E series

Coaxial gear reducers and gearmotors

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1

Rossi for You

Innovation

Rossi offers a wide range of **solutions for an evolving industry**, flexible and innovative gearboxes and gearmotors for customer tailored solutions to maximize performance and minimize the total cost of ownership.

High quality, 3 years warranty

Our drive is to innovate and boost operations by manufacturing performing, precise, reliable and high-quality products all over the world. We are always one step forward in offering and developing solutions that can satisfy an unlimited number of application needs, even in the most demanding conditions.

Reliability

We are a reliable company with the right flexibility and know-how to respond to worldwide market requests, in all application fields, without leaving aside our commitment for the environment and value on human safety, to protect everyone's future.

Tools and processes

We continue to invest in new tools and processes, so our highly skilled specialist team in different fields are supporting you to find the best solution suitable for your demands, always by your side on every step of the project.

After-sale service

Highly trained mechanics and support teams can ensure a fast and efficient after-sale service providing support worldwide.

Digital support

Alongside our 24/7 **Rossi for You** support portal you have a suite of digital support tools enabling real time access to your order tracking, invoices, spare part tables download and contact to our service.

70
YEARS

Experience

Shaped by more than 60 years of history Rossi meets your unique needs whether you need a standard design or a customized solution.

ROSSI

Global presence local service

Local support
Sales, customer service,
technical support, spare parts

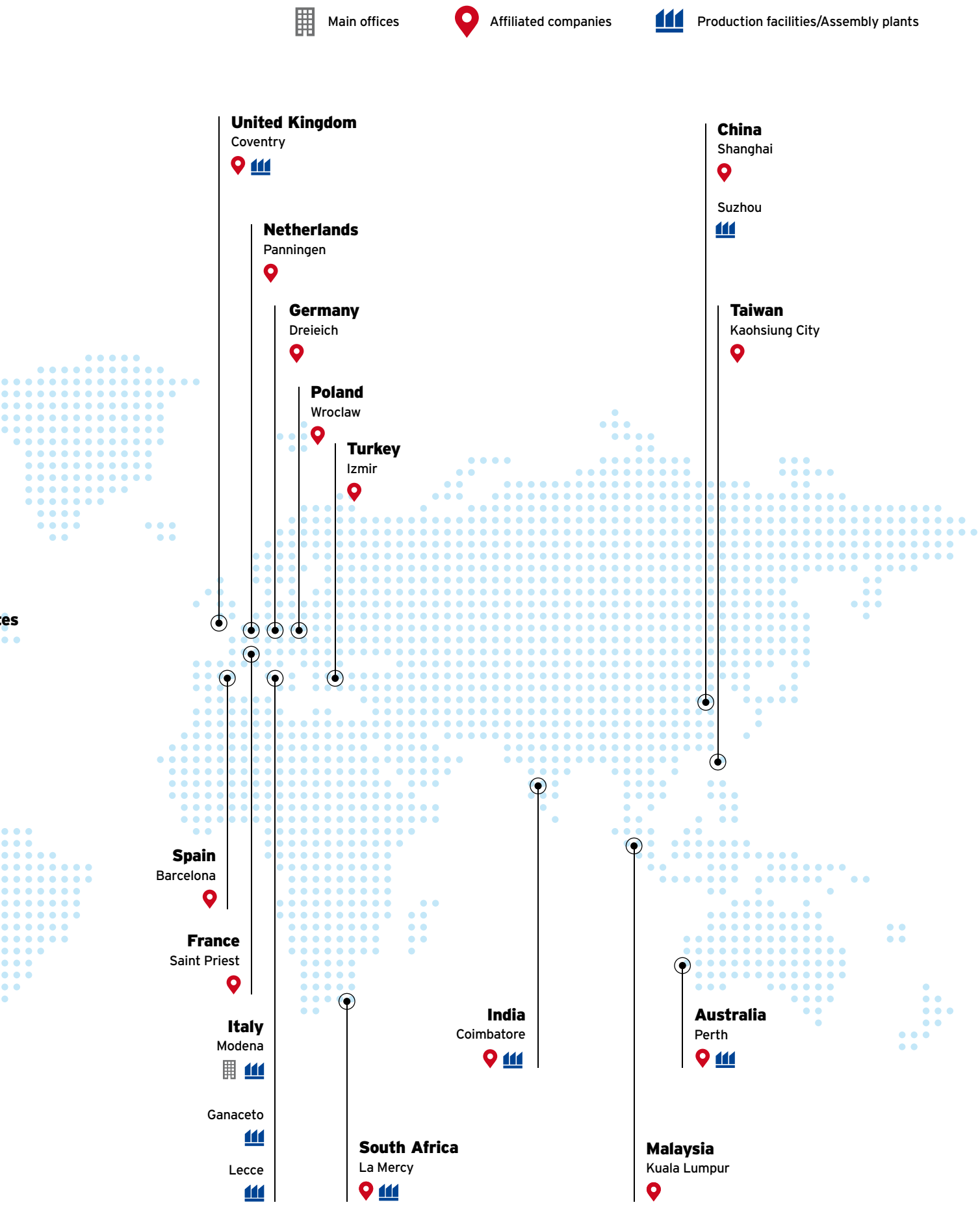
17 branches*

Worldwide distribution network*

A global network of subsidiaries and dealers. From design and execution to after-sales service. Rossi is always close to you: a local, reliable and flexible partner.

Alongside our 24/7 **Rossi for You** portal you have a suite of digital support tools enabling real time access to your order tracking, invoices, spare part tables download and contact to our service.

*All contacts available on **www.rossi.com**


Main offices
Affiliated companies
Production facilities/Assembly plants
United Kingdom
Coventry
Netherlands
Panningen
Germany
Dreieich
Poland
Wroclaw
Turkey
Izmir
China
Shanghai
Suzhou
Taiwan
Kaohsiung City
Spain
Barcelona
France
Saint Priest
Italy
Modena
Ganaceto
Lecce
India
Coimbatore
South Africa
La Mercy
Malaysia
Kuala Lumpur
Australia
Perth

2

Features, benefits and range

Maximum performance

We drive the heaviest applications worldwide

Sustainability

We care about environment

Modular system

For cost–effective and high quality solutions

Innovation

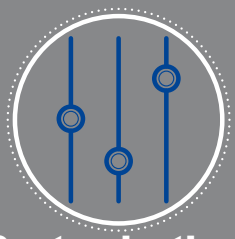
We are constantly thinking forward, solutions for an evolving industry

Digitalization

Rossi for You is always at your disposal for any info

Know-how

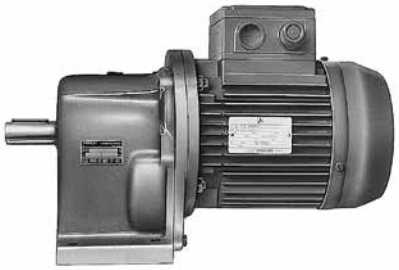
We support you through interdisciplinary know-how



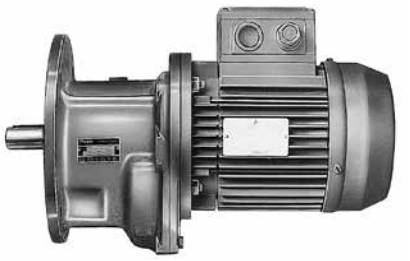
Customization

Cost-effective solutions starting from standard products

Coaxial gear reducers and gearmotors



2I, 3I 32 ... 41*
with 2, 3 cylindrical gear pairsi



2I, 3I 50 ... 180
with 2, 3 cylindrical gear pairs

Combined gear reducer and gearmotor units

MR 3I + R 2I, 3I

MR 3I + MR 2I, 3I

* gearmotors only

Symbols and units of measure

All dimensions in the catalog are expressed in mm except where otherwise stated

Symbol	Description	Unit
f	frequency	Hz
F	force	lb
F_r, F_a	radial (overhung) loads, axial (thrust) loads	lb
fs	service factor	–
ft	thermal factor	–
G	weight (weight force)	lb
i	transmission ratio	–
i_N	nominal transmission ratio	–
L_h	total duration of load cycle	h
L_{WA}	sound power level	dB(A)
m	mass	lb
M_b	bending moment	lb in
n	angular speed	rpm
n_1	gear reducer input speed (high speed)	rpm
n_2	gear reducer output speed (low speed)	rpm
n_{2eq}	load cycle equivalent speed	rpm
n_{N2}	gear reducer nominal output speed	rpm
n_{2i}	gear reducer output speed during load cycle interval i	rpm
P	power	hp
P_1	gear reducer input power (high speed shaft), motor power	hp
P_2	gear reducer output power (low speed shaft)	hp
P_{N2}	gear reducer nominal output power (low speed shaft)	hp
Pt	thermal power	hp
Pt_N	gear reducer nominal thermal power	hp
P_{1th}	gear reducer equivalent thermal power	hp
T	torque	lb in

Symbol	Description	Unit
T_2	gear reducer output torque (low speed shaft), derived from input power and speed	lb in
T_{2eq}	load cycle equivalent torque	lb in
T_{N2}	gear reducer nominal output torque (low speed shaft)	lb in
T_{2i}	gear reducer output torque (low speed shaft), during load cycle interval i	lb in
T_S	screw tightening torque	N m
T_{start}	motor starting torque	lb in
T_{brake}	motor braking torque	lb in
$T_{ambient}$	ambient temperature	°F
T_{oil}	oil temperature	°F
t	time	s
ta	starting time	s
tb	braking time	s
U	voltage	V
W	work, energy	10^6 lb in
WK	moment of inertia	lb ft²
WK_0^2	moment of inertia (of mass) of the motor	lb ft²
WK_1^2	moment of inertia (of mass) of the gear reducer referred to high speed shaft	lb ft²
WK_R^2	external (gear reducer, coupling, driven machine) moment of inertia (of mass) referred to to high speed shaft	lb ft²
z	starting frequency	starts/h
z_0	no load starting frequency	starts/h
	angular acceleration	rad/s²
	efficiency	–
	plane angle	rad
a_1	revolution of motor shaft during acceleration	rad
b_1	revolution of motor shaft during deceleration	rad
	agular velocity	rad/s

Additional indexes (subscripts) and other symbols

Index	Description
N	nominal
1	relating to high speed shaft (input)
2	relating to low speed shaft (input)
max	maximum
min	minimum
eq	equivalent

Index	Description
th	thermal
c	cycle
–	from ... to
≈	approximately equal to
	greater than or equal to
	less than or equal to

Unit conversion table

Description	Imperial units				International System of Units (SI), Technical System (metric)		
Length, Distance	1	inch	[in]	= 0.0254	meter	[m]	
	1	foot	[ft]	= 0.3048			
Mass	1	pound	[lb]	= 0.4536	kilogram	[kg]	
	1	ounce	[oz]	= 0.0283			
Volume	1	US liquid gallon	[gal]	= 3.7854	liter	[l]	
Temperature	1	Fahrenheit degree	[°F]	= 1.8 · °C + 32	Celsius degree	[°C]	
Force	1	pound-force	[lb_{fn}]	= 4.4482	newton	[N]	
				= 0.4536	kilogram force	[kg_{fn}]	
Power	1	horse power	[hp]	= 0.7457	kilowatt	[kW]	
Torque, Work	1	pound-force inch	[lb_{fn} in]	= 0.1130	newton meter, joule	[N m], [J]	
				= 0.0115	kilogram-force meter	[kg_{fn} m]	
	1	pound-force foot	[lb_{fn} ft]	= 1.3560	newton meter, joule	[N m], [J]	
				= 0.1383	kilogram-force meter	[kg_{fn} m]	
Pressure	1	pound-force per square inch (psi)	[lb_{fn}/in²]	= 0.0689	bar	[bar]	
Moment of inertia	1	WK²	[lb_{fn} ft²]	= 0.0421	kilogram square-meter	[kg m²]	

Features, benefits and range 2

Universal mounting (patented; lower feet, upper feet, B5 flange with low speed shaft end shifted forward) excluding sizes 32 ... 41.

Closer intermediate size steps (for size pairs, standard and strengthened, only one housing and many components in common, changing only the ones allowing higher performances of greater size; improved modular construction) **offering sizes closer to every application need and maintaining nearly the same component number for maximum economy of solution; same mounting dimensions for the size pairs**

Rigid and precise single-piece cast iron housing (excluding sizes 32 ... 41)

Generously proportioned bearings of low speed shaft (bearings and shaft) **in order to withstand high loads** on shaft end

Possibility of mounting large size motors

Manufacturing and product management flexibility

High manufacturing quality standard

Minimum maintenance requirements

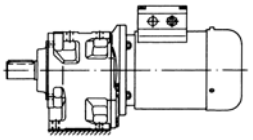
Standard motor to IEC

High, reliable and tested performances

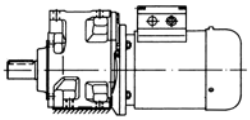
Pinion of final reduction with three bearings (excluding sizes 32 ... 41) **in order to ensure best meshing conditions** (no overhang wheel; maximum rigidity and overloading capacity, maximum reduction of noise level)

This range of gear reducers and gearmotors combines and exalts the traditional qualities of coaxial gear reducers – **compactness, economy** –, with the ones deriving from modern design, manufacturing and operating criteria – **strength and suitability also for heaviest applications, universality and ease of application, wide range of sizes, service** – the advantages typically associated with high quality gear reducers produced in large series.

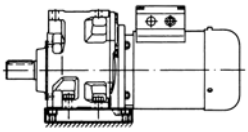
Foot mounting



«Standard» shaft height (H)

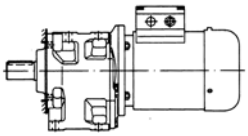


«Low» shaft height (H_0), minimum overall dimensions

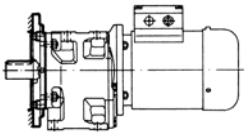


Adaptor for interchangeability

Flange mounting



Standard flange (through holes) and low speed shaft end shifted forward for minimum overhang



Oversized flange (through holes) and low speed shaft end having shoulder coinciding with flange plane

a - Gear reducer

Structural features

Main specifications are:

– **universal mounting (patented)** with lower and upper feet and B5 flange **integral** with housing (excluding sizes 32 ... 41 whose mounting is either with feet or with flange always integral with housing);

– **low speed shaft end** shifted forward (excluding size 40) compared to flange plane, for **smaller overhang** having same position of external radial load;

– modern conception according to Rossi **new modular system** (improved modular construction both for component parts and assembled product); to withstand **high loads on** high and low speed **shaft ends**;

UT C 640B

32	40	41	50	51	63	64	80	81	100	101	125	126	140	160		180	1)
75	90	90	106	106	132	132	160	160	195	195	236	236	250	295		315	H
–	–	–	71	71	85	85	106	106	132	132	160	160	160	200		200	H_0
16	19	24	24	28	32	38	38	48	48	55	60	70	80	90		100	D
3,75	7,5	9,5	16	22,4	33,5	45	67	90	132	180	265	355	500	710	φ = 1,4	1000	M_{N2}
125	200	250	355	425	530	670	800	1000	1250	1600	2000	2500	3150	4000		5000	F_{r2}

1) H, H_0 shaft height [in]
D Ø low speed shaft end [in]
M_{N2} nominal torque [lb in]
F_{r2} radial load [lb]s

– maximum compactness and reduced overall dimensions – and equal for 2I and 3I – especially in longitudinal direction; coaxial low and high speed shafts excluding sizes 140 ... 180 for which they are slightly misaligned (see ch. 3.2 and 3.8);
– **single-piece** cast iron **housing** 200 UNI ISO 185 (excluding sizes 32 ... 41) with **stiffening ribs** and high lubricant capacity;
– gear reducer overall sized so as to accept particularly powerful motors, to permit the transmission of **high** nominal and maximum **torques** and support **high loads on low and high speed shaft ends**;
– cylindrical roller or ball bearings on intermediate shafts duly sized for every condition;
– bearings of **low speed shaft** generously proportioned in order to withstand high loads on low speed shaft end (which is also proportioned for the same purpose);

Cuscinetto Bearing	Grandezza - Size															
	32	40	41	50	51	63	64	80	81	100	101	125	126	140	160	180
lato esterno external side	6203	6204	6205	6206	6206	6207	6208	6308	NJ210EC	6310	NJ212EC	30214	32016	32018	32021	32024
lato interno internal side	6201	6004	6203	6204	6204E	6205E	6206E	6306	NJ207EC	6308	NJ210EC	30212	32014	32016	32018	32021

– pinion of final reduction with **three bearings** (excluding sizes 32 ... 41) in order to ensure best meshing conditions (no overhang wheel, maximum rigidity and **overloading capacity**, maximum **reduction of noise level**);
– gear reducers: input face having machined flange and holes (excluding sizes 32 and 40);
– gearmotors: **standard motor to IEC** with pinion directly mounted onto shaft end;
– shaft end with parallel key and tapped butt-end hole;
– standard dimensions and compliance with standards;
– grease or oil-bath lubrication; with synthetic grease for sizes 32 ... 41 or synthetic oil sizes 50 ... 81 all supplied **filled with lubricant** for lubrication **«for life»** and with a plug (sizes 32 ... 64) or two plugs (sizes 80 and 81); with synthetic or mineral oil (ch. 4) with filler plug with **valve**, drain and level plug (sizes 100 ... 180); sealed;
– **paint**: **external** coating in epoxy powder paint (sizes 32 ... 41) or water based dual compound acrylic-polyurethane resin basis enamel (sizes 50 ... 180) resistant to atmospheric and aggressive agents (corrosivity category C3 ISO 12944-2); suitable for further coats only with dual-compound products after degreasing and sanding; color blue RAL 5010 DIN 1843, other colors and/or painting cycles on request); **internal** protection with epoxy powder paint (sizes 32 ... 41) suitable to resist to synthetic oils or with synthetic paint (sizes 50 ... 180) suitable to resist polyalphaolefines based synthetic or mineral oils.
– possibility of obtaining combined gear reducer and gearmotor units providing high transmission ratios;
– non-standard designs: see ch. 5.

Train of gears:

– 2, 3 cylindrical gear pairs (5, 6 in combined units);
– 7 sizes with final reduction centre distance to R 10 series (32 ... 125, with 6 size pairs: standard and strengthened); 3 sizes with final reduction centre distance to R 20 series (140 ... 180) for a total of **16 sizes**;
– nominal transmission ratios to R 10 series (6,3 ... 6 300) for gear reducers;
– output speeds close to standard number R 20 series (0,45 ... 710 rpm) for gearmotors;
– casehardened and hardened gear pairs in 16 CrNi4 or 20 MnCr5 steel depending on size and 18 NiCrMo5 steel, according to UNI 7846-78;
– helical toothed gear pairs with **ground** profile;
– gears load capacity calculated for tooth breakage and pitting.

Specific standards:

– nominal transmission ratios and main dimensions according to UNI 2016 standard numbers (DIN 323-74, NF X 01.001, BS 2045-65, ISO 3-73);
– tooth profiles to UNI 6587-69 (DIN 867-86, NF E 23.011, BS 436.2-70, ISO 53-74);
– shaft heights to UNI 2946-68 (DIN 747-76, NF E 01.051, BS 5186-75, ISO 496-73);
– fixing flanges B14 and B5 taken from UNEL 13501-69 (DIN 42948-65, IEC 72.2);
– medium series fixing holes to UNI 1728-83 (DIN 69-71, NF E 27.040, BS 4186-67, ISO/R 273);
– cylindrical shaft ends (long or short) to UNI ISO 775-88 (DIN 748, NF E 22.05.051, BS 4506-70, ISO/R775) with tapped butt-end hole to UNI 9321 (DIN 332 BI. 2-70, NF E 22.056) excluding d-D diameter ratio;
– parallel keys to UNI 6604-69 (DIN 6885 BI. 1-68, NF E 27.656 and 22.175, BS 4235.1-72, ISO/R/773-69) except for specific cases of motor-to-gear reducer coupling where key height is reduced;
– mounting positions taken from CEI 2-14 (DIN EN 60034-7, IEC 34.7);
– load capacity verified according to UNI 8862, DIN 3990, AFNOR E 23-015, ISO 6336 for running time ≥ **12 500** h.

Sound levels L_{WA} and $\bar{L}_{pA}$ [dB(A)]

Standard production sound power level L_{WA} [dB(A)][1] and mean sound pressure level $\bar{L}_{pA}$ [dB(A)][2] for gearmotors assuming nominal load, and input speed n_1 = 1 400[3] rpm^{-1}. Tolerance +3 dB(A).
If required, gear reducers can be supplied with reduced sound levels (normally 3 dB(A) below tabulated values); consult us.
Values in table are valid also for gear reducers.

In case of gearmotor with 4 poles 60 Hz motor (motor supplied by Rossi) add 1 dB(A) to the values in table.

Size and train of gears		Gearmotors with 4 poles motor																			
		63		71		80		90		100 112		132		160 180 M		180 L 200		225 250		280	
		L_{WA}	$\bar{L}_{pA}$	L_{WA}	$\bar{L}_{pA}$	L_{WA}	$\bar{L}_{pA}$	L_{WA}	$\bar{L}_{pA}$	L_{WA}	$\bar{L}_{pA}$	L_{WA}	$\bar{L}_{pA}$	L_{WA}	$\bar{L}_{pA}$	L_{WA}	$\bar{L}_{pA}$	L_{WA}	$\bar{L}_{pA}$	L_{WA}	$\bar{L}_{pA}$
32, 40, 41	**2I**	**63**	54	**65**	56	**68**	59	–		–		–		–		–		–		–	
	3I	**62**	53	**64**	55	–		–		–		–		–		–		–		–	
50, 51	**2I**	–		**66**	57	**69**	60	**71**	62	–		–		–		–		–		–	
	3I	**62**	53	**65**	56	**68**	59	–		–		–		–		–		–		–	
63, 64	**2I**	–		–		**69**	60	**73**	64	**75**	66	–		–		–		–		–	
	3I	–		**66**	57	**68**	59	**71**	62	–		–		–		–		–		–	
80, 81	**2I**	–		–		–		**73**	64	**77**	68	**78**	69	–		–		–		–	
	3I	–		–		**69**	60	**72**	63	**75**	66	–		–		–		–		–	
100, 101	**2I**	–		–		–		–		**77**	68	**80**	71	**81**	72	–		–		–	
	3I	–		–		–		**73**	64	**76**	67	**78**	69	–		–		–		–	
125, 126, 140	**2I**	–		–		–		–		–		**81**	72	**83**	74	**85**	76	**87**	78	–	
	3I	–		–		–		–		**77**	68	**80**	71	**81**	72	–		–		–	
160, 180	**2I**	–		–		–		–		–		–		**83**	74	**86**	77	**88**	79	**90**	81
	3I	–		–		–		–		–		**81**	72	**82**	73	**84**	75	**86**	77	–	

1) To ISO 8579-1.
2) Mean value of measurement at 3.28 ft (1 m) from external profile of gear reducer standing in free field on a reflecting surface.
3) For n_1 710 ÷ 1 800 rpm, modify tabulated values thus: n_1 = 710 rpm, -3 dB(A); n_1 = 900 rpm, -2 dB(A); n_1 = 1 120 rpm, -1 dB(A); n_1 = 1 800 rpm, +2 dB(A).

b - Electric motor

Gearmotor dimensions and masses of present catalog (see ch. 3.6 and 3.8) refer to HB and HBZ motors (cat. TX).

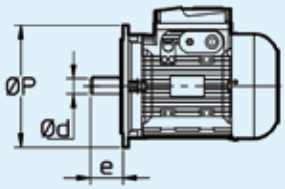
Main structural features (HB motor and HBZ brake motor)

- motor **standardized to IEC**;
- asynchronous three-phase, totally-enclosed, externally ventilated, with cage rotor;
- single polarity, frequency 50 Hz, voltage Δ 230 V Y 400 V (size ≤ 132), Δ 400 V (size ≥ 160);
- **IP 55** protection, **insulation** class **F**, temperature rise class **B**;
- rated power delivered on continuous duty S1 (excluding some cases of motor sizes with power not according to standard; see specific documentation) and referred to nominal voltage and frequency; maximum ambient temperature 104 °F (40 °C) and altitude 3 280 ft (1 000 m);
- capacity to withstand one or more overloads up to 1,6 times the nominal load for a maximum total period of 2 min per single hour;
- starting torque with direct on-line start at least 1,6 times the nominal one (it is usually higher);
- mounting position B5 and derivates as shown in the following table;
- **suitable for inverter duty** (generous electromagnetic sizing, low-loss electrical stamping, phase separators, etc.)
- designs available for every application need: flywheel, independent cooling fan, independent cooling fan and encoder, etc.

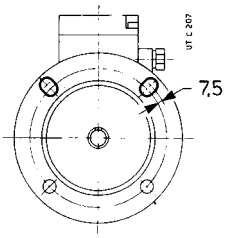
Constructive features of HBZ brake motor

– particularly strong construction to withstand braking stresses; **maximum reduction of noise level**;
– spring-loaded d.c. electromagnetic brake; feeding from the terminal box; brake can also be independently fed directly from the line;
– braking torque **proportioned** to motor torque (usually $T_f \approx 2\,T_N$) and adjustable by adding or removing spring pairs;
– possibility of high frequency of starting;
– quick and rapid stop;
– hand lever for manual release with automatic return (on request for size ≤160S); removable lever rod.
For other specifications and details see **specific documentation of cat. TX**

Main coupling dimensions



IEC 60072
(UNEL 13117-17, DIN 43677 Bl. 1.A-65)
Motor mounting position



Motor size	IM **B5** Ød	×	e	-	ØP	**B5R** Ød	×	e	-	ØP	**B5A** Ød	×	e	-	ØP
63	11	×	23	-	140			–					–		
71	14	×	30	-	160	11	×	23	-	140	14	×	30	-	140
80	19	×	40	-	200	14	×	30	-	160	19	×	40	-	160
90	24	×	50	-	200	19	×	40	-	200			–		
100, 112	28	×	60	-	250	24	×	50	-	200			–		
132	38	×	80	-	300	28	×	60	-	250			–		
160	42	×	110	-	350	38	×	80	-	300			–		
180	48	×	110	-	350			–					–		
200	55	×	110	-	400	48	×	110	-	350			–		
225	60	×	140	-	450			–					–		
250	65	×	140	-	550	60	×	140	-	450			–		
280	75	×	140	-	550			–					–		

ATTENTION: Electric motor flange of gearmotors MR 3I 50, 51 with motor size 63 must have the two top holes slotted outwards as shown in the drawing.

Short time duty (S2) and intermittent periodic duty (S3); duty cycles S4 ... S10

In case of a duty-requirement type S2 ... S10 the motor power can be increased as per the following table; starting torque keeps unchanged.

Short time duty (S2). – Running at constant load for a given period of time less than that necessary to reach normal running temperature, followed by a rest period long enough for motor's return to ambient temperature.

Intermittent periodic duty (S3). – Succession of identical work cycles consisting of a period of running at constant load and a rest period. Current peaks on starting are not to be of an order that will influence motor heat to any significant extent.

Cyclic duration factor = $\frac{N}{N+R} \cdot 100\%$

where: N being running time at constant load,
R the rest period and $N + R = 10$ min (if longer consult us)

Duty			Motor size[1] 63 ... 90	100 ... 132	160 ... 280
S2	duration of running	**90 min**	1	1	1.06
		60 min	1	1.06	1.12
		30 min	1.12	1.18	1.25
		10 min	1.25	1.25	1.32
S3	cyclic duration factor	**60%**	1.12		
		40%	1.18		
		25%	1.25		
		15%	1.32		
S4 ... S10			consult us		

1) For motor sizes 90LC 4, 112MC 4, 132MC 4, consult us.

Frequency 60 Hz

Normal motors up to size 132 wound for 50 Hz can be fed at 60 Hz; in this case speed increases by 20%. If input-voltage corresponds to winding voltage, power keeps unchanged, providing that higher temperature rise values are acceptable, starting is not on full load and that the power requirement is not unduly demanding, whilst starting and maximum torques decrease by 17%. If input-voltage is 20% higher than winding voltage, power increases by 20% whilst starting and maximum torques keep unchanged.

For **brake** motors see **specific literature**.

From size 160 upwards motors — both standard and brake ones — should be wound for 60 Hz exploiting the 20% power increase as a matter of course.

Power available with high ambient temperature or high altitude

When motor has to run at an ambient temperature higher than 104 °F (40 °C) or at altitude above sea level higher than 3 300 ft (1 000 m), it has to be derated according to the following tables:

Ambient temperature [°F]	**86**	**104**	**113**	**122**	**131**	**140**
P/P_N [%]	106	100	96,5	93	90	86,5

Altitude l.a.s. [ft]	**3 300**	**4 900**	**6 600**	**8 200**	**9 800**	**11 500**	**13 100**
P/P_N [%]	100	96	92	88	84	80	76

Specific standards:

- nominal powers and dimensions to CENELEC HD 231 (IEC 72-1, DIN 42677, NF C51-120, BS 5000-10 and BS 4999-141) for mounting positions IM B5, IM B14 and derivates;
- nominal performances and running specifications to CENELEC EN 60034-1 (IEC 34-1, CEI EN 60034-1, DIN VDE 0530-1, NF C51-111, BS 4999-101);
- protection to CENELEC EN 60034-5 (IEC 34-5, CEI 2-16, DIN EN 60034-5, NF C51-115, BS 4999-105);
- mounting positions to CENELEC EN 60034-7 (IEC 34-7, CEI EN 60034-7, DIN IEC 34-7, NF C51-117, BS EN 60034-7);
- sound levels to CENELEC 60034-9 (IEC 34.9, DIN 57530 pt. 9);
- balancing and vibration velocity (vibration under standard rating N) to CENELEC HD 53.14 S1 (IEC 34-14, ISO 2373 CEI 2-23, BS 4999-142); motors are balanced with half key inserted into shaft extension;
- cooling to CENELEC EN 60034-6 (CEI 2-7, IEC 34-6): standard type IC 411; type IC 416 for non-standard design with axial independent cooling fan.

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Asynchronous three-phase motors, brake motors

HE - HB
Asynchronous three-phase motor

HEZ - HBZ
Asynchronous three-phase **brake motor** with **d.c. brake**

HBF
Asynchronous three-phase **brake motor** with **a.c. brake**

HBV
Asynchronous three-phase **brake motor** with **d.c. safety brake**

Advanced design motors sharing the **same stator windings**, the same **rotors**, the same **housings**, the same **flanges**, the same performance, and the majority of technical solutions with its twin brake motor series **(HEZ, HBZ, HBF, and HBV)**.

The generous electromagnetic sizing allow to achieve **high efficiency values** complying **with different energy saving regulations**:

– Efficiency class **IE3 (ErP)** for HB and HE;

– Efficiency class **IE3 (ErP)** for HEZ and HBZ

The electric design (terminal block, name plate, etc.) has been studied to comply, as standard, also with **NEMA MG1-12** for the maximum application flexibility and facility.

The strength and the precision of mechanical construction, the generous bearings and the wide range of non-standard designs available on catalog make this motor particularly suitable for coupling with gearmotors.

Thanks to its outstanding **low noise**, **progressivity** and **dynamic** characteristics, it is specifically suitable for **coupling with gearmotor minimizing the dynamic overloads** deriving from **starting and braking phases** (especially in case of motion reversals) and maintaining a **very good braking torque value**.

The excellent **operation progressivity** - when starting and braking - is assured by the brake anchor which is less quick in the impact (compared to a.c. HBF) and by the slight quickness of d.c. brakes.

Offering a comprehensive **range of accessories and non-standard designs** in order to satisfy all possible gearmotor application fields.

The **high reactivity** typical of **a.c. brake** and the **high braking capacity** make this brake motor **particularly suitable for heavy duties** requiring **quick brakings** and a **high number of operations** (e.g.: lifts with high frequency of starting, usually for size > 132, and/or for jog operations).

Vice versa, its very **high dynamic characteristics** (rapidity and frequency of starting) **are not advisable for the use** in **gearmotor** coupling, especially when these features are not strictly necessary for the application (avoiding useless overloads on the whole transmission).

Comprehensive **range of accessories and non-standard designs** in order to satisfy all application needs of gearmotors (in particular for HBF: IP 56, IP 65, encoder, independent cooling fan, independent cooling fan and encoder, double extension shaft, etc.).

Featuring **maximum economy**, **very reduced overall dimensions and moderate braking torque**, it is suitable for the coupling with gearmotor and can be applied as brake for **safety or parking stops** (e.g. cutting machines) and for operations at deceleration ramp end **during the running with inverter**.

The standard cast iron fan supplies a flywheel effect increasing the very good progressivity of starting and braking (typical of d.c. brake) being particularly **suitable for** «**light**»[1] **traverse movements**.

1) Mechanism group M4 (max 180 starts/h) and on-load running L1 (light) or L2 (moderate) to ISO 4301/1, F.E.M./II 1997.

3

Product overview

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Designation code

R	2I	50	U	C	2	A			–	29,3	B3							
MR	3I	50	U	C	2	A	-	19 × 200	–	22,7	V5		HB3 80B4 230.400-50 B5		TB3			

TERMINAL BOX POSITION
(see page 23)

MOTOR DESIGNATION
(see page 23)

INPUT SPEED
(see page 23)

MOUNTING POSITION
(see ch. 3.6 and 3.8)

TRANSMISSION RATIO

IEC MOTOR COUPLING DIMENSIONS
Ø**d** × Ø**P** (see ch. 2b)

DESIGN
A normal

MODEL
1, 2 normal

SHAFT POSITION
C coaxial

MOUNTING
U universal (sizes 50 ... 180)
P foot mounted (sizes 32 ... 41)
F flange mounted (sizes 32 ... 41)

SIZE
32 ... 180 final reduction center distance [mm]

TRAIN OF GEARS
2I 2 cylindrical gear pairs
3I 3 cylindrical gear pairs

MACHINE
R gear reducer
MR gearmotor

Gear reducer mounting position

Gear reducer and gearmotor mounting positions are described in ch. 3.6, 3.8 (the mounting position designation refers to foot mounting only, even if gear reducers are for universal mounting, sizes 32 ... 41 excluded).

When having no particular needs, **prefer B3** (B3 or B5 for sizes 32 ... 41) **mounting position** for its technical and economic cost effectiveness (maximum simplification of lubrication system, lower oil splash, lower gear reducer heating, stock availability).

Input speed

Complete the designation stating the input speed n_1, if > 1400 rpm:

Example:

R 2I 50 UC2A / 29,3 n_1 = **2000 rpm**

Motor

When the gearmotor is supplied **equipped with a standard Rossi motor,** fill in the designation stating the motor designation (ref. cat. TX).

Example:

MR 3I 140 UC2A - 48 × 350 – 20,4

HB3 180M 4 400-50 B5

When **brake motor** is required, insert the letters **HBZ** (ref. cat. TX).

Example:

MR 3I 140 UC2A - 48 × 350 – 20,4

HB3Z 180M 4 400-50 B5

When the gearmotor is equipped **without motor**, omit the designation and add «without motor».

Esempio:

MR 3I 140 UC2A - 48×350 – 20,4

without motor

When motor is supplied by the **Buyer**[1], complete the designation by stating the description of «motor supplied by us».

1) The motor, supplied by the Buyer must be to IEC with mating surfaces machined under accuracy rating IEC 60072-1 and is to be sent carriage and expenses paid to our factory for fitting to the gear reducer.

Example:

MR 3I 140 UC2A - 48×350 – 20,4

motore supplied by us

Motor terminal box position

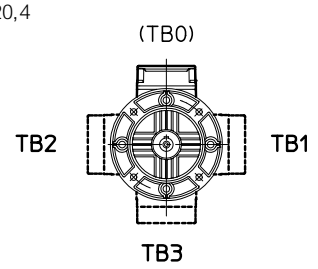
Complete the designation stating the motor terminal box position if differing from the standard one (TB0; scheme below); the cable input is Buyer's responsibility.

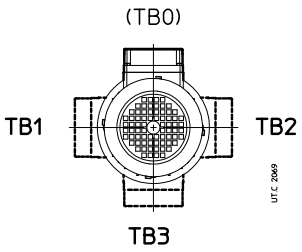
Example:

MR 3I 140 UC2A - 48×350 / 20,4

HB3 180M 4 400-50 B5 **TB3**

View from drive end (D)





View from non-drive end (N)

Accessories and non-standard designs

In the event of a gear reducer or gearmotor being required in a design different from those stated above, specify it in detail (ch. 5).

Thermal power *Pt* [hp] 3.2

Nominal thermal power Pt_N, written in red in the following tables, is that which can be applied at the gear reducer input without exceeding 203 °F[1] (95 °C[1]) approximately oil temperature when operating in following running conditions:
- input speed n_1 =1 800 rpm;
- mounting position B3;
- continuous duty S1;
- maximum ambient temperature 104 °F (40 °C);
- maximum altitude 3,300 ft (1 000 m) above sea level;
- air speed ⩾ 4 ft/s (typical value in presence of a gearmotor with self cooled motor).

For the cases marked at ch. 7 and 9 it should be always verified that the applied power P_1 is less than or equal to gear reducer nominal thermal power Pt_N multiplied by the corrective coefficients ft_1, ft_2, ft_4, ft_5 (stated in the following tables) considering the several operational conditions:

$$P_1 \leqslant Pt_N \cdot ft_1 \cdot ft_2 \cdot ft_4 \cdot ft_5$$

When this condition is not satisfied consider the use of special lubricant or a cooling unit with heat exchanger: consult us.

Thermal power needs not be taken into account when maximum duration of continuous running time is 1 ÷ 3 h (from small to large gear reducer sizes) followed by rest periods long enough to restore the gear reducer to near ambient temperature (likewise 1 ÷ 3 h).
In case of maximum ambient temperature above 122 °F (50 °C) or below 32 °F (0 °C) consult us.

Nominal termal power Pt_N [hp]

Train of gears	Pt_N [hp]					
	80, 81	**100, 101**	**125, 126**	**140**	**160**	**180**
2I	20	30	45	48	71	75
3I	15	23	33.5	35,5	54	57

Thermal factor ft_1 according to **input speed n_1**

Train of gears	ft_1 Input speed n_1 [min^{-1}] ⩾				
	710	**900**	**1 120**	**1 400**	**1 800**
2I	1,18	1,12	1,06	1	0,85
3I	1,06	1,06	1,03	1	0,95

Thermal factor ft_2 according to **ambient temperature** and **duty**

Maximum ambient temperature °F (°C)	ft_2 Continuous duty **S1**	Intermittent duty **S3 ... S6** Cyclic duration factor for 60 min running[2]			
		60	**40**	**25**	**15**
122 (50)	0,8	0,95	1,06	1,18	1,32
104 (40)	**1**	1,18	1,32	1,5	1,7
86 (30)	1,18	1,4	1,6	1,8	2
68 (20)	1,32	1,6	1,8	2	2,24
50 (10)	1,5	1,8	2	2,24	2,5

Thermal factor ft_4 according to **altitude**

Altitude a.s.l [ft]	ft_4
⩽ 3 300	**1**
3 300 ÷ 6 600	0,95
6 600 ÷ 9 800	0,9
9 800 ÷ 13 100	0,85
⩾ 13 100	0,8

Thermal factor ft_5 according to **air speed** on the housing

Air speed ft/s	Working environment	ft_5
< 2	very small or no air movement or gear reducer shielded	consult us
2	small and with limited air movement	0,71
3.15	large and without ventilation	0,9
4	large and with slight ventilation (e.g. gearmotor with self-cooled motor)	**1**
8	outdoor ventilated	1,18
12.5	strong air movement	1,32

1) Corresponding to an average temperature of the external housing surface of approximately 85 °C; locally housing temperature can achieve the oil temperature.
2) (Duration of running on load / 60) · 100 [%].

Service factor *fs* 3.3

Service factor *fs* takes into account the different running conditions (nature of load, running time, frequency of starting, other considerations) which must be referred to when performing calculations of gear reducer selection and verification.

The powers and torques shown in the catalog are nominal (i.e. valid for *fs* = 1) for gear reducers, corresponding to the *fs* indicated for gearmotors.

Service factor based: on the **nature of load** and **running time** (this value is to be multiplied by the values shown in the tables alongside).

...: on **frequency of starting** referred to the nature of load.

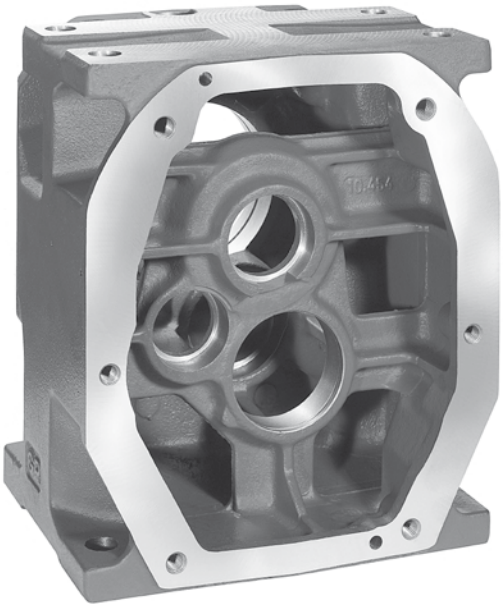
Natura del carico della macchina azionata Nature of load of the driven machine		Durata di funzionamento [h] Running time [h]				
Rif. Ref.	Descrizione Description	**3 150** ≤2 h/d	**6 300** 2÷4 h/d	**12 500** 4÷8 h/d	**25 000** 8÷16 h/d	**50 000** 16÷24 h/d
a	**Uniforme** **Uniform**	0.8	0.9	1	1.18	1.32
b	**Sovraccarichi moderati** (entità 1.6 volte il carico normale) **Moderate overloads** (1.6 × normal)	1	1.12	1.25	1.5	1.7
c	**Sovraccarichi forti** (entità 2.5 volte il carico normale) **Heavy overloads** (2.5 × normal)	1.32	1.5	1.7	2	2.24

Rif. carico Load ref.	Frequenza di avviamento *z* [avv./h] Frequency of starting *z* [starts/h]							
	2	**4**	**8**	**16**	**32**	**63**	**125**	**250**
a	1	1.06	1.12	1.18	1.25	1.32	1.4	1.5
b	1	1	1.06	1.12	1.18	1.25	1.32	1.4
c	1	1	1	1.06	1.12	1.18	1.25	1.32

Details of service factor, and considerations.
Given *fs* values are valid for:

- electric motor with cage rotor, direct on-line starting up to 12.34 hp (9,2 kW), star-delta starting for higher power ratings; for direct on-line starting above 12.34 hp (9,2 kW) or for brake motors, select *fs* according to a frequency of starting double the actual frequency; for internal combustion engines multiply *fs* by 1.25 (multicylinder) or 1.5 (single-cylinder);
- maximum time on overload 15 s; on starting 3 s; if over and/or subject to heavy shock effect, consult us;
- a whole number of overload cycles (or start) **imprecisely** completed in 1, 2, 3 or 4 revolutions of low speed shaft; if **precisely** a continous overloads should be assumed;
- **standard** level of reliability; if a **higher** degree of reliability is required (particularly difficult maintenance conditions, key importance of gear reducer to production, personnel safety, etc.) multiply *fs* by **1.25 ÷ 1.4**.

Motors having a starting torque not exceeding nominal values (star-delta starting, particular types of motor operating on direct current, and single-phase motors), and particular types of coupling between gear reducer and motor, and gear reducer and driven machine (flexible, centrifugal, fluid and safety couplings, clutches and belt drives) affect service factor favourably, allowing its reduction in certain heavy-duty applications; consult us if need be.



a - Gear reducer

Determining the gear reducer size

— Make available all necessary data: required output power P_2 of gear reducer, speeds n_2 and n_1, running conditions (nature of load, running time, frequency of starting **z**, other considerations) with reference to ch. 5.
— Determine service factor **fs** on the basis of running conditions (ch. 5).
— Select the gear reducer size (also, the train of gears and transmission ratio **i** at the same time) on the basis of n_2, n_1 and of a power P_{N2} greater than or equal to $P_2 \cdot fs$ (ch. 7).
— Calculate power P_1, required at input side of gear reducer using — the formula $\frac{P_2}{\eta}$, where $\eta = 0.96 \div 0.94$ is the efficiency of the gear reducer (ch. 3.13).

When for reasons of motor standardization, power P_1 applied at input side of gear reducer turns out to be higher than the power required (considering motor/gear reducer efficiency), it must be certain that this excess power applied will never be required, and frequency of starting **z** is so low as not to affect service factor (ch. 3.3).

Otherwise, make the selection by multiplying P_{N2} by $\frac{P_1 \text{ applied}}{P_1 \text{ required}}$.

Calculations can also be made on the basis of torque instead of power; this method is even preferable for low n_2 values.

Verifications

— Verify possible radial loads F_{r1}, F_{r2} by referring to instructions and values given in ch. 3.11 and 3.12.
— When the load chart is available, and/or there are overloads — due to starting on full load (mainly for high inertias and low transmission ratios), braking, shocks, gear reducers in which the low speed shaft becomes driving member due to driven machine inertia, or other static or dynamic causes — verify that the maximum torque peak (ch. 3.13) is always less than $2 \cdot M_{N2}$; if it is higher or cannot be evaluated in the above cases, install a safety device so that $2 \cdot M_{N2}$ will never be exceeded.
— Verify, when $fs < 1$, that torque M_2 is less or equal to M_{N2} value valid for $n_1 \leqslant 90$ rpm (see ch. 3.5).

— For the cases marked at ch. 7 with * and ** (in red) verify that $P_1 \leqslant Pt$ (ch. 3.2).

b - Gearmotor

Determining the gearmotor size

— Make available all necessary data: required output power P_2 of gearmotor, speed n_2, running conditions (nature of load, running time, frequency of starting **z**, other considerations) with reference to ch. 3.3.
— Determine service factor **fs** on the basis of running conditions (ch. 3.3).
— Select the gearmotor size on the basis of n_2, **fs** and of a power P_1 greater than or equal to P_2 (ch. 3.7).

If power P_2 required is the result of a precise calculation, the gearmotor should be selected on the basis of a power P_1 equal to or greater than $\frac{P_2}{\eta}$, where $\eta = 0.96 \div 0.94$ is gear reducer efficiency (ch. 3.13). The torque value M_2 has been calculated taking into account efficiency.

When for reasons of motor standardization, power P_1 available in catalogue is much greater than the power P_2 required, the gearmotor can be selected on

the basis of a lower service factor ($fs \cdot \frac{P_2 \text{ required}}{P_1 \text{ available}}$) provided it is certain that this excess power available will never be required and

frequency of starting **z** is low enough not to affect service factor (ch. 3.3).
Calculations can also be made on the basis of torque instead of power; this method is even preferable for low n_2 values.

Verifications

— Verify possible radial load F_{r2} referring to directions and values given in ch. 3.12.
— For the motor, verify frequency of starting ***z*** when higher than that normally permissible, referring to directions and values given in ch. 2b; this will normally be required for brake motors only.
– Verify, in case of **motors supplied by the customer**, that the **static bending moment** M_b generated by motor weight on the counter flange of gear reducer is lower than the value allowed M_{bmax}, stated in the ch. 3.13.

Loads higher than permissible loads may be present in dynamical applications where the gearmotor is subjected to translations, rotations or oscillations: consult us for the study of every specific case

— When a load chart is available, and/or there are overloads — due to starting on full load (especially with high inertias and low transmission ratios), braking, shocks, gear reducers in which the low speed shaft becomes driving member due to driven machine inertia, or other static or dynamic causes — verify that the maximum torque peak (ch. 3.13) is always less than $2 \cdot M_{N2}$ ($M_{N2} = M_2 \cdot f_s$, see ch. 3.7); if it is higher or cannot be evaluated in the above instances, install suitable safety devices so that $2 \cdot M_{N2}$ will never be exceeded.
— For the cases marked at ch. 3.7 with * and ** (in red) verify that $P_1 \leqslant P_t$ (ch. 3.2).

c - Combined gear reducer and gearmotor units

Combined units are obtained by coupling together **normal single** gear reducers and/or gearmotors so as to produce low output speeds.

Determining the final gear reducer size and the combined unit

— Make available all necessary data relating to the output of the final gear reducer: required torque M_2, speed n_2, running conditions (nature of load, running time, frequency of starting ***z***, other considerations) with reference to ch. 3.3.
— Determine service factor f_s on the basis of running conditions (ch. 3.3).
— Select the final gear reducer size and basic reference, and the initial gear reducer or gearmotor size (ch. 3.9) on the basis of a torque value M_{N2} greater than or equal to $M_2 \cdot f_s$.

Selection of initial gear reducer or gearmotor

— Calculate the speed n_2 and the required power P_2 at the initial gearmotor output using the following formulae:

$$n_2 \text{ initial} = n_2 \text{ final} \cdot i \text{ final}$$

$$P_2 \text{ initial} = \frac{M_2 \text{ final} \cdot n_2 \text{ final}}{63\,025 \cdot \eta \text{ final}} \text{ [hp]}$$

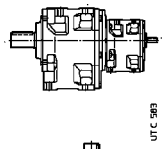
— In the case of gear reducer, make available input speed n_1 at the input of the initial gear reducer.
— Make the selection of initial gear reducer or gearmotor as shown in ch. 3.4 paragraph a) or b) bearing in mind that sizes are pre-established (and cannot be changed on account of couplings being standard) and that it is not necessary to verify service factor.

Designation for ordering

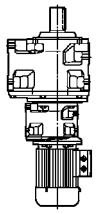
When ordering combined units, the single gear reducers or gearmotors must be designated **separately**, as indicated in ch. 3.1) bearing in mind the following:

- insert the words **coupled with** between the final gear reducer designation and that of the initial gear reducer or gearmotor;
- always add the words **without motor** to the final gear reducer designation; select the design **oversized B5 flange** for the initial gear reducer or gearmotor (for size 63 also add -**Ø 28**); in case of initial gear reducer or gearmotor size 40 select with flange **FC1A** design.

E.g.: MR 3I 160 UC2A - 38 × 300 - 49.7 without motor coupled with
R 2I 80 UC2A/15.7 oversized B5 flange



MR 3I 125 UC2A - 28 × 250 - 34.1 without motor mounting position V6 coupled with
MR 2I 63 UC2A - 19 × 200 - 24.3
oversized B5 flange - Ø 28, mounting position V6
HB3 80B 4 230.400 B5



Considerations on selection

Motor power

Taking into account the efficiency of the gear reducer, and other drives — if any — motor power is to be as near as possible to the power rating required by the driven machine: accurate calculation is therefore recommended.

The power required by the machine can be calculated, seeing that it is related directly to the power-requirement of the work to be carried out, to friction (starting, sliding of rolling friction) and inertia (particularly when mass and/or acceleration or deceleration are considerable). It can also be determined experimentally on the basis of tests, comparisons with existing applications, or readings taken with amperometers or wattmeters.

An oversized motor would involve: a greater starting current and consequently larger fuses and heavier cable; a higher running cost as power factor (cos ω) and efficiency would suffer; greater stress on the drive, causing danger of mechanical failure, drive being normally proportionate to the power rating required by the machine, not to motor power.

Only high values of ambient temperature, altitude, frequency of starting or other particular conditions require an increase in motor power.

Input speed

Maximum input speed must be always $n_1 \leq 2\,800$ rpm; for intermittent duty or for particular needs higher speeds may be accepted: consult us.

For n_1 higher than 1 400 rpm, **power** and **torque** ratings relating to a given transmission ratio vary as shown in the table alongside. In this case no loads should be imposed on the high speed shaft end.

For variable n_1, the selection should be carried out on the basis of $n_{1\,max}$; but it should also be verified on the basis of $n_{1\,min}$.

When there is a belt drive between motor and gear reducer, different input speeds n_1 should be examined in order to select the most suitable unit from engineering and economy standpoints alike (our catalogue favours this method of selection as it shows a number of input speed values n_1 relating to a determined output speed n_{N2} in the same section). Input speed should not be higher than 1 400 rpm, unless conditions make it necessary; better to take advantage of the transmission, and use an input speed lower than 900 rpm.

n_1 rpm	R 2I		R 3I	
	P_{N2}	M_{N2}	P_{N2}	M_{N2}
2 800	1.4	0.71	1.7	0.85
2 240	1.25	0.8	1.4	0.9
1 800	1.12	0.9	1.18	0.95
1 400	1	1	1	1

Operation on 60 Hz supply

When motor is fed with 60 Hz frequency (ch. 2 b), the gearmotor specifications vary as follows.
– Speed n_2 increases by 20%.
– Power P_1 may either remain constant or increase (ch. 2 b).
– Torque M_2 and service factor fs vary as follows:

$$M_{2\ \text{at 60 Hz}} = M_{2\ \text{at 50 Hz}} \cdot \frac{P_{1\ \text{at 60 Hz}}}{1.2 \cdot P_{1\ \text{at 50 Hz}}}$$

$$f_{S\ \text{at 60 Hz}} = f_{S\ \text{at 50 Hz}} \cdot \frac{1.12 \cdot P_{1\ \text{at 50 Hz}}}{P_{1\ \text{at 60 Hz}}}$$

Nominal powers and torques (gear reducers) 3.5

n_{N2} rpm	n_1 rpm	i_N	Gear reducer size P_{N2} hp T_{N2} lb in ... / *i*															
			32	**40**	**50**	**51**	**63**	**64**	**80**	**81**	**100**	**101**	**125**	**126**	**140**	**160**	**180**
			1.32	2.29	4.51	5.8	9.8	11.6	20.4	24*	38.4*	45.8**	79**	91**		184**	
280	1 800	**6.3**	292	489	1 030	1 330	2 170	2 590	4 360	5 100	8 700	10 400	17 500	20 200	–	40 800	–
			2I/6.33	**2I/6.08**	**2I/6.52**	**2I/6.52**	**2I/6.36**	**2I/6.36**	**2I/6.1**	**2I/6.1**	**2I/6.5**	**2I/6.5**	**2I/6.35**	**2I/6.35**		**2I/6.34**	
			1.03	2.22	4.39	6.2	9.4	11.8	19.7	24.7*	37*	48.6**	75**	94**		195**	200**
224	1 800	**8**	292	590	1 250	1 750	2 640	3 320	5 300	6 600	10 500	13 800	21 000	26 600	–	55 600	59 100
			2I/8.12	**2I/7.61**	**2I/8.13**	**2I/8.13**	**2I/8.05**	**2I/8.05**	**2I/7.64**	**2I/7.64**	**2I/8.11**	**2I/8.11**	**2I/8.03**	**2I/8.03**		**2I/8.12**	**2I/8.43**
			1.04	1.8	3.54	4.57	7.7	9.1	16.0	18.9	30.1	36.1*	62*	72**		145**	
	1 400	**6.3**	297	495	1 040	1 340	2 200	2 620	4 410	5 200	8 800	10 600	17 600	20 500	–	41 200	–
			2I/6.33	**2I/6.08**	**2I/6.52**	**2I/6.52**	**2I/6.36**	**2I/6.36**	**2I/6.1**	**2I/6.1**	**2I/6.5**	**2I/6.5**	**2I/6.35**	**2I/6.35**		**2I/6.34**	
			0.77	1.73	3.43	4.89	7.2	9.7	15.4	20.6	28.9	39*	58*	77**	96**	143**	200**
180	1 800	**10**	292	590	1 250	1 780	2 640	3 540	5 300	7 100	10 500	14 200	21 000	28 200	33 500	53 800	75 600
			2I/10.8	**2I/9.76**	**2I/10.4**	**2I/10.4**	**2I/10.5**	**2I/10.5**	**2I/9.79**	**2I/9.79**	**2I/10.4**	**2I/10.4**	**2I/10.4**	**2I/10.4**	**2I/9.92**	**2I/10.7**	**2I/10.8**
			0.81	1.75	3.48	4.84	7.4	9.2	15.6	19.3	29.2	38.2*	59*	73**		154**	158**
	1 400	**8**	297	600	1 270	1 770	2 680	3 320	5 400	6 600	10 700	14 000	21 400	26 600	–	56 500	59 800
			2I/8.12	**2I/7.61**	**2I/8.13**	**2I/8.13**	**2I/8.05**	**2I/8.05**	**2I/7.64**	**2I/7.64**	**2I/8.11**	**2I/8.11**	**2I/8.03**	**2I/8.03**		**2I/8.12**	**2I/8.43**
			0.85	1.46	2.86	3.69	6.2	7.4	12.9	15.2	24.3	29.2	49.6	58*		117**	
	1 120	**6.3**	302	500	1 050	1 350	2 210	2 650	4 430	5 200	8 900	10 700	17 700	20 700	–	41 600	–
			2I/6.33	**2I/6.08**	**2I/6.52**	**2I/6.52**	**2I/6.36**	**2I/6.36**	**2I/6.1**	**2I/6.1**	**2I/6.5**	**2I/6.5**	**2I/6.35**	**2I/6.35**		2I/6.34	
			0.73	1.58	3.13	4.35	6.7	8.2	14.0	17.2	26.2	34.3	53*	66**		139**	141**
160	1 250	**8**	299	610	1 280	1 780	2 700	3 320	5 400	6 600	10 700	14 000	21 500	26 600	–	56 900	60 000
			2I/8.12	**2I/7.61**	**2I/8.13**	**2I/8.13**	**2I/8.05**	**2I/8.05**	**2I/7.64**	**2I/7.64**	**2I/8.11**	**2I/8.11**	**2I/8.03**	**2I/8.03**		**2I/8.12**	**2I/8.43**
			0.76	1.31	2.57	3.31	5.5	6.6	11.5	13.7	21.8	26.2	44.2	52		105**	
	1 000	**6.3**	304	500	1 050	1 360	2 210	2 660	4 430	5 300	8 900	10 700	17 700	20 800	–	41 800	–
			2I/6.33	**2I/6.08**	**2I/6.52**	**2I/6.52**	**2I/6.36**	**2I/6.36**	**2I/6.1**	**2I/6.1**	**2I/6.5**	**2I/6.5**	**2I/6.35**	**2I/6.35**		**2I/6.34**	
			0.58	1.3	2.86	3.97	5.9	7.7	11.6	15.1	24.1	31.4	47.3	61*	85**	129**	142**
140	1 800	**12.5**	276	590	1 250	1 730	2 640	3 440	5 300	6 900	10 500	13 700	21 000	27 300	38 700	54 300	62 100
			2I/13.5	**2I/13**	**2I/12.5**	**2I/12.5**	**2I/12.7**	**2I/12.7**	**2I/13**	**2I/13**	**2I/12.5**	**2I/12.5**	**2I/12.7**	**2I/12.7**	**2I/12.9**	**2I/12.1**	**2I/12.5**
			0.61	1.37	2.72	3.86	5.7	7.6	12.2	16.3	22.8	30.8	45.5	61*	76**	113**	158**
	1 400	**10**	297	600	1 270	1 810	2 680	3 600	5 400	7 200	10 700	14 400	21 400	28 600	33 900	54 700	76 400
			2I/10.8	**2I/9.76**	**2I/10.4**	**2I/10.4**	**2I/10.5**	**2I/10.5**	**2I/9.79**	**2I/9.79**	**2I/10.4**	**2I/10.4**	**2I/10.4**	**2I/10.4**	**2I/9.92**	**2I/10.7**	**2I/10.8**
			0.66	1.42	2.83	3.91	6.0	7.3	12.7	15.4	23.7	30.9	47.9	59*		125**	127**
	1 120	**8**	302	610	1 290	1 790	2 720	3 320	5 400	6 600	10 800	14 100	21 600	26 600	–	57 300	60 300
			2I/8.12	**2I/7.61**	**2I/8.13**	**2I/8.13**	**2I/8.05**	**2I/8.05**	**2I/7.64**	**2I/7.64**	**2I/8.11**	**2I/8.11**	**2I/8.03**	**2I/8.03**		**2I/8.12**	**2I/8.43**
			0.69	1.18	2.32	3.00	4.96	6.0	10.4	12.4	19.7	23.7	39.8	46.9		95*	
	900	**6.3**	306	500	1 060	1 370	2 210	2 660	4 430	5 300	9 000	10 800	17 700	20 900	–	42 000	–
			2I/6.33	**2I/6.08**	**2I/6.52**	**2I/6.52**	**2I/6.36**	**2I/6.36**	**2I/6.1**	**2I/6.1**	**2I/6.5**	**2I/6.5**	**2I/6.35**	**2I/6.35**		**2I/6.34**	
			0.55	1.23	2.45	3.47	5.1	6.9	10.9	14.7	20.5	27.7	40.9	55*	68*	102*	141*
125	1 250	**10**	299	610	1 280	1 820	2 700	3 630	5 400	7 200	10 700	14 500	21 500	28 800	34 000	55 100	76 700
			2I/10.8	**2I/9.76**	**2I/10.4**	**2I/10.4**	**2I/10.5**	**2I/10.5**	**2I/9.79**	**2I/9.79**	**2I/10.4**	**2I/10.4**	**2I/10.4**	**2I/10.4**	**2I/9.92**	**2I/10.7**	**2I/10.8**

For n_1 > 1 400 rpm or n_1 < 355 rpm see ch. 3.4 and the table on page 36.
* In case of ambient temperature > 86 °F (30 °C) check the thermal power (ch. 3.2).
** Check the thermal power (ch. 3.2).

Nominal powers and torques (gear reducers) 3.5

n_{N2} rpm	n_1	i_N	Gear reducer size P_{N2} hp T_{N2} lb in ... / *i*														
			32	**40**	**50**	**51**	**63**	**64**	**80**	**81**	**100**	**101**	**125**	**126**	**140**	**160**	**180**
			0.59	1.28	2.54	3.51	5.4	6.5	11.4	13.8	21.3	27.7	43.1	52		113**	114**
125	1 000	**8**	304	610	1 300	1 800	2 740	3 320	5 500	6 600	10 900	14 200	21 800	26 600	–	57 700	60 600
			2I/8.12	**2I/7.61**	**2I/8.13**	**2I/8.13**	**2I/8.05**	**2I/8.05**	**2I/7.64**	**2I/7.64**	**2I/8.11**	**2I/8.11**	**2I/8.03**	**2I/8.03**		**2I/8.12**	**2I/8.43**
			0.62	1.06	2.07	2.68	4.41	5.3	9.2	11.0	17.6	21.1	35.4	41.8		84*	
	800	**6.3**	308	510	1 060	1 370	2 210	2 660	4 430	5 300	9 000	10 800	17 700	20 900	–	42 200	–
			2I/6.33	**2I/6.08**	**2I/6.52**	**2I/6.52**	**2I/6.36**	**2I/6.36**	**2I/6.1**	**2I/6.1**	**2I/6.5**	**2I/6.5**	**2I/6.35**	**2I/6.35**		**2I/6.34**	
				0.98	2.26	2.94	4.73	5.8	9.9	12.3	18.9	25.5	39.9	52	72**	99*	135**
112	1 800	**16**	–	560	1 290	1 680	2 720	3 330	5 400	6 700	10 800	14 600	21 300	27 600	39 100	55 200	75 600
				2I/16.2	**2I/16.3**	**2I/16.3**	**2I/16.4**	**2I/16.4**	**2I/15.7**	**2I/15.7**	**2I/16.3**	**2I/16.3**	**2I/15.2**	**2I/15.2**	**2I/15.5**	**2I/15.9**	**2I/16**
			0.46	1.03	2.26	3.13	4.68	6.1	9.1	11.9	19.0	24.9	37.4	48.5	67**	101**	111**
	1 400	**12.5**	279	600	1 270	1 760	2 680	3 500	5 400	7 000	10 700	14 000	21 400	27 700	39 300	54 900	62 800
			2I/13.5	**2I/13**	**2I/12.5**	**2I/12.5**	**2I/12.7**	**2I/12.7**	**2I/13**	2I/13	**2I/12.5**	**2I/12.5**	**2I/12.7**	**2I/12.7**	**2I/12.9**	**2I/12.1**	**2I/12.5**
			0.5	1.11	2.21	3.13	4.63	6.2	9.9	13.2	18.5	25.0	36.9	49.4	61*	92*	127*
	1 120	**10**	302	610	1 290	1 830	2 720	3 650	5 400	7 300	10 800	14 600	21 600	29 000	34 200	55 500	77 100
			2I/10.8	**2I/9.76**	**2I/10.4**	**2I/10.4**	**2I/10.5**	**2I/10.5**	**2I/9.79**	**2I/9.79**	**2I/10.4**	**2I/10.4**	**2I/10.4**	**2I/10.4**	**2I/9.92**	**2I/10.7**	**2I/10.8**
			0.54	1.16	2.31	3.18	4.9	5.9	10.3	12.4	19.3	25.1	39.0	47.2		102**	103*
	900	**8**	306	620	1 310	1 810	2 760	3 320	5 500	6 600	10 900	14 300	21 900	26 600	–	58 100	60 900
			2I/8.12	**2I/7.61**	**2I/8.13**	**2I/8.13**	**2I/8.05**	**2I/8.05**	**2I/7.64**	**2I/7.64**	**2I/8.11**	**2I/8.11**	**2I/8.03**	**2I/8.03**		**2I/8.12**	**2I/8.43**
			0.55	0.94	1.85	2.39	3.92	4.7	8.2	9.8	15.7	18.9	31.4	37.1		75	
	710	**6.3**	310	510	1 070	1 380	2 210	2 660	4 430	5 300	9 100	10 900	17 700	20 900	–	42 400	–
			2I/6.33	**2I/6.08**	**2I/6.52**	**2I/6.52**	**2I/6.36**	**2I/6.36**	**2I/6.1**	**2I/6.1**	**2I/6.5**	**2I/6.5**	**2I/6.35**	**2I/6.35**		**2I/6.34**	
			0.41	0.92	2.04	2.82	4.21	5.5	8.2	10.7	17.1	22.4	33.6	43.6	61*	91*	100*
100	1 250	**12.5**	281	610	1 280	1 770	2 700	3 530	5 400	7 000	10 700	14 100	21 500	27 900	39 500	55 100	63 000
			2I/13.5	**2I/13**	**2I/12.5**	**2I/12.5**	**2I/12.7**	**2I/12.7**	**2I/13**	**2I/13**	**2I/12.5**	**2I/12.5**	**2I/12.7**	**2I/12.7**	**2I/12.9**	**2I/12.1**	**2I/12.5**
			0.45	1.00	1.99	2.82	4.16	5.6	8.9	11.9	16.6	22.5	33.2	44.4	55	83	114**
	1 000	**10**	304	610	1 300	1 850	2 740	3 680	5 500	7 400	10 900	14 700	21 800	29 200	34 400	55 900	77 400
			2I/10.8	**2I/9.76**	**2I/10.4**	**2I/10.4**	**2I/10.5**	**2I/10.5**	**2I/9.79**	**2I/9.79**	**2I/10.4**	**2I/10.4**	**2I/10.4**	**2I/10.4**	**2I/9.92**	**2I/10.7**	**2I/10.8**
			0.48	1.04	2.07	2.84	4.39	5.2	9.2	11.0	17.2	22.4	34.9	42.0		91*	92*
	800	**8**	308	620	1 320	1 820	2 780	3 320	5 600	6 600	11 000	14 300	22 100	26 600	–	58 500	61 100
			2I/8.12	**2I/7.61**	**2I/8.13**	**2I/8.13**	**2I/8.05**	**2I/8.05**	**2I/7.64**	**2I/7.64**	**2I/8.11**	**2I/8.11**	**2I/8.03**	**2I/8.03**		**2I/8.12**	**2I/8.43**
			0.49	0.84	1.65	2.13	3.48	4.17	7.2	8.7	14.0	16.8	27.9	32.9		67	
	630	**6.3**	313	510	1 070	1 390	2 210	2 660	4 430	5 300	9 100	10 900	17 700	20 900	–	42 600	–
			2I/6.33	**2I/6.08**	**2I/6.52**	**2I/6.52**	**2I/6.36**	**2I/6.36**	2I/6.1	**2I/6.1**	**2I/6.5**	**2I/6.5**	**2I/6.35**	**2I/6.35**		**2I/6.34**	
				0.89	1.88	2.59	3.88	5.1	7.5	9.7	15.7	20.6	29.8	36.4	52	73	101*
90	1 800	**20**	–	620	1 290	1 780	2 720	3 550	5 400	7 100	10 800	14 100	19 800	24 200	34 400	48 600	68 900
				2I/19.9	**2I/19.6**	**2I/19.6**	**2I/20**	**2I/20**	**2I/20.8**	**2I/20.8**	**2I/19.6**	**2I/19.6**	**2I/19**	**2I/19**	**2I/19**	**2I/19**	**2I/19.5**
				0.77	1.79	2.31	3.74	4.55	7.8	9.6	14.9	20.2	31.6	41.0	57*	78	106**
	1 400	**16**	–	560	1 310	1 700	2 760	3 360	5 500	6 800	11 000	14 800	21 600	28 000	39 700	56 100	76 400
				2I/16.2	**2I/16.3**	**2I/16.3**	**2I/16.4**	**2I/16.4**	**2I/15.7**	**2I/15.7**	**2I/16.3**	**2I/16.3**	**2I/15.2**	**2I/15.2**	**2I/15.5**	**2I/15.9**	**2I/16**

For n_1 > 1 400 rpm or n_1 < 355 rpm see ch. 3.4 and the table on page 36.
* In case of ambient temperature > > 86 °F (30 °C) check the thermal power (ch. 3.2).
** Check the thermal power (ch. 3.2).

Nominal powers and torques (gear reducers) 3.5

n_{N2} rpm	n_1 rpm	i_N	Gear reducer size P_{N2} hp T_{N2} lb in ... / *i*														
			32	**40**	**50**	**51**	**63**	**64**	**80**	**81**	**100**	**101**	**125**	**126**	**140**	**160**	**180**
			0.37	0.83	1.84	2.54	3.8	4.96	7.4	9.7	15.4	20.2	30.3	39.3	55	82	90*
90	1 120	**12.5**	283	610	1 290	1 780	2 720	3 550	5 400	7 100	10 800	14 200	21 600	28 100	39 800	55 400	63 300
			2I/13.5	**2I/13**	**2I/12.5**	**2I/12.5**	**2I/12.7**	**2I/12.7**	**2I/13**	**2I/13**	**2I/12.5**	**2I/12.5**	**2I/12.7**	**2I/12.7**	**2I/12.9**	**2I/12.1**	**2I/12.5**
			0.4	0.9	1.8	2.55	3.77	5.1	8.0	10.8	15.1	20.4	30.0	40.2	49.7	75	103*
	900	**10**	306	620	1 310	1 860	2 760	3 710	5 500	7 400	10 900	14 800	21 900	29 400	34 500	56 300	77 800
			2I/10.8	**2I/9.76**	**2I/10.4**	**2I/10.4**	**2I/10.5**	**2I/10.5**	**2I/9.79**	**2I/9.79**	**2I/10.4**	**2I/10.4**	**2I/10.4**	**2I/10.4**	**2I/9.92**	**2I/10.7**	**2I/10.8**
			0.43	0.93	1.85	2.53	3.92	4.65	8.3	9.8	15.4	20.0	31.2	37.3		82	82
	710	**8**	310	630	1 330	1 830	2 800	3 320	5 600	6 600	11 100	14 400	22 300	26 600	–	58 900	61 400
			2I/8.12	**2I/7.61**	**2I/8.13**	**2I/8.13**	**2I/8.05**	**2I/8.05**	**2I/7.64**	**2I/7.64**	**2I/8.11**	**2I/8.11**	**2I/8.03**	**2I/8.03**		**2I/8.12**	**2I/8.43**
			0.44	0.75	1.47	1.9	3.09	3.71	6.4	7.7	12.5	15.0	24.8	29.2		60	
	560	**6.3**	315	520	1 080	1 400	2 210	2 660	4 430	5 300	9 100	11 000	17 700	20 900	–	42 800	–
			2I/6.33	**2I/6.08**	**2I/6.52**	**2I/6.52**	**2I/6.36**	**2I/6.36**	**2I/6.1**	**2I/6.1**	**2I/6.5**	**2I/6.5**	**2I/6.35**	**2I/6.35**		**2I/6.34**	
				0.69	1.61	2.07	3.36	4.08	7.0	8.6	13.4	18.1	28.4	36.8	51	70	95*
80	1 250	**16**	–	570	1 320	1 710	2 780	3 380	5 600	6 800	11 000	14 900	21 700	28 200	40 000	56 500	76 700
				2I/16.2	**2I/16.3**	**2I/16.3**	**2I/16.4**	**2I/16.4**	**2I/15.7**	**2I/15.7**	**2I/16.3**	**2I/16.3**	**2I/15.2**	**2I/15.2**	**2I/15.5**	**2I/15.9**	**2I/16**
			0.33	0.75	1.66	2.28	3.42	4.46	6.7	8.7	13.9	18.2	27.2	35.4	49.1	73	81
	1 000	**12.5**	284	610	1 300	1 800	2 740	3 580	5 500	7 200	10 900	14 300	21 800	28 300	40 100	55 600	63 600
			2I/13.5	**2I/13**	**2I/12.5**	**2I/12.5**	**2I/12.7**	**2I/12.7**	**2I/13**	**2I/13**	**2I/12.5**	**2I/12.5**	**2I/12.7**	**2I/12.7**	**2I/12.9**	**2I/12.1**	**2I/12.5**
			0.36	0.81	1.62	2.28	3.38	4.53	7.2	9.7	13.5	18.3	26.9	36.0	44.4	67	92*
	800	**10**	308	620	1 320	1 870	2 780	3 730	5 600	7 500	11 000	14 900	22 100	29 600	34 700	56 700	78 100
			2I/10.8	**2I/9.76**	**2I/10.4**	**2I/10.4**	**2I/10.5**	**2I/10.5**	**2I/9.79**	**2I/9.79**	**2I/10.4**	**2I/10.4**	**2I/10.4**	**2I/10.4**	**2I/9.92**	**2I/10.7**	**2I/10.8**
			0.38	0.83	1.65	2.26	3.51	4.12	7.4	8.7	13.8	17.8	27.9	33.1		73	73
	630	**8**	313	630	1 340	1 840	2 830	3 320	5 600	6 600	11 200	14 500	22 400	26 600	–	59 300	61 700
			2I/8.12	**2I/7.61**	**2I/8.13**	**2I/8.13**	**2I/8.05**	**2I/8.05**	**2I/7.64**	**2I/7.64**	**2I/8.11**	**2I/8.11**	**2I/8.03**	**2I/8.03**		**2I/8.12**	**2I/8.43**
													24.6	32.9	38.2	68	76
71	1 800	**25**	–	–	–	–	–	–	–	–	–	–	22 600	30 300	39 200	60 500	78 200
													3I/26.2	**3I/26.2**	**3I/29.3**	**3I/25.5**	**3I/29.5**
				0.67	1.42	1.86	2.89	3.54	5.6	6.8	12.0	14.6	21.3				
	1 800	**25**	–	620	1 190	1 570	2 530	3 100	5 100	6 200	10 100	12 300	18 100	–	–	–	–
				2I/26.5	**2I/24.1**	**2I/24.1**	**2I/25**	**2I/25**	**2I/26**	**2I/26**	**2I/24.1**	**2I/24.1**	**2I/24.3**				
				0.7	1.49	2.05	3.07	4.00	5.9	7.7	12.4	16.3	23.5	28.8	40.8	58	79
	1 400	**20**	–	630	1 310	1 810	2 760	3 600	5 500	7 200	11 000	14 400	20 100	24 600	34 900	49 300	69 800
				2I/19.9	**2I/19.6**	**2I/19.6**	**2I/20**	**2I/20**	**2I/20.8**	**2I/20.8**	**2I/19.6**	**2I/19.6**	**2I/19**	**2I/19**	**2I/19**	**2I/19**	**2I/19.5**
				0.62	1.45	1.87	3.03	3.67	6.4	7.8	12.1	16.4	25.6	33.2	46.1	64	86
	1 120	**16**	–	570	1 330	1 720	2 800	3 400	5 600	6 900	11 100	15 000	21 900	28 400	40 200	56 900	77 100
				2I/16.2	**2I/16.3**	**2I/16.3**	**2I/16.4**	**2I/16.4**	**2I/15.7**	**2I/15.7**	**2I/16.3**	**2I/16.3**	**2I/15.2**	**2I/15.2**	**2I/15.5**	**2I/15.9**	**2I/16**
			0.3	0.68	1.5	2.07	3.1	4.04	6.1	7.9	12.5	16.5	24.7	32.1	44.5	66	73
	900	**12.5**	286	620	1 310	1 810	2 760	3 600	5 500	7 200	10 900	14 400	21 900	28 500	40 300	55 900	63 900
			2I/13.5	**2I/13**	**2I/12.5**	**2I/12.5**	**2I/12.7**	**2I/12.7**	**2I/13**	**2I/13**	**2I/12.5**	**2I/12.5**	**2I/12.7**	**2I/12.7**	**2I/12.9**	**2I/12.1**	**2I/12.5**

For n_1 > 1 400 rpm or n_1 < 355 rpm see ch. 3.4 and the table on page 36.
* In case of ambient temperature > 86 °F (30 °C) check the thermal power (ch. 3.2).
** Check the thermal power (ch. 3.2).

Nominal powers and torques (gear reducers) 3.5

n_{N2} rpm	n_1	i_N	Gear reducer size P_{N2} hp T_{N2} lb in ... / *i*														
			32	**40**	**50**	**51**	**63**	**64**	**80**	**81**	**100**	**101**	**125**	**126**	**140**	**160**	**180**
			0.32	0.72	1.45	2.04	3.02	4.05	6.4	8.6	12.1	16.4	24.0	32.2	39.6	60	82
71	710	**10**	310	630	1 330	1 880	2 800	3 760	5 600	7 500	11 100	15 100	22 300	29 800	34 900	57 100	78 500
			2I/10.8	**2I/9.76**	**2I/10.4**	**2I/10.4**	**2I/10.5**	**2I/10.5**	**2I/9.79**	**2I/9.79**	**2I/10.4**	**2I/10.4**	**2I/10.4**	**2I/10.4**	**2I/9.92**	**2I/10.7**	**2I/10.8**
			0.34	0.74	1.48	2.02	3.14	3.66	6.6	7.7	12.3	15.9	25.0	29.4		65	65
	560	**8**	315	640	1 360	1 850	2 850	3 320	5 700	6 600	11 200	14 600	22 600	26 600	–	59 700	62 000
			2I/8.12	**2I/7.61**	**2I/8.13**	**2I/8.13**	**2I/8.05**	**2I/8.05**	**2I/7.64**	**2I/7.64**	**2I/8.11**	**2I/8.11**	**2I/8.03**	**2I/8.03**		**2I/8.12**	**2I/8.43**
				0.63	1.34	1.84	2.76	3.6	5.3	6.9	11.1	14.7	21.1	25.8	36.6	52	71
63	1 250	**20**	–	630	1 320	1 820	2 780	3 630	5 600	7 300	11 000	14 500	20 200	24 800	35 100	49 600	70 300
				2I/19.9	**2I/19.6**	**2I/19.6**	**2I/20**	**2I/20**	**2I/20.8**	**2I/20.8**	**2I/19.6**	**2I/19.6**	**2I/19**	**2I/19**	**2I/19**	**2I/19**	**2I/19.5**
				0.56	1.31	1.67	2.73	3.29	5.7	7.0	10.8	14.7	23.0	29.9	41.5	57	77
	1 000	**16**	–	570	1 340	1 720	2 820	3 410	5 600	6 900	11 200	15 200	22 000	28 600	40 500	57 300	77 400
				2I/16.2	**2I/16.3**	**2I/16.3**	**2I/16.4**	**2I/16.4**	**2I/15.7**	**2I/15.7**	**2I/16.3**	**2I/16.3**	**2I/15.2**	**2I/15.2**	**2I/15.5**	**2I/15.9**	**2I/16**
			0.27	0.61	1.35	1.85	2.78	3.62	5.4	7.1	11.2	14.8	22.1	28.7	39.8	59	65
	800	**12.5**	287	620	1 320	1 820	2 780	3 630	5 600	7 300	11 000	14 500	22 100	28 700	40 600	56 100	64 200
			2I/13.5	**2I/13**	**2I/12.5**	**2I/12.5**	**2I/12.7**	**2I/12.7**	**2I/13**	**2I/13**	**2I/12.5**	**2I/12.5**	**2I/12.7**	**2I/12.7**	**2I/12.9**	**2I/12.1**	**2I/12.5**
			0.29	0.65	1.29	1.82	2.7	3.63	5.8	7.7	10.8	14.6	21.5	28.8	35.3	54	73
	630	**10**	313	630	1 340	1 900	2 830	3 790	5 600	7 600	11 200	15 200	22 400	30 000	35 100	57 500	78 900
			2I/10.8	**2I/9.76**	**2I/10.4**	**2I/10.4**	**2I/10.5**	**2I/10.5**	**2I/9.79**	**2I/9.79**	**2I/10.4**	**2I/10.4**	**2I/10.4**	**2I/10.4**	**2I/9.92**	**2I/10.7**	**2I/10.8**
					1.21	1.7	2.38	3.2	4.97	6.7	10.0	13.6	18.9	25.4	37.6	53	72
56	1 800	**31.5**	–	–	1 350	1 900	2 850	3 820	5 700	7 700	11 200	15 200	22 600	30 300	42 700	60 500	85 400
					3I/31.9	**3I/31.9**	**3I/34.2**	**3I/34.2**	**3I/32.8**	**3I/32.8**	**3I/32**	**3I/32**	**3I/34.1**	**3I/34.1**	**3I/32.4**	**3I/32.7**	**3I/33.9**
				0.5	1.08		2.04		4.1		9.1						
	1 800	**31.5**	–	580	1 110	–	2 280	–	4 560	–	9 400	–	–	–	–	–	–
				2I/33.1	**2I/29.3**		**2I/31.9**		**2I/31.8**		**2I/29.3**						
													19.4	26.0	30.2	54	60
	1 400	**25**	–	–	–	–	–	–	–	–	–	–	22 900	30 700	39 800	61 400	79 400
													3I/26.2	**3I/26.2**	**3I/29.3**	**3I/25.5**	**3I/29.5**
				0.53	1.12	1.47	2.28	2.79	4.38	5.4	9.4	11.5	16.7				
	1 400	**25**	–	630	1 210	1 590	2 560	3 140	5 100	6 300	10 200	12 500	18 200	–	–	–	–
				2I/26.5	**2I/24.1**	**2I/24.1**	**2I/25**	**2I/25**	**2I/26**	**2I/26**	**2I/24.1**	**2I/24.1**	**2I/24.3**				
				0.57	1.21	1.66	2.49	3.25	4.78	6.2	10.1	13.2	19.0	23.3	33.0	46.8	64
	1 120	**20**	–	640	1 330	1 830	2 800	3 660	5 600	7 300	11 100	14 600	20 300	24 900	35 300	49 900	70 700
				2I/19.9	**2I/19.6**	**2I/19.6**	**2I/20**	**2I/20**	**2I/20.8**	**2I/20.8**	**2I/19.6**	**2I/19.6**	**2I/19**	**2I/19**	**2I/19**	**2I/19**	**2I/19.5**
				0.51	1.18	1.51	2.47	2.98	5.2	6.3	9.8	13.3	20.8	27.1	37.6	52	69
	900	**16**	–	580	1 350	1 730	2 840	3 430	5 700	6 900	11 200	15 300	22 200	28 800	40 800	57 700	77 800
				2I/16.2	**2I/16.3**	**2I/16.3**	**2I/16.4**	**2I/16.4**	**2I/15.7**	**2I/15.7**	**2I/16.3**	**2I/16.3**	**2I/15.2**	**2I/15.2**	**2I/15.5**	**2I/15.9**	**2I/16**
			0.24	0.54	1.2	1.65	2.48	3.24	4.85	6.3	10.0	13.2	19.7	25.7	35.6	53	58
	710	**12.5**	289	630	1 330	1 830	2 800	3 660	5 600	7 300	11 100	14 600	22 300	28 900	40 900	56 400	64 500
			2I/13.5	**2I/13**	**2I/12.5**	**2I/12.5**	**2I/12.7**	**2I/12.7**	**2I/13**	**2I/13**	**2I/12.5**	**2I/12.5**	**2I/12.7**	**2I/12.7**	**2I/12.9**	**2I/12.1**	**2I/12.5**

For n_1 > 1 400 rpm or n_1 < 355 rpm see ch. 3.4 and the table on page 36.
* In case of ambient temperature > > 86 °F (30 °C) check the thermal power (ch. 3.2).
** Check the thermal power (ch. 3.2).

Nominal powers and torques (gear reducers) 3.5

n_{N2} rpm	n_1	i_N	Gear reducer size P_{N2} hp T_{N2} lb in ... / *i*														
			32	**40**	**50**	**51**	**63**	**64**	**80**	**81**	**100**	**101**	**125**	**126**	**140**	**160**	**180**
			0.26	0.58	1.16	1.63	2.42	3.25	5.2	6.9	9.6	13.1	19.2	25.8	31.6	48.1	65
56	560	**10**	315	640	1 360	1 910	2 850	3 820	5 700	7 600	11 200	15 300	22 600	30 200	35 200	58 000	79 300
			2I/10.8	**2I/9.76**	**2I/10.4**	**2I/10.4**	**2I/10.5**	**2I/10.5**	**2I/9.79**	**2I/9.79**	**2I/10.4**	**2I/10.4**	**2I/10.4**	**2I/10.4**	**2I/9.92**	**2I/10.7**	**2I/10.8**
													17.4	23.4	27.2	48.1	54
50	1 250	**25**	–	–	–	–	–	–	–	–	–	–	23 100	30 900	40 100	61 800	80 000
													3I/26.2	**3I/26.2**	**3I/29.3**	**3I/25.5**	**3I/29.5**
				0.47	1.00	1.32	2.05	2.5	3.94	4.81	8.5	10.3	15.0				
	1 250	**25**	–	630	1 220	1 600	2 580	3 150	5 200	6 300	10 300	12 600	18 300	–	–	–	–
				2I/26.5	**2I/24.1**	**2I/24.1**	**2I/25**	**2I/25**	**2I/26**	**2I/26**	**2I/24.1**	**2I/24.1**	**2I/24.3**				
				0.51	1.09	1.49	2.24	2.92	4.3	5.6	9.0	11.9	17.1	20.9	29.7	42.0	58
	1 000	**20**	–	640	1 340	1 840	2 820	3 680	5 600	7 400	11 200	14 700	20 400	25 100	35 500	50 200	71 100
				2I/19.9	**2I/19.6**	**2I/19.6**	**2I/20**	**2I/20**	**2I/20.8**	**2I/20.8**	**2I/19.6**	**2I/19.6**	**2I/19**	**2I/19**	**2I/19**	**2I/19**	**2I/19.5**
				0.45	1.06	1.35	2.21	2.66	4.64	5.6	8.8	11.9	18.6	24.2	33.5	46.3	62
	800	**16**	–	580	1 360	1 740	2 860	3 440	5 700	7 000	11 300	15 400	22 300	29 000	40 900	58 100	78 100
				2I/16.2	**2I/16.3**	**2I/16.3**	**2I/16.4**	**2I/16.4**	**2I/15.7**	**2I/15.7**	**2I/16.3**	**2I/16.3**	**2I/15.2**	**2I/15.2**	**2I/15.5**	**2I/15.9**	**2I/16**
			0.22	0.49	1.08	1.48	2.22	2.89	4.33	5.7	9.0	11.8	17.6	22.9	31.6	47.0	52
	630	**12.5**	291	630	1 340	1 850	2 830	3 680	5 600	7 400	11 200	14 700	22 400	29 100	40 900	56 700	64 800
			2I/13.5	**2I/13**	**2I/12.5**	**2I/12.5**	**2I/12.7**	**2I/12.7**	**2I/13**	**2I/13**	**2I/12.5**	**2I/12.5**	**2I/12.7**	**2I/12.7**	**2I/12.9**	**2I/12.1**	**2I/12.5**
				0.37	1.01	1.38	1.96	2.55	3.74	4.88	8.3	11.0	15.6	20.2	28.0	38.9	55
45	1 800	**40**	–	520	1 350	1 850	2 850	3 720	5 700	7 400	11 200	14 800	22 600	29 400	41 500	58 800	83 100
				2I/40.4	**3I/38.4**	**3I/38.4**	**3I/41.6**	**3I/41.6**	**3I/43.6**	**3I/43.6**	**3I/38.4**	**3I/38.4**	**3I/41.5**	**3I/41.5**	**3I/42.3**	**3I/43.1**	**3I/43.3**
					0.96	1.34	1.88	2.53	3.93	5.3	7.9	10.8	14.9	20.0	29.7	41.8	57
	1 400	**31.5**	–	–	1 370	1 930	2 890	3 890	5 800	7 800	11 400	15 500	22 900	30 700	43 300	61 400	86 600
					3I/31.9	**3I/31.9**	**3I/34.2**	**3I/34.2**	**3I/32.8**	**3I/32.8**	**3I/32**	**3I/32**	**3I/34.1**	**3I/34.1**	**3I/32.4**	**3I/32.7**	**3I/33.9**
				0.39	0.85		1.6		3.22		7.2						
	1 400	**31.5**	–	580	1 120	–	2 300	–	4 610	–	9 500	–	–	–	–	–	–
				2I/33.1	**2I/29.3**		**2I/31.9**		**2I/31.8**		**2I/29.3**						
													15.7	21.1	24.5	43.4	48.4
	1 120	**25**	–	–	–	–	–	–	–	–	–	–	23 200	31 100	40 400	62 200	80 500
													3I/26.2	**3I/26.2**	**3I/29.3**	**3I/25.5**	**3I/29.5**
				0.43	0.9	1.19	1.84	2.25	3.55	4.34	7.6	9.3	13.5				
	1 120	**25**	–	640	1 220	1 610	2 590	3 170	5 200	6 300	10 300	12 600	18 400	–	–	–	–
				2I/26.5	**2I/24.1**	**2I/24.1**	**2I/25**	**2I/25**	**2I/26**	**2I/26**	**2I/24.1**	**2I/24.1**	**2I/24.3**				
				0.46	0.99	1.35	2.03	2.65	3.9	5.1	8.2	10.8	15.4	18.9	26.9	38.0	52
	900	**20**	–	650	1 350	1 860	2 840	3 710	5 700	7 400	11 200	14 800	20 500	25 200	35 700	50 500	71 500
				2I/19.9	**2I/19.6**	**2I/19.6**	**2I/20**	**2I/20**	**2I/20.8**	**2I/20.8**	**2I/19.6**	**2I/19.6**	**2I/19**	**2I/19**	**2I/19**	**2I/19**	**2I/19.5**
				0.41	0.95	1.21	1.98	2.37	4.15	5.0	7.9	10.7	16.7	21.7	29.7	41.4	55
	710	**16**	–	580	1 370	1 750	2 880	3 460	5 800	7 000	11 400	15 500	22 500	29 200	40 900	58 500	78 500
				2I/16.2	**2I/16.3**	**2I/16.3**	**2I/16.4**	**2I/16.4**	**2I/15.7**	**2I/15.7**	**2I/16.3**	**2I/16.3**	**2I/15.2**	**2I/15.2**	**2I/15.5**	**2I/15.9**	**2I/16**

For n_1 > 1 400 rpm or n_1 < 355 rpm see ch. 3.4 and the table on page 36.
* In case of ambient temperature > 86 °F (30 °C) check the thermal power (ch. 3.2).
** Check the thermal power (ch. 3.2).

n_{N2} rpm	n_1	i_N	Gear reducer size P_{N2} hp T_{N2} lb in ... / *i*														
			32	**40**	**50**	**51**	**63**	**64**	**80**	**81**	**100**	**101**	**125**	**126**	**140**	**160**	**180**
			0.19	0.44	0.96	1.32	1.99	2.59	3.88	5.1	8.0	10.6	15.8	20.5	28.1	41.9	46.2
45	560	**12.5**	293	640	1 360	1 860	2 850	3 710	5 700	7 400	11 200	14 800	22 600	29 300	40 900	56 900	65 100
			2I/13.5	**2I/13**	**2I/12.5**	**2I/12.5**	**2I/12.7**	**2I/12.7**	**2I/13**	**2I/13**	**2I/12.5**	**2I/12.5**	**2I/12.7**	**2I/12.7**	**2I/12.9**	**2I/12.1**	**2I/12.5**
					0.86	1.21	1.69	2.27	3.53	4.74	7.1	9.7	13.4	18.0	26.7	37.5	51
40	1 250	**31.5**	–	–	1 380	1 940	2 910	3 910	5 800	7 800	11 500	15 600	23 100	30 900	43 500	61 800	87 100
					3I/31.9	**3I/31.9**	**3I/34.2**	**3I/34.2**	**3I/32.8**	**3I/32.8**	**3I/32**	**3I/32**	**3I/34.1**	**3I/34.1**	**3I/32.4**	**3I/32.7**	**3I/33.9**
				0.35	0.76		1.44		2.89		6.4						
	1 250	**31.5**	–	590	1 120	–	2 310	–	4 630	–	9 500	–	–	–	–	–	–
				2I/33.1	**2I/29.3**		**2I/31.9**		**2I/31.8**		**2I/29.3**						
													14.1	18.9	22.1	39.0	43.5
	1 000	**25**	–	–	–	–	–	–	–	–	–	–	23 400	31 300	40 700	62 600	81 100
													3I/26.2	**3I/26.2**	**3I/29.3**	**3I/25.5**	**3I/29.5**
				0.38	0.81	1.07	1.66	2.02	3.19	3.89	6.8	8.4	12.1				
	1 000	**25**	–	640	1 230	1 620	2 610	3 190	5 200	6 400	10 400	12 700	18 500	–	–	–	–
				2I/26.5	**2I/24.1**	**2I/24.1**	**2I/25**	**2I/25**	**2I/26**	**2I/26**	**2I/24.1**	**2I/24.1**	**2I/24.3**				
				0.41	0.88	1.21	1.82	2.37	3.49	4.55	7.3	9.7	13.8	17.0	24.0	34.0	46.8
	800	**20**	–	650	1 360	1 870	2 860	3 730	5 700	7 500	11 300	14 900	20 700	25 400	36 000	50 800	72 000
				2I/19.9	**2I/19.6**	**2I/19.6**	**2I/20**	**2I/20**	**2I/20.8**	**2I/20.8**	**2I/19.6**	**2I/19.6**	**2I/19**	**2I/19**	**2I/19**	**2I/19**	**2I/19.5**
				0.36	0.85	1.08	1.77	2.12	3.71	4.49	7.0	9.5	14.9	19.4	26.4	37.0	49.3
	630	**16**	–	590	1 390	1 760	2 910	3 480	5 800	7 000	11 500	15 600	22 600	29 500	40 900	58 900	78 900
				2I/16.2	**2I/16.3**	**2I/16.3**	**2I/16.4**	**2I/16.4**	**2I/15.7**	**2I/15.7**	**2I/16.3**	**2I/16.3**	**2I/15.2**	**2I/15.2**	**2I/15.5**	**2I/15.9**	**2I/16**
					0.75	1.06	1.65	2.22	3.35	4.5	6.2	8.5	13.1	17.6	23.6	35.6	45.5
35.5	1 800	**50**	–	–	1 400	1 960	2 920	3 920	5 800	7 900	11 500	15 700	23 100	30 900	42 000	62 000	84 100
					3I/53	**3I/53**	**3I/50.4**	**3I/50.4**	**3I/49.8**	**3I/49.8**	**3I/53.1**	**3I/53.1**	**3I/50.2**	**3I/50.2**	**3I/50.8**	**3I/49.7**	**3I/52.7**
				0.29	0.8	1.09	1.55	2.02	2.95	3.85	6.6	8.7	12.3	16.0	22.1	30.7	43.3
	1 400	**40**	–	520	1 370	1 880	2 890	3 770	5 800	7 600	11 400	15 000	22 900	29 800	42 100	59 700	84 400
				2I/40.4	**3I/38.4**	**3I/38.4**	**3I/41.6**	**3I/41.6**	**3I/43.6**	**3I/43.6**	**3I/38.4**	**3I/38.4**	**3I/41.5**	**3I/41.5**	**3I/42.3**	**3I/43.1**	**3I/43.3**
					0.78	1.09	1.53	2.05	3.18	4.28	6.4	8.7	12.1	16.2	24.0	33.8	46.0
	1 120	**31.5**	–	–	1 390	1 960	2 930	3 940	5 900	7 900	11 500	15 700	23 200	31 100	43 800	62 200	87 700
					3I/31.9	**3I/31.9**	**3I/34.2**	**3I/34.2**	**3I/32.8**	**3I/32.8**	**3I/32**	**3I/32**	**3I/34.1**	**3I/34.1**	**3I/32.4**	**3I/32.7**	**3I/33.9**
				0.32	0.68		1.29		2.6		5.8						
	1 120	**31.5**	–	590	1 130	–	2 320	–	4 650	–	9 600	–	–	–	–	–	–
				2I/33.1	**2I/29.3**		**2I/31.9**		**2I/31.8**		**2I/29.3**						
													12.8	17.1	20.0	35.2	39.4
	900	**25**	–	–	–	–	–	–	–	–	–	–	23 500	31 400	41 000	62 800	81 600
													3I/26.2	**3I/26.2**	**3I/29.3**	**3I/25.5**	**3I/29.5**
				0.35	0.73	0.96	1.5	1.83	2.88	3.52	6.2	7.6	10.9				
	900	**25**	–	650	1 240	1 630	2 620	3 210	5 300	6 400	10 400	12 800	18 600	–	–	–	–
				2I/26.5	**2I/24.1**	**2I/24.1**	**2I/25**	**2I/25**	**2I/26**	**2I/26**	**2I/24.1**	**2I/24.1**	**2I/24.3**				

For n_1 > 1 400 rpm or n_1 < 355 rpm see ch. 3.4 and the table on page 36.
* In case of ambient temperature > > 86 °F (30 °C) check the thermal power (ch. 3.2).
** Check the thermal power (ch. 3.2).

Nominal powers and torques (gear reducers) 3.5

n_{N2}	n_1	i_N	Gear reducer size P_{N2} hp T_{N2} lb in ... / *i*														
rpm			32	40	50	51	63	64	80	81	100	101	125	126	140	160	180
				0.37	0.79	1.08	1.62	2.12	3.12	4.07	6.5	8.6	12.3	15.1	21.5	30.4	41.8
35.5	710	**20**	–	660	1 370	1 880	2 880	3 760	5 800	7 500	11 400	15 000	20 800	25 500	36 200	51 100	72 500
				2I/19.9	**2I/19.6**	**2I/19.6**	**2I/20**	**2I/20**	**2I/20.8**	**2I/20.8**	**2I/19.6**	**2I/19.6**	**2I/19**	**2I/19**	**2I/19**	**2I/19**	**2I/19.5**
				0.32	0.76	0.96	1.58	1.89	3.32	4.01	6.3	8.5	13.3	17.3	23.5	33.1	44.0
	560	**16**	–	590	1 400	1 770	2 930	3 500	5 900	7 100	11 500	15 700	22 800	29 700	40 900	59 400	79 300
				2I/16.2	**2I/16.3**	**2I/16.3**	**2I/16.4**	**2I/16.4**	**2I/15.7**	**2I/15.7**	**2I/16.3**	**2I/16.3**	**2I/15.2**	**2I/15.2**	**2I/15.5**	**2I/15.9**	**2I/16**
				0.26	0.72	0.98	1.39	1.81	2.65	3.47	5.9	7.8	11.0	14.4	19.9	27.6	38.9
31.5	1 250	**40**	–	530	1 380	1 890	2 910	3 800	5 800	7 600	11 500	15 200	23 100	30 000	42 400	60 100	84 900
				2I/40.4	**3I/38.4**	**3I/38.4**	**3I/41.6**	**3I/41.6**	**3I/43.6**	**3I/43.6**	**3I/38.4**	**3I/38.4**	**3I/41.5**	**3I/41.5**	**3I/42.3**	**3I/43.1**	**3I/43.3**
					0.7	0.98	1.37	1.84	2.86	3.84	5.8	7.8	10.9	14.6	21.6	30.4	41.3
	1 000	**31.5**	–	–	1 400	1 970	2 950	3 970	5 900	7 900	11 600	15 800	23 400	31 300	44 100	62 600	88 200
					3I/31.9	**3I/31.9**	**3I/34.2**	**3I/34.2**	**3I/32.8**	**3I/32.8**	**3I/32**	**3I/32**	**3I/34.1**	**3I/34.1**	**3I/32.4**	**3I/32.7**	**3I/33.9**
				0.29	0.61		1.16		2.33		5.2						
	1 000	**31.5**	–	590	1 130	–	2 330	–	4 670	–	9 600	–	–	–	–	–	–
				2I/33.1	**2I/29.3**		**2I/31.9**		**2I/31.8**		**2I/29.3**						
													11.4	15.2	17.9	31.3	35.3
	800	**25**	–	–	–	–	–	–	–	–	–	–	23 500	31 400	41 300	62 800	82 200
													3I/26.2	**3I/26.2**	**3I/29.3**	**3I/25.5**	**3I/29.5**
				0.31	0.66	0.86	1.34	1.64	2.58	3.15	5.5	6.8	9.8				
	800	**25**	–	650	1 250	1 640	2 640	3 230	5 300	6 500	10 500	12 900	18 700	–	–	–	–
				2I/26.5	**2I/24.1**	**2I/24.1**	**2I/25**	**2I/25**	**2I/26**	**2I/26**	**2I/24.1**	**2I/24.1**	**2I/24.3**				
				0.33	0.71	0.96	1.45	1.89	2.79	3.64	5.8	7.7	11.0	13.5	19.2	27.1	37.3
	630	**20**	–	660	1 390	1 890	2 910	3 790	5 800	7 600	11 500	15 200	20 900	25 700	36 400	51 500	72 900
				2I/19.9	**2I/19.6**	**2I/19.6**	**2I/20**	**2I/20**	**2I/20.8**	**2I/20.8**	**2I/19.6**	**2I/19.6**	**2I/19**	**2I/19**	**2I/19**	**2I/19**	**2I/19.5**
					0.63	0.86	1.36	1.77	2.52	3.29	5.2	6.8	10.8	14.0	19.4	26.2	36.9
28	1 800	**63**	–	–	1 400	1 910	2 920	3 810	5 800	7 600	11 500	15 300	23 100	30 100	42 500	60 200	85 200
					3I/63.6	**3I/63.6**	**3I/61.3**	**3I/61.3**	**3I/66.3**	**3I/66.3**	**3I/63.8**	**3I/63.8**	**3I/61.2**	**3I/61.2**	**3I/62.3**	**3I/65.6**	**3I/65.9**
					0.59	0.83	1.31	1.75	2.64	3.55	4.89	6.7	10.4	13.9	18.6	28.1	35.9
	1 400	**50**	–	–	1 420	1 980	2 960	3 980	5 900	8 000	11 700	15 900	23 400	31 400	42 600	62 800	85 300
					3I/53	**3I/53**	**3I/50.4**	**3I/50.4**	**3I/49.8**	**3I/49.8**	**3I/53.1**	**3I/53.1**	**3I/50.2**	**3I/50.2**	**3I/50.8**	**3I/49.7**	**3I/52.7**
				0.23	0.65	0.88	1.25	1.64	2.39	3.13	5.3	7.1	9.9	12.9	17.9	24.9	35.0
	1 120	**40**	–	530	1 390	1 900	2 930	3 830	5 900	7 700	11 500	15 300	23 200	30 200	42 700	60 400	85 400
				2I/40.4	**3I/38.4**	**3I/38.4**	**3I/41.6**	**3I/41.6**	**3I/43.6**	**3I/43.6**	**3I/38.4**	**3I/38.4**	**3I/41.5**	**3I/41.5**	**3I/42.3**	**3I/43.1**	**3I/43.3**
					0.63	0.89	1.24	1.67	2.58	3.47	5.2	7.1	9.8	13.2	19.5	27.5	37.3
	900	**31.5**	–	–	1 410	1 980	2 970	3 980	5 900	8 000	11 700	15 900	23 500	31 400	44 300	62 800	88 500
					3I/31.9	**3I/31.9**	**3I/34.2**	**3I/34.2**	**3I/32.8**	**3I/32.8**	**3I/32**	**3I/32**	**3I/34.1**	**3I/34.1**	**3I/32.4**	**3I/32.7**	**3I/33.9**
				0.26	0.55		1.05		2.11		4.7						
	900	**31.5**	–	600	1 140	–	2 340	–	4 690	–	9 600	–	–	–	–	–	–
				2I/33.1	**2I/29.3**		**2I/31.9**		**2I/31.8**		**2I/29.3**						

For n_1 > 1 400 rpm or n_1 < 355 rpm see ch. 3.4 and the table on page 36.
* In case of ambient temperature > 86 °F (30 °C) check the thermal power (ch. 3.2).
** Check the thermal power (ch. 3.2).

n_{N2} rpm	n_1 rpm	i_N	Gear reducer size P_{N2} hp T_{N2} lb in ... / *i*														
			32	**40**	**50**	**51**	**63**	**64**	**80**	**81**	**100**	**101**	**125**	**126**	**140**	**160**	**180**
28	710	**25**	–	–	–	–	–	–	–	–	–	–	10.1 23 500 **3I/26.2**	13.5 31 400 **3I/26.2**	16.0 41 600 **3I/29.3**	27.8 62 800 **3I/25.5**	31.6 82 800 **3I/29.5**
	710	**25**	–	0.28 660 **2I/26.5**	0.59 1 250 **2I/24.1**	0.77 1 640 **2I/24.1**	1.2 2 660 **2I/25**	1.46 3 250 **2I/25**	2.3 5 300 **2I/26**	2.81 6 500 **2I/26**	4.94 10 600 **2I/24.1**	6.1 13 000 **2I/24.1**	8.7 18 800 **2I/24.3**	–	–	–	–
	560	**20**	–	0.3 660 **2I/19.9**	0.63 1 400 **2I/19.6**	0.86 1 910 **2I/19.6**	1.3 2 930 **2I/20**	1.7 3 820 **2I/20**	2.5 5 900 **2I/20.8**	3.26 7 600 **2I/20.8**	5.2 11 500 **2I/19.6**	6.9 15 300 **2I/19.6**	9.8 21 000 **2I/19**	12.1 25 900 **2I/19**	17.1 36 700 **2I/19**	24.3 51 800 **2I/19**	33.4 73 400 **2I/19.5**
25	1 250	**50**	–	–	0.53 1 420 **3I/53**	0.74 1 980 **3I/53**	1.17 2 970 **3I/50.4**	1.57 3 980 **3I/50.4**	2.36 5 900 **3I/49.8**	3.17 8 000 **3I/49.8**	4.36 11 700 **3I/53.1**	6.0 15 900 **3I/53.1**	9.3 23 500 **3I/50.2**	12.4 31 400 **3I/50.2**	16.7 42 800 **3I/50.8**	25.1 62 800 **3I/49.7**	32.3 85 900 **3I/52.7**
	1 000	**40**	–	0.21 530 **2I/40.4**	0.58 1 400 **3I/38.4**	0.79 1 920 **3I/38.4**	1.13 2 950 **3I/41.6**	1.47 3 850 **3I/41.6**	2.15 5 900 **3I/43.6**	2.81 7 700 **3I/43.6**	4.79 11 600 **3I/38.4**	6.3 15 400 **3I/38.4**	8.9 23 400 **3I/41.5**	11.6 30 400 **3I/41.5**	16.1 42 900 **3I/42.3**	22.4 60 800 **3I/43.1**	31.5 86 000 **3I/43.3**
	800	**31.5**	–	–	0.56 1 420 **3I/31.9**	0.79 1 980 **3I/31.9**	1.1 2 970 **3I/34.2**	1.48 3 980 **3I/34.2**	2.3 5 900 **3I/32.8**	3.09 8 000 **3I/32.8**	4.64 11 700 **3I/32**	6.3 15 900 **3I/32**	8.7 23 500 **3I/34.1**	11.7 31 400 **3I/34.1**	17.3 44 300 **3I/32.4**	24.4 62 800 **3I/32.7**	33.1 88 500 **3I/33.9**
	800	**31.5**	–	0.23 600 **2I/33.1**	0.5 1 140 **2I/29.3**	–	0.94 2 350 **2I/31.9**	–	1.88 4 720 **2I/31.8**	–	4.2 9 700 **2I/29.3**	–	–	–	–	–	–
	630	**25**	–	–	–	–	–	–	–	–	–	–	8.9 23 500 **3I/26.2**	12.0 31 400 **3I/26.2**	14.3 42 000 **3I/29.3**	24.6 62 800 **3I/25.5**	28.2 83 300 **3I/29.5**
	630	**25**	–	0.25 660 **2I/26.5**	0.52 1 260 **2I/24.1**	0.69 1 650 **2I/24.1**	1.07 2 670 **2I/25**	1.31 3 260 **2I/25**	2.06 5 400 **2I/26**	2.51 6 500 **2I/26**	4.41 10 600 **2I/24.1**	5.4 13 000 **2I/24.1**	7.8 18 800 **2I/24.3**	–	–	–	–
22.4	1 800	**80**	–	–	0.46 1 270 **3I/78.2**	0.61 1 660 **3I/78.2**	1.00 2 680 **3I/76.7**	1.22 3 280 **3I/76.7**	1.86 5 400 **3I/82.7**	2.27 6 600 **3I/82.7**	3.9 10 700 **3I/78.3**	4.79 13 100 **3I/78.3**	7.9 21 200 **3I/76.5**	9.8 26 200 **3I/76.5**	13.9 37 100 **3I/76.5**	22.1 60 900 **3I/78.5**	31.1 86 000 **3I/78.9**
	1 400	**63**	–	–	0.49 1 420 **3I/63.6**	0.67 1 930 **3I/63.6**	1.07 2 960 **3I/61.3**	1.4 3 860 **3I/61.3**	1.99 5 900 **3I/66.3**	2.59 7 700 **3I/66.3**	4.07 11 700 **3I/63.8**	5.4 15 500 **3I/63.8**	8.5 23 400 **3I/61.2**	11.1 30 500 **3I/61.2**	15.3 43 100 **3I/62.3**	20.7 61 100 **3I/65.6**	29.1 86 300 **3I/65.9**
	1 120	**50**	–	–	0.47 1 420 **3I/53**	0.66 1 980 **3I/53**	1.05 2 970 **3I/50.4**	1.4 3 980 **3I/50.4**	2.11 5 900 **3I/49.8**	2.84 8 000 **3I/49.8**	3.91 11 700 **3I/53.1**	5.3 15 900 **3I/53.1**	8.3 23 500 **3I/50.2**	11.1 31 400 **3I/50.2**	15.1 43 100 **3I/50.8**	22.5 62 800 **3I/49.7**	29.1 86 300 **3I/52.7**
	900	**40**	–	0.19 530 **2I/40.4**	0.53 1 410 **3I/38.4**	0.72 1 930 **3I/38.4**	1.02 2 970 **3I/41.6**	1.33 3 870 **3I/41.6**	1.94 5 900 **3I/43.6**	2.54 7 700 **3I/43.6**	4.34 11 700 **3I/38.4**	5.7 15 500 **3I/38.4**	8.1 23 500 **3I/41.5**	10.5 30 500 **3I/41.5**	14.6 43 100 **3I/42.3**	20.2 61 100 **3I/43.1**	28.4 86 300 **3I/43.3**

For n_1 > 1 400 rpm or n_1 < 355 rpm see ch. 3.4 and the table on page 36.
* In case of ambient temperature > > 86 °F (30 °C) check the thermal power (ch. 3.2).
** Check the thermal power (ch. 3.2).

Nominal powers and torques (gear reducers) 3.5

n_{N2}	n_1 rpm	i_N	Gear reducer size P_{N2} hp T_{N2} lb in ... / *i*														
			32	**40**	**50**	**51**	**63**	**64**	**80**	**81**	**100**	**101**	**125**	**126**	**140**	**160**	**180**
					0.5	0.7	0.98	1.31	2.04	2.74	4.11	5.6	7.8	10.4	15.4	21.7	29.4
22.4	710	**31.5**	–	–	1 420	1 980	2 970	3 980	5 900	8 000	11 700	15 900	23 500	31 400	44 300	62 800	88 500
					3I/31.9	**3I/31.9**	**3I/34.2**	**3I/34.2**	**3I/32.8**	**3I/32.8**	**3I/32**	**3I/32**	**3I/34.1**	**3I/34.1**	**3I/32.4**	**3I/32.7**	**3I/33.9**
				0.21	0.44		0.83		1.68		3.74						
	710	**31.5**	–	600	1 150	–	2 360	–	4 740	–	9 700	–	–	–	–	–	–
				2I/33.1	**2I/29.3**		**2I/31.9**		**2I/31.8**		**2I/29.3**						
													7.9	10.6	12.8	21.9	25.2
	560	**25**	–	–	–	–	–	–	–	–	–	–	23 500	31 400	42 300	62 800	83 900
													3I/26.2	**3I/26.2**	**3I/29.3**	**3I/25.5**	**3I/29.5**
				0.22	0.47	0.61	0.96	1.17	1.84	2.24	3.94	4.84	6.9				
	560	**25**	–	660	1 270	1 660	2 690	3 280	5 400	6 600	10 700	13 100	18 900	–	–	–	–
				2I/26.5	**2I/24.1**	**2I/24.1**	**2I/25**	**2I/25**	**2I/26**	**2I/26**	**2I/24.1**	**2I/24.1**	**2I/24.3**				
					0.4	0.54	0.88	1.15	1.63	2.12	3.27	4.34	7.0	9.0	12.5	17.4	23.3
18	1 800	**100**	–	–	1 420	1 930	2 970	3 870	5 900	7 700	11 700	15 500	23 500	30 500	43 100	61 100	82 100
					3I/102	**3I/102**	**3I/96.4**	**3I/96.4**	**3I/104**	**3I/104**	**3I/102**	**3I/102**	**3I/96.4**	**3I/96.4**	**3I/98.2**	**3I/100**	**3I/101**
					0.36	0.48	0.79	0.96	1.46	1.78	3.06	3.77	6.2	7.7	10.9	17.3	24.3
	1 400	**80**	–	–	1 280	1 680	2 720	3 320	5 400	6 600	10 800	13 300	21 500	26 500	37 600	61 100	86 300
					3I/78.2	**3I/78.2**	**3I/76.7**	**3I/76.7**	**3I/82.7**	**3I/82.7**	**3I/78.3**	**3I/78.3**	**3I/76.5**	**3I/76.5**	**3I/76.5**	**3I/78.5**	**3I/78.9**
					0.4	0.54	0.86	1.12	1.59	2.08	3.26	4.32	6.8	8.9	12.3	16.5	23.3
	1 120	**63**	–	–	1 420	1 930	2 970	3 870	5 900	7 700	11 700	15 500	23 500	30 500	43 100	61 100	86 300
					3I/63.6	**3I/63.6**	**3I/61.3**	**3I/61.3**	**3I/66.3**	**3I/66.3**	**3I/63.8**	**3I/63.8**	**3I/61.2**	**3I/61.2**	**3I/62.3**	**3I/65.6**	**3I/65.9**
					0.38	0.53	0.84	1.13	1.7	2.28	3.14	4.29	6.7	8.9	12.1	18.0	23.4
	900	**50**	–	–	1 420	1 980	2 970	3 980	5 900	8 000	11 700	15 900	23 500	31 400	43 100	62 800	86 300
					3I/53	**3I/53**	**3I/50.4**	**3I/50.4**	**3I/49.8**	**3I/49.8**	**3I/53.1**	**3I/53.1**	**3I/50.2**	**3I/50.2**	**3I/50.8**	**3I/49.7**	**3I/52.7**
				0.15	0.42	0.57	0.8	1.05	1.53	2.00	3.43	4.54	6.4	8.3	11.5	16.0	22.4
	710	**40**	–	540	1 420	1 930	2 970	3 870	5 900	7 700	11 700	15 500	23 500	30 500	43 100	61 100	86 300
				2I/40.4	**3I/38.4**	**3I/38.4**	**3I/41.6**	**3I/41.6**	**3I/43.6**	**3I/43.6**	**3I/38.4**	**3I/38.4**	**3I/41.5**	**3I/41.5**	**3I/42.3**	**3I/43.1**	**3I/43.3**
					0.39	0.55	0.77	1.04	1.61	2.16	3.25	4.43	6.1	8.2	12.1	17.1	23.2
	560	**31.5**	–	–	1 420	1 980	2 970	3 980	5 900	8 000	11 700	15 900	23 500	31 400	44 300	62 800	88 500
					3I/31.9	**3I/31.9**	**3I/34.2**	**3I/34.2**	**3I/32.8**	**3I/32.8**	**3I/32**	**3I/32**	**3I/34.1**	**3I/34.1**	**3I/32.4**	**3I/32.7**	**3I/33.9**
				0.16	0.35		0.66		1.34		2.98						
	560	**31.5**	–	610	1 160	–	2 390	–	4 780	–	9 800	–	–	–	–	–	–
				2I/33.1	**2I/29.3**		**2I/31.9**		**2I/31.8**		**2I/29.3**						
					0.29	0.38	0.64	0.79	1.27	1.66	2.68	3.55	5.7	7.4	10.3	12.7	17.5
14	1 800	**125**	–	–	1 280	1 680	2 720	3 320	5 900	7 700	11 700	15 500	23 500	30 500	42 900	53 100	75 200
					3I/125	**3I/125**	**3I/120**	**3I/120**	**3I/133**	**3I/133**	**3I/125**	**3I/125**	**3I/117**	**3I/117**	**3I/119**	**3I/119**	**3I/123**
					0.31	0.42	0.68	0.89	1.26	1.65	2.54	3.37	5.4	7.0	9.7	13.5	18.3
	1 400	**100**	–	–	1 420	1 930	2 970	3 870	5 900	7 700	11 700	15 500	23 500	30 500	43 100	61 100	82 900
					3I/102	**3I/102**	**3I/96.4**	**3I/96.4**	**3I/104**	**3I/104**	**3I/102**	**3I/102**	**3I/96.4**	**3I/96.4**	**3I/98.2**	**3I/100**	**3I/101**

For n_1 > 1 400 rpm or n_1 < 355 rpm see ch. 3.4 and the table on page 36.
* In case of ambient temperature > 86 °F (30 °C) check the thermal power (ch. 3.2).
** Check the thermal power (ch. 3.2).

n_{N2} rpm	n_1 rpm	i_N	Gear reducer size P_{N2} hp T_{N2} lb in ... / *i*														
			32	**40**	**50**	**51**	**63**	**64**	**80**	**81**	**100**	**101**	**125**	**126**	**140**	**160**	**180**
					0.29	0.38	0.63	0.77	1.17	1.43	2.45	3.01	5.0	6.2	8.7	13.8	19.4
14	1 120	**80**	–	–	1 280	1 680	2 720	3 320	5 400	6 600	10 800	13 300	21 500	26 600	37 600	61 100	86 300
					3I/78.2	**3I/78.2**	**3I/76.7**	**3I/76.7**	**3I/82.7**	**3I/82.7**	**3I/78.3**	**3I/78.3**	**3I/76.5**	**3I/76.5**	**3I/76.5**	**3I/78.5**	**3I/78.9**
					0.32	0.43	0.69	0.9	1.28	1.67	2.62	3.47	5.5	7.1	9.9	13.3	18.7
	900	**63**	–	–	1 420	1 930	2 970	3 870	5 900	7 700	11 700	15 500	23 500	30 500	43 100	61 100	86 300
					3I/63.6	**3I/63.6**	**3I/61.3**	**3I/61.3**	**3I/66.3**	**3I/66.3**	**3I/63.8**	**3I/63.8**	**3I/61.2**	**3I/61.2**	**3I/62.3**	**3I/65.6**	**3I/65.9**
					0.3	0.42	0.66	0.89	1.34	1.8	2.48	3.38	5.3	7.0	9.6	14.2	18.4
	710	**50**	–	–	1 420	1 980	2 970	3 980	5 900	8 000	11 700	15 900	23 500	31 400	43 100	62 800	86 300
					3I/53	**3I/53**	**3I/50.4**	**3I/50.4**	**3I/49.8**	**3I/49.8**	**3I/53.1**	**3I/53.1**	**3I/50.2**	**3I/50.2**	**3I/50.8**	**3I/49.7**	**3I/52.7**
				0.12	0.33	0.45	0.63	0.83	1.21	1.58	2.7	3.58	5.0	6.5	9.1	12.6	17.7
	560	**40**	–	540	1 420	1 930	2 970	3 870	5 900	7 700	11 700	15 500	23 500	30 500	43 100	61 100	86 300
				2I/40.4	**3I/38.4**	**3I/38.4**	**3I/41.6**	**3I/41.6**	**3I/43.6**	**3I/43.6**	**3I/38.4**	**3I/38.4**	**3I/41.5**	**3I/41.5**	**3I/42.3**	**3I/43.1**	**3I/43.3**
					0.22		0.45		0.94	1.14	2.01	2.48	4.19	5.2	7.3		
11.2	1 800	**160**	–	–	1 170	–	2 410	–	5 400	6 600	10 800	13 300	21 500	26 600	37 600	–	–
					3I/152		**3I/154**		**3I/166**	**3I/166**	**3I/153**	**3I/153**	**3I/146**	**3I/146**	**3I/146**		
					0.23	0.3	0.5	0.61	0.99	1.29	2.08	2.76	4.45	5.8	8.0	9.9	13.6
	1 400	**125**	–	–	1 280	1 680	2 720	3 320	5 900	7 700	11 700	15 500	23 500	30 500	43 100	53 100	75 200
					3I/125	**3I/125**	**3I/120**	**3I/120**	**3I/133**	**3I/133**	**3I/125**	**3I/125**	**3I/117**	**3I/117**	**3I/119**	**3I/119**	**3I/123**
					0.25	0.34	0.55	0.71	1.01	1.32	2.04	2.7	4.32	5.6	7.8	10.8	14.8
	1 120	**100**	–	–	1 420	1 930	2 970	3 870	5 900	7 700	11 700	15 500	23 500	30 500	43 100	61 100	83 700
					3I/102	**3I/102**	**3I/96.4**	**3I/96.4**	**3I/104**	**3I/104**	**3I/102**	**3I/102**	**3I/96.4**	**3I/96.4**	**3I/98.2**	**3I/100**	**3I/101**
					0.23	0.31	0.51	0.62	0.94	1.15	1.97	2.42	4.02	4.96	7.0	11.1	15.6
	900	**80**	–	–	1 280	1 680	2 720	3 320	5 400	6 600	10 800	13 300	21 500	26 600	37 600	61 100	86 300
					3I/78.2	**3I/78.2**	**3I/76.7**	**3I/76.7**	**3I/82.7**	**3I/82.7**	**3I/78.3**	**3I/78.3**	**3I/76.5**	**3I/76.5**	**3I/76.5**	**3I/78.5**	**3I/78.9**
					0.25	0.34	0.54	0.71	1.01	1.32	2.06	2.74	4.32	5.6	7.8	10.5	14.7
	710	**63**	–	–	1 420	1 930	2 970	3 870	5 900	7 700	11 700	15 500	23 500	30 500	43 100	61 100	86 300
					3I/63.6	**3I/63.6**	**3I/61.3**	**3I/61.3**	**3I/66.3**	**3I/66.3**	**3I/63.8**	**3I/63.8**	**3I/61.2**	**3I/61.2**	**3I/62.3**	**3I/65.6**	**3I/65.9**
					0.24	0.33	0.52	0.7	1.06	1.42	1.96	2.67	4.15	5.6	7.5	11.2	14.5
	560	**50**	–	–	1 420	1 980	2 970	3 980	5 900	8 000	11 700	15 900	23 500	31 400	43 100	62 800	86 300
					3I/53	**3I/53**	**3I/50.4**	**3I/50.4**	**3I/49.8**	**3I/49.8**	**3I/53.1**	**3I/53.1**	**3I/50.2**	**3I/50.2**	**3I/50.8**	**3I/49.7**	**3I/52.7**
									0.68		1.52		2.95				
9	1 800	**200**	–	–	–	–	–	–	4 820	–	9 900	–	19 300	–	–	–	–
									3I/203		**3I/186**		**3I/187**				
					0.17		0.35		0.73	0.89	1.57	1.93	3.26	4.03	5.7		
	1 400	**160**	–	–	1 170	–	2 410	–	5 400	6 600	10 800	13 300	21 500	26 600	37 600	–	–
					3I/152		**3I/154**		**3I/166**	**3I/166**	**3I/153**	**3I/153**	**3I/146**	**3I/146**	**3I/146**		
					0.18	0.24	0.4	0.49	0.79	1.03	1.66	2.21	3.56	4.63	6.4	7.9	10.9
	1 120	**125**	–	–	1 280	1 680	2 720	3 320	5 900	7 700	11 700	15 500	23 500	30 500	43 100	53 100	75 200
					3I/125	**3I/125**	**3I/120**	**3I/120**	**3I/133**	**3I/133**	**3I/125**	**3I/125**	**3I/117**	**3I/117**	**3I/119**	**3I/119**	**3I/123**

For n_1 > 1 400 rpm or n_1 < 355 rpm see ch. 3.4 and the table on page 36.
* In case of ambient temperature > > 86 °F (30 °C) check the thermal power (ch. 3.2).
** Check the thermal power (ch. 3.2).

Nominal powers and torques (gear reducers) 3.5

n_{N2} rpm	n_1 rpm	i_N	Gear reducer size P_{N2} hp T_{N2} lb in ... / *i*														
			32	**40**	**50**	**51**	**63**	**64**	**80**	**81**	**100**	**101**	**125**	**126**	**140**	**160**	**180**
					0.2	0.27	0.44	0.57	0.81	1.06	1.64	2.17	3.48	4.52	6.3	8.7	12.0
9	900	**100**	–	–	1 420	1 930	2 970	3 870	5 900	7 700	11 700	15 500	23 500	30 500	43 100	61 100	84 400
					3I/102	**3I/102**	**3I/96.4**	**3I/96.4**	**3I/104**	**3I/104**	**3I/102**	**3I/102**	**3I/96.4**	**3I/96.4**	**3I/98.2**	**3I/100**	**3I/101**
					0.18	0.24	0.4	0.49	0.74	0.9	1.55	1.91	3.17	3.91	5.5	8.8	12.3
	710	**80**	–	–	1 280	1 680	2 720	3 320	5 400	6 600	10 800	13 300	21 500	26 600	37 600	61 100	86 300
					3I/78.2	**3I/78.2**	**3I/76.7**	**3I/76.7**	**3I/82.7**	**3I/82.7**	**3I/78.3**	**3I/78.3**	**3I/76.5**	**3I/76.5**	**3I/76.5**	**3I/78.5**	**3I/78.9**
					0.2	0.27	0.43	0.56	0.79	1.04	1.63	2.16	3.41	4.44	6.1	8.3	11.6
	560	**63**	–	–	1 420	1 930	2 970	3 870	5 900	7 700	11 700	15 500	23 500	30 500	43 100	61 100	86 300
					3I/63.6	**3I/63.6**	**3I/61.3**	**3I/61.3**	**3I/66.3**	**3I/66.3**	**3I/63.8**	**3I/63.8**	**3I/61.2**	**3I/61.2**	**3I/62.3**	**3I/65.6**	**3I/65.9**
									0.53		1.18		2.29				
7.1	1 400	**200**	–	–	–	–	–	–	4 820	–	9 900	–	19 300	–	–	–	–
									3I/203		**3I/186**		**3I/187**				
					0.14		0.28		0.58	0.71	1.25	1.54	2.61	3.22	4.56		
	1 120	**160**	–	–	1 170	–	2 410	–	5 400	6 600	10 800	13 300	21 500	26 600	37 600	–	–
					3I/152		**3I/154**		**3I/166**	**3I/166**	**3I/153**	**3I/153**	**3I/146**	**3I/146**	**3I/146**		
					0.15	0.19	0.32	0.39	0.64	0.83	1.34	1.77	2.86	3.72	5.2	6.3	8.7
	900	**125**	–	–	1 280	1 680	2 720	3 320	5 900	7 700	11 700	15 500	23 500	30 500	43 100	53 100	75 200
					3I/125	**3I/125**	**3I/120**	**3I/120**	**3I/133**	**3I/133**	**3I/125**	**3I/125**	**3I/117**	**3I/117**	**3I/119**	**3I/119**	**3I/123**
					0.16	0.21	0.35	0.45	0.64	0.84	1.29	1.71	2.74	3.57	4.94	6.9	9.5
	710	**100**	–	–	1 420	1 930	2 970	3 870	5 900	7 700	11 700	15 500	23 500	30 500	43 100	61 100	85 200
					3I/102	**3I/102**	**3I/96.4**	**3I/96.4**	**3I/104**	**3I/104**	**3I/102**	**3I/102**	**3I/96.4**	**3I/96.4**	**3I/98.2**	**3I/100**	**3I/101**
					0.15	0.19	0.31	0.38	0.58	0.71	1.23	1.51	2.5	3.09	4.37	6.9	9.7
	560	**80**	–	–	1 280	1 680	2 720	3 320	5 400	6 600	10 800	13 300	21 500	26 600	37 600	61 100	86 300
					3I/78.2	**3I/78.2**	**3I/76.7**	**3I/76.7**	**3I/82.7**	**3I/82.7**	**3I/78.3**	**3I/78.3**	**3I/76.5**	**3I/76.5**	**3I/76.5**	**3I/78.5**	**3I/78.9**
									0.42		0.95		1.83				
5.6	1 120	**200**	–	–	–	–	–	–	4 820	–	9 900	–	19 300	–	–	–	–
									3I/203		**3I/186**		**3I/187**				
					0.11		0.22		0.47	0.57	1.01	1.24	2.1	2.59	3.67		
	900	**160**	–	–	1 170	–	2 410	–	5 400	6 600	10 800	13 300	21 500	26 600	37 600	–	–
					3I/152		**3I/154**		**3I/166**	**3I/166**	**3I/153**	**3I/153**	**3I/146**	**3I/146**	**3I/146**		
					0.12	0.15	0.25	0.31	0.5	0.66	1.06	1.4	2.26	2.94	4.07	5.0	6.9
	710	**125**	–	–	1 280	1 680	2 720	3 320	5 900	7 700	11 700	15 500	23 500	30 500	43 100	53 100	75 200
					3I/125	**3I/125**	**3I/120**	**3I/120**	**3I/133**	**3I/133**	**3I/125**	**3I/125**	**3I/117**	**3I/117**	**3I/119**	**3I/119**	**3I/123**
					0.12	0.17	0.27	0.36	0.51	0.66	1.02	1.35	2.16	2.82	3.9	5.4	7.6
	560	**100**	–	–	1 420	1 930	2 970	3 870	5 900	7 700	11 700	15 500	23 500	30 500	43 100	61 100	85 900
					3I/102	**3I/102**	**3I/96.4**	**3I/96.4**	**3I/104**	**3I/104**	**3I/102**	**3I/102**	**3I/96.4**	**3I/96.4**	**3I/98.2**	**3I/100**	**3I/101**

For n_1 > 1 400 rpm or n_1 < 355 rpm see ch. 3.4 and the table on page 36.
* In case of ambient temperature > 86 °F (30 °C) check the thermal power (ch. 3.2).
** Check the thermal power (ch. 3.2).

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Designs, dimensions, mounting positions and lubricant quantities 3.6

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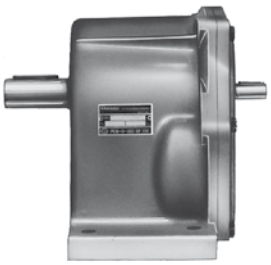
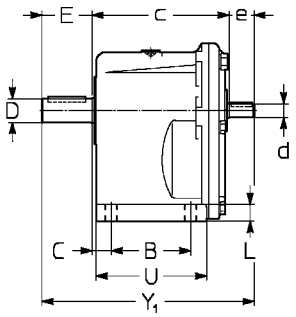
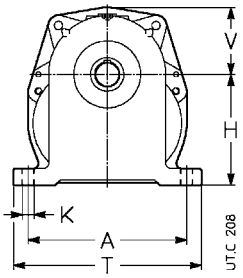


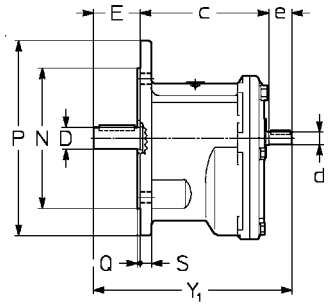


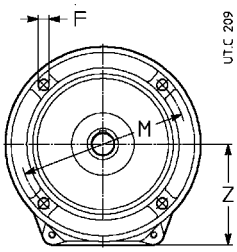


Standard **design**

Mounting position B3, B6, B7, B8, V5, V6

PC1A





FC1A

Standard **design**

Mounting position B5, V1, V3

Size	A	B	C	c	D Ø	E	d	e	Y_1	F Ø	H h11	K Ø	L	M Ø	N Ø h6	P Ø	Q	S	T	U	V	Z	Mass lb
32	115	53	20	103-93[1]	16	30	11	20	153	9.5	75	9.5	10	115	95	140	3	10	139	77	48[2]	73	8.8
40	132	63	19	122	19	40	11	23	185	9.5	90	9.5	12	130	110	160	3.5	10	156	92	56	87	15.4

1) Dimensions of shaft end shoulder and flange surface respectively.
2) Square input flange ☒105: consult us if need be.

Mounting positions and grease quantities [gal]

Design

	B3	B6	B7	B8	V5	V6	Size	B3, B6 B7, B8	V5, V6
PC1A							**32**	0.31	0.55
							40	0.57	1.04
	B5				**V1**	**V3**		**B5**	**V1, V3**
FC1A							**32**	0.22	0.4
							40	0.42	0.77

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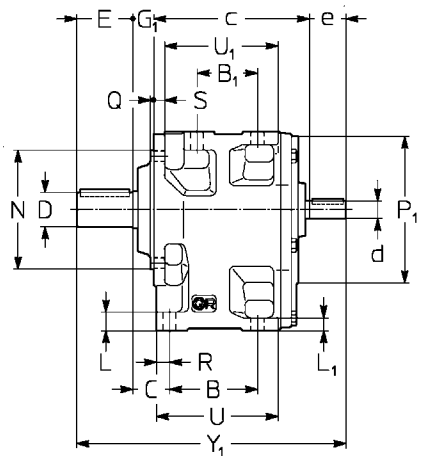
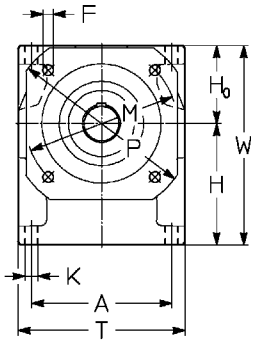
Designs, dimensions, mounting positions and lubricant quantities 3.6

R 2I, 3I 50 ... 180





Standard **design**

Mounting position B3, B6, B7, B8, V5, V6

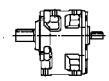
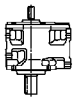
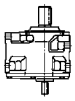
UC2A

Size	A	B B_1	C	c	D Ø	E	d Ø e $i_N \le 12.5$	Y_1 R2I	d Ø e $i_N \ge 16$	Y_1	d Ø e $i_N \le 80$	Y_1 R3I	d Ø e $i_N \ge 100$	Y_1	F Ø	G_1	H h11	H_0 h11	K Ø	L	L_1	M Ø	N Ø h6	P Ø Q_{+2}^{0}	P_1 Ø	R	S	T	U	U_1	W_1	Mass lb
50 **51**	124	76 52	30.5	138	24 28	50 42	14 30	234 226	14 30	234 226	11 23	227 219	11 23	227 219	9.5	16	106	71	11.5	17	12	130	110	160 3.5	140	13.5	10	148	110	100	177	26.5
63 **64**	153	96 66	36.5	168	32 38	58	19 40	285	16 30	275	14 30	275	14 30	275	11.5	19	132	85	14	20	14	165	130	200 3.5	160	16	12	182	136	124	217	44.1
80 **81**	192	123 87	43	208	38 48	80	24 50	360	19 40	350	19 40	350	16 30	340	14	22	160	106	16	24	17	215	180	250 4	200	19	14	226	171	157	266	77.2
100 **101**	240	160 119	51.5	253	48 55	82	28 60	422	24 50	412	24 50	412	19 40	402	14	27	195	132	18	28.5	20	265	230	300 4	250	22.5	16	280	214	198	327	137
125 **126**	297	200 151	59	311 [4]	60 70	105	32 80	526	32 80	526	28 60	502	24 50	492	18	30	236	160	22	35	25	300	250	350 5	300	26.5	19	345	264	245	396	243
140	297	218 169	59	329 [4]	80	130	32 80	569	32 80	569	28 60	545	24 50	535	18	30	250 [1]	160 [1]	22	35	25	300	250	350 5	300	26.5	19	345	282	263	410	271
160	373	250 191	68.5	385 [4]	90	130	42 110	659	42 110	659	32 80	623	32 80	623	22	34	295 [2]	200 [2]	27	42	30	400	350	450 5	400	31.5	22	430	326	304	495	430
180	373	275 216	68.5	410 [4]	100	165	42 110	719	42 110	719	32 80	683	32 80	683	22	34	315 [3]	200 [3]	27	42	30	400	350	450 5	400	31.5	22	430	351	329	515	573

1) For high speed shaft **H** dimension is -15 mm, H_0 +15 mm.
2) For high speed shaft **H** dimension is -8 mm, H_0 +8 mm.
3) For high speed shaft **H** dimension is -29 mm, H_0 +29 mm.
4) For R 3I **c** dimension is -4 mm (sizes 125 ... 140), -6 mm (sizes 160 and 180).

Mounting positions and oil quantities [gal]

Size

B3	B6	B7	B8	V5	V6
					

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Size	B3	B6, B7	B8, V6	V5
50, 51	0.8	1.1	1.1	1.4
63, 64	1.6	2.2	2.2	2.8
80, 81	3.1	4.3	4.3	5.5
100, 101	5.6	7.1	8	10
125, 126	10.2	13	14.6	18.3
140	11.6	14.8	16.6	21
160	19.6	25	28	35
180	23	29	32	40

Motor power P_1 hp 1)	Output speed n_2 rpm	Output torque T_2 lb in	Service factor fs	2)	Gear ratio i
0.12	8.82	825	1.4	MR 3I 50 - 11 × 140 63 A 6	130
0.12	10.7	675	1.9	MR 3I 50 - 11 × 140 63 A 6	107
0.12	10.7	675	2.5	MR 3I 51 - 11 × 140 63 A 6	107
0.12	12.4	585	1.06	MR 3I 40 - 11 × 140 63 A 6	92.8
0.12	13.2	550	2.5	MR 3I 50 - 11 × 140 63 A 6	87.3
0.12	13.2	550	3.55	MR 3I 51 - 11 × 140 63 A 6	87.3
0.12	15.5	470	1.4	MR 3I 40 - 11 × 140 63 A 6	74.4
0.12	15.5	470	1.7	MR 3I 41 - 11 × 140 63 A 6	74.4
0.12	16.1	450	3.15	MR 3I 50 - 11 × 140 63 A 6	71.4
0.12	17.4	415	1.6	MR 3I 40 - 11 × 140 63 A 6	65.9
0.12	17.4	415	2	MR 3I 41 - 11 × 140 63 A 6	65.9
0.12	17.7	410	3.55	MR 3I 50 - 11 × 140 63 A 6	65.0
0.12	20.6	355	1.9	MR 3I 40 - 11 × 140 63 A 6	55.9
0.12	20.6	355	2.36	MR 3I 41 - 11 × 140 63 A 6	55.9
0.12	19.3	375	3.75	MR 3I 50 - 11 × 140 63 A 6	59.5
0.12	24.2	300	1.12	MR 3I 32 - 11 × 140 63 A 6	47.5
0.12	22.4	325	2	MR 3I 40 - 11 × 140 63 A 6	51.3
0.12	22.4	325	2.5	MR 3I 41 - 11 × 140 63 A 6	51.3
0.12	22.4	325	4.25	MR 3I 50 - 11 × 140 63 A 6	51.4
0.12	25.7	280	2.36	MR 3I 40 - 11 × 140 63 A 6	44.7
0.12	25.7	280	2.8	MR 3I 41 - 11 × 140 63 A 6	44.7
0.12	26.7	270	5.3	MR 3I 50 - 11 × 140 63 A 6	43.0
0.12	27.3	265	1.25	MR 3I 32 - 11 × 140 63 A 6	42.1
0.12	29.0	250	2.65	MR 3I 40 - 11 × 140 63 A 6	39.6
0.12	29.0	250	3.35	MR 3I 41 - 11 × 140 63 A 6	39.6
0.12	32.2	225	1.5	MR 3I 32 - 11 × 140 63 A 6	35.7
0.12	35.9	200	1.6	MR 3I 32 - 11 × 140 63 A 6	32.1
0.12	34.2	210	3.15	MR 3I 40 - 11 × 140 63 A 6	33.6
0.12	37.3	195	3.35	MR 3I 40 - 11 × 140 63 A 6	30.8
0.12	41.0	175	1.8	MR 3I 32 - 11 × 140 63 A 6	28.1
0.12	46.2	155	2.12	MR 3I 32 - 11 × 140 63 A 6	24.9
0.12	43.8	165	3.75	MR 3I 40 - 11 × 140 63 A 6	26.2
0.12	52.0	140	3.75	MR 2I 40 - 11 × 140 63 A 6	22.1
0.12	54.5	135	2.5	MR 3I 32 - 11 × 140 63 A 6	21.1
0.12	60.7	120	2.65	MR 3I 32 - 11 × 140 63 A 6	18.9
0.12	69.8	105	3	MR 3I 32 - 11 × 140 63 A 6	16.5
0.12	85.4	87	3.35	MR 2I 32 - 11 × 140 63 A 6	13.5
0.12	107	70	4.5	MR 2I 32 - 11 × 140 63 A 6	10.8
0.12	120	62	5	MR 2I 32 - 11 × 140 63 A 6	9.57
0.16	8.82	1 100	1.06	MR 3I 50 - 11 × 140 63 B 6	130
0.16	10.7	900	1.4	MR 3I 50 - 11 × 140 63 B 6	107
0.16	10.7	900	1.9	MR 3I 51 - 11 × 140 63 B 6	107
0.16	13.2	735	1.9	MR 3I 50 - 11 × 140 63 B 6	87.3
0.16	13.2	735	2.65	MR 3I 51 - 11 × 140 63 B 6	87.3
0.16	13.4	720	1.6	MR 3I 50 - 11 × 140 63 A 4	130
0.16	15.5	625	1.06	MR 3I 40 - 11 × 140 63 B 6	74.4
0.16	15.5	625	1.32	MR 3I 41 - 11 × 140 63 B 6	74.4
0.16	16.3	595	2.12	MR 3I 50 - 11 × 140 63 A 4	107
0.16	16.3	595	2.8	MR 3I 51 - 11 × 140 63 A 4	107
0.16	17.4	555	1.18	MR 3I 40 - 11 × 140 63 B 6	65.9
0.16	17.4	555	1.5	MR 3I 41 - 11 × 140 63 B 6	65.9
0.16	17.7	545	2.65	MR 3I 50 - 11 × 140 63 B 6	65.0
0.16	17.7	545	3.55	MR 3I 51 - 11 × 140 63 B 6	65.0
0.16	20.6	470	1.4	MR 3I 40 - 11 × 140 63 B 6	55.9
0.16	18.9	515	1.18	MR 3I 40 - 11 × 140 63 A 4	92.8
0.16	20.6	470	1.8	MR 3I 41 - 11 × 140 63 B 6	55.9
0.16	20.0	485	3	MR 3I 50 - 11 × 140 63 A 4	87.3
0.16	20.0	485	4	MR 3I 51 - 11 × 140 63 A 4	87.3
0.16	23.5	410	1.6	MR 3I 40 - 11 × 140 63 A 4	74.4
0.16	23.5	410	2	MR 3I 41 - 11 × 140 63 A 4	74.4
0.16	22.4	435	3.35	MR 3I 50 - 11 × 140 63 B 6	51.4

Motor power P_1 hp 1)	Output speed n_2 rpm	Output torque T_2 lb in	Service factor fs	2)	Gear ratio i
0.16	25.7	375	1.8	MR 3I 40 - 11 × 140 63 B 6	44.7
0.16	25.7	375	2.12	MR 3I 41 - 11 × 140 63 B 6	44.7
0.16	24.5	395	3.55	MR 3I 50 - 11 × 140 63 A 4	71.4
0.16	26.6	365	1.8	MR 3I 40 - 11 × 140 63 A 4	65.9
0.16	29.0	335	2.5	MR 3I 41 - 11 × 140 63 B 6	39.6
0.16	26.6	365	2.36	MR 3I 41 - 11 × 140 63 A 4	65.9
0.16	26.9	360	4	MR 3I 50 - 11 × 140 63 A 4	65.0
0.16	29.4	330	4.25	MR 3I 50 - 11 × 140 63 A 4	59.5
0.16	32.2	300	1.12	MR 3I 32 - 11 × 140 63 B 6	35.7
0.16	31.3	310	2.12	MR 3I 40 - 11 × 140 63 A 4	55.9
0.16	31.3	310	2.65	MR 3I 41 - 11 × 140 63 A 4	55.9
0.16	36.8	265	1.25	MR 3I 32 - 11 × 140 63 A 4	47.5
0.16	34.1	285	2.36	MR 3I 40 - 11 × 140 63 A 4	51.3
0.16	34.1	285	2.8	MR 3I 41 - 11 × 140 63 A 4	51.3
0.16	34.1	285	5	MR 3I 50 - 11 × 140 63 A 4	51.4
0.16	41.6	235	1.4	MR 3I 32 - 11 × 140 63 A 4	42.1
0.16	39.1	245	2.65	MR 3I 40 - 11 × 140 63 A 4	44.7
0.16	39.1	245	3.15	MR 3I 41 - 11 × 140 63 A 4	44.7
0.16	46.2	210	1.5	MR 3I 32 - 11 × 140 63 B 6	24.9
0.16	44.2	220	3	MR 3I 40 - 11 × 140 63 A 4	39.6
0.16	44.2	220	3.75	MR 3I 41 - 11 × 140 63 A 4	39.6
0.16	49.0	200	1.6	MR 3I 32 - 11 × 140 63 A 4	35.7
0.16	52.0	185	3.55	MR 3I 40 - 11 × 140 63 A 4	33.6
0.16	52.0	190	2.8	MR 2I 40 - 11 × 140 63 B 6	22.1
0.16	54.6	175	1.7	MR 3I 32 - 11 × 140 63 A 4	32.1
0.16	56.8	170	3.75	MR 3I 40 - 11 × 140 63 A 4	30.8
0.16	62.3	155	2	MR 3I 32 - 11 × 140 63 A 4	28.1
0.16	63.5	155	3.75	MR 2I 40 - 11 × 140 63 B 6	18.1
0.16	70.4	140	2.24	MR 3I 32 - 11 × 140 63 A 4	24.9
0.16	66.7	145	4.25	MR 3I 40 - 11 × 140 63 A 4	26.2
0.16	70.9	140	4.25	MR 2I 40 - 11 × 140 63 B 6	16.2
0.16	82.9	115	2.65	MR 3I 32 - 11 × 140 63 A 4	21.1
0.16	85.4	115	2.5	MR 2I 32 - 11 × 140 63 B 6	13.5
0.16	79.2	125	4	MR 2I 40 - 11 × 140 63 A 4	22.1
0.16	92.4	105	3	MR 3I 32 - 11 × 140 63 A 4	18.9
0.16	107	93	3.35	MR 2I 32 - 11 × 140 63 B 6	10.8
0.16	106	91	3.15	MR 3I 32 - 11 × 140 63 A 4	16.5
0.16	120	82	3.75	MR 2I 32 - 11 × 140 63 B 6	9.57
0.16	130	76	3.75	MR 2I 32 - 11 × 140 63 A 4	13.5
0.16	162	61	5	MR 2I 32 - 11 × 140 63 A 4	10.8
0.16	183	54	5.6	MR 2I 32 - 11 × 140 63 A 4	9.57
0.16	216	46	6.3	MR 2I 32 - 11 × 140 63 A 4	8.12
0.16	240	41	7.1	MR 2I 32 - 11 × 140 63 A 4	7.29
0.16	276	36	8.5	MR 2I 32 - 11 × 140 63 A 4	6.33
0.16	346	29	8.5	MR 2I 32 - 11 × 140 63 A 4	5.06
0.25	8.09	1 870	1.32	MR 3I 63 - 14 × 160 71 A 6	142
0.25	10.3	1 460	1.9	MR 3I 63 - 14 × 160 71 A 6	111
0.25	10.3	1 460	2.24	MR 3I 64 - 14 × 160 71 A 6	111
0.25	12.9	1 170	2.5	MR 3I 63 - 14 × 160 71 A 6	89.0
0.25	12.9	1 170	3.35	MR 3I 64 - 14 × 160 71 A 6	89.0
0.25	14.8	1 020	1.25	MR 3I 50 - 14 × 160 71 A 6	77.7
0.25	13.4	1 130	1.06	MR 3I 50 - 11 × 140 63 B 4	130
0.25	14.8	1 020	1.6	MR 3I 51 - 14 × 160 71 A 6	77.7
0.25	16.3	925	1.4	MR 3I 50 - 11 × 140 63 B 4	107
0.25	16.3	925	1.8	MR 3I 51 - 11 × 140 63 B 4	107
0.25	15.4	980	3	MR 3I 63 - 14 × 160 71 A 6	74.5
0.25	18.2	830	1.7	MR 3I 50 - 14 × 160 71 A 6	63.2
0.25	18.2	830	2.36	MR 3I 51 - 14 × 160 71 A 6	63.2
0.25	18.8	805	3.75	MR 3I 63 - 14 × 160 71 A 6	61.3
0.25	21.3	710	1.18	MR 3I 41 - 14 × 160 71 A 6	53.9
0.25	20.0	755	1.9	MR 3I 50 - 11 × 140 63 B 4	87.3
0.25	20.0	755	2.5	MR 3I 51 - 11 × 140 63 B 4	87.3

1) Powers valid for continuous duty S1; **increase** possible for S2 ... S10 (ch. 2b) in which case P_2 and M_2 increase and fs decreases proportionately.
2) For complete designation when ordering, see ch. 3.

Motor power P_1 hp 1)	Output speed n_2 rpm	Output torque T_2 lb in	Service factor fs	2)	Gear ratio i
0.25	23.5	645	1.06	MR 3I 40 - 11 × 140 63 B 4	74.4
0.25	23.5	645	1.25	MR 3I 41 - 11 × 140 63 B 4	74.4
0.25	22.2	680	2.12	MR 3I 50 - 14 × 160 71 A 6	51.7
0.25	22.2	680	2.8	MR 3I 51 - 14 × 160 71 A 6	51.7
0.25	24.5	615	2.24	MR 3I 50 - 11 × 140 63 B 4	71.4
0.25	24.5	615	3.15	MR 3I 51 - 11 × 140 63 B 4	71.4
0.25	26.6	570	1.18	MR 3I 40 - 11 × 140 63 B 4	65.9
0.25	26.6	570	1.5	MR 3I 41 - 11 × 140 63 B 4	65.9
0.25	26.9	560	2.5	MR 3I 50 - 11 × 140 63 B 4	65.0
0.25	29.4	515	2.8	MR 3I 50 - 11 × 140 63 B 4	59.5
0.25	26.9	560	3.55	MR 3I 51 - 11 × 140 63 B 4	65.0
0.25	31.3	485	1.4	MR 3I 40 - 11 × 140 63 B 4	55.9
0.25	31.3	485	1.7	MR 3I 41 - 11 × 140 63 B 4	55.9
0.25	34.1	445	1.5	MR 3I 40 - 11 × 140 63 B 4	51.3
0.25	34.1	445	1.8	MR 3I 41 - 11 × 140 63 B 4	51.3
0.25	34.1	445	3.15	MR 3I 50 - 11 × 140 63 B 4	51.4
0.25	39.1	385	1.7	MR 3I 40 - 11 × 140 63 B 4	44.7
0.25	39.1	385	2.12	MR 3I 41 - 11 × 140 63 B 4	44.7
0.25	40.7	370	3.75	MR 3I 50 - 11 × 140 63 B 4	43.0
0.25	44.2	345	1.9	MR 3I 40 - 11 × 140 63 B 4	39.6
0.25	44.2	345	2.36	MR 3I 41 - 11 × 140 63 B 4	39.6
0.25	44.7	340	4	MR 3I 50 - 11 × 140 63 B 4	39.2
0.25	49.0	310	1.06	MR 3I 32 - 11 × 140 63 B 4	35.7
0.25	52.0	290	2.24	MR 3I 40 - 11 × 140 63 B 4	33.6
0.25	52.0	290	2.8	MR 3I 41 - 11 × 140 63 B 4	33.6
0.25	48.8	310	4.5	MR 3I 50 - 11 × 140 63 B 4	35.8
0.25	54.6	275	1.12	MR 3I 32 - 11 × 140 63 B 4	32.1
0.25	56.8	265	2.5	MR 3I 40 - 11 × 140 63 B 4	30.8
0.25	56.8	265	3.15	MR 3I 41 - 11 × 140 63 B 4	30.8
0.25	62.3	245	1.32	MR 3I 32 - 11 × 140 63 B 4	28.1
0.25	70.4	215	1.5	MR 3I 32 - 11 × 140 63 B 4	24.9
0.25	66.7	225	2.65	MR 3I 40 - 11 × 140 63 B 4	26.2
0.25	66.7	225	3.15	MR 3I 41 - 11 × 140 63 B 4	26.2
0.25	71.0	220	2.36	MR 2I 40 - 14 × 160 71 A 6	16.2
0.25	82.9	180	1.7	MR 3I 32 - 11 × 140 63 B 4	21.1
0.25	79.2	195	2.65	MR 2I 40 - 11 × 140 63 B 4	22.1
0.25	92.4	165	1.9	MR 3I 32 - 11 × 140 63 B 4	18.9
0.25	86.5	180	3.15	MR 2I 40 - 14 × 160 71 A 6	13.3
0.25	96.7	160	3.55	MR 2I 40 - 11 × 140 63 B 4	18.1
0.25	106	140	2	MR 3I 32 - 11 × 140 63 B 4	16.5
0.25	108	145	4.25	MR 2I 40 - 11 × 140 63 B 4	16.2
0.25	130	120	2.36	MR 2I 32 - 11 × 140 63 B 4	13.5
0.25	121	130	4.75	MR 2I 40 - 11 × 140 63 B 4	14.5
0.25	137	115	5.3	MR 2I 40 - 11 × 140 63 B 4	12.8
0.25	162	95	3.15	MR 2I 32 - 11 × 140 63 B 4	10.8
0.25	183	84	3.55	MR 2I 32 - 11 × 140 63 B 4	9.57
0.25	216	72	4.25	MR 2I 32 - 11 × 140 63 B 4	8.12
0.25	240	64	4.75	MR 2I 32 - 11 × 140 63 B 4	7.29
0.25	276	56	5.3	MR 2I 32 - 11 × 140 63 B 4	6.33
0.25	346	45	5.6	MR 2I 32 - 11 × 140 63 B 4	5.06
0.33	10.3	1 930	1.4	MR 3I 63 - 14 × 160 71 B 6	111
0.33	10.3	1 930	1.7	MR 3I 64 - 14 × 160 71 B 6	111
0.33	12.9	1 550	1.9	MR 3I 63 - 14 × 160 71 B 6	89.0
0.33	12.3	1 620	1.5	MR 3I 63 - 14 × 160 71 A 4	142
0.33	12.9	1 550	2.5	MR 3I 64 - 14 × 160 71 B 6	89.0
0.33	14.8	1 350	1.25	MR 3I 51 - 14 × 160 71 B 6	77.7
0.33	16.3	1 220	1.06	MR 3I 50 - 11 × 140 63 C 4	107
0.33	16.3	1 220	1.4	MR 3I 51 - 11 × 140 63 C 4	107
0.33	15.7	1 270	2.12	MR 3I 63 - 14 × 160 71 A 4	111
0.33	15.4	1 290	3	MR 3I 64 - 14 × 160 71 B 6	74.5
0.33	15.7	1 270	2.65	MR 3I 64 - 14 × 160 71 A 4	111

Motor power P_1 hp 1)	Output speed n_2 rpm	Output torque T_2 lb in	Service factor fs	2)	Gear ratio i
0.33	18.2	1 100	1.32	MR 3I 50 - 14 × 160 71 B 6	63.2
0.33	18.5	1 080	1.06	MR 3I 50 - 14 × 160 71 A 4	94.4
0.33	18.2	1 100	1.8	MR 3I 51 - 14 × 160 71 B 6	63.2
0.33	18.8	1 060	2.8	MR 3I 63 - 14 × 160 71 B 6	61.3
0.33	20.0	995	1.4	MR 3I 50 - 11 × 140 63 C 4	87.3
0.33	20.0	995	1.9	MR 3I 51 - 11 × 140 63 C 4	87.3
0.33	19.7	1 020	3	MR 3I 63 - 14 × 160 71 A 4	89.0
0.33	19.7	1 020	3.75	MR 3I 64 - 14 × 160 71 A 4	89.0
0.33	22.5	885	1.4	MR 3I 50 - 14 × 160 71 A 4	77.7
0.33	22.2	900	2.12	MR 3I 51 - 14 × 160 71 B 6	51.7
0.33	22.5	885	1.9	MR 3I 51 - 14 × 160 71 A 4	77.7
0.33	23.5	850	3.55	MR 3I 63 - 14 × 160 71 A 4	74.5
0.33	24.5	815	1.7	MR 3I 50 - 11 × 140 63 C 4	71.4
0.33	24.5	815	2.36	MR 3I 51 - 11 × 140 63 C 4	71.4
0.33	24.8	805	3.55	MR 3I 63 - 14 × 160 71 B 6	46.3
0.33	26.6	750	1.12	MR 3I 41 - 11 × 140 63 C 4	65.9
0.33	26.9	740	1.9	MR 3I 50 - 11 × 140 63 C 4	65.0
0.33	29.4	680	2.12	MR 3I 50 - 11 × 140 63 C 4	59.5
0.33	27.7	720	2	MR 3I 50 - 14 × 160 71 A 4	63.2
0.33	26.9	740	2.65	MR 3I 51 - 11 × 140 63 C 4	65.0
0.33	29.4	680	3	MR 3I 51 - 11 × 140 63 C 4	59.5
0.33	27.7	720	2.65	MR 3I 51 - 14 × 160 71 A 4	63.2
0.33	28.5	700	4.25	MR 3I 63 - 14 × 160 71 A 4	61.3
0.33	31.3	640	1.06	MR 3I 40 - 11 × 140 63 C 4	55.9
0.33	32.5	615	1.06	MR 3I 40 - 14 × 160 71 A 4	53.9
0.33	31.3	640	1.32	MR 3I 41 - 11 × 140 63 C 4	55.9
0.33	32.5	615	1.32	MR 3I 41 - 14 × 160 71 A 4	53.9
0.33	30.6	650	2.12	MR 3I 50 - 14 × 160 71 A 4	57.1
0.33	30.6	650	2.8	MR 3I 51 - 14 × 160 71 A 4	57.1
0.33	31.6	630	4.75	MR 3I 63 - 14 × 160 71 A 4	55.4
0.33	34.1	585	1.12	MR 3I 40 - 11 × 140 63 C 4	51.3
0.33	36.6	545	1.18	MR 3I 40 - 14 × 160 71 A 4	47.7
0.33	34.1	585	1.4	MR 3I 41 - 11 × 140 63 C 4	51.3
0.33	36.6	545	1.5	MR 3I 41 - 14 × 160 71 A 4	47.7
0.33	34.1	585	2.36	MR 3I 50 - 11 × 140 63 C 4	51.4
0.33	33.8	590	2.36	MR 3I 50 - 14 × 160 71 A 4	51.7
0.33	37.2	535	2.65	MR 3I 50 - 14 × 160 71 A 4	47.1
0.33	34.1	585	3.35	MR 3I 51 - 11 × 140 63 C 4	51.4
0.33	33.8	590	3.15	MR 3I 51 - 14 × 160 71 A 4	51.7
0.33	37.2	535	3.75	MR 3I 51 - 14 × 160 71 A 4	47.1
0.33	39.1	510	1.25	MR 3I 40 - 11 × 140 63 C 4	44.7
0.33	39.1	510	1.6	MR 3I 41 - 11 × 140 63 C 4	44.7
0.33	40.7	490	2.8	MR 3I 50 - 11 × 140 63 C 4	43.0
0.33	40.6	490	2.8	MR 3I 50 - 14 × 160 71 A 4	43.1
0.33	40.6	490	4	MR 3I 51 - 14 × 160 71 A 4	43.1
0.33	44.2	450	1.4	MR 3I 40 - 11 × 140 63 C 4	39.6
0.33	43.2	460	1.4	MR 3I 40 - 14 × 160 71 A 4	40.5
0.33	44.2	450	1.8	MR 3I 41 - 11 × 140 63 C 4	39.6
0.33	43.2	460	1.8	MR 3I 41 - 14 × 160 71 A 4	40.5
0.33	44.7	445	3.15	MR 3I 50 - 11 × 140 63 C 4	39.2
0.33	52.0	385	1.7	MR 3I 40 - 11 × 140 63 C 4	33.6
0.33	47.2	425	1.6	MR 3I 40 - 14 × 160 71 A 4	37.1
0.33	52.0	385	2.12	MR 3I 41 - 11 × 140 63 C 4	33.6
0.33	47.2	425	1.9	MR 3I 41 - 14 × 160 71 A 4	37.1
0.33	48.8	410	3.35	MR 3I 50 - 11 × 140 63 C 4	35.8
0.33	47.0	425	3.35	MR 3I 50 - 14 × 160 71 A 4	37.2
0.33	51.7	395	2.8	MR 2I 50 - 14 × 160 71 B 6	22.3
0.33	56.8	350	1.8	MR 3I 40 - 11 × 140 63 C 4	30.8
0.33	54.0	370	1.7	MR 3I 40 - 14 × 160 71 A 4	32.4
0.33	56.8	350	2.36	MR 3I 41 - 11 × 140 63 C 4	30.8
0.33	54.0	370	2.12	MR 3I 41 - 14 × 160 71 A 4	32.4
0.33	56.5	355	4	MR 3I 50 - 11 × 140 63 C 4	31.0
0.33	56.1	355	3.75	MR 3I 50 - 14 × 160 71 A 4	31.2
0.33	62.3	320	1	MR 3I 32 - 11 × 140 63 C 4	28.1
0.33	60.9	330	1.9	MR 3I 40 - 14 × 160 71 A 4	28.7
0.33	60.9	330	2.5	MR 3I 41 - 14 × 160 71 A 4	28.7
0.33	61.7	325	4.25	MR 3I 50 - 14 × 160 71 A 4	28.4

1) Powers valid for continuous duty S1; **increase** possible for S2 ... S10 (ch. 2b) in which case P_2 and M_2 increase and fs decreases proportionately.
2) For complete designation when ordering, see ch. 3.

Motor power P_1 hp 1)	Output speed n_2 rpm	Output torque T_2 lb in	Service factor fs	2)						Gear ratio i
0.33	70.4	285	1.12	MR	3I	32 - 11 × 140	63 C	4		24.9
0.33	66.7	300	2	MR	3I	40 - 11 × 140	63 C	4		26.2
0.33	71.8	280	2.24	MR	3I	40 - 14 × 160	71 A	4		24.4
0.33	66.7	300	2.36	MR	3I	41 - 11 × 140	63 C	4		26.2
0.33	71.8	280	3	MR	3I	41 - 14 × 160	71 A	4		24.4
0.33	67.4	295	4.5	MR	3I	50 - 14 × 160	71 A	4		26.0
0.33	71.0	285	1.8	MR	2I	40 - 14 × 160	71 B	6		16.2
0.33	82.9	240	1.32	MR	3I	32 - 11 × 140	63 C	4		21.1
0.33	78.5	255	2.5	MR	3I	40 - 14 × 160	71 A	4		22.3
0.33	78.5	255	3.15	MR	3I	41 - 14 × 160	71 A	4		22.3
0.33	78.0	255	5.3	MR	3I	50 - 14 × 160	71 A	4		22.4
0.33	79.2	255	2	MR	2I	40 - 11 × 140	63 C	4		22.1
0.33	78.6	260	4.25	MR	2I	50 - 14 × 160	71 A	4		22.3
0.33	92.4	215	1.5	MR	3I	32 - 11 × 140	63 C	4		18.9
0.33	92.1	215	2.8	MR	3I	40 - 14 × 160	71 A	4		19.0
0.33	92.1	215	3.35	MR	3I	41 - 14 × 160	71 A	4		19.0
0.33	86.5	235	2.36	MR	2I	40 - 14 × 160	71 B	6		13.3
0.33	86.5	235	2.8	MR	2I	41 - 14 × 160	71 B	6		13.3
0.33	97.8	210	2.8	MR	2I	40 - 14 × 160	71 B	6		11.8
0.33	96.7	210	2.65	MR	2I	40 - 11 × 140	63 C	4		18.1
0.33	97.8	210	3.35	MR	2I	41 - 14 × 160	71 B	6		11.8
0.33	106	190	1.5	MR	3I	32 - 11 × 140	63 C	4		16.5
0.33	115	175	2.8	MR	3I	40 - 14 × 160	71 A	4		15.2
0.33	108	190	3.15	MR	2I	40 - 11 × 140	63 C	4		16.2
0.33	108	190	2.65	MR	2I	40 - 14 × 160	71 A	4		16.2
0.33	108	190	3.75	MR	2I	41 - 11 × 140	63 C	4		16.2
0.33	130	155	1.8	MR	2I	32 - 11 × 140	63 C	4		13.5
0.33	121	170	3.55	MR	2I	40 - 11 × 140	63 C	4		14.5
0.33	132	155	3.55	MR	2I	40 - 14 × 160	71 A	4		13.3
0.33	137	150	4	MR	2I	40 - 11 × 140	63 C	4		12.8
0.33	162	125	2.36	MR	2I	32 - 11 × 140	63 C	4		10.8
0.33	161	125	4.75	MR	2I	40 - 11 × 140	63 C	4		10.9
0.33	149	135	4.25	MR	2I	40 - 14 × 160	71 A	4		11.8
0.33	183	110	2.65	MR	2I	32 - 11 × 140	63 C	4		9.57
0.33	166	125	4.75	MR	2I	40 - 14 × 160	71 A	4		10.6
0.33	186	110	5.3	MR	2I	40 - 14 × 160	71 A	4		9.41
0.33	216	95	3.15	MR	2I	32 - 11 × 140	63 C	4		8.12
0.33	219	93	6.3	MR	2I	40 - 14 × 160	71 A	4		7.98
0.33	240	85	3.55	MR	2I	32 - 11 × 140	63 C	4		7.29
0.33	239	85	7.1	MR	2I	40 - 14 × 160	71 A	4		7.32
0.33	276	74	4	MR	2I	32 - 11 × 140	63 C	4		6.33
0.33	346	59	4.25	MR	2I	32 - 11 × 140	63 C	4		5.06
0.5	7.46	4 060	1.18	MR	3I	80 - 19 × 200	80 A	6		154
0.5	9.12	3 320	1.6	MR	3I	80 - 19 × 200	80 A	6		126
0.5	9.12	3 320	2	MR	3I	81 - 19 × 200	80 A	6		126
0.5	10.3	2 930	1.12	MR	3I	64 - 14 × 160	71 C	6		111
0.5	11.4	2 660	2.24	MR	3I	80 - 19 × 200	80 A	6		101
0.5	11.4	2 660	3	MR	3I	81 - 19 × 200	80 A	6		101
0.5	12.9	2 340	1.25	MR	3I	63 - 14 × 160	71 C	6		89.0
0.5	12.3	2 460	1	MR	3I	63 - 14 × 160	71 B	4		142
0.5	12.9	2 340	1.7	MR	3I	64 - 14 × 160	71 C	6		89.0
0.5	13.6	2 230	2.65	MR	3I	80 - 19 × 200	80 A	6		84.6
0.5	13.6	2 230	3.55	MR	3I	81 - 19 × 200	80 A	6		84.6
0.5	15.4	1 960	1.5	MR	3I	63 - 14 × 160	71 C	6		74.5
0.5	15.7	1 920	1.4	MR	3I	63 - 14 × 160	71 B	4		111
0.5	15.4	1 960	2	MR	3I	64 - 14 × 160	71 C	6		74.5
0.5	15.7	1 920	1.7	MR	3I	64 - 14 × 160	71 B	4		111
0.5	18.2	1 660	1.18	MR	3I	51 - 14 × 160	71 C	6		63.2
0.5	18.8	1 610	1.8	MR	3I	63 - 14 × 160	71 C	6		61.3
0.5	18.8	1 610	2.36	MR	3I	64 - 14 × 160	71 C	6		61.3
0.5	17.3	1 740	3.35	MR	3I	80 - 19 × 200	80 A	6		66.3

Motor power P_1 hp 1)	Output speed n_2 rpm	Output torque T_2 lb in	Service factor fs	2)						Gear ratio i
0.5	20.6	1 470	1.25	MR	3I	51 - 19 × 200	80 A	6		55.9
0.5	19.7	1 540	1.9	MR	3I	63 - 14 × 160	71 B	4		89.0
0.5	19.7	1 540	2.5	MR	3I	64 - 14 × 160	71 B	4		89.0
0.5	19.6	1 550	3.75	MR	3I	80 - 19 × 200	80 A	6		58.7
0.5	22.7	1 330	1.06	MR	3I	50 - 19 × 200	80 A	6		50.6
0.5	22.5	1 340	0.95	MR	3I	50 - 14 × 160	71 B	4		77.7
0.5	22.7	1 330	1.4	MR	3I	51 - 19 × 200	80 A	6		50.6
0.5	22.5	1 340	1.25	MR	3I	51 - 14 × 160	71 B	4		77.7
0.5	23.5	1 290	2.36	MR	3I	63 - 14 × 160	71 B	4		74.5
0.5	23.5	1 290	3	MR	3I	64 - 14 × 160	71 B	4		74.5
0.5	26.7	1 130	1.25	MR	3I	50 - 14 × 160	71 C	6		43.1
0.5	26.7	1 130	1.7	MR	3I	51 - 14 × 160	71 C	6		43.1
0.5	26.0	1 160	2.5	MR	3I	63 - 19 × 200	80 A	6		44.2
0.5	24.8	1 220	3	MR	3I	64 - 14 × 160	71 C	6		46.3
0.5	27.7	1 090	1.32	MR	3I	50 - 14 × 160	71 B	4		63.2
0.5	27.7	1 090	1.8	MR	3I	51 - 14 × 160	71 B	4		63.2
0.5	28.5	1 060	2.8	MR	3I	63 - 14 × 160	71 B	4		61.3
0.5	28.5	1 060	3.55	MR	3I	64 - 14 × 160	71 B	4		61.3
0.5	30.6	990	1.4	MR	3I	50 - 14 × 160	71 B	4		57.1
0.5	33.3	905	2.24	MR	3I	51 - 19 × 200	80 A	6		34.5
0.5	30.6	990	1.8	MR	3I	51 - 14 × 160	71 B	4		57.1
0.5	31.6	960	3.15	MR	3I	63 - 14 × 160	71 B	4		55.4
0.5	36.6	825	1	MR	3I	41 - 14 × 160	71 B	4		47.7
0.5	33.8	895	1.6	MR	3I	50 - 14 × 160	71 B	4		51.7
0.5	37.2	815	1.7	MR	3I	50 - 14 × 160	71 B	4		47.1
0.5	33.8	895	2.12	MR	3I	51 - 14 × 160	71 B	4		51.7
0.5	37.2	815	2.36	MR	3I	51 - 14 × 160	71 B	4		47.1
0.5	34.7	870	3.35	MR	3I	63 - 14 × 160	71 B	4		50.4
0.5	40.1	755	1.12	MR	3I	41 - 14 × 160	71 C	6		28.7
0.5	40.6	745	1.9	MR	3I	50 - 14 × 160	71 B	4		43.1
0.5	40.6	745	2.65	MR	3I	51 - 14 × 160	71 B	4		43.1
0.5	37.8	800	3.55	MR	3I	63 - 14 × 160	71 B	4		46.3
0.5	43.2	700	1.18	MR	3I	41 - 14 × 160	71 B	4		40.5
0.5	44.3	685	2	MR	3I	50 - 14 × 160	71 C	6		26.0
0.5	44.3	685	2.8	MR	3I	51 - 14 × 160	71 C	6		26.0
0.5	42.1	720	4	MR	3I	63 - 14 × 160	71 B	4		41.6
0.5	46.6	650	4.5	MR	3I	63 - 14 × 160	71 B	4		37.6
0.5	47.2	640	1	MR	3I	40 - 14 × 160	71 B	4		37.1
0.5	51.6	585	1.4	MR	3I	41 - 14 × 160	71 C	6		22.3
0.5	47.2	640	1.25	MR	3I	41 - 14 × 160	71 B	4		37.1
0.5	47.0	645	2.12	MR	3I	50 - 14 × 160	71 B	4		37.2
0.5	47.0	645	3	MR	3I	51 - 14 × 160	71 B	4		37.2
0.5	51.7	600	1.9	MR	2I	50 - 14 × 160	71 C	6		22.3
0.5	54.0	560	1.12	MR	3I	40 - 14 × 160	71 B	4		32.4
0.5	54.0	560	1.4	MR	3I	41 - 14 × 160	71 B	4		32.4
0.5	56.1	540	2.5	MR	3I	50 - 14 × 160	71 B	4		31.2
0.5	56.1	540	3.35	MR	3I	51 - 14 × 160	71 B	4		31.2
0.5	60.9	495	1.32	MR	3I	40 - 14 × 160	71 B	4		28.7
0.5	60.9	495	1.6	MR	3I	41 - 14 × 160	71 B	4		28.7
0.5	61.7	490	2.8	MR	3I	50 - 14 × 160	71 B	4		28.4
0.5	61.7	490	4	MR	3I	51 - 14 × 160	71 B	4		28.4
0.5	71.8	420	1.5	MR	3I	40 - 14 × 160	71 B	4		24.4
0.5	71.8	420	1.9	MR	3I	41 - 14 × 160	71 B	4		24.4
0.5	67.4	450	3	MR	3I	50 - 14 × 160	71 B	4		26.0
0.5	78.5	385	1.7	MR	3I	40 - 14 × 160	71 B	4		22.3
0.5	78.5	385	2.12	MR	3I	41 - 14 × 160	71 B	4		22.3
0.5	78.0	390	3.55	MR	3I	50 - 14 × 160	71 B	4		22.4
0.5	78.6	395	2.8	MR	2I	50 - 14 × 160	71 B	4		22.3
0.5	92.1	330	1.8	MR	3I	40 - 14 × 160	71 B	4		19.0
0.5	92.1	330	2.12	MR	3I	41 - 14 × 160	71 B	4		19.0
0.5	86.2	350	3.75	MR	3I	50 - 14 × 160	71 B	4		20.3
0.5	86.5	355	1.6	MR	2I	40 - 14 × 160	71 C	6		13.3
0.5	86.5	355	1.8	MR	2I	41 - 14 × 160	71 C	6		13.3
0.5	97.8	315	1.9	MR	2I	40 - 14 × 160	71 C	6		11.8
0.5	97.8	315	2.24	MR	2I	41 - 14 × 160	71 C	6		11.8
0.5	95.6	325	3.75	MR	2I	50 - 14 × 160	71 B	4		18.3

1) Powers valid for continuous duty S1; **increase** possible for S2 ... S10 (ch. 2b) in which case P_2 and M_2 increase and fs decreases proportionately.
2) For complete designation when ordering, see ch. 3.

* Mounting position **B5R** (see table ch. 2b).

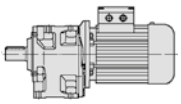
Motor power P_1 hp 1)	Output speed n_2 rpm	Output torque T_2 lb in	Service factor fs	2)	Gear ratio i
0.5	115	260	1.8	MR 3I 40 - 14 × 160 71 B 4	15.2
0.5	109	285	2.12	MR 2I 40 - 14 × 160 71 C 6	10.6
0.5	108	285	1.8	MR 2I 40 - 14 × 160 71 B 4	16.2
0.5	109	285	2.65	MR 2I 41 - 14 × 160 71 C 6	10.6
0.5	106	290	4.25	MR 2I 50 - 14 × 160 71 B 4	16.5
0.5	117	265	5	MR 2I 50 - 14 × 160 71 B 4	14.9
0.5	130	240	1.18	MR 2I 32 - 11 × 140 71 B B5R 4	13.5
0.5	132	235	2.36	MR 2I 40 - 14 × 160 71 B 4	13.3
0.5	132	235	2.65	MR 2I 41 - 14 × 160 71 B 4	13.3
0.5	127	245	5	MR 2I 50 - 14 × 160 71 B 4	13.8
0.5	140	220	5.6	MR 2I 50 - 14 × 160 71 B 4	12.5
0.5	162	190	1.6	MR 2I 32 - 11 × 140 71 B B5R 4	10.8
0.5	149	205	2.8	MR 2I 40 - 14 × 160 71 B 4	11.8
0.5	149	205	3.35	MR 2I 41 - 14 × 160 71 B 4	11.8
0.5	183	170	1.8	MR 2I 32 - 11 × 140 71 B B5R 4	9.57
0.5	166	185	3.15	MR 2I 40 - 14 × 160 71 B 4	10.6
0.5	186	165	3.55	MR 2I 40 - 14 × 160 71 B 4	9.41
0.5	216	145	2.12	MR 2I 32 - 11 × 140 71 B B5R 4	8.12
0.5	219	140	4.25	MR 2I 40 - 14 × 160 71 B 4	7.98
0.5	240	130	2.36	MR 2I 32 - 11 × 140 71 B B5R 4	7.29
0.5	239	130	4.5	MR 2I 40 - 14 × 160 71 B 4	7.32
0.5	276	110	2.65	MR 2I 32 - 11 × 140 71 B B5R 4	6.33
0.5	281	110	5.3	MR 2I 40 - 14 × 160 71 B 4	6.22
0.5	346	89	2.8	MR 2I 32 - 11 × 140 71 B B5R 4	5.06
0.5	352	88	5.6	MR 2I 40 - 14 × 160 71 B 4	4.97
0.75	9.12	4 980	1.12	MR 3I 80 - 19 × 200 80 B 6	126
0.75	9.12	4 980	1.32	MR 3I 81 - 19 × 200 80 B 6	126
0.75	11.4	3 990	1.5	MR 3I 80 - 19 × 200 80 B 6	101
0.75	11.3	4 000	1.18	MR 3I 80 - 19 × 200 80 A 4	154
0.75	11.4	3 990	1.9	MR 3I 81 - 19 × 200 80 B 6	101
0.75	13.6	3 340	1.8	MR 3I 80 - 19 × 200 80 B 6	84.6
0.75	13.9	3 270	1.7	MR 3I 80 - 19 × 200 80 A 4	126
0.75	13.6	3 340	2.36	MR 3I 81 - 19 × 200 80 B 6	84.6
0.75	13.9	3 270	2	MR 3I 81 - 19 × 200 80 A 4	126
0.75	15.5	2 930	1.12	MR 3I 64 - 19 × 200 80 B 6	74.3
0.75	15.7	2 890	1.18	MR 3I 64 - 14 × 160 71 C 4	111
0.75	18.4	2 460	1	MR 3I 63 - 19 × 200 80 A 4	94.9
0.75	17.3	2 620	2.24	MR 3I 80 - 19 × 200 80 A 4	101
0.75	17.3	2 620	3	MR 3I 81 - 19 × 200 80 A 4	101
0.75	19.3	2 350	1.25	MR 3I 63 - 19 × 200 80 B 6	59.5
0.75	19.7	2 310	1.32	MR 3I 63 - 14 × 160 71 C 4	89.0
0.75	19.3	2 350	1.6	MR 3I 64 - 19 × 200 80 B 6	59.5
0.75	19.7	2 310	1.7	MR 3I 64 - 14 × 160 71 C 4	89.0
0.75	20.7	2 190	2.65	MR 3I 80 - 19 × 200 80 A 4	84.6
0.75	20.7	2 190	3.55	MR 3I 81 - 19 × 200 80 A 4	84.6
0.75	23.5	1 930	1.5	MR 3I 63 - 14 × 160 71 C 4	74.5
0.75	23.5	1 930	1.4	MR 3I 63 - 19 × 200 80 A 4	74.3
0.75	23.5	1 930	2	MR 3I 64 - 19 × 200 80 B 6	48.9
0.75	23.5	1 930	2	MR 3I 64 - 14 × 160 71 C 4	74.5
0.75	23.5	1 930	1.7	MR 3I 64 - 19 × 200 80 A 4	74.3
0.75	23.1	1 970	3	MR 3I 80 - 19 × 200 80 B 6	49.8
0.75	25.1	1 810	1	MR 3I 51 - 19 × 200 80 B 6	45.7
0.75	26.0	1 740	1.7	MR 3I 63 - 19 × 200 80 B 6	44.2
0.75	26.0	1 740	2.24	MR 3I 64 - 19 × 200 80 B 6	44.2
0.75	26.4	1 720	3.35	MR 3I 80 - 19 × 200 80 A 4	66.3
0.75	27.7	1 640	1.18	MR 3I 51 - 14 × 160 71 C 4	63.2
0.75	28.1	1 610	1.06	MR 3I 51 - 19 × 200 80 A 4	62.2
0.75	28.5	1 590	1.9	MR 3I 63 - 14 × 160 71 C 4	61.3
0.75	29.4	1 540	1.9	MR 3I 63 - 19 × 200 80 A 4	59.5
0.75	28.5	1 590	2.5	MR 3I 64 - 14 × 160 71 C 4	61.3
0.75	29.4	1 540	2.5	MR 3I 64 - 19 × 200 80 A 4	59.5

Motor power P_1 hp 1)	Output speed n_2 rpm	Output torque T_2 lb in	Service factor fs	2)	Gear ratio i
0.75	30.5	1 490	1.32	MR 3I 51 - 19 × 200 80 B 6	37.7
0.75	33.3	1 360	1.5	MR 3I 51 - 19 × 200 80 B 6	34.5
0.75	30.6	1 480	1.18	MR 3I 51 - 14 × 160 71 C 4	57.1
0.75	31.3	1 450	1.25	MR 3I 51 - 19 × 200 80 A 4	55.9
0.75	31.6	1 440	2.12	MR 3I 63 - 14 × 160 71 C 4	55.4
0.75	32.1	1 410	2	MR 3I 63 - 19 × 200 80 A 4	54.5
0.75	31.6	1 440	2.8	MR 3I 64 - 14 × 160 71 C 4	55.4
0.75	32.1	1 410	2.5	MR 3I 64 - 19 × 200 80 A 4	54.5
0.75	29.8	1 520	4	MR 3I 80 - 19 × 200 80 A 4	58.7
0.75	33.8	1 340	1.06	MR 3I 50 - 14 × 160 71 C 4	51.7
0.75	37.2	1 220	1.12	MR 3I 50 - 14 × 160 71 C 4	47.1
0.75	34.6	1 310	1.06	MR 3I 50 - 19 × 200 80 A 4	50.6
0.75	33.8	1 340	1.4	MR 3I 51 - 14 × 160 71 C 4	51.7
0.75	37.2	1 220	1.6	MR 3I 51 - 14 × 160 71 C 4	47.1
0.75	34.6	1 310	1.5	MR 3I 51 - 19 × 200 80 A 4	50.6
0.75	34.7	1 310	2.24	MR 3I 63 - 14 × 160 71 C 4	50.4
0.75	35.8	1 270	2.36	MR 3I 63 - 19 × 200 80 A 4	48.9
0.75	34.7	1 310	3	MR 3I 64 - 14 × 160 71 C 4	50.4
0.75	35.8	1 270	3	MR 3I 64 - 19 × 200 80 A 4	48.9
0.75	38.6	1 180	1.18	MR 3I 50 - 19 × 200 80 B 6	29.8
0.75	40.6	1 120	1.25	MR 3I 50 - 14 × 160 71 C 4	43.1
0.75	38.3	1 190	1.12	MR 3I 50 - 19 × 200 80 A 4	45.7
0.75	38.6	1 180	1.7	MR 3I 51 - 19 × 200 80 B 6	29.8
0.75	40.6	1 120	1.8	MR 3I 51 - 14 × 160 71 C 4	43.1
0.75	38.3	1 190	1.5	MR 3I 51 - 19 × 200 80 A 4	45.7
0.75	37.8	1 200	2.36	MR 3I 63 - 14 × 160 71 C 4	46.3
0.75	39.6	1 150	2.5	MR 3I 63 - 19 × 200 80 A 4	44.2
0.75	37.8	1 200	3	MR 3I 64 - 14 × 160 71 C 4	46.3
0.75	39.6	1 150	3.35	MR 3I 64 - 19 × 200 80 A 4	44.2
0.75	42.3	1 070	1.32	MR 3I 50 - 19 × 200 80 A 4	41.4
0.75	46.4	980	1.4	MR 3I 50 - 19 × 200 80 A 4	37.7
0.75	42.3	1 070	1.8	MR 3I 51 - 19 × 200 80 A 4	41.4
0.75	46.4	980	2	MR 3I 51 - 19 × 200 80 A 4	37.7
0.75	42.1	1 080	2.65	MR 3I 63 - 14 × 160 71 C 4	41.6
0.75	46.6	975	3	MR 3I 63 - 14 × 160 71 C 4	37.6
0.75	43.5	1 040	2.8	MR 3I 63 - 19 × 200 80 A 4	40.2
0.75	42.1	1 080	3.55	MR 3I 64 - 14 × 160 71 C 4	41.6
0.75	43.5	1 040	3.75	MR 3I 64 - 19 × 200 80 A 4	40.2
0.75	47.4	975	2.36	MR 2I 63 - 19 × 200 80 B 6	24.3
0.75	47.0	965	1.5	MR 3I 50 - 14 × 160 71 C 4	37.2
0.75	50.7	895	1.5	MR 3I 50 - 19 × 200 80 A 4	34.5
0.75	47.0	965	2	MR 3I 51 - 14 × 160 71 C 4	37.2
0.75	50.7	895	2.12	MR 3I 51 - 19 × 200 80 A 4	34.5
0.75	51.2	885	3.35	MR 3I 63 - 14 × 160 71 C 4	34.2
0.75	47.4	960	2.8	MR 3I 63 - 19 × 200 80 A 4	36.9
0.75	52.8	860	3.35	MR 3I 63 - 19 × 200 80 A 4	33.2
0.75	51.7	895	1.25	MR 2I 50 - 14 × 160 80 B B5R 6	22.3
0.75	55.3	820	1.7	MR 3I 50 - 19 × 200 80 B 6	20.8
0.75	56.1	810	1.7	MR 3I 50 - 14 × 160 71 C 4	31.2
0.75	58.7	775	1.8	MR 3I 50 - 19 × 200 80 A 4	29.8
0.75	55.3	820	2.36	MR 3I 51 - 19 × 200 80 B 6	20.8
0.75	56.1	810	2.24	MR 3I 51 - 14 × 160 71 C 4	31.2
0.75	58.7	775	2.5	MR 3I 51 - 19 × 200 80 A 4	29.8
0.75	58.4	775	3.75	MR 3I 63 - 19 × 200 80 A 4	30.0
0.75	60.5	765	3.35	MR 2I 63 - 19 × 200 80 B 6	19.0
0.75	60.9	745	1.06	MR 3I 41 - 14 × 160 71 C 4	28.7
0.75	64.0	710	1.9	MR 3I 50 - 19 × 200 80 B 6	18.0
0.75	61.7	735	1.8	MR 3I 50 - 14 × 160 71 C 4	28.4
0.75	64.0	710	2.8	MR 3I 51 - 19 × 200 80 B 6	18.0
0.75	61.7	735	2.65	MR 3I 51 - 14 × 160 71 C 4	28.4
0.75	62.8	740	1.7	MR 2I 50 - 14 × 160 80 B B5R 6	18.3
0.75	62.8	740	2.12	MR 2I 51 - 14 × 160 80 B B5R 6	18.3
0.75	71.8	630	1	MR 3I 40 - 14 × 160 71 C 4	24.4
0.75	71.8	630	1.25	MR 3I 41 - 14 × 160 71 C 4	24.4
0.75	67.4	675	2	MR 3I 50 - 14 × 160 71 C 4	26.0
0.75	70.1	645	2.12	MR 3I 50 - 19 × 200 80 A 4	25.0
0.75	67.4	675	2.8	MR 3I 51 - 14 × 160 71 C 4	26.0
0.75	70.1	645	2.8	MR 3I 51 - 19 × 200 80 A 4	25.0
0.75	69.8	665	1.9	MR 2I 50 - 14 × 160 80 B B5R 6	16.5
0.75	69.8	665	2.65	MR 2I 51 - 14 × 160 80 B B5R 6	16.5
0.75	72.1	640	3.55	MR 2I 63 - 19 × 200 80 A 4	24.3

1) Powers valid for continuous duty S1; **increase** possible for S2 ... S10 (ch. 2b) in which case P_2 and M_2 increase and fs decreases proportionately.
2) For complete designation when ordering, see ch. 3.

* Mounting position **B5R** (see table ch. 2b).

Gearmotors selection tables



Motor power P_1 hp 1)	Output speed n_2 rpm	Output torque T_2 lb in	Service factor fs	2)	Gear ratio i
0.75	78.5	580	1.12	MR 3I 40 - 14 × 160 71 C 4	22.3
0.75	78.5	580	1.4	MR 3I 41 - 14 × 160 71 C 4	22.3
0.75	78.0	580	2.36	MR 3I 50 - 14 × 160 71 C 4	22.4
0.75	77.0	590	2.24	MR 3I 50 - 19 × 200 80 A 4	22.7
0.75	78.0	580	3.35	MR 3I 51 - 14 × 160 71 C 4	22.4
0.75	77.0	590	3.15	MR 3I 51 - 19 × 200 80 A 4	22.7
0.75	77.1	600	2.24	MR 2I 50 - 14 × 160 80 B B5R 6	14.9
0.75	83.4	555	2.24	MR 2I 50 - 14 × 160 80 B B5R 6	13.8
0.75	77.3	600	1.8	MR 2I 50 - 19 × 200 80 B 6	14.9
0.75	78.6	590	1.9	MR 2I 50 - 14 × 160 71 C 4	22.3
0.75	77.1	600	3	MR 2I 51 - 14 × 160 80 B B5R 6	14.9
0.75	83.4	555	3.15	MR 2I 51 - 14 × 160 80 B B5R 6	13.8
0.75	92.1	495	1.18	MR 3I 40 - 14 × 160 71 C 4	19.0
0.75	92.1	495	1.4	MR 3I 41 - 14 × 160 71 C 4	19.0
0.75	86.2	525	2.65	MR 3I 50 - 14 × 160 71 C 4	20.3
0.75	84.2	540	2.5	MR 3I 50 - 19 × 200 80 A 4	20.8
0.75	86.2	525	3.55	MR 3I 51 - 14 × 160 71 C 4	20.3
0.75	84.2	540	3.55	MR 3I 51 - 19 × 200 80 A 4	20.8
0.75	86.5	535	1.06	MR 2I 40 - 14 × 160 80 B B5R 6	13.3
0.75	86.5	535	1.18	MR 2I 41 - 14 × 160 80 B B5R 6	13.3
0.75	94.0	495	2.36	MR 2I 50 - 19 × 200 80 B 6	12.2
0.75	94.0	495	3.15	MR 2I 51 - 19 × 200 80 B 6	12.2
0.75	97.4	465	2.8	MR 3I 50 - 19 × 200 80 A 4	18.0
0.75	97.4	465	4	MR 3I 51 - 19 × 200 80 A 4	18.0
0.75	97.8	475	1.25	MR 2I 40 - 14 × 160 80 B B5R 6	11.8
0.75	97.8	475	1.5	MR 2I 41 - 14 × 160 80 B B5R 6	11.8
0.75	95.6	485	2.5	MR 2I 50 - 14 × 160 71 C 4	18.3
0.75	95.6	485	3.15	MR 2I 51 - 14 × 160 71 C 4	18.3
0.75	115	395	1.18	MR 3I 40 - 14 × 160 71 C 4	15.2
0.75	108	420	3.15	MR 3I 50 - 19 × 200 80 A 4	16.3
0.75	109	425	1.4	MR 2I 40 - 14 × 160 80 B B5R 6	10.6
0.75	108	430	1.18	MR 2I 40 - 14 × 160 71 C 4	16.2
0.75	109	425	1.8	MR 2I 41 - 14 × 160 80 B B5R 6	10.6
0.75	106	435	2.8	MR 2I 50 - 14 × 160 71 C 4	16.5
0.75	117	395	3.35	MR 2I 50 - 14 × 160 71 C 4	14.9
0.75	118	395	2.8	MR 2I 50 - 19 × 200 80 A 4	14.9
0.75	106	435	3.75	MR 2I 51 - 14 × 160 71 C 4	16.5
0.75	132	350	1.6	MR 2I 40 - 14 × 160 71 C 4	13.3
0.75	122	380	2	MR 2I 41 - 14 × 160 80 B B5R 6	9.41
0.75	132	350	1.8	MR 2I 41 - 14 × 160 71 C 4	13.3
0.75	127	365	3.35	MR 2I 50 - 14 × 160 71 C 4	13.8
0.75	144	320	1.9	MR 2I 40 - 14 × 160 80 B B5R 6	7.98
0.75	144	320	2.36	MR 2I 41 - 14 × 160 80 B B5R 6	7.98
0.75	140	330	3.75	MR 2I 50 - 14 × 160 71 C 4	12.5
0.75	143	325	3.55	MR 2I 50 - 19 × 200 80 A 4	12.2
0.75	162	285	1.06	MR 2I 32 - 11 × 140 71 C B5R 4	10.8
0.75	149	310	1.9	MR 2I 40 - 14 × 160 71 C 4	11.8
0.75	157	295	2.65	MR 2I 41 - 14 × 160 80 B B5R 6	7.32
0.75	149	310	2.24	MR 2I 41 - 14 × 160 71 C 4	11.8
0.75	154	300	4.25	MR 2I 50 - 14 × 160 71 C 4	11.4
0.75	159	290	4.25	MR 2I 50 - 19 × 200 80 A 4	11.0
0.75	183	255	1.18	MR 2I 32 - 11 × 140 71 C B5R 4	9.57
0.75	166	280	2.12	MR 2I 40 - 14 × 160 71 C 4	10.6
0.75	186	250	2.36	MR 2I 40 - 14 × 160 71 C 4	9.41
0.75	166	280	2.65	MR 2I 41 - 14 × 160 71 C 4	10.6
0.75	186	250	3	MR 2I 41 - 14 × 160 71 C 4	9.41
0.75	168	275	4.75	MR 2I 50 - 14 × 160 71 C 4	10.4
0.75	176	265	4.75	MR 2I 50 - 19 × 200 80 A 4	9.96
0.75	193	240	5.3	MR 2I 50 - 19 × 200 80 A 4	9.07
0.75	216	215	1.4	MR 2I 32 - 11 × 140 71 C B5R 4	8.12
0.75	219	210	2.8	MR 2I 40 - 14 × 160 71 C 4	7.98
0.75	219	210	3.55	MR 2I 41 - 14 × 160 71 C 4	7.98
0.75	240	195	1.5	MR 2I 32 - 11 × 140 71 C B5R 4	7.29
0.75	239	195	3	MR 2I 40 - 14 × 160 71 C 4	7.32
0.75	239	195	4	MR 2I 41 - 14 × 160 71 C 4	7.32
0.75	276	170	1.8	MR 2I 32 - 11 × 140 71 C B5R 4	6.33
0.75	281	165	3.55	MR 2I 40 - 14 × 160 71 C 4	6.22
0.75	346	135	1.8	MR 2I 32 - 11 × 140 71 C B5R 4	5.06
0.75	352	130	3.75	MR 2I 40 - 14 × 160 71 C 4	4.97
1	8.01	7 560	1.32	MR 3I 100 - 24 × 200 100 LA B5R 6	144
1	9.12	6 640	1	MR 3I 81 - 19 × 200 80 C S3 6	126
1	9.73	6 220	1.7	MR 3I 100 - 24 × 200 100 LA B5R 6	118
1	9.73	6 220	2.12	MR 3I 101 - 24 × 200 100 LA B5R 6	118
1	11.4	5 320	1.12	MR 3I 80 - 19 × 200 80 C S3 6	101
1	11.4	5 320	1.5	MR 3I 81 - 19 × 200 80 C S3 6	101
1	12.0	5 060	2.36	MR 3I 100 - 24 × 200 100 LA B5R 6	96.2
1	12.0	5 060	3	MR 3I 101 - 24 × 200 100 LA B5R 6	96.2
1	13.9	4 360	1.25	MR 3I 80 - 19 × 200 90 S B5R 4	126
1	13.9	4 360	1.5	MR 3I 81 - 19 × 200 90 S B5R 4	126
1	14.8	4 100	2.8	MR 3I 100 - 24 × 200 100 LA B5R 6	77.9
1	14.8	4 100	3.75	MR 3I 101 - 24 × 200 100 LA B5R 6	77.9
1	17.3	3 500	1.7	MR 3I 80 - 19 × 200 90 S B5R 4	101
1	17.3	3 500	2.24	MR 3I 81 - 19 × 200 90 S B5R 4	101
1	18.0	3 350	3.55	MR 3I 100 - 24 × 200 100 LA B5R 6	63.8
1	21.1	2 870	1	MR 3I 63 - 19 × 200 80 C S3 6	54.5
1	21.1	2 870	1.25	MR 3I 64 - 19 × 200 80 C S3 6	54.5
1	20.7	2 930	2	MR 3I 80 - 19 × 200 90 S B5R 4	84.6
1	20.7	2 930	2.65	MR 3I 81 - 19 × 200 90 S B5R 4	84.6
1	21.7	2 790	4.25	MR 3I 100 - 24 × 200 100 LA B5R 6	53.1
1	23.5	2 570	1.06	MR 3I 63 - 19 × 200 90 S B5R 4	74.3
1	23.5	2 570	1.5	MR 3I 64 - 19 × 200 80 C S3 6	48.9
1	23.5	2 570	1.32	MR 3I 64 - 19 × 200 90 S B5R 4	74.3
1	23.1	2 620	2.24	MR 3I 80 - 19 × 200 80 C S3 6	49.8
1	23.1	2 620	3	MR 3I 81 - 19 × 200 80 C S3 6	49.8
1	26.0	2 330	1.25	MR 3I 63 - 19 × 200 80 C S3 6	44.2
1	24.5	2 470	1.18	MR 3I 63 - 24 × 200 100 LA B5R 6	46.9
1	26.0	2 330	1.7	MR 3I 64 - 19 × 200 80 C S3 6	44.2
1	24.5	2 470	1.6	MR 3I 64 - 24 × 200 100 LA B5R 6	46.9
1	26.4	2 290	2.65	MR 3I 80 - 19 × 200 90 S B5R 4	66.3
1	26.4	2 290	3.35	MR 3I 81 - 19 × 200 90 S B5R 4	66.3
1	29.4	2 060	1.4	MR 3I 63 - 19 × 200 90 S B5R 4	59.5
1	29.4	2 060	1.9	MR 3I 64 - 19 × 200 90 S B5R 4	59.5
1	29.8	2 030	3	MR 3I 80 - 19 × 200 80 C S3 6	38.6
1	33.3	1 810	1.12	MR 3I 51 - 19 × 200 80 C S3 6	34.5
1	32.1	1 880	1.5	MR 3I 63 - 19 × 200 90 S B5R 4	54.5
1	33.0	1 830	2.12	MR 3I 64 - 24 × 200 100 LA B5R 6	34.8
1	32.1	1 880	1.9	MR 3I 64 - 19 × 200 90 S B5R 4	54.5
1	29.8	2 030	3	MR 3I 80 - 19 × 200 90 S B5R 4	58.7
1	29.8	2 030	4	MR 3I 81 - 19 × 200 90 S B5R 4	58.7
1	37.2	1 630	1.18	MR 3I 51 - 14 × 160 80 B S3 B5R 4	47.1
1	34.6	1 750	1.12	MR 3I 51 - 19 × 200 90 S B5R 4	50.6
1	35.8	1 690	1.7	MR 3I 63 - 19 × 200 90 S B5R 4	48.9
1	35.8	1 690	2.24	MR 3I 64 - 19 × 200 90 S B5R 4	48.9
1	35.1	1 720	3.35	MR 3I 80 - 19 × 200 90 S B5R 4	49.8
1	40.6	1 490	1.32	MR 3I 51 - 14 × 160 80 B S3 B5R 4	43.1
1	38.3	1 580	1.12	MR 3I 51 - 19 × 200 90 S B5R 4	45.7
1	39.6	1 530	1.9	MR 3I 63 - 19 × 200 90 S B5R 4	44.2
1	39.6	1 530	2.5	MR 3I 64 - 19 × 200 90 S B5R 4	44.2
1	40.2	1 510	3.75	MR 3I 80 - 19 × 200 90 S B5R 4	43.6
1	46.4	1 300	1.06	MR 3I 50 - 19 × 200 90 S B5R 4	37.7
1	42.3	1 430	1.32	MR 3I 51 - 19 × 200 90 S B5R 4	41.4
1	46.4	1 300	1.5	MR 3I 51 - 19 × 200 90 S B5R 4	37.7
1	43.5	1 390	2.12	MR 3I 63 - 19 × 200 90 S B5R 4	40.2
1	43.5	1 390	2.8	MR 3I 64 - 19 × 200 90 S B5R 4	40.2
1	50.7	1 190	1.18	MR 3I 50 - 19 × 200 90 S B5R 4	34.5
1	50.7	1 190	1.6	MR 3I 51 - 19 × 200 90 S B5R 4	34.5
1	47.4	1 280	2.12	MR 3I 63 - 19 × 200 90 S B5R 4	36.9
1	52.8	1 150	2.5	MR 3I 63 - 19 × 200 90 S B5R 4	33.2
1	47.4	1 280	2.8	MR 3I 64 - 19 × 200 90 S B5R 4	36.9
1	52.8	1 150	3.15	MR 3I 64 - 19 × 200 90 S B5R 4	33.2
1	58.7	1 030	1.32	MR 3I 50 - 19 × 200 90 S B5R 4	29.8
1	58.7	1 030	1.9	MR 3I 51 - 19 × 200 90 S B5R 4	29.8
1	58.4	1 040	2.8	MR 3I 63 - 19 × 200 90 S B5R 4	30.0
1	58.4	1 040	3.75	MR 3I 64 - 19 × 200 90 S B5R 4	30.0

Motor (cat. TX) with efficiency value not according to IE3 class (IEC 60034-30); the nominal power and nameplate data refer to intermittent duty S3 70%.

1) Powers valid for continuous duty S1; **increase** possible for S2 ... S10 (ch. 2b) in which case P_2 and M_2 increase and fs decreases proportionately.
2) For complete designation when ordering, see ch. 3.
* Mounting position **B5R** (see table ch. 2b).

Motor power P_1 hp 1)	Output speed n_2 rpm	Output torque T_2 lb in	Service factor fs	2)	Gear ratio i
1	61.7	980	1.4	MR 3I 50 - 14 × 160 80 B S3 B5R 4	28.4
1	61.7	980	1.9	MR 3I 51 - 14 × 160 80 B S3 B5R 4	28.4
1	64.2	940	3	MR 3I 63 - 19 × 200 90 S B5R 4	27.2
1	64.2	940	4	MR 3I 64 - 19 × 200 90 S B5R 4	27.2
1	70.1	865	1.5	MR 3I 50 - 19 × 200 90 S B5R 4	25.0
1	70.1	865	2.12	MR 3I 51 - 19 × 200 90 S B5R 4	25.0
1	72.1	855	2.65	MR 2I 63 - 19 × 200 90 S B5R 4	24.3
1	77.0	785	1.7	MR 3I 50 - 19 × 200 90 S B5R 4	22.7
1	77.0	785	2.36	MR 3I 51 - 19 × 200 90 S B5R 4	22.7
1	75.0	805	3.55	MR 3I 63 - 19 × 200 90 S B5R 4	23.3
1	83.4	725	4	MR 3I 63 - 19 × 200 90 S B5R 4	21.0
1	77.3	800	1.4	MR 2I 50 - 19 × 200 80 C S3 6	14.9
1	84.2	720	1.9	MR 3I 50 - 19 × 200 90 S B5R 4	20.8
1	84.2	720	2.65	MR 3I 51 - 19 × 200 90 S B5R 4	20.8
1	94.0	655	1.8	MR 2I 50 - 19 × 200 80 C S3 6	12.2
1	94.0	655	2.36	MR 2I 51 - 19 × 200 80 C S3 6	12.2
1	92.1	670	3.75	MR 2I 63 - 19 × 200 90 S B5R 4	19.0
1	97.4	620	2.12	MR 3I 50 - 19 × 200 90 S B5R 4	18.0
1	97.4	620	3	MR 3I 51 - 19 × 200 90 S B5R 4	18.0
1	105	590	2.12	MR 2I 50 - 19 × 200 80 C S3 6	11.0
1	98.2	630	1.7	MR 2I 50 - 24 × 200 100 LA B5R 6	11.7
1	105	590	2.8	MR 2I 51 - 19 × 200 80 C S3 6	11.0
1	103	595	4.5	MR 2I 63 - 19 × 200 90 S B5R 4	16.9
1	108	560	2.36	MR 3I 50 - 19 × 200 90 S B5R 4	16.3
1	108	560	3.35	MR 3I 51 - 19 × 200 90 S B5R 4	16.3
1	109	565	1.12	MR 2I 41 - 19 × 160 80 C S3 B5A 6	10.6
1	115	535	2.36	MR 2I 50 - 19 × 200 80 C S3 6	9.96
1	119	520	2.24	MR 2I 50 - 24 × 200 100 LA B5R 6	9.64
1	118	525	2.12	MR 2I 50 - 19 × 200 90 S B5R 4	14.9
1	119	520	3	MR 2I 51 - 24 × 200 100 LA B5R 6	9.64
1	132	470	1.18	MR 2I 40 - 14 × 160 80 B S3 B5R 4	13.3
1	132	470	1.32	MR 2I 41 - 14 × 160 80 B S3 B5R 4	13.3
1	127	485	2.65	MR 2I 50 - 19 × 200 80 C S3 6	9.07
1	133	465	2.65	MR 2I 50 - 24 × 200 100 LA B5R 6	8.67
1	127	485	3.75	MR 2I 51 - 19 × 200 80 C S3 6	9.07
1	133	465	3.55	MR 2I 51 - 24 × 200 100 LA B5R 6	8.67
1	136	455	1.32	MR 2I 40 - 19 × 160 80 C S3 B5A 6	8.46
1	136	455	1.12	MR 2I 40 - 19 × 160 80 B S3 B5A 4	12.9
1	136	455	1.6	MR 2I 41 - 19 × 160 80 C S3 B5A 6	8.46
1	143	430	2.65	MR 2I 50 - 19 × 200 90 S B5R 4	12.2
1	143	430	3.55	MR 2I 51 - 19 × 200 90 S B5R 4	12.2
1	149	415	1.4	MR 2I 40 - 14 × 160 80 B S3 B5R 4	11.8
1	153	405	1.9	MR 2I 41 - 19 × 160 80 C S3 B5A 6	7.50
1	149	415	1.7	MR 2I 41 - 14 × 160 80 B S3 B5R 4	11.8
1	159	390	3.15	MR 2I 50 - 19 × 200 90 S B5R 4	11.0
1	166	375	1.6	MR 2I 40 - 14 × 160 80 B S3 B5R 4	10.6
1	186	330	1.8	MR 2I 40 - 14 × 160 80 B S3 B5R 4	9.41
1	166	375	1.5	MR 2I 40 - 19 × 160 80 B S3 B5A 4	10.6
1	186	330	1.7	MR 2I 40 - 19 × 160 80 B S3 B5A 4	9.41
1	166	375	2	MR 2I 41 - 14 × 160 80 B S3 B5R 4	10.6
1	186	330	2.24	MR 2I 41 - 14 × 160 80 B S3 B5R 4	9.41
1	166	375	1.6	MR 2I 41 - 19 × 160 80 B S3 B5A 4	10.6
1	186	330	2	MR 2I 41 - 19 × 160 80 B S3 B5A 4	9.41
1	176	350	3.55	MR 2I 50 - 19 × 200 90 S B5R 4	9.96
1	207	300	2	MR 2I 40 - 19 × 160 80 B S3 B5A 4	8.46
1	207	300	2.36	MR 2I 41 - 19 × 160 80 B S3 B5A 4	8.46
1	193	320	4	MR 2I 50 - 19 × 200 90 S B5R 4	9.07
1	211	295	4.25	MR 2I 50 - 19 × 200 90 S B5R 4	8.29
1	219	280	2.12	MR 2I 40 - 14 × 160 80 B S3 B5R 4	7.98
1	233	265	2.24	MR 2I 40 - 19 × 160 80 B S3 B5A 4	7.50
1	219	280	2.65	MR 2I 41 - 14 × 160 80 B S3 B5R 4	7.98
1	233	265	2.8	MR 2I 41 - 19 × 160 80 B S3 B5A 4	7.50
1	244	255	5	MR 2I 50 - 19 × 200 90 S B5R 4	7.17
1	275	225	2.65	MR 2I 40 - 19 × 160 80 B S3 B5A 4	6.36
1	275	225	3.35	MR 2I 41 - 19 × 160 80 B S3 B5A 4	6.36
1	270	230	5.6	MR 2I 50 - 19 × 200 90 S B5R 4	6.49
1	300	205	2.8	MR 2I 40 - 19 × 160 80 B S3 B5A 4	5.83
1	300	205	3.55	MR 2I 41 - 19 × 160 80 B S3 B5A 4	5.83
1	353	175	3.35	MR 2I 40 - 19 × 160 80 B S3 B5A 4	4.96
1	441	140	3.55	MR 2I 40 - 19 × 160 80 B S3 B5A 4	3.96
1.5	9.73	9 320	1.18	MR 3I 100 - 24 × 200 112 M B5R 6	118
1.5	9.73	9 320	1.4	MR 3I 101 - 24 × 200 112 M B5R 6	118
1.5	12.0	7 590	1.5	MR 3I 100 - 24 × 200 112 M B5R 6	96.2
1.5	12.0	7 590	2	MR 3I 101 - 24 × 200 112 M B5R 6	96.2
1.5	12.2	7 450	1.32	MR 3I 100 - 24 × 200 90 L 4	144
1.5	13.6	6 650	1	MR 3I 81 - 24 × 200 112 M B5R 6	84.3
1.5	13.9	6 540	1	MR 3I 81 - 19 × 200 80 C S3 4	126
1.5	14.8	6 150	1.9	MR 3I 100 - 24 × 200 112 M B5R 6	77.9
1.5	14.8	6 150	2.5	MR 3I 101 - 24 × 200 112 M B5R 6	77.9
1.5	14.8	6 130	1.8	MR 3I 100 - 24 × 200 90 L 4	118
1.5	14.8	6 130	2.12	MR 3I 101 - 24 × 200 90 L 4	118
1.5	17.0	5 330	1.12	MR 3I 80 - 24 × 200 112 M B5R 6	67.5
1.5	17.3	5 240	1.12	MR 3I 80 - 19 × 200 80 C S3 4	101
1.5	17.0	5 330	1.5	MR 3I 81 - 24 × 200 112 M B5R 6	67.5
1.5	17.3	5 240	1.5	MR 3I 81 - 19 × 200 80 C S3 4	101
1.5	18.2	4 990	2.36	MR 3I 100 - 24 × 200 90 L 4	96.2
1.5	18.2	4 990	3.15	MR 3I 101 - 24 × 200 90 L 4	96.2
1.5	20.7	4 390	1.32	MR 3I 80 - 19 × 200 80 C S3 4	84.6
1.5	20.8	4 370	1.25	MR 3I 80 - 24 × 200 90 L 4	84.3
1.5	20.7	4 390	1.8	MR 3I 81 - 19 × 200 80 C S3 4	84.6
1.5	20.8	4 370	1.5	MR 3I 81 - 24 × 200 90 L 4	84.3
1.5	21.7	4 190	2.8	MR 3I 100 - 24 × 200 112 M B5R 6	53.1
1.5	21.7	4 170	1.4	MR 3I 80 - 24 × 200 112 M B5R 6	52.9
1.5	21.7	4 170	1.9	MR 3I 81 - 24 × 200 112 M B5R 6	52.9
1.5	22.5	4 040	2.8	MR 3I 100 - 24 × 200 90 L 4	77.9
1.5	22.5	4 040	3.75	MR 3I 101 - 24 × 200 90 L 4	77.9
1.5	24.5	3 700	1.06	MR 3I 64 - 24 × 200 112 M B5R 6	46.9
1.5	26.8	3 390	1.06	MR 3I 64 - 24 × 200 112 M B5R 6	42.9
1.5	26.4	3 440	1.7	MR 3I 80 - 19 × 200 80 C S3 4	66.3
1.5	25.9	3 500	1.7	MR 3I 80 - 24 × 200 90 L 4	67.5
1.5	26.4	3 440	2.24	MR 3I 81 - 19 × 200 80 C S3 4	66.3
1.5	25.9	3 500	2.24	MR 3I 81 - 24 × 200 90 L 4	67.5
1.5	25.1	3 620	3.15	MR 3I 100 - 24 × 200 112 M B5R 6	45.9
1.5	29.4	3 080	0.95	MR 3I 63 - 19 × 200 80 C S3 4	59.5
1.5	29.8	3 040	1.25	MR 3I 64 - 24 × 200 112 M B5R 6	38.5
1.5	29.4	3 080	1.25	MR 3I 64 - 19 × 200 80 C S3 4	59.5
1.5	28.9	3 140	1.9	MR 3I 80 - 24 × 200 112 M B5R 6	39.8
1.5	28.9	3 140	2.5	MR 3I 81 - 24 × 200 112 M B5R 6	39.8
1.5	27.5	3 310	3.55	MR 3I 100 - 24 × 200 90 L 4	63.8
1.5	33.0	2 750	1.06	MR 3I 63 - 24 × 200 112 M B5R 6	34.8
1.5	32.1	2 830	1	MR 3I 63 - 19 × 200 80 C S3 4	54.5
1.5	33.0	2 750	1.4	MR 3I 64 - 24 × 200 112 M B5R 6	34.8
1.5	32.1	2 830	1.25	MR 3I 64 - 19 × 200 80 C S3 4	54.5
1.5	29.9	3 040	1.06	MR 3I 64 - 24 × 200 90 L 4	58.6
1.5	29.8	3 050	1.9	MR 3I 80 - 19 × 200 80 C S3 4	58.7
1.5	29.7	3 050	1.9	MR 3I 80 - 24 × 200 90 L 4	58.8
1.5	33.1	2 740	2.12	MR 3I 80 - 24 × 200 90 L 4	52.9
1.5	29.8	3 050	2.65	MR 3I 81 - 19 × 200 80 C S3 4	58.7
1.5	29.7	3 050	2.36	MR 3I 81 - 24 × 200 90 L 4	58.8
1.5	33.1	2 740	2.8	MR 3I 81 - 24 × 200 90 L 4	52.9
1.5	30.2	3 010	4	MR 3I 100 - 24 × 200 90 L 4	58.0
1.5	33.0	2 750	4.25	MR 3I 100 - 24 × 200 90 L 4	53.1
1.5	36.3	2 500	1.18	MR 3I 63 - 24 × 200 112 M B5R 6	31.7
1.5	35.8	2 540	1.18	MR 3I 63 - 19 × 200 80 C S3 4	48.9
1.5	33.5	2 710	1.06	MR 3I 63 - 24 × 200 90 L 4	52.2
1.5	37.3	2 430	1.18	MR 3I 63 - 24 × 200 90 L 4	46.9
1.5	36.3	2 500	1.6	MR 3I 64 - 24 × 200 112 M B5R 6	31.7
1.5	35.8	2 540	1.5	MR 3I 64 - 19 × 200 80 C S3 4	48.9
1.5	33.5	2 710	1.32	MR 3I 64 - 24 × 200 90 L 4	52.2
1.5	37.3	2 430	1.6	MR 3I 64 - 24 × 200 90 L 4	46.9
1.5	35.1	2 590	2.24	MR 3I 80 - 19 × 200 80 C S3 4	49.8
1.5	37.3	2 430	2.36	MR 3I 80 - 24 × 200 90 L 4	46.9
1.5	35.1	2 590	3.15	MR 3I 81 - 19 × 200 80 C S3 4	49.8
1.5	37.3	2 430	3.15	MR 3I 81 - 24 × 200 90 L 4	46.9

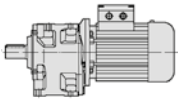
Motor (cat. TX) with efficiency value not according to IE3 class (IEC 60034-30); the nominal power and nameplate data refer to intermittent duty S3 70%.

1) Powers valid for continuous duty S1; **increase** possible for S2 ... S10 (ch. 2b) in which case P_2 and M_2 increase and fs decreases proportionately.
2) For complete designation when ordering, see ch. 3.

* Mounting position **B5R** (see table ch. 2b).

** Mounting position **B5A** (see table ch. 2b).

Gearmotors selection tables



Motor power P_1 hp 1)	Output speed n_2 rpm	Output torque T_2 lb in	Service factor fs	2)	Gear ratio i
1.5	39.6	2 290	1.25	MR 3I 63 - 19 × 200 80 C S3 4	44.2
1.5	40.8	2 230	1.25	MR 3I 63 - 24 × 200 90 L 4	42.9
1.5	39.6	2 290	1.7	MR 3I 64 - 19 × 200 80 C S3 4	44.2
1.5	40.8	2 230	1.6	MR 3I 64 - 24 × 200 90 L 4	42.9
1.5	40.2	2 260	2.5	MR 3I 80 - 19 × 200 80 C S3 4	43.6
1.5	40.2	2 260	3.35	MR 3I 81 - 19 × 200 80 C S3 4	43.6
1.5	46.4	1 960	1	MR 3I 51 - 19 × 200 80 C S3 4	37.7
1.5	43.5	2 080	1.4	MR 3I 63 - 19 × 200 80 C S3 4	40.2
1.5	45.4	2 000	1.4	MR 3I 63 - 24 × 200 90 L 4	38.5
1.5	43.5	2 080	1.9	MR 3I 64 - 19 × 200 80 C S3 4	40.2
1.5	45.4	2 000	1.9	MR 3I 64 - 24 × 200 90 L 4	38.5
1.5	45.3	2 000	2.8	MR 3I 80 - 19 × 200 80 C S3 4	38.6
1.5	44.0	2 060	2.8	MR 3I 80 - 24 × 200 90 L 4	39.8
1.5	44.0	2 060	3.75	MR 3I 81 - 24 × 200 90 L 4	39.8
1.5	47.4	1 950	1.18	MR 2I 63 - 19 × 200 90 L S3 B5R 6	24.3
1.5	46.9	1 980	2.36	MR 2I 80 - 24 × 200 112 M B5R 6	24.5
1.5	50.7	1 790	1.06	MR 3I 51 - 19 × 200 80 C S3 4	34.5
1.5	47.4	1 920	1.4	MR 3I 63 - 19 × 200 80 C S3 4	36.9
1.5	52.8	1 720	1.7	MR 3I 63 - 19 × 200 80 C S3 4	33.2
1.5	50.2	1 810	1.6	MR 3I 63 - 24 × 200 90 L 4	34.8
1.5	47.4	1 920	1.8	MR 3I 64 - 19 × 200 80 C S3 4	36.9
1.5	52.8	1 720	2.12	MR 3I 64 - 19 × 200 80 C S3 4	33.2
1.5	50.2	1 810	2.12	MR 3I 64 - 24 × 200 90 L 4	34.8
1.5	50.4	1 800	3.15	MR 3I 80 - 24 × 200 90 L 4	34.8
1.5	58.7	1 550	1.25	MR 3I 51 - 19 × 200 80 C S3 4	29.8
1.5	58.4	1 550	1.8	MR 3I 63 - 19 × 200 80 C S3 4	30.0
1.5	55.3	1 640	1.8	MR 3I 63 - 24 × 200 90 L 4	31.7
1.5	58.4	1 550	2.5	MR 3I 64 - 19 × 200 80 C S3 4	30.0
1.5	55.3	1 640	2.36	MR 3I 64 - 24 × 200 90 L 4	31.7
1.5	53.4	1 700	3.35	MR 3I 80 - 19 × 200 80 C S3 4	32.8
1.5	56.8	1 600	3.55	MR 3I 80 - 24 × 200 90 L 4	30.8
1.5	60.5	1 530	1.7	MR 2I 63 - 19 × 200 90 L S3 B5R 6	19.0
1.5	60.5	1 530	2.12	MR 2I 64 - 19 × 200 90 L S3 B5R 6	19.0
1.5	57.3	1 620	3.15	MR 2I 80 - 24 × 200 112 M B5R 6	20.1
1.5	64.2	1 410	2	MR 3I 63 - 19 × 200 80 C S3 4	27.2
1.5	60.1	1 510	1.8	MR 3I 63 - 24 × 200 90 L 4	29.1
1.5	64.2	1 410	2.65	MR 3I 64 - 19 × 200 80 C S3 4	27.2
1.5	60.1	1 510	2.24	MR 3I 64 - 24 × 200 90 L 4	29.1
1.5	70.1	1 290	1.06	MR 3I 50 - 19 × 200 80 C S3 4	25.0
1.5	70.1	1 290	1.4	MR 3I 51 - 19 × 200 80 C S3 4	25.0
1.5	67.0	1 360	2.12	MR 3I 63 - 24 × 200 90 L 4	26.1
1.5	74.1	1 220	2.24	MR 3I 63 - 24 × 200 90 L 4	23.6
1.5	67.0	1 360	2.65	MR 3I 64 - 24 × 200 90 L 4	26.1
1.5	74.1	1 220	3.15	MR 3I 64 - 24 × 200 90 L 4	23.6
1.5	71.0	1 310	1.7	MR 2I 63 - 24 × 200 112 M B5R 6	16.2
1.5	72.1	1 280	1.8	MR 2I 63 - 19 × 200 80 C S3 4	24.3
1.5	71.4	1 300	3.55	MR 2I 80 - 24 × 200 90 L 4	24.5
1.5	77.0	1 180	1.12	MR 3I 50 - 19 × 200 80 C S3 4	22.7
1.5	77.0	1 180	1.6	MR 3I 51 - 19 × 200 80 C S3 4	22.7
1.5	75.0	1 210	2.36	MR 3I 63 - 19 × 200 80 C S3 4	23.3
1.5	83.4	1 090	2.65	MR 3I 63 - 19 × 200 80 C S3 4	21.0
1.5	81.5	1 110	2.5	MR 3I 63 - 24 × 200 90 L 4	21.5
1.5	75.0	1 210	3.15	MR 3I 64 - 19 × 200 80 C S3 4	23.3
1.5	83.4	1 090	3.55	MR 3I 64 - 19 × 200 80 C S3 4	21.0
1.5	81.5	1 110	3.35	MR 3I 64 - 24 × 200 90 L 4	21.5
1.5	84.2	1 080	1.25	MR 3I 50 - 19 × 200 80 C S3 4	20.8
1.5	84.2	1 080	1.7	MR 3I 51 - 19 × 200 80 C S3 4	20.8
1.5	94.0	985	1.18	MR 2I 50 - 19 × 200 90 L S3 B5R 6	12.2
1.5	94.0	985	1.6	MR 2I 51 - 19 × 200 90 L S3 B5R 6	12.2
1.5	90.6	1 020	2.5	MR 2I 63 - 24 × 200 112 M B5R 6	12.7
1.5	92.1	1 010	2.5	MR 2I 63 - 19 × 200 80 C S3 4	19.0
1.5	90.6	1 020	3	MR 2I 64 - 24 × 200 112 M B5R 6	12.7
1.5	92.1	1 010	3.15	MR 2I 64 - 19 × 200 80 C S3 4	19.0
1.5	97.4	930	1.4	MR 3I 50 - 19 × 200 80 C S3 4	18.0
1.5	97.4	930	2	MR 3I 51 - 19 × 200 80 C S3 4	18.0
1.5	95.2	955	3	MR 3I 63 - 24 × 200 90 L 4	18.4
1.5	106	855	3.35	MR 3I 63 - 24 × 200 90 L 4	16.5
1.5	105	885	1.4	MR 2I 50 - 19 × 200 90 L S3 B5R 6	11.0
1.5	98.2	945	1.18	MR 2I 50 - 24 × 200 112 M B5R 6	11.7
1.5	105	885	1.9	MR 2I 51 - 19 × 200 90 L S3 B5R 6	11.0
1.5	103	895	3	MR 2I 63 - 19 × 200 80 C S3 4	16.9
1.5	108	845	1.6	MR 3I 50 - 19 × 200 80 C S3 4	16.3
1.5	108	845	2.24	MR 3I 51 - 19 × 200 80 C S3 4	16.3
1.5	115	800	1.6	MR 2I 50 - 19 × 200 90 L S3 B5R 6	9.96
1.5	119	775	1.5	MR 2I 50 - 24 × 200 112 M B5R 6	9.64
1.5	118	785	1.4	MR 2I 50 - 19 × 200 80 C S3 4	14.9
1.5	115	800	2.24	MR 2I 51 - 19 × 200 90 L S3 B5R 6	9.96
1.5	119	775	2	MR 2I 51 - 24 × 200 112 M B5R 6	9.64
1.5	113	820	3.35	MR 2I 63 - 24 × 200 112 M B5R 6	10.2
1.5	115	805	3.35	MR 2I 63 - 19 × 200 80 C S3 4	15.2
1.5	108	860	2.65	MR 2I 63 - 24 × 200 90 L 4	16.2
1.5	133	700	1.8	MR 2I 50 - 24 × 200 112 M B5R 6	8.67
1.5	133	700	2.36	MR 2I 51 - 24 × 200 112 M B5R 6	8.67
1.5	123	750	3.55	MR 2I 63 - 19 × 200 80 C S3 4	14.2
1.5	147	630	2	MR 2I 50 - 24 × 200 112 M B5R 6	7.85
1.5	143	650	1.8	MR 2I 50 - 19 × 200 80 C S3 4	12.2
1.5	147	630	2.8	MR 2I 51 - 24 × 200 112 M B5R 6	7.85
1.5	143	650	2.36	MR 2I 51 - 19 × 200 80 C S3 4	12.2
1.5	138	675	4	MR 2I 63 - 19 × 200 80 C S3 4	12.7
1.5	138	670	3.75	MR 2I 63 - 24 × 200 90 L 4	12.7
1.5	161	575	2.24	MR 2I 50 - 24 × 200 112 M B5R 6	7.14
1.5	159	580	2.12	MR 2I 50 - 19 × 200 80 C S3 4	11.0
1.5	149	620	1.7	MR 2I 50 - 24 × 200 90 L 4	11.7
1.5	161	575	3.15	MR 2I 51 - 24 × 200 112 M B5R 6	7.14
1.5	159	580	2.8	MR 2I 51 - 19 × 200 80 C S3 4	11.0
1.5	152	610	4.5	MR 2I 63 - 19 × 200 80 C S3 4	11.5
1.5	155	600	4.25	MR 2I 63 - 24 × 200 90 L 4	11.3
1.5	166	560	1	MR 2I 40 - 19 × 160 80 C S3 B5A 4	10.6
1.5	186	500	1.12	MR 2I 40 - 19 × 160 80 C S3 B5A 4	9.41
1.5	166	560	1.12	MR 2I 41 - 19 × 160 80 C S3 B5A 4	10.6
1.5	186	500	1.4	MR 2I 41 - 19 × 160 80 C S3 B5A 4	9.41
1.5	176	525	2.36	MR 2I 50 - 19 × 200 80 C S3 4	9.96
1.5	182	510	2.24	MR 2I 50 - 24 × 200 90 L 4	9.64
1.5	176	525	3.35	MR 2I 51 - 19 × 200 80 C S3 4	9.96
1.5	182	510	3	MR 2I 51 - 24 × 200 90 L 4	9.64
1.5	207	450	1.32	MR 2I 40 - 19 × 160 80 C S3 B5A 4	8.46
1.5	207	450	1.6	MR 2I 41 - 19 × 160 80 C S3 B5A 4	8.46
1.5	193	480	2.65	MR 2I 50 - 19 × 200 80 C S3 4	9.07
1.5	211	440	2.8	MR 2I 50 - 19 × 200 80 C S3 4	8.29
1.5	202	460	2.65	MR 2I 50 - 24 × 200 90 L 4	8.67
1.5	193	480	3.75	MR 2I 51 - 19 × 200 80 C S3 4	9.07
1.5	202	460	3.55	MR 2I 51 - 24 × 200 90 L 4	8.67
1.5	233	395	1.5	MR 2I 40 - 19 × 160 80 C S3 B5A 4	7.50
1.5	233	395	1.9	MR 2I 41 - 19 × 160 80 C S3 B5A 4	7.50
1.5	223	415	3	MR 2I 50 - 24 × 200 90 L 4	7.85
1.5	223	415	4	MR 2I 51 - 24 × 200 90 L 4	7.85
1.5	244	380	3.35	MR 2I 50 - 19 × 200 80 C S3 4	7.17
1.5	245	380	3.35	MR 2I 50 - 24 × 200 90 L 4	7.14
1.5	275	335	1.7	MR 2I 40 - 19 × 160 80 C S3 B5A 4	6.36
1.5	275	335	2.24	MR 2I 41 - 19 × 160 80 C S3 B5A 4	6.36
1.5	270	345	3.55	MR 2I 50 - 19 × 200 80 C S3 4	6.49
1.5	268	345	3.55	MR 2I 50 - 24 × 200 90 L 4	6.53
1.5	300	310	1.9	MR 2I 40 - 19 × 160 80 C S3 B5A 4	5.83
1.5	300	310	2.36	MR 2I 41 - 19 × 160 80 C S3 B5A 4	5.83
1.5	310	300	4	MR 2I 50 - 24 × 200 90 L 4	5.65
1.5	353	265	2.24	MR 2I 40 - 19 × 160 80 C S3 B5A 4	4.96
1.5	353	265	2.65	MR 2I 41 - 19 × 160 80 C S3 B5A 4	4.96
1.5	342	270	4.5	MR 2I 50 - 24 × 200 90 L 4	5.11
1.5	441	210	2.36	MR 2I 40 - 19 × 160 80 C S3 B5A 4	3.96
1.5	427	215	4.75	MR 2I 50 - 24 × 200 90 L 4	4.10
2	7.69	15 750	1.25	MR 3I 125 - 28 × 250 112 MB 6	150
2	9.73	12 450	1.06	MR 3I 101 - 24 × 200 90 LC S3 6	118
2	9.82	12 350	1.7	MR 3I 125 - 28 × 250 112 MB 6	117
2	9.82	12 350	2.12	MR 3I 126 - 28 × 250 112 MB 6	117
2	9.82	12 350	3	MR 3I 140 - 28 × 250 112 MB 6	117

Motor (cat. TX) with efficiency value not according to IE3 class (IEC 60034-30); the nominal power and nameplate data refer to intermittent duty S3 70%.

1) Powers valid for continuous duty S1; **increase** possible for S2 ... S10 (ch. 2b) in which case P_2 and M_2 increase and fs decreases proportionately.
2) For complete designation when ordering, see ch. 3.

* Mounting position **B5R** (see table ch. 2b).
** Mounting position **B5A** (see table ch. 2b).

Motor power P_1 hp 1)	Output speed n_2 rpm	Output torque T_2 lb in	Service factor fs	2)	Gear ratio i
2	12.0	10 050	1.06	MR 3I 100 - 28 × 250 112 MB 6	95.7
2	12.0	10 100	1.18	MR 3I 100 - 24 × 200 90 LC S3 6	96.2
2	12.0	10 050	1.32	MR 3I 101 - 28 × 250 112 MB 6	95.7
2	12.0	10 100	1.5	MR 3I 101 - 24 × 200 90 LC S3 6	96.2
2	12.2	9 930	1	MR 3I 100 - 24 × 200 90 LB 4	144
2	12.3	9 860	2.36	MR 3I 125 - 28 × 250 112 MB 6	93.7
2	12.3	9 860	3.15	MR 3I 126 - 28 × 250 112 MB 6	93.7
2	14.8	8 200	1.4	MR 3I 100 - 28 × 250 112 MB 6	77.9
2	14.8	8 200	1.4	MR 3I 100 - 24 × 200 90 LC S3 6	77.9
2	14.8	8 200	1.9	MR 3I 101 - 28 × 250 112 MB 6	77.9
2	14.8	8 200	1.9	MR 3I 101 - 24 × 200 90 LC S3 6	77.9
2	14.8	8 170	1.32	MR 3I 100 - 24 × 200 90 LB 4	118
2	14.8	8 170	1.6	MR 3I 101 - 24 × 200 90 LB 4	118
2	15.5	7 820	3	MR 3I 125 - 28 × 250 112 MB 6	74.4
2	15.5	7 820	4	MR 3I 126 - 28 × 250 112 MB 6	74.4
2	17.0	7 110	1.06	MR 3I 81 - 24 × 200 90 LC S3 6	67.5
2	18.2	6 650	1.8	MR 3I 100 - 24 × 200 90 LB 4	96.2
2	18.2	6 650	2.36	MR 3I 101 - 24 × 200 90 LB 4	96.2
2	18.8	6 440	3.55	MR 3I 125 - 28 × 250 112 MB 6	61.2
2	21.6	5 600	1.4	MR 3I 81 - 28 × 250 112 MB 6	53.2
2	20.8	5 830	1.12	MR 3I 81 - 24 × 200 90 LB 4	84.3
2	20.1	6 010	1.9	MR 3I 100 - 28 × 250 112 MB 6	57.1
2	21.7	5 590	2.12	MR 3I 100 - 24 × 200 90 LC S3 6	53.1
2	20.1	6 010	2.36	MR 3I 101 - 28 × 250 112 MB 6	57.1
2	21.7	5 590	2.8	MR 3I 101 - 24 × 200 90 LC S3 6	53.1
2	20.8	5 820	4	MR 3I 125 - 28 × 250 112 MB 6	55.3
2	21.7	5 560	1.06	MR 3I 80 - 24 × 200 90 LC S3 6	52.9
2	21.7	5 560	1.4	MR 3I 81 - 24 × 200 90 LC S3 6	52.9
2	22.5	5 390	2.12	MR 3I 100 - 24 × 200 90 LB 4	77.9
2	22.5	5 390	2.8	MR 3I 101 - 24 × 200 90 LB 4	77.9
2	25.9	4 670	1.25	MR 3I 80 - 24 × 200 90 LB 4	67.5
2	25.9	4 670	1.7	MR 3I 81 - 24 × 200 90 LB 4	67.5
2	26.7	4 530	2.65	MR 3I 100 - 28 × 250 112 MB 6	43.1
2	25.1	4 830	2.36	MR 3I 100 - 24 × 200 90 LC S3 6	45.9
2	24.4	4 960	3.15	MR 3I 101 - 28 × 250 112 MB 6	47.1
2	28.9	4 180	1.4	MR 3I 80 - 24 × 200 90 LC S3 6	39.8
2	28.9	4 180	1.9	MR 3I 81 - 24 × 200 90 LC S3 6	39.8
2	27.5	4 410	2.65	MR 3I 100 - 24 × 200 90 LB 4	63.8
2	27.5	4 410	3.55	MR 3I 101 - 24 × 200 90 LB 4	63.8
2	33.0	3 670	1.06	MR 3I 64 - 24 × 200 90 LC S3 6	34.8
2	29.7	4 070	1.4	MR 3I 80 - 24 × 200 90 LB 4	58.8
2	33.1	3 660	1.6	MR 3I 80 - 24 × 200 90 LB 4	52.9
2	29.7	4 070	1.8	MR 3I 81 - 24 × 200 90 LB 4	58.8
2	33.1	3 660	2.12	MR 3I 81 - 24 × 200 90 LB 4	52.9
2	30.2	4 010	3	MR 3I 100 - 24 × 200 90 LB 4	58.0
2	33.0	3 670	3.15	MR 3I 100 - 24 × 200 90 LB 4	53.1
2	33.5	3 610	1	MR 3I 64 - 24 × 200 90 LB 4	52.2
2	37.3	3 240	1.18	MR 3I 64 - 24 × 200 90 LB 4	46.9
2	37.3	3 240	1.8	MR 3I 80 - 24 × 200 90 LB 4	46.9
2	37.3	3 240	2.36	MR 3I 81 - 24 × 200 90 LB 4	46.9
2	36.9	3 280	3.55	MR 3I 100 - 28 × 250 112 MB 6	31.2
2	36.0	3 370	3.55	MR 3I 100 - 24 × 200 90 LC S3 6	32.0
2	40.8	2 970	1.18	MR 3I 64 - 24 × 200 90 LB 4	42.9
2	42.0	2 880	2	MR 3I 80 - 28 × 250 112 MB 6	27.4
2	42.0	2 880	2.65	MR 3I 81 - 28 × 250 112 MB 6	27.4
2	38.1	3 170	3.75	MR 3I 100 - 24 × 200 90 LB 4	45.9
2	45.4	2 670	1.06	MR 3I 63 - 24 × 200 90 LB 4	38.5
2	45.4	2 670	1.4	MR 3I 64 - 24 × 200 90 LB 4	38.5
2	44.0	2 750	2.12	MR 3I 80 - 24 × 200 90 LB 4	39.8
2	44.0	2 750	2.8	MR 3I 81 - 24 × 200 90 LB 4	39.8
2	45.6	2 660	4.25	MR 3I 100 - 24 × 200 90 LB 4	38.4
2	50.2	2 410	1.18	MR 3I 63 - 24 × 200 90 LB 4	34.8
2	50.2	2 410	1.6	MR 3I 64 - 24 × 200 90 LB 4	34.8
2	50.4	2 400	2.36	MR 3I 80 - 24 × 200 90 LB 4	34.8
2	50.4	2 400	3.15	MR 3I 81 - 24 × 200 90 LB 4	34.8
2	55.3	2 190	1.32	MR 3I 63 - 24 × 200 90 LB 4	31.7
2	55.3	2 190	1.8	MR 3I 64 - 24 × 200 90 LB 4	31.7
2	56.8	2 130	2.65	MR 3I 80 - 24 × 200 90 LB 4	30.8
2	56.8	2 130	3.55	MR 3I 81 - 24 × 200 90 LB 4	30.8
2	62.6	1 930	1.5	MR 3I 63 - 24 × 200 90 LC S3 6	18.4
2	60.1	2 010	1.32	MR 3I 63 - 24 × 200 90 LB 4	29.1
2	62.6	1 930	2	MR 3I 64 - 24 × 200 90 LC S3 6	18.4
2	60.1	2 010	1.7	MR 3I 64 - 24 × 200 90 LB 4	29.1
2	62.2	1 940	3	MR 3I 80 - 28 × 250 112 MB 6	18.5
2	64.3	1 920	2.8	MR 2I 80 - 24 × 200 90 LC S3 6	17.9
2	70.1	1 730	1.06	MR 3I 51 - 19 × 200 90 LB B5R 4	25.0
2	67.0	1 810	1.6	MR 3I 63 - 24 × 200 90 LB 4	26.1
2	74.1	1 630	1.7	MR 3I 63 - 24 × 200 90 LB 4	23.6
2	67.0	1 810	2	MR 3I 64 - 24 × 200 90 LB 4	26.1
2	74.1	1 630	2.36	MR 3I 64 - 24 × 200 90 LB 4	23.6
2	67.0	1 810	3.15	MR 3I 80 - 24 × 200 90 LB 4	26.1
2	74.6	1 620	3.55	MR 3I 80 - 24 × 200 90 LB 4	23.5
2	72.1	1 710	1.32	MR 2I 63 - 19 × 200 90 LB B5R 4	24.3
2	71.4	1 730	2.65	MR 2I 80 - 24 × 200 90 LB 4	24.5
2	77.0	1 570	1.18	MR 3I 51 - 19 × 200 90 LB B5R 4	22.7
2	81.5	1 480	1.9	MR 3I 63 - 24 × 200 90 LB 4	21.5
2	81.5	1 480	2.5	MR 3I 64 - 24 × 200 90 LB 4	21.5
2	79.4	1 560	3.35	MR 2I 80 - 28 × 250 112 MB 6	14.5
2	79.4	1 560	3.35	MR 2I 80 - 24 × 200 90 LC S3 6	14.5
2	84.2	1 440	1.32	MR 3I 51 - 19 × 200 90 LB B5R 4	20.8
2	90.1	1 370	1.6	MR 2I 63 - 28 × 250 112 MB 6	12.8
2	92.1	1 340	1.9	MR 2I 63 - 19 × 200 90 LB B5R 4	19.0
2	92.1	1 340	2.36	MR 2I 64 - 19 × 200 90 LB B5R 4	19.0
2	87.3	1 420	3.55	MR 2I 80 - 24 × 200 90 LB 4	20.1
2	97.4	1 240	1.06	MR 3I 50 - 19 × 200 90 LB B5R 4	18.0
2	97.4	1 240	1.5	MR 3I 51 - 19 × 200 90 LB B5R 4	18.0
2	95.2	1 270	2.24	MR 3I 63 - 24 × 200 90 LB 4	18.4
2	106	1 140	2.5	MR 3I 63 - 24 × 200 90 LB 4	16.5
2	95.2	1 270	3	MR 3I 64 - 24 × 200 90 LB 4	18.4
2	106	1 140	3.35	MR 3I 64 - 24 × 200 90 LB 4	16.5
2	103	1 190	2.24	MR 2I 63 - 19 × 200 90 LB B5R 4	16.9
2	103	1 190	2.8	MR 2I 64 - 19 × 200 90 LB B5R 4	16.9
2	108	1 120	1.18	MR 3I 50 - 19 × 200 90 LB B5R 4	16.3
2	108	1 120	1.7	MR 3I 51 - 19 × 200 90 LB B5R 4	16.3
2	119	1 040	1.12	MR 2I 50 - 24 × 200 90 LC S3 6	9.64
2	118	1 050	1.06	MR 2I 50 - 19 × 200 90 LB B5R 4	14.9
2	119	1 040	1.5	MR 2I 51 - 24 × 200 90 LC S3 6	9.64
2	115	1 070	2.5	MR 2I 63 - 19 × 200 90 LB B5R 4	15.2
2	108	1 140	2	MR 2I 63 - 24 × 200 90 LB 4	16.2
2	115	1 070	2.8	MR 2I 64 - 28 × 250 112 MB 6	10.0
2	115	1 070	3.35	MR 2I 64 - 19 × 200 90 LB B5R 4	15.2
2	133	930	1.32	MR 2I 50 - 24 × 200 90 LC S3 6	8.67
2	133	930	1.8	MR 2I 51 - 24 × 200 90 LC S3 6	8.67
2	123	1 000	2.65	MR 2I 63 - 19 × 200 90 LB B5R 4	14.2
2	123	1 000	3.35	MR 2I 64 - 19 × 200 90 LB B5R 4	14.2
2	147	845	1.5	MR 2I 50 - 24 × 200 90 LC S3 6	7.85
2	143	865	1.32	MR 2I 50 - 19 × 200 90 LB B5R 4	12.2
2	147	845	2.12	MR 2I 51 - 24 × 200 90 LC S3 6	7.85
2	143	865	1.8	MR 2I 51 - 19 × 200 90 LB B5R 4	12.2
2	138	895	2.8	MR 2I 63 - 24 × 200 90 LB 4	12.7
2	138	895	3.35	MR 2I 64 - 24 × 200 90 LB 4	12.7
2	159	775	1.6	MR 2I 50 - 19 × 200 90 LB B5R 4	11.0
2	149	825	1.32	MR 2I 50 - 24 × 200 90 LB 4	11.7
2	159	775	2.12	MR 2I 51 - 19 × 200 90 LB B5R 4	11.0
2	155	800	3.15	MR 2I 63 - 24 × 200 90 LB 4	11.3
2	155	800	4	MR 2I 64 - 24 × 200 90 LB 4	11.3
2	176	705	1.8	MR 2I 50 - 19 × 200 90 LB B5R 4	9.96
2	182	680	1.7	MR 2I 50 - 24 × 200 90 LB 4	9.64
2	176	705	2.5	MR 2I 51 - 19 × 200 90 LB B5R 4	9.96
2	182	680	2.24	MR 2I 51 - 24 × 200 90 LB 4	9.64
2	172	715	3.75	MR 2I 63 - 24 × 200 90 LB 4	10.2

Motor (cat. TX) with efficiency value not according to IE3 class (IEC 60034-30); the nominal power and nameplate data refer to intermittent duty S3 70%.

1) Powers valid for continuous duty S1; **increase** possible for S2 ... S10 (ch. 2b) in which case P_2 and M_2 increase and fs decreases proportionately.

2) For complete designation when ordering, see ch. 3.a

* Mounting position **B5R** (see table ch. 2b).

Motor power P_1 hp 1)	Output speed n_2 rpm	Output torque T_2 lb in	Service factor fs	2)	Gear ratio i
2	193	640	2	MR 2I 50 - 19 × 200 90 LB B5R 4	9.07
2	211	585	2.12	MR 2I 50 - 19 × 200 90 LB B5R 4	8.29
2	202	610	2	MR 2I 50 - 24 × 200 90 LB 4	8.67
2	193	640	2.8	MR 2I 51 - 19 × 200 90 LB B5R 4	9.07
2	211	585	3	MR 2I 51 - 19 × 200 90 LB B5R 4	8.29
2	202	610	2.65	MR 2I 51 - 24 × 200 90 LB 4	8.67
2	191	650	4	MR 2I 63 - 24 × 200 90 LB 4	9.18
2	210	590	4.5	MR 2I 63 - 24 × 200 90 LB 4	8.34
2	223	555	2.24	MR 2I 50 - 24 × 200 90 LB 4	7.85
2	223	555	3.15	MR 2I 51 - 24 × 200 90 LB 4	7.85
2	245	505	2.5	MR 2I 50 - 24 × 200 90 LB 4	7.14
2	245	505	3.55	MR 2I 51 - 24 × 200 90 LB 4	7.14
2	268	460	2.65	MR 2I 50 - 24 × 200 90 LB 4	6.53
2	268	460	3.75	MR 2I 51 - 24 × 200 90 LB 4	6.53
2	310	400	3.15	MR 2I 50 - 24 × 200 90 LB 4	5.65
2	342	360	3.35	MR 2I 50 - 24 × 200 90 LB 4	5.11
2	427	290	3.55	MR 2I 50 - 24 × 200 90 LB 4	4.10
2.5	7.69	19 650	1	MR 3I 125 - 28 × 250 100 LB S3 6	150
2.5	9.82	15 400	1.4	MR 3I 125 - 28 × 250 100 LB S3 6	117
2.5	9.82	15 400	1.7	MR 3I 126 - 28 × 250 100 LB S3 6	117
2.5	9.82	15 400	2.5	MR 3I 140 - 28 × 250 100 LB S3 6	117
2.5	12.0	12 600	1.06	MR 3I 101 - 28 × 250 100 LB S3 6	95.7
2.5	12.0	12 550	3.35	MR 3I 140 - 28 × 250 100 LB S3 6	95.5
2.5	12.3	12 350	1.9	MR 3I 125 - 28 × 250 100 LB S3 6	93.7
2.5	12.3	12 350	2.5	MR 3I 126 - 28 × 250 100 LB S3 6	93.7
2.5	14.8	10 250	1.12	MR 3I 100 - 28 × 250 100 LB S3 6	77.9
2.5	14.8	10 250	1.5	MR 3I 101 - 28 × 250 100 LB S3 6	77.9
2.5	14.8	10 200	1.06	MR 3I 100 - 24 × 200 90 LB S3 4	118
2.5	14.8	10 200	1.32	MR 3I 101 - 24 × 200 90 LB S3 4	118
2.5	15.5	9 780	2.36	MR 3I 125 - 28 × 250 100 LB S3 6	74.4
2.5	15.5	9 780	3.15	MR 3I 126 - 28 × 250 100 LB S3 6	74.4
2.5	18.2	8 310	1.4	MR 3I 100 - 24 × 200 90 LB S3 4	96.2
2.5	18.2	8 310	1.9	MR 3I 101 - 24 × 200 90 LB S3 4	96.2
2.5	18.8	8 050	3	MR 3I 125 - 28 × 250 100 LB S3 6	61.2
2.5	21.6	7 000	1.12	MR 3I 81 - 28 × 250 100 LB S3 6	53.2
2.5	20.1	7 520	1.5	MR 3I 100 - 28 × 250 100 LB S3 6	57.1
2.5	20.1	7 520	1.9	MR 3I 101 - 28 × 250 100 LB S3 6	57.1
2.5	20.8	7 270	3.15	MR 3I 125 - 28 × 250 100 LB S3 6	55.3
2.5	22.5	6 740	1.7	MR 3I 100 - 24 × 200 90 LB S3 4	77.9
2.5	22.5	6 740	2.24	MR 3I 101 - 24 × 200 90 LB S3 4	77.9
2.5	22.9	6 610	3.55	MR 3I 125 - 28 × 250 100 LB S3 6	50.2
2.5	25.9	5 840	1	MR 3I 80 - 24 × 200 90 LB S3 4	67.5
2.5	25.9	5 840	1.32	MR 3I 81 - 24 × 200 90 LB S3 4	67.5
2.5	26.7	5 670	2.12	MR 3I 100 - 28 × 250 100 LB S3 6	43.1
2.5	26.7	5 670	2.8	MR 3I 101 - 28 × 250 100 LB S3 6	43.1
2.5	27.6	5 480	1.06	MR 3I 80 - 28 × 250 100 LB S3 6	41.7
2.5	27.6	5 480	1.4	MR 3I 81 - 28 × 250 100 LB S3 6	41.7
2.5	27.5	5 510	2.12	MR 3I 100 - 24 × 200 90 LB S3 4	63.8
2.5	27.5	5 510	2.8	MR 3I 101 - 24 × 200 90 LB S3 4	63.8
2.5	29.7	5 090	1.12	MR 3I 80 - 24 × 200 90 LB S3 4	58.8
2.5	33.1	4 570	1.32	MR 3I 80 - 24 × 200 90 LB S3 4	52.9
2.5	29.7	5 090	1.4	MR 3I 81 - 24 × 200 90 LB S3 4	58.8
2.5	33.1	4 570	1.7	MR 3I 81 - 24 × 200 90 LB S3 4	52.9
2.5	30.2	5 020	2.36	MR 3I 100 - 24 × 200 90 LB S3 4	58.0
2.5	33.0	4 590	2.5	MR 3I 100 - 24 × 200 90 LB S3 4	53.1
2.5	30.2	5 020	3.15	MR 3I 101 - 24 × 200 90 LB S3 4	58.0
2.5	33.0	4 590	3.55	MR 3I 101 - 24 × 200 90 LB S3 4	53.1
2.5	37.3	4 050	1.4	MR 3I 80 - 24 × 200 90 LB S3 4	46.9
2.5	37.3	4 050	1.9	MR 3I 81 - 24 × 200 90 LB S3 4	46.9
2.5	36.9	4 100	2.8	MR 3I 100 - 28 × 250 100 LB S3 6	31.2
2.5	42.0	3 600	1.6	MR 3I 80 - 28 × 250 100 LB S3 6	27.4
2.5	42.0	3 600	2.12	MR 3I 81 - 28 × 250 100 LB S3 6	27.4
2.5	38.1	3 970	3	MR 3I 100 - 24 × 200 90 LB S3 4	45.9
2.5	45.4	3 330	1.12	MR 3I 64 - 24 × 200 90 LB S3 4	38.5
2.5	44.0	3 440	1.7	MR 3I 80 - 24 × 200 90 LB S3 4	39.8
2.5	44.0	3 440	2.24	MR 3I 81 - 24 × 200 90 LB S3 4	39.8
2.5	45.6	3 320	3.35	MR 3I 100 - 24 × 200 90 LB S3 4	38.4
2.5	50.2	3 010	0.95	MR 3I 63 - 24 × 200 90 LB S3 4	34.8
2.5	50.2	3 010	1.32	MR 3I 64 - 24 × 200 90 LB S3 4	34.8
2.5	50.4	3 000	1.9	MR 3I 80 - 24 × 200 90 LB S3 4	34.8
2.5	50.4	3 000	2.5	MR 3I 81 - 24 × 200 90 LB S3 4	34.8
2.5	50.0	3 020	3.75	MR 3I 100 - 24 × 200 90 LB S3 4	35.0
2.5	55.3	2 740	1.06	MR 3I 63 - 24 × 200 90 LB S3 4	31.7
2.5	55.3	2 740	1.4	MR 3I 64 - 24 × 200 90 LB S3 4	31.7
2.5	56.8	2 660	2.12	MR 3I 80 - 24 × 200 90 LB S3 4	30.8
2.5	56.8	2 660	2.8	MR 3I 81 - 24 × 200 90 LB S3 4	30.8
2.5	54.7	2 760	4	MR 3I 100 - 24 × 200 90 LB S3 4	32.0
2.5	60.1	2 520	1.06	MR 3I 63 - 24 × 200 90 LB S3 4	29.1
2.5	60.1	2 520	1.4	MR 3I 64 - 24 × 200 90 LB S3 4	29.1
2.5	62.2	2 430	2.36	MR 3I 80 - 28 × 250 100 LB S3 6	18.5
2.5	62.2	2 430	3.15	MR 3I 81 - 28 × 250 100 LB S3 6	18.5
2.5	67.0	2 260	1.25	MR 3I 63 - 24 × 200 90 LB S3 4	26.1
2.5	74.1	2 040	1.4	MR 3I 63 - 24 × 200 90 LB S3 4	23.6
2.5	67.0	2 260	1.6	MR 3I 64 - 24 × 200 90 LB S3 4	26.1
2.5	74.1	2 040	1.8	MR 3I 64 - 24 × 200 90 LB S3 4	23.6
2.5	67.0	2 260	2.5	MR 3I 80 - 24 × 200 90 LB S3 4	26.1
2.5	74.6	2 030	2.8	MR 3I 80 - 24 × 200 90 LB S3 4	23.5
2.5	67.0	2 260	3.35	MR 3I 81 - 24 × 200 90 LB S3 4	26.1
2.5	74.6	2 030	3.75	MR 3I 81 - 24 × 200 90 LB S3 4	23.5
2.5	72.1	2 140	1.06	MR 2I 63 - 19 × 200 90 LB S3 B5R 4	24.3
2.5	70.8	2 180	2.36	MR 2I 80 - 28 × 250 100 LB S3 6	16.3
2.5	71.4	2 160	2.12	MR 2I 80 - 24 × 200 90 LB S3 4	24.5
2.5	81.5	1 860	1.5	MR 3I 63 - 24 × 200 90 LB S3 4	21.5
2.5	81.5	1 860	2	MR 3I 64 - 24 × 200 90 LB S3 4	21.5
2.5	79.4	1 950	2.8	MR 2I 80 - 28 × 250 100 LB S3 6	14.5
2.5	79.4	1 950	3.55	MR 2I 81 - 28 × 250 100 LB S3 6	14.5
2.5	85.8	1 760	3.15	MR 3I 80 - 24 × 200 90 LB S3 4	20.4
2.5	92.1	1 680	1.5	MR 2I 63 - 19 × 200 90 LB S3 B5R 4	19.0
2.5	92.1	1 680	1.8	MR 2I 64 - 19 × 200 90 LB S3 B5R 4	19.0
2.5	87.3	1 770	2.8	MR 2I 80 - 24 × 200 90 LB S3 4	20.1
2.5	87.3	1 770	3.55	MR 2I 81 - 24 × 200 90 LB S3 4	20.1
2.5	95.2	1 590	1.8	MR 3I 63 - 24 × 200 90 LB S3 4	18.4
2.5	106	1 430	2	MR 3I 63 - 24 × 200 90 LB S3 4	16.5
2.5	95.2	1 590	2.36	MR 3I 64 - 24 × 200 90 LB S3 4	18.4
2.5	106	1 430	2.65	MR 3I 64 - 24 × 200 90 LB S3 4	16.5
2.5	103	1 490	1.8	MR 2I 63 - 19 × 200 90 LB S3 B5R 4	16.9
2.5	103	1 490	2.24	MR 2I 64 - 19 × 200 90 LB S3 B5R 4	16.9
2.5	97.9	1 580	3.35	MR 2I 80 - 24 × 200 90 LB S3 4	17.9
2.5	119	1 290	1.18	MR 2I 51 - 24 × 200 100 LB S3 B5R 6	9.64
2.5	115	1 340	2	MR 2I 63 - 19 × 200 90 LB S3 B5R 4	15.2
2.5	108	1 430	1.6	MR 2I 63 - 24 × 200 90 LB S3 4	16.2
2.5	115	1 340	2.65	MR 2I 64 - 19 × 200 90 LB S3 B5R 4	15.2
2.5	109	1 420	3.75	MR 2I 80 - 24 × 200 90 LB S3 4	16.1
2.5	133	1 160	1.06	MR 2I 50 - 24 × 200 100 LB S3 B5R 6	8.67
2.5	133	1 160	1.4	MR 2I 51 - 24 × 200 100 LB S3 B5R 6	8.67
2.5	123	1 250	2.12	MR 2I 63 - 19 × 200 90 LB S3 B5R 4	14.2
2.5	123	1 250	2.65	MR 2I 64 - 19 × 200 90 LB S3 B5R 4	14.2
2.5	121	1 280	4	MR 2I 80 - 24 × 200 90 LB S3 4	14.5
2.5	147	1 050	1.18	MR 2I 50 - 24 × 200 100 LB S3 B5R 6	7.85
2.5	143	1 080	1.06	MR 2I 50 - 19 × 200 90 LB S3 B5R 4	12.2
2.5	147	1 050	1.7	MR 2I 51 - 24 × 200 100 LB S3 B5R 6	7.85
2.5	143	1 080	1.4	MR 2I 51 - 19 × 200 90 LB S3 B5R 4	12.2
2.5	138	1 120	2.36	MR 2I 63 - 19 × 200 90 LB S3 B5R 4	12.7
2.5	138	1 120	2.24	MR 2I 63 - 24 × 200 90 LB S3 4	12.7
2.5	138	1 120	3.15	MR 2I 64 - 19 × 200 90 LB S3 B5R 4	12.7
2.5	138	1 120	2.65	MR 2I 64 - 24 × 200 90 LB S3 4	12.7
2.5	134	1 150	4.75	MR 2I 80 - 24 × 200 90 LB S3 4	13.0
2.5	159	970	1.25	MR 2I 50 - 19 × 200 90 LB S3 B5R 4	11.0
2.5	149	1 030	1.06	MR 2I 50 - 24 × 200 90 LB S3 4	11.7
2.5	159	970	1.7	MR 2I 51 - 19 × 200 90 LB S3 B5R 4	11.0
2.5	155	1 000	2.65	MR 2I 63 - 24 × 200 90 LB S3 4	11.3
2.5	155	1 000	3.35	MR 2I 64 - 24 × 200 90 LB S3 4	11.3

Motor (cat. TX) with efficiency value not according to IE3 class (IEC 60034-30); the nominal power and nameplate data refer to intermittent duty S3 70%.

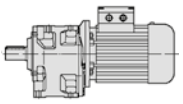
1) Powers valid for continuous duty S1; **increase** possible for S2 ... S10 (ch. 2b) in which case P_2 and M_2 increase and fs decreases proportionately.

2) For complete designation when ordering, see ch. 3.

* Mounting position **B5R** (see table ch. 2b).

** Mounting position **B5A** (see table ch. 2b).

Gearmotors selection tables

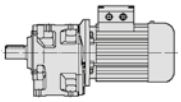


Motor power P_1 hp 1)	Output speed n_2 rpm	Output torque T_2 lb in	Service factor fs	2)	Gear ratio i
2.5	182	850	1.32	MR 2I 50 - 24 × 200 90 LB S3 4	9.64
2.5	176	880	2	MR 2I 51 - 19 × 200 90 LB S3 B5R 4	9.96
2.5	182	850	1.8	MR 2I 51 - 24 × 200 90 LB S3 4	9.64
2.5	172	895	3	MR 2I 63 - 24 × 200 90 LB S3 4	10.2
2.5	172	895	3.75	MR 2I 64 - 24 × 200 90 LB S3 4	10.2
2.5	211	730	1.7	MR 2I 50 - 19 × 200 90 LB S3 B5R 4	8.29
2.5	202	765	1.6	MR 2I 50 - 24 × 200 90 LB S3 4	8.67
2.5	211	730	2.5	MR 2I 51 - 19 × 200 90 LB S3 B5R 4	8.29
2.5	202	765	2.12	MR 2I 51 - 24 × 200 90 LB S3 4	8.67
2.5	191	810	3.35	MR 2I 63 - 24 × 200 90 LB S3 4	9.18
2.5	210	735	3.55	MR 2I 63 - 24 × 200 90 LB S3 4	8.34
2.5	223	690	1.8	MR 2I 50 - 24 × 200 90 LB S3 4	7.85
2.5	223	690	2.5	MR 2I 51 - 24 × 200 90 LB S3 4	7.85
2.5	245	630	2	MR 2I 50 - 24 × 200 90 LB S3 4	7.14
2.5	245	630	2.8	MR 2I 51 - 24 × 200 90 LB S3 4	7.14
2.5	245	630	4.25	MR 2I 63 - 24 × 200 90 LB S3 4	7.14
2.5	268	575	2.12	MR 2I 50 - 24 × 200 90 LB S3 4	6.53
2.5	268	575	3	MR 2I 51 - 24 × 200 90 LB S3 4	6.53
2.5	273	565	4.75	MR 2I 63 - 24 × 200 90 LB S3 4	6.42
2.5	310	500	2.5	MR 2I 50 - 24 × 200 90 LB S3 4	5.65
2.5	310	500	3.35	MR 2I 51 - 24 × 200 90 LB S3 4	5.65
2.5	342	450	2.8	MR 2I 50 - 24 × 200 90 LB S3 4	5.11
2.5	342	450	3.35	MR 2I 51 - 24 × 200 90 LB S3 4	5.11
2.5	427	360	2.8	MR 2I 50 - 24 × 200 90 LB S3 4	4.10
3	9.82	18 500	1.18	MR 3I 125 - 28 × 250 132 S B5R 6	117
3	9.82	18 500	1.4	MR 3I 126 - 28 × 250 132 S B5R 6	117
3	9.82	18 500	2	MR 3I 140 - 28 × 250 132 S B5R 6	117
3	11.7	15 500	1.25	MR 3I 125 - 28 × 250 112 MA 4	150
3	12.0	15 100	2.8	MR 3I 140 - 28 × 250 132 S B5R 6	95.5
3	12.3	14 800	1.6	MR 3I 125 - 28 × 250 132 S B5R 6	93.7
3	12.3	14 800	2.12	MR 3I 126 - 28 × 250 132 S B5R 6	93.7
3	14.8	12 300	1.25	MR 3I 101 - 28 × 250 132 S B5R 6	77.9
3	14.8	12 250	1.06	MR 3I 101 - 24 × 200 90 LC S3 4	118
3	15.5	11 750	2	MR 3I 125 - 28 × 250 132 S B5R 6	74.4
3	14.9	12 150	1.8	MR 3I 125 - 28 × 250 112 MA 4	117
3	15.5	11 750	2.65	MR 3I 126 - 28 × 250 132 S B5R 6	74.4
3	14.9	12 150	2.24	MR 3I 126 - 28 × 250 112 MA 4	117
3	14.9	12 150	3.15	MR 3I 140 - 28 × 250 112 MA 4	117
3	18.2	9 980	1.18	MR 3I 100 - 28 × 250 132 S B5R 6	63.2
3	18.3	9 930	1.06	MR 3I 100 - 28 × 250 112 MA 4	95.7
3	18.2	9 980	1.18	MR 3I 100 - 24 × 200 90 LC S3 4	96.2
3	18.2	9 980	1.6	MR 3I 101 - 28 × 250 132 S B5R 6	63.2
3	18.3	9 930	1.32	MR 3I 101 - 28 × 250 112 MA 4	95.7
3	18.2	9 980	1.6	MR 3I 101 - 24 × 200 90 LC S3 4	96.2
3	18.7	9 720	2.36	MR 3I 125 - 28 × 250 112 MA 4	93.7
3	18.7	9 720	3.15	MR 3I 126 - 28 × 250 112 MA 4	93.7
3	20.1	9 020	1.25	MR 3I 100 - 28 × 250 132 S B5R 6	57.1
3	20.1	9 020	1.6	MR 3I 101 - 28 × 250 132 S B5R 6	57.1
3	20.8	8 730	2.65	MR 3I 125 - 28 × 250 132 S B5R 6	55.3
3	20.8	8 730	3.55	MR 3I 126 - 28 × 250 132 S B5R 6	55.3
3	22.5	8 080	1.4	MR 3I 100 - 28 × 250 112 MA 4	77.9
3	22.5	8 080	1.4	MR 3I 100 - 24 × 200 90 LC S3 4	77.9
3	22.5	8 080	1.9	MR 3I 101 - 28 × 250 112 MA 4	77.9
3	22.5	8 080	1.9	MR 3I 101 - 24 × 200 90 LC S3 4	77.9
3	23.5	7 710	3	MR 3I 125 - 28 × 250 112 MA 4	74.4
3	26.4	6 890	0.95	MR 3I 81 - 28 × 250 112 MA 4	66.4
3	25.9	7 000	1.12	MR 3I 81 - 24 × 200 90 LC S3 4	67.5
3	26.7	6 800	1.7	MR 3I 100 - 28 × 250 132 S B5R 6	43.1
3	26.7	6 800	2.36	MR 3I 101 - 28 × 250 132 S B5R 6	43.1
3	24.9	7 290	3.15	MR 3I 125 - 28 × 250 132 S B5R 6	46.2
3	27.6	6 580	1.18	MR 3I 81 - 28 × 250 132 S B5R 6	41.7
3	27.7	6 560	1.8	MR 3I 100 - 28 × 250 112 MA 4	63.2
3	27.5	6 610	1.8	MR 3I 100 - 24 × 200 90 LC S3 4	63.8
3	27.7	6 560	2.36	MR 3I 101 - 28 × 250 112 MA 4	63.2
3	27.5	6 610	2.36	MR 3I 101 - 24 × 200 90 LC S3 4	63.8
3	28.6	6 340	3.75	MR 3I 125 - 28 × 250 112 MA 4	61.2
3	32.9	5 520	1.06	MR 3I 80 - 28 × 250 112 MA 4	53.2
3	33.1	5 490	1.06	MR 3I 80 - 24 × 200 90 LC S3 4	52.9
3	29.6	6 140	1.18	MR 3I 81 - 28 × 250 112 MA 4	59.2
3	32.9	5 520	1.4	MR 3I 81 - 28 × 250 112 MA 4	53.2
3	29.7	6 100	1.18	MR 3I 81 - 24 × 200 90 LC S3 4	58.8
3	33.1	5 490	1.4	MR 3I 81 - 24 × 200 90 LC S3 4	52.9
3	30.6	5 930	1.9	MR 3I 100 - 28 × 250 112 MA 4	57.1
3	30.2	6 020	1.9	MR 3I 100 - 24 × 200 90 LC S3 4	58.0
3	33.0	5 510	2.12	MR 3I 100 - 24 × 200 90 LC S3 4	53.1
3	30.6	5 930	2.5	MR 3I 101 - 28 × 250 112 MA 4	57.1
3	30.2	6 020	2.65	MR 3I 101 - 24 × 200 90 LC S3 4	58.0
3	33.0	5 510	2.8	MR 3I 101 - 24 × 200 90 LC S3 4	53.1
3	31.7	5 730	4	MR 3I 125 - 28 × 250 112 MA 4	55.3
3	36.7	4 950	1.18	MR 3I 80 - 28 × 250 132 S B5R 6	31.3
3	37.3	4 860	1.18	MR 3I 80 - 24 × 200 90 LC S3 4	46.9
3	36.7	4 950	1.6	MR 3I 81 - 28 × 250 132 S B5R 6	31.3
3	37.3	4 860	1.6	MR 3I 81 - 24 × 200 90 LC S3 4	46.9
3	33.8	5 370	2.12	MR 3I 100 - 28 × 250 112 MA 4	51.7
3	37.2	4 880	2.36	MR 3I 100 - 28 × 250 112 MA 4	47.1
3	33.8	5 370	2.8	MR 3I 101 - 28 × 250 112 MA 4	51.7
3	37.2	4 880	3.15	MR 3I 101 - 28 × 250 112 MA 4	47.1
3	42.0	4 320	1.32	MR 3I 80 - 28 × 250 132 S B5R 6	27.4
3	37.7	4 810	1.18	MR 3I 80 - 28 × 250 112 MA 4	46.4
3	42.0	4 320	1.7	MR 3I 81 - 28 × 250 132 S B5R 6	27.4
3	37.7	4 810	1.5	MR 3I 81 - 28 × 250 112 MA 4	46.4
3	40.6	4 470	2.65	MR 3I 100 - 28 × 250 112 MA 4	43.1
3	38.1	4 760	2.5	MR 3I 100 - 24 × 200 90 LC S3 4	45.9
3	40.6	4 470	3.55	MR 3I 101 - 28 × 250 112 MA 4	43.1
3	38.1	4 760	3.35	MR 3I 101 - 24 × 200 90 LC S3 4	45.9
3	42.0	4 320	1.32	MR 3I 80 - 28 × 250 112 MA 4	41.7
3	44.0	4 120	1.4	MR 3I 80 - 24 × 200 90 LC S3 4	39.8
3	42.0	4 320	1.7	MR 3I 81 - 28 × 250 112 MA 4	41.7
3	44.0	4 120	1.9	MR 3I 81 - 24 × 200 90 LC S3 4	39.8
3	45.6	3 980	2.8	MR 3I 100 - 24 × 200 90 LC S3 4	38.4
3	50.2	3 610	1.06	MR 3I 64 - 24 × 200 90 LC S3 4	34.8
3	47.4	3 830	1.5	MR 3I 80 - 28 × 250 112 MA 4	36.9
3	50.4	3 600	1.6	MR 3I 80 - 24 × 200 90 LC S3 4	34.8
3	47.4	3 830	2	MR 3I 81 - 28 × 250 112 MA 4	36.9
3	50.4	3 600	2.12	MR 3I 81 - 24 × 200 90 LC S3 4	34.8
3	47.0	3 860	3	MR 3I 100 - 28 × 250 112 MA 4	37.2
3	50.0	3 630	3.15	MR 3I 100 - 24 × 200 90 LC S3 4	35.0
3	49.1	3 770	2.5	MR 2I 100 - 28 × 250 132 S B5R 6	23.4
3	55.3	3 280	1.18	MR 3I 64 - 24 × 200 90 LC S3 4	31.7
3	55.9	3 250	1.8	MR 3I 80 - 28 × 250 112 MA 4	31.3
3	56.8	3 190	1.8	MR 3I 80 - 24 × 200 90 LC S3 4	30.8
3	55.9	3 250	2.36	MR 3I 81 - 28 × 250 112 MA 4	31.3
3	56.8	3 190	2.36	MR 3I 81 - 24 × 200 90 LC S3 4	30.8
3	56.1	3 230	3.55	MR 3I 100 - 28 × 250 112 MA 4	31.2
3	54.7	3 320	3.35	MR 3I 100 - 24 × 200 90 LC S3 4	32.0
3	57.9	3 200	1.4	MR 2I 80 - 28 × 250 132 S B5R 6	19.9
3	59.7	3 110	3.35	MR 2I 100 - 28 × 250 132 S B5R 6	19.3
3	60.1	3 020	1.12	MR 3I 64 - 24 × 200 90 LC S3 4	29.1
3	63.9	2 840	2	MR 3I 80 - 28 × 250 112 MA 4	27.4
3	63.9	2 840	2.65	MR 3I 81 - 28 × 250 112 MA 4	27.4
3	61.7	2 940	3.75	MR 3I 100 - 28 × 250 112 MA 4	28.4
3	67.0	2 710	1.06	MR 3I 63 - 24 × 200 90 LC S3 4	26.1
3	74.1	2 450	1.12	MR 3I 63 - 24 × 200 90 LC S3 4	23.6
3	67.0	2 710	1.32	MR 3I 64 - 24 × 200 90 LC S3 4	26.1
3	74.1	2 450	1.5	MR 3I 64 - 24 × 200 90 LC S3 4	23.6
3	72.1	2 520	2.24	MR 3I 80 - 28 × 250 112 MA 4	24.3
3	67.0	2 710	2.12	MR 3I 80 - 24 × 200 90 LC S3 4	26.1
3	74.6	2 430	2.36	MR 3I 80 - 24 × 200 90 LC S3 4	23.5
3	72.1	2 520	3	MR 3I 81 - 28 × 250 112 MA 4	24.3
3	67.0	2 710	2.8	MR 3I 81 - 24 × 200 90 LC S3 4	26.1
3	74.6	2 430	3.15	MR 3I 81 - 24 × 200 90 LC S3 4	23.5
3	70.8	2 620	2	MR 2I 80 - 28 × 250 132 S B5R 6	16.3
3	71.4	2 600	1.8	MR 2I 80 - 24 × 200 90 LC S3 4	24.5
3	70.8	2 620	2.36	MR 2I 81 - 28 × 250 132 S B5R 6	16.3
3	74.7	2 480	3.75	MR 2I 100 - 28 × 250 112 MA 4	23.4

Motor (cat. TX) with efficiency value not according to IE3 class (IEC 60034-30); the nominal power and nameplate data refer to intermittent duty S3 70%.

1) Powers valid for continuous duty S1; **increase** possible for S2 ... S10 (ch. 2b) in which case P_2 and M_2 increase and fs decreases proportionately.
2) For complete designation when ordering, see ch. 3.
* Mounting position **B5R** (see table ch. 2b).

Gearmotors selection tables



Motor power P_1 hp 1)	Output speed n_2 rpm	Output torque T_2 lb in	Service factor fs	2)	Gear ratio i
3	81.5	2 230	1.25	MR 3I 63 - 24 × 200 90 LC S3 4	21.5
3	81.5	2 230	1.7	MR 3I 64 - 24 × 200 90 LC S3 4	21.5
3	85.0	2 140	2.65	MR 3I 80 - 28 × 250 112 MA 4	20.6
3	85.8	2 110	2.65	MR 3I 80 - 24 × 200 90 LC S3 4	20.4
3	85.0	2 140	3.55	MR 3I 81 - 28 × 250 112 MA 4	20.6
3	90.1	2 060	1.12	MR 2I 63 - 28 × 250 132 S B5R 6	12.8
3	88.3	2 100	2.65	MR 2I 80 - 28 × 250 132 S B5R 6	13.0
3	88.1	2 100	2.12	MR 2I 80 - 28 × 250 112 MA 4	19.9
3	87.3	2 120	2.36	MR 2I 80 - 24 × 200 90 LC S3 4	20.1
3	88.3	2 100	3.35	MR 2I 81 - 28 × 250 132 S B5R 6	13.0
3	87.3	2 120	3	MR 2I 81 - 24 × 200 90 LC S3 4	20.1
3	95.2	1 910	1.5	MR 3I 63 - 24 × 200 90 LC S3 4	18.4
3	106	1 710	1.6	MR 3I 63 - 24 × 200 90 LC S3 4	16.5
3	95.2	1 910	2	MR 3I 64 - 24 × 200 90 LC S3 4	18.4
3	106	1 710	2.24	MR 3I 64 - 24 × 200 90 LC S3 4	16.5
3	94.7	1 920	3	MR 3I 80 - 28 × 250 112 MA 4	18.5
3	97.9	1 890	2.8	MR 2I 80 - 24 × 200 90 LC S3 4	17.9
3	109	1 670	3.35	MR 3I 80 - 28 × 250 112 MA 4	16.1
3	115	1 610	1.6	MR 2I 63 - 28 × 250 132 S B5R 6	10.0
3	108	1 720	1.32	MR 2I 63 - 24 × 200 90 LC S3 4	16.2
3	115	1 610	1.9	MR 2I 64 - 28 × 250 132 S B5R 6	10.0
3	108	1 720	3	MR 2I 80 - 28 × 250 112 MA 4	16.3
3	109	1 700	3.15	MR 2I 80 - 24 × 200 90 LC S3 4	16.1
3	108	1 720	3.55	MR 2I 81 - 28 × 250 112 MA 4	16.3
3	129	1 440	1.8	MR 2I 63 - 28 × 250 132 S B5R 6	8.91
3	129	1 440	2.24	MR 2I 64 - 28 × 250 132 S B5R 6	8.91
3	121	1 530	3.35	MR 2I 80 - 28 × 250 112 MA 4	14.5
3	121	1 530	3.35	MR 2I 80 - 24 × 200 90 LC S3 4	14.5
3	143	1 300	1.18	MR 2I 51 - 19 × 200 90 LC S3 B5R 4	12.2
3	144	1 290	2.12	MR 2I 63 - 28 × 250 132 S B5R 6	8.00
3	137	1 350	1.6	MR 2I 63 - 28 × 250 112 MA 4	12.8
3	138	1 340	1.8	MR 2I 63 - 24 × 200 90 LC S3 4	12.7
3	144	1 290	2.65	MR 2I 64 - 28 × 250 132 S B5R 6	8.00
3	138	1 340	2.24	MR 2I 64 - 24 × 200 90 LC S3 4	12.7
3	134	1 380	4	MR 2I 80 - 28 × 250 112 MA 4	13.0
3	159	1 160	1.06	MR 2I 50 - 19 × 200 90 LC S3 B5R 4	11.0
3	159	1 160	1.4	MR 2I 51 - 19 × 200 90 LC S3 B5R 4	11.0
3	159	1 170	2.24	MR 2I 63 - 28 × 250 132 S B5R 6	7.23
3	155	1 200	2.12	MR 2I 63 - 24 × 200 90 LC S3 4	11.3
3	159	1 170	3.15	MR 2I 64 - 28 × 250 132 S B5R 6	7.23
3	155	1 200	2.65	MR 2I 64 - 24 × 200 90 LC S3 4	11.3
3	182	1 020	1.12	MR 2I 50 - 24 × 200 90 LC S3 4	9.64
3	176	1 050	1.6	MR 2I 51 - 19 × 200 90 LC S3 B5R 4	9.96
3	182	1 020	1.5	MR 2I 51 - 24 × 200 90 LC S3 4	9.64
3	175	1 060	2.36	MR 2I 63 - 28 × 250 112 MA 4	10.0
3	172	1 080	2.5	MR 2I 63 - 24 × 200 90 LC S3 4	10.2
3	175	1 060	2.8	MR 2I 64 - 28 × 250 112 MA 4	10.0
3	172	1 080	3.15	MR 2I 64 - 24 × 200 90 LC S3 4	10.2
3	211	880	1.4	MR 2I 50 - 19 × 200 90 LC S3 B5R 4	8.29
3	202	920	1.32	MR 2I 50 - 24 × 200 90 LC S3 4	8.67
3	211	880	2	MR 2I 51 - 19 × 200 90 LC S3 B5R 4	8.29
3	202	920	1.8	MR 2I 51 - 24 × 200 90 LC S3 4	8.67
3	196	945	2.65	MR 2I 63 - 28 × 250 112 MA 4	8.91
3	191	970	2.8	MR 2I 63 - 24 × 200 90 LC S3 4	9.18
3	210	885	3	MR 2I 63 - 24 × 200 90 LC S3 4	8.34
3	196	945	3.35	MR 2I 64 - 28 × 250 112 MA 4	8.91
3	191	970	3.55	MR 2I 64 - 24 × 200 90 LC S3 4	9.18
3	223	830	1.5	MR 2I 50 - 24 × 200 90 LC S3 4	7.85
3	223	830	2	MR 2I 51 - 24 × 200 90 LC S3 4	7.85
3	219	845	3.15	MR 2I 63 - 28 × 250 112 MA 4	8.00
3	219	845	4	MR 2I 64 - 28 × 250 112 MA 4	8.00
3	245	755	1.6	MR 2I 50 - 24 × 200 90 LC S3 4	7.14
3	245	755	2.36	MR 2I 51 - 24 × 200 90 LC S3 4	7.14
3	242	765	3.35	MR 2I 63 - 28 × 250 112 MA 4	7.23
3	245	755	3.55	MR 2I 63 - 24 × 200 90 LC S3 4	7.14
3	268	690	1.8	MR 2I 50 - 24 × 200 90 LC S3 4	6.53
3	268	690	2.5	MR 2I 51 - 24 × 200 90 LC S3 4	6.53
3	266	695	3.75	MR 2I 63 - 28 × 250 112 MA 4	6.57
3	273	680	4	MR 2I 63 - 24 × 200 90 LC S3 4	6.42

Motor power P_1 hp 1)	Output speed n_2 rpm	Output torque T_2 lb in	Service factor fs	2)	Gear ratio i
3	310	600	2	MR 2I 50 - 24 × 200 90 LC S3 4	5.65
3	310	600	2.8	MR 2I 51 - 24 × 200 90 LC S3 4	5.65
3	311	595	4.25	MR 2I 63 - 28 × 250 112 MA 4	5.63
3	342	540	2.24	MR 2I 50 - 24 × 200 90 LC S3 4	5.11
3	342	540	2.8	MR 2I 51 - 24 × 200 90 LC S3 4	5.11
3	346	535	4.75	MR 2I 63 - 28 × 250 112 MA 4	5.06
3	427	435	2.36	MR 2I 50 - 24 × 200 90 LC S3 4	4.10
3	427	435	2.8	MR 2I 51 - 24 × 200 90 LC S3 4	4.10
4	9.35	25 900	3	MR 3I 180 - 38 × 300 132 M 6	123
4	9.82	24 650	1.06	MR 3I 126 - 28 × 250 112 MC S3 6	117
4	9.82	24 650	1.5	MR 3I 140 - 28 × 250 112 MC S3 6	117
4	9.63	25 150	2.12	MR 3I 160 - 38 × 300 132 M 6	119
4	12.0	20 100	2.12	MR 3I 140 - 28 × 250 112 MC S3 6	95.5
4	11.5	21 100	2.8	MR 3I 160 - 38 × 300 132 M 6	100
4	12.3	19 700	1.18	MR 3I 125 - 28 × 250 112 MC S3 6	93.7
4	12.3	19 700	1.5	MR 3I 126 - 28 × 250 112 MC S3 6	93.7
4	13.7	17 650	3.55	MR 3I 160 - 38 × 300 132 M 6	83.8
4	15.5	15 650	1.5	MR 3I 125 - 28 × 250 112 MC S3 6	74.4
4	14.9	16 200	1.32	MR 3I 125 - 28 × 250 112 M 4	117
4	15.5	15 650	2	MR 3I 126 - 28 × 250 112 MC S3 6	74.4
4	14.9	16 200	1.6	MR 3I 126 - 28 × 250 112 M 4	117
4	15.2	15 950	2.65	MR 3I 140 - 28 × 250 112 MC S3 6	75.8
4	14.9	16 200	2.36	MR 3I 140 - 28 × 250 112 M 4	117
4	18.2	13 300	1.18	MR 3I 101 - 28 × 250 112 MC S3 6	63.2
4	18.3	13 250	1	MR 3I 101 - 28 × 250 112 M 4	95.7
4	18.7	12 950	1.8	MR 3I 125 - 28 × 250 112 M 4	93.7
4	18.7	12 950	2.36	MR 3I 126 - 28 × 250 112 M 4	93.7
4	18.3	13 200	3.35	MR 3I 140 - 28 × 250 112 M 4	95.5
4	20.1	12 000	1.18	MR 3I 101 - 28 × 250 112 MC S3 6	57.1
4	20.8	11 650	2	MR 3I 125 - 28 × 250 112 MC S3 6	55.3
4	20.8	11 650	2.65	MR 3I 126 - 28 × 250 112 MC S3 6	55.3
4	20.6	11 700	3.75	MR 3I 140 - 28 × 250 112 MC S3 6	55.7
4	22.5	10 800	1.06	MR 3I 100 - 28 × 250 112 M 4	77.9
4	22.5	10 800	1.4	MR 3I 101 - 28 × 250 112 M 4	77.9
4	23.5	10 300	2.24	MR 3I 125 - 28 × 250 112 M 4	74.4
4	23.5	10 300	3	MR 3I 126 - 28 × 250 112 M 4	74.4
4	22.7	10 700	4	MR 3I 140 - 28 × 250 112 MC S3 6	50.8
4	24.4	9 910	1.18	MR 3I 100 - 28 × 250 112 MC S3 6	47.1
4	26.7	9 060	1.32	MR 3I 100 - 28 × 250 112 MC S3 6	43.1
4	25.1	9 630	1.18	MR 3I 100 - 38 × 300 132 M 6	45.7
4	24.4	9 910	1.6	MR 3I 101 - 28 × 250 112 MC S3 6	47.1
4	26.7	9 060	1.8	MR 3I 101 - 28 × 250 112 MC S3 6	43.1
4	25.1	9 630	1.5	MR 3I 101 - 38 × 300 132 M 6	45.7
4	24.9	9 720	2.36	MR 3I 125 - 28 × 250 112 MC S3 6	46.2
4	25.8	9 370	2.5	MR 3I 125 - 38 × 300 132 M 6	44.5
4	24.9	9 720	3	MR 3I 126 - 28 × 250 112 MC S3 6	46.2
4	24.6	9 820	4.25	MR 3I 140 - 28 × 250 112 MC S3 6	46.7
4	27.7	8 750	1.32	MR 3I 100 - 28 × 250 112 M 4	63.2
4	27.7	8 750	1.8	MR 3I 101 - 28 × 250 112 M 4	63.2
4	28.6	8 460	2.8	MR 3I 125 - 28 × 250 112 M 4	61.2
4	28.6	8 460	3.55	MR 3I 126 - 28 × 250 112 M 4	61.2
4	32.9	7 360	1.06	MR 3I 81 - 28 × 250 112 M 4	53.2
4	30.6	7 900	1.4	MR 3I 100 - 28 × 250 112 M 4	57.1
4	30.9	7 840	2	MR 3I 101 - 28 × 250 112 MC S3 6	37.2
4	30.6	7 900	1.8	MR 3I 101 - 28 × 250 112 M 4	57.1
4	31.7	7 650	3	MR 3I 125 - 28 × 250 112 M 4	55.3
4	37.3	6 480	1.18	MR 3I 81 - 24 × 200 112 M B5R 4	46.9
4	33.8	7 150	1.6	MR 3I 100 - 28 × 250 112 M 4	51.7
4	37.2	6 510	1.8	MR 3I 100 - 28 × 250 112 M 4	47.1
4	33.8	7 150	2.12	MR 3I 101 - 28 × 250 112 M 4	51.7
4	37.2	6 510	2.36	MR 3I 101 - 28 × 250 112 M 4	47.1
4	34.8	6 950	3.35	MR 3I 125 - 28 × 250 112 M 4	50.2
4	42.0	5 760	1.32	MR 3I 81 - 28 × 250 112 MC S3 6	27.4
4	37.7	6 410	1.12	MR 3I 81 - 28 × 250 112 M 4	46.4
4	40.6	5 960	1.9	MR 3I 100 - 28 × 250 112 M 4	43.1
4	40.6	5 960	2.65	MR 3I 101 - 28 × 250 112 M 4	43.1
4	37.9	6 390	3.55	MR 3I 125 - 28 × 250 112 M 4	46.2

Motor (cat. TX) with efficiency value not according to IE3 class (IEC 60034-30); the nominal power and nameplate data refer to intermittent duty S3 70%.

1) Powers valid for continuous duty S1; **increase** possible for S2 ... S10 (ch. 2b) in which case P_2 and M_2 increase and fs decreases proportionately.
2) For complete designation when ordering, see ch. 3.

* Mounting position **B5R** (see table ch. 2b).

Motor power P_1 hp 1)	Output speed n_2 rpm	Output torque T_2 lb in	Service factor fs	2)	Gear ratio i
4	47.4	5 110	1.12	MR 3I 80 - 28 × 250 112 MC S3 6	24.3
4	42.0	5 760	1	MR 3I 80 - 28 × 250 112 M 4	41.7
4	47.4	5 110	1.5	MR 3I 81 - 28 × 250 112 MC S3 6	24.3
4	42.0	5 760	1.32	MR 3I 81 - 28 × 250 112 M 4	41.7
4	44.3	5 460	2.12	MR 3I 100 - 28 × 250 112 MC S3 6	26.0
4	44.3	5 460	2.8	MR 3I 101 - 28 × 250 112 MC S3 6	26.0
4	42.2	5 740	4	MR 3I 125 - 28 × 250 112 M 4	41.5
4	46.7	5 180	4.5	MR 3I 125 - 28 × 250 112 M 4	37.5
4	47.4	5 110	1.12	MR 3I 80 - 28 × 250 112 M 4	36.9
4	47.4	5 110	1.5	MR 3I 81 - 28 × 250 112 M 4	36.9
4	47.0	5 150	2.24	MR 3I 100 - 28 × 250 112 M 4	37.2
4	47.0	5 150	3	MR 3I 101 - 28 × 250 112 M 4	37.2
4	49.1	5 030	1.9	MR 2I 100 - 28 × 250 112 MC S3 6	23.4
4	55.9	4 330	1.32	MR 3I 80 - 28 × 250 112 M 4	31.3
4	55.9	4 330	1.8	MR 3I 81 - 28 × 250 112 M 4	31.3
4	56.1	4 310	2.65	MR 3I 100 - 28 × 250 112 M 4	31.2
4	56.1	4 310	3.35	MR 3I 101 - 28 × 250 112 M 4	31.2
4	59.7	4 140	2.5	MR 2I 100 - 28 × 250 112 MC S3 6	19.3
4	59.7	4 140	3	MR 2I 101 - 28 × 250 112 MC S3 6	19.3
4	63.9	3 790	1.5	MR 3I 80 - 28 × 250 112 M 4	27.4
4	63.9	3 790	1.9	MR 3I 81 - 28 × 250 112 M 4	27.4
4	61.7	3 920	2.8	MR 3I 100 - 28 × 250 112 M 4	28.4
4	61.7	3 920	4	MR 3I 101 - 28 × 250 112 M 4	28.4
4	67.0	3 610	1	MR 3I 64 - 24 × 200 112 M B5R 4	26.1
4	74.1	3 270	1.18	MR 3I 64 - 24 × 200 112 M B5R 4	23.6
4	72.1	3 360	1.7	MR 3I 80 - 28 × 250 112 M 4	24.3
4	72.1	3 360	2.24	MR 3I 81 - 28 × 250 112 M 4	24.3
4	67.4	3 590	3.15	MR 3I 100 - 28 × 250 112 M 4	26.0
4	70.8	3 490	1.5	MR 2I 80 - 28 × 250 112 MC S3 6	16.3
4	71.4	3 460	1.32	MR 2I 80 - 24 × 200 112 M B5R 4	24.5
4	70.8	3 490	1.8	MR 2I 81 - 28 × 250 112 MC S3 6	16.3
4	74.7	3 310	2.8	MR 2I 100 - 28 × 250 112 M 4	23.4
4	81.5	2 970	1.25	MR 3I 64 - 24 × 200 112 M B5R 4	21.5
4	78.0	3 100	3.55	MR 3I 100 - 28 × 250 112 M 4	22.4
4	79.4	3 110	1.7	MR 2I 80 - 28 × 250 112 MC S3 6	14.5
4	79.4	3 110	2.24	MR 2I 81 - 28 × 250 112 MC S3 6	14.5
4	85.0	2 850	2	MR 3I 80 - 28 × 250 112 M 4	20.6
4	85.0	2 850	2.65	MR 3I 81 - 28 × 250 112 M 4	20.6
4	87.3	2 830	1.8	MR 2I 80 - 24 × 200 112 M B5R 4	20.1
4	88.1	2 800	1.6	MR 2I 80 - 28 × 250 112 M 4	19.9
4	87.3	2 830	2.24	MR 2I 81 - 24 × 200 112 M B5R 4	20.1
4	90.8	2 720	3.75	MR 2I 100 - 28 × 250 112 M 4	19.3
4	95.2	2 540	1.12	MR 3I 63 - 24 × 200 112 M B5R 4	18.4
4	106	2 290	1.25	MR 3I 63 - 24 × 200 112 M B5R 4	16.5
4	95.2	2 540	1.5	MR 3I 64 - 24 × 200 112 M B5R 4	18.4
4	106	2 290	1.7	MR 3I 64 - 24 × 200 112 M B5R 4	16.5
4	94.7	2 560	2.24	MR 3I 80 - 28 × 250 112 M 4	18.5
4	94.7	2 560	3	MR 3I 81 - 28 × 250 112 M 4	18.5
4	97.9	2 520	2.65	MR 2I 81 - 24 × 200 112 M B5R 4	17.9
4	101	2 450	4.25	MR 2I 100 - 28 × 250 112 M 4	17.3
4	109	2 220	2.5	MR 3I 80 - 28 × 250 112 M 4	16.1
4	109	2 220	3.35	MR 3I 81 - 28 × 250 112 M 4	16.1
4	115	2 150	1.18	MR 2I 63 - 28 × 250 112 MC S3 6	10.0
4	115	2 150	1.4	MR 2I 64 - 28 × 250 112 MC S3 6	10.0
4	109	2 270	2.36	MR 2I 80 - 24 × 200 112 M B5R 4	16.1
4	108	2 290	2.24	MR 2I 80 - 28 × 250 112 M 4	16.3
4	109	2 270	3.15	MR 2I 81 - 24 × 200 112 M B5R 4	16.1
4	108	2 290	2.65	MR 2I 81 - 28 × 250 112 M 4	16.3
4	129	1 910	1.32	MR 2I 63 - 28 × 250 112 MC S3 6	8.91
4	129	1 910	1.7	MR 2I 64 - 28 × 250 112 MC S3 6	8.91
4	121	2 050	2.5	MR 2I 80 - 28 × 250 112 M 4	14.5
4	121	2 050	3.15	MR 2I 81 - 28 × 250 112 M 4	14.5
4	144	1 720	1.6	MR 2I 63 - 28 × 250 112 MC S3 6	8.00
4	138	1 790	1.4	MR 2I 63 - 24 × 200 112 M B5R 4	12.7
4	137	1 800	1.25	MR 2I 63 - 28 × 250 112 M 4	12.8
4	144	1 720	2	MR 2I 64 - 28 × 250 112 MC S3 6	8.00
4	138	1 790	1.7	MR 2I 64 - 24 × 200 112 M B5R 4	12.7
4	134	1 840	3	MR 2I 80 - 28 × 250 112 M 4	13.0
4	134	1 840	3.75	MR 2I 81 - 28 × 250 112 M 4	13.0

Motor power P_1 hp 1)	Output speed n_2 rpm	Output torque T_2 lb in	Service factor fs	2)	Gear ratio i
4	159	1 550	1.7	MR 2I 63 - 28 × 250 112 MC S3 6	7.23
4	155	1 600	1.6	MR 2I 63 - 24 × 200 112 M B5R 4	11.3
4	159	1 550	2.36	MR 2I 64 - 28 × 250 112 MC S3 6	7.23
4	155	1 600	2	MR 2I 64 - 24 × 200 112 M B5R 4	11.3
4	149	1 660	3.15	MR 2I 80 - 28 × 250 112 M 4	11.8
4	182	1 360	1.12	MR 2I 51 - 24 × 200 112 M B5R 4	9.64
4	172	1 430	1.8	MR 2I 63 - 24 × 200 112 M B5R 4	10.2
4	175	1 410	1.7	MR 2I 63 - 28 × 250 112 M 4	10.0
4	175	1 410	2.5	MR 2I 64 - 28 × 250 112 MC S3 6	6.57
4	172	1 430	2.36	MR 2I 64 - 24 × 200 112 M B5R 4	10.2
4	175	1 410	2.12	MR 2I 64 - 28 × 250 112 M 4	10.0
4	166	1 490	3.55	MR 2I 80 - 28 × 250 112 M 4	10.6
4	187	1 320	4	MR 2I 80 - 28 × 250 112 M 4	9.36
4	202	1 220	1	MR 2I 50 - 24 × 200 112 M B5R 4	8.67
4	202	1 220	1.32	MR 2I 51 - 24 × 200 112 M B5R 4	8.67
4	210	1 180	2.24	MR 2I 63 - 24 × 200 112 M B5R 4	8.34
4	196	1 260	2	MR 2I 63 - 28 × 250 112 M 4	8.91
4	210	1 180	3	MR 2I 64 - 24 × 200 112 M B5R 4	8.34
4	196	1 260	2.5	MR 2I 64 - 28 × 250 112 M 4	8.91
4	223	1 110	1.12	MR 2I 50 - 24 × 200 112 M B5R 4	7.85
4	223	1 110	1.5	MR 2I 51 - 24 × 200 112 M B5R 4	7.85
4	219	1 130	2.36	MR 2I 63 - 28 × 250 112 M 4	8.00
4	219	1 130	3	MR 2I 64 - 28 × 250 112 M 4	8.00
4	220	1 120	4.75	MR 2I 80 - 28 × 250 112 M 4	7.95
4	245	1 010	1.25	MR 2I 50 - 24 × 200 112 M B5R 4	7.14
4	245	1 010	1.7	MR 2I 51 - 24 × 200 112 M B5R 4	7.14
4	242	1 020	2.5	MR 2I 63 - 28 × 250 112 M 4	7.23
4	242	1 020	3.35	MR 2I 64 - 28 × 250 112 M 4	7.23
4	268	920	1.32	MR 2I 50 - 24 × 200 112 M B5R 4	6.53
4	268	920	1.9	MR 2I 51 - 24 × 200 112 M B5R 4	6.53
4	288	860	2.5	MR 2I 63 - 28 × 250 112 MC S3 6	4.00
4	266	930	2.8	MR 2I 63 - 28 × 250 112 M 4	6.57
4	288	860	2.8	MR 2I 64 - 28 × 250 112 MC S3 6	4.00
4	266	930	3.75	MR 2I 64 - 28 × 250 112 M 4	6.57
4	310	795	1.5	MR 2I 50 - 24 × 200 112 M B5R 4	5.65
4	310	795	2	MR 2I 51 - 24 × 200 112 M B5R 4	5.65
4	311	795	3.35	MR 2I 63 - 28 × 250 112 M 4	5.63
4	342	720	1.7	MR 2I 50 - 24 × 200 112 M B5R 4	5.11
4	342	720	2	MR 2I 51 - 24 × 200 112 M B5R 4	5.11
4	346	715	3.55	MR 2I 63 - 28 × 250 112 M 4	5.06
4	427	580	1.8	MR 2I 50 - 24 × 200 112 M B5R 4	4.10
4	427	580	2	MR 2I 51 - 24 × 200 112 M B5R 4	4.10
4	438	565	3.75	MR 2I 63 - 28 × 250 112 M 4	4.00
5.4	9.35	34 950	2.12	MR 3I 180 - 38 × 300 132 MB 6	123
5.4	9.63	33 950	1.6	MR 3I 160 - 38 × 300 132 MB 6	119
5.4	11.5	28 500	2.12	MR 3I 160 - 38 × 300 132 MB 6	100
5.4	11.4	28 650	3	MR 3I 180 - 38 × 300 132 MB 6	101
5.4	13.7	23 800	2.5	MR 3I 160 - 38 × 300 132 MB 6	83.8
5.4	13.7	23 900	3.55	MR 3I 180 - 38 × 300 132 MB 6	84.2
5.4	14.9	21 850	1	MR 3I 125 - 28 × 250 112 MB 4	117
5.4	14.9	21 850	1.18	MR 3I 126 - 28 × 250 112 MB 4	117
5.4	14.9	21 850	1.7	MR 3I 140 - 28 × 250 112 MB 4	117
5.4	18.7	17 500	1.32	MR 3I 125 - 28 × 250 112 MB 4	93.7
5.4	18.7	17 500	1.7	MR 3I 126 - 28 × 250 112 MB 4	93.7
5.4	18.3	17 850	2.36	MR 3I 140 - 28 × 250 112 MB 4	95.5
5.4	17.5	18 650	3.35	MR 3I 160 - 38 × 300 132 MB 6	65.6
5.4	21.0	15 600	1.5	MR 3I 125 - 38 × 300 132 MB 6	54.8
5.4	21.0	15 600	1.8	MR 3I 126 - 38 × 300 132 MB 6	54.8
5.4	20.8	15 750	2.65	MR 3I 140 - 38 × 300 132 MB 6	55.4
5.4	20.0	16 300	3.75	MR 3I 160 - 38 × 300 132 MB 6	57.4
5.4	22.5	14 550	1.06	MR 3I 101 - 28 × 250 112 MB 4	77.9
5.4	23.5	13 900	1.7	MR 3I 125 - 28 × 250 112 MB 4	74.4
5.4	23.5	13 900	2.24	MR 3I 126 - 28 × 250 112 MB 4	74.4
5.4	23.1	14 150	3	MR 3I 140 - 28 × 250 112 MB 4	75.8

Motor (cat. TX) with efficiency value not according to IE3 class (IEC 60034-30); the nominal power and nameplate data refer to intermittent duty S3 70%.

1) Powers valid for continuous duty S1; **increase** possible for S2 ... S10 (ch. 2b) in which case P_2 and M_2 increase and fs decreases proportionately.

2) For complete designation when ordering, see ch. 3.

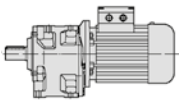
* Mounting position **B5R** (see table ch. 2b).

Motor power P_1 hp 1)	Output speed n_2 rpm	Output torque T_2 lb in	Service factor fs	2)	Gear ratio i
5.4	25.1	13 000	1.12	**MR 3I 101 - 38 × 300** 132 MB 6	45.7
5.4	25.8	12 650	1.9	**MR 3I 125 - 38 × 300** 132 MB 6	44.5
5.4	25.8	12 650	2.5	**MR 3I 126 - 38 × 300** 132 MB 6	44.5
5.4	25.6	12 750	3.35	**MR 3I 140 - 38 × 300** 132 MB 6	44.9
5.4	27.7	11 800	1	**MR 3I 100 - 28 × 250** 112 MB 4	63.2
5.4	27.7	11 800	1.32	**MR 3I 101 - 28 × 250** 112 MB 4	63.2
5.4	28.6	11 400	2	**MR 3I 125 - 28 × 250** 112 MB 4	61.2
5.4	28.6	11 400	2.65	**MR 3I 126 - 28 × 250** 112 MB 4	61.2
5.4	28.1	11 650	3.75	**MR 3I 140 - 28 × 250** 112 MB 4	62.3
5.4	33.3	9 800	1.18	**MR 3I 100 - 38 × 300** 132 MB 6	34.5
5.4	30.6	10 650	1.06	**MR 3I 100 - 28 × 250** 112 MB 4	57.1
5.4	33.3	9 800	1.6	**MR 3I 101 - 38 × 300** 132 MB 6	34.5
5.4	30.6	10 650	1.32	**MR 3I 101 - 28 × 250** 112 MB 4	57.1
5.4	31.7	10 300	2.24	**MR 3I 125 - 28 × 250** 112 MB 4	55.3
5.4	31.7	10 300	3	**MR 3I 126 - 28 × 250** 112 MB 4	55.3
5.4	33.8	9 660	1.18	**MR 3I 100 - 28 × 250** 112 MB 4	51.7
5.4	37.2	8 790	1.32	**MR 3I 100 - 28 × 250** 112 MB 4	47.1
5.4	33.8	9 660	1.6	**MR 3I 101 - 28 × 250** 112 MB 4	51.7
5.4	37.2	8 790	1.8	**MR 3I 101 - 28 × 250** 112 MB 4	47.1
5.4	34.8	9 380	2.5	**MR 3I 125 - 28 × 250** 112 MB 4	50.2
5.4	34.8	9 380	3.35	**MR 3I 126 - 28 × 250** 112 MB 4	50.2
5.4	40.6	8 040	1.4	**MR 3I 100 - 28 × 250** 112 MB 4	43.1
5.4	40.6	8 040	2	**MR 3I 101 - 28 × 250** 112 MB 4	43.1
5.4	37.9	8 620	2.65	**MR 3I 125 - 28 × 250** 112 MB 4	46.2
5.4	37.9	8 620	3.35	**MR 3I 126 - 28 × 250** 112 MB 4	46.2
5.4	42.0	7 780	0.95	**MR 3I 81 - 28 × 250** 112 MB 4	41.7
5.4	46.1	7 090	1.6	**MR 3I 100 - 38 × 300** 132 MB 6	25.0
5.4	46.1	7 090	2.12	**MR 3I 101 - 38 × 300** 132 MB 6	25.0
5.4	42.2	7 740	3	**MR 3I 125 - 28 × 250** 112 MB 4	41.5
5.4	46.7	7 000	3.35	**MR 3I 125 - 28 × 250** 112 MB 4	37.5
5.4	47.4	7 040	2.65	**MR 2I 125 - 38 × 300** 132 MB 6	24.3
5.4	47.4	6 890	1.12	**MR 3I 81 - 28 × 250** 112 MB 4	36.9
5.4	47.0	6 950	1.7	**MR 3I 100 - 28 × 250** 112 MB 4	37.2
5.4	47.0	6 950	2.24	**MR 3I 101 - 28 × 250** 112 MB 4	37.2
5.4	51.4	6 360	3.55	**MR 3I 125 - 28 × 250** 112 MB 4	34.1
5.4	55.9	5 850	1	**MR 3I 80 - 28 × 250** 112 MB 4	31.3
5.4	55.9	5 850	1.32	**MR 3I 81 - 28 × 250** 112 MB 4	31.3
5.4	56.1	5 820	1.9	**MR 3I 100 - 28 × 250** 112 MB 4	31.2
5.4	56.1	5 820	2.5	**MR 3I 101 - 28 × 250** 112 MB 4	31.2
5.4	60.5	5 510	3.75	**MR 2I 125 - 38 × 300** 132 MB 6	19.0
5.4	63.9	5 110	1.12	**MR 3I 80 - 28 × 250** 112 MB 4	27.4
5.4	63.9	5 110	1.4	**MR 3I 81 - 28 × 250** 112 MB 4	27.4
5.4	61.7	5 300	2.12	**MR 3I 100 - 28 × 250** 112 MB 4	28.4
5.4	61.7	5 300	2.8	**MR 3I 101 - 28 × 250** 112 MB 4	28.4
5.4	72.1	4 530	1.25	**MR 3I 80 - 28 × 250** 112 MB 4	24.3
5.4	72.1	4 530	1.7	**MR 3I 81 - 28 × 250** 112 MB 4	24.3
5.4	67.4	4 850	2.36	**MR 3I 100 - 28 × 250** 112 MB 4	26.0
5.4	67.4	4 850	3.15	**MR 3I 101 - 28 × 250** 112 MB 4	26.0
5.4	71.4	4 670	1	**MR 2I 80 - 24 × 200** 112 MB B5R 4	24.5
5.4	74.7	4 470	2.12	**MR 2I 100 - 28 × 250** 112 MB 4	23.4
5.4	78.0	4 190	2.65	**MR 3I 100 - 28 × 250** 112 MB 4	22.4
5.4	78.0	4 190	3.55	**MR 3I 101 - 28 × 250** 112 MB 4	22.4
5.4	76.8	4 340	2.12	**MR 2I 100 - 38 × 300** 132 MB 6	15.0
5.4	85.0	3 840	1.5	**MR 3I 80 - 28 × 250** 112 MB 4	20.6
5.4	85.0	3 840	2	**MR 3I 81 - 28 × 250** 112 MB 4	20.6
5.4	86.2	3 790	3	**MR 3I 100 - 28 × 250** 112 MB 4	20.3
5.4	87.3	3 820	1.32	**MR 2I 80 - 24 × 200** 112 MB B5R 4	20.1
5.4	88.1	3 790	1.18	**MR 2I 80 - 28 × 250** 112 MB 4	19.9
5.4	87.3	3 820	1.6	**MR 2I 81 - 24 × 200** 112 MB B5R 4	20.1
5.4	90.8	3 670	2.8	**MR 2I 100 - 28 × 250** 112 MB 4	19.3
5.4	90.8	3 670	3.35	**MR 2I 101 - 28 × 250** 112 MB 4	19.3
5.4	94.7	3 450	1.6	**MR 3I 80 - 28 × 250** 112 MB 4	18.5
5.4	94.7	3 450	2.24	**MR 3I 81 - 28 × 250** 112 MB 4	18.5
5.4	97.9	3 410	1.5	**MR 2I 80 - 24 × 200** 112 MB B5R 4	17.9
5.4	97.9	3 410	2	**MR 2I 81 - 24 × 200** 112 MB B5R 4	17.9
5.4	101	3 300	3.15	**MR 2I 100 - 28 × 250** 112 MB 4	17.3

Motor power P_1 hp 1)	Output speed n_2 rpm	Output torque T_2 lb in	Service factor fs	2)	Gear ratio i
5.4	109	3 000	1.9	**MR 3I 80 - 28 × 250** 112 MB 4	16.1
5.4	109	3 000	2.5	**MR 3I 81 - 28 × 250** 112 MB 4	16.1
5.4	109	3 060	1.8	**MR 2I 80 - 24 × 200** 112 MB B5R 4	16.1
5.4	108	3 100	1.6	**MR 2I 80 - 28 × 250** 112 MB 4	16.3
5.4	109	3 060	2.36	**MR 2I 81 - 24 × 200** 112 MB B5R 4	16.1
5.4	108	3 100	2	**MR 2I 81 - 28 × 250** 112 MB 4	16.3
5.4	112	2 990	3.55	**MR 2I 100 - 28 × 250** 112 MB 4	15.7
5.4	121	2 760	1.9	**MR 2I 80 - 28 × 250** 112 MB 4	14.5
5.4	121	2 760	2.36	**MR 2I 81 - 28 × 250** 112 MB 4	14.5
5.4	127	2 620	4	**MR 2I 100 - 28 × 250** 112 MB 4	13.8
5.4	138	2 420	1.25	**MR 2I 64 - 24 × 200** 112 MB B5R 4	12.7
5.4	134	2 480	2.12	**MR 2I 80 - 28 × 250** 112 MB 4	13.0
5.4	134	2 480	2.8	**MR 2I 81 - 28 × 250** 112 MB 4	13.0
5.4	141	2 370	4.5	**MR 2I 100 - 28 × 250** 112 MB 4	12.5
5.4	155	2 160	1.18	**MR 2I 63 - 24 × 200** 112 MB B5R 4	11.3
5.4	155	2 160	1.5	**MR 2I 64 - 24 × 200** 112 MB B5R 4	11.3
5.4	152	2 200	2.5	**MR 2I 80 - 24 × 200** 112 MB B5R 4	11.5
5.4	149	2 240	2.24	**MR 2I 80 - 28 × 250** 112 MB 4	11.8
5.4	152	2 200	3.35	**MR 2I 81 - 24 × 200** 112 MB B5R 4	11.5
5.4	149	2 240	3	**MR 2I 81 - 28 × 250** 112 MB 4	11.8
5.4	154	2 160	5	**MR 2I 100 - 28 × 250** 112 MB 4	11.3
5.4	172	1 940	1.4	**MR 2I 63 - 24 × 200** 112 MB B5R 4	10.2
5.4	175	1 910	1.25	**MR 2I 63 - 28 × 250** 112 MB 4	10.0
5.4	172	1 940	1.8	**MR 2I 64 - 24 × 200** 112 MB B5R 4	10.2
5.4	175	1 910	1.6	**MR 2I 64 - 28 × 250** 112 MB 4	10.0
5.4	166	2 010	2.65	**MR 2I 80 - 28 × 250** 112 MB 4	10.6
5.4	187	1 780	3	**MR 2I 80 - 28 × 250** 112 MB 4	9.36
5.4	166	2 010	3.35	**MR 2I 81 - 28 × 250** 112 MB 4	10.6
5.4	187	1 780	4	**MR 2I 81 - 28 × 250** 112 MB 4	9.36
5.4	210	1 590	1.7	**MR 2I 63 - 24 × 200** 112 MB B5R 4	8.34
5.4	196	1 700	1.5	**MR 2I 63 - 28 × 250** 112 MB 4	8.91
5.4	210	1 590	2.24	**MR 2I 64 - 24 × 200** 112 MB B5R 4	8.34
5.4	196	1 700	1.9	**MR 2I 64 - 28 × 250** 112 MB 4	8.91
5.4	201	1 660	3.15	**MR 2I 80 - 38 × 300** 132 MB 6	5.71
5.4	223	1 500	1.12	**MR 2I 51 - 24 × 200** 112 MB B5R 4	7.85
5.4	219	1 520	1.7	**MR 2I 63 - 28 × 250** 112 MB 4	8.00
5.4	219	1 520	2.24	**MR 2I 64 - 28 × 250** 112 MB 4	8.00
5.4	220	1 510	3.55	**MR 2I 80 - 28 × 250** 112 MB 4	7.95
5.4	245	1 360	1.32	**MR 2I 51 - 24 × 200** 112 MB B5R 4	7.14
5.4	242	1 380	1.9	**MR 2I 63 - 28 × 250** 112 MB 4	7.23
5.4	242	1 380	2.5	**MR 2I 64 - 28 × 250** 112 MB 4	7.23
5.4	245	1 360	4	**MR 2I 80 - 28 × 250** 112 MB 4	7.13
5.4	268	1 250	1.4	**MR 2I 51 - 24 × 200** 112 MB B5R 4	6.53
5.4	266	1 250	2.12	**MR 2I 63 - 28 × 250** 112 MB 4	6.57
5.4	266	1 250	2.8	**MR 2I 64 - 28 × 250** 112 MB 4	6.57
5.4	282	1 180	4.5	**MR 2I 80 - 28 × 250** 112 MB 4	6.20
5.4	310	1 080	1.5	**MR 2I 51 - 24 × 200** 112 MB B5R 4	5.65
5.4	311	1 070	2.36	**MR 2I 63 - 28 × 250** 112 MB 4	5.63
5.4	311	1 070	3	**MR 2I 64 - 28 × 250** 112 MB 4	5.63
5.4	342	975	1.5	**MR 2I 51 - 24 × 200** 112 MB B5R 4	5.11
5.4	346	965	2.65	**MR 2I 63 - 28 × 250** 112 MB 4	5.06
5.4	346	965	3	**MR 2I 64 - 28 × 250** 112 MB 4	5.06
5.4	427	780	1.5	**MR 2I 51 - 24 × 200** 112 MB B5R 4	4.10
5.4	438	760	2.8	**MR 2I 63 - 28 × 250** 112 MB 4	4.00
5.4	438	760	3	**MR 2I 64 - 28 × 250** 112 MB 4	4.00
7.5	9.35	48 550	1.5	**MR 3I 180 - 38 × 300** 132 MB S3 6	123
7.5	9.63	47 150	1.12	**MR 3I 160 - 38 × 300** 132 MB S3 6	119
7.5	11.5	39 550	1.5	**MR 3I 160 - 38 × 300** 132 MB S3 6	100
7.5	11.4	39 750	2.12	**MR 3I 180 - 38 × 300** 132 MB S3 6	101
7.5	13.7	33 050	1.8	**MR 3I 160 - 38 × 300** 132 MB S3 6	83.8
7.5	14.7	30 950	1.7	**MR 3I 160 - 38 × 300** 132 M 4	119
7.5	13.7	33 200	2.5	**MR 3I 180 - 38 × 300** 132 MB S3 6	84.2
7.5	14.2	31 900	2.36	**MR 3I 180 - 38 × 300** 132 M 4	123
7.5	15.4	29 550	1.25	**MR 3I 140 - 38 × 300** 132 MB S3 6	74.8
7.5	14.9	30 400	1.25	**MR 3I 140 - 28 × 250** 112 MC S3 4	117

1) Powers valid for continuous duty S1; **increase** possible for S2 ... S10 (ch. 2b) in which case P_2 and M_2 increase and fs decreases proportionately.
2) For complete designation when ordering, see ch. 3.
* Mounting position **B5R** (see table ch. 2b).

Gearmotors selection tables



Motor power P_1 hp 1)	Output speed n_2 rpm	Output torque T_2 lb in	Service factor fs	2)	Gear ratio i
7.5	18.7	24 300	0.95	MR 3I 125 - 28 × 250 112 MC S3 4	93.7
7.5	18.7	24 300	1.25	MR 3I 126 - 28 × 250 112 MC S3 4	93.7
7.5	18.3	24 750	1.7	MR 3I 140 - 28 × 250 112 MC S3 4	95.5
7.5	17.5	26 000	2.36	MR 3I 160 - 38 × 300 132 M 4	100
7.5	17.4	26 150	3.15	MR 3I 180 - 38 × 300 132 M 4	101
7.5	21.0	21 650	1.06	MR 3I 125 - 38 × 300 132 MB S3 6	54.8
7.5	21.0	21 650	1.32	MR 3I 126 - 38 × 300 132 MB S3 6	54.8
7.5	20.8	21 850	1.9	MR 3I 140 - 38 × 300 132 MB S3 6	55.4
7.5	20.9	21 700	2.8	MR 3I 160 - 38 × 300 132 M 4	83.8
7.5	20.8	21 850	3.75	MR 3I 180 - 38 × 300 132 M 4	84.2
7.5	23.3	19 450	1.18	MR 3I 125 - 38 × 300 132 MB S3 6	49.3
7.5	23.5	19 300	1.18	MR 3I 125 - 28 × 250 112 MC S3 4	74.4
7.5	23.4	19 400	1.12	MR 3I 125 - 38 × 300 132 M 4	74.8
7.5	23.3	19 450	1.6	MR 3I 126 - 38 × 300 132 MB S3 6	49.3
7.5	23.5	19 300	1.6	MR 3I 126 - 28 × 250 112 MC S3 4	74.4
7.5	23.4	19 400	1.4	MR 3I 126 - 38 × 300 132 M 4	74.8
7.5	22.9	19 800	2.12	MR 3I 140 - 38 × 300 132 MB S3 6	50.2
7.5	23.1	19 650	2.12	MR 3I 140 - 28 × 250 112 MC S3 4	75.8
7.5	23.4	19 400	1.9	MR 3I 140 - 38 × 300 132 M 4	74.8
7.5	23.1	19 600	3.15	MR 3I 160 - 38 × 300 132 MB S3 6	49.7
7.5	25.8	17 550	1.32	MR 3I 125 - 38 × 300 132 MB S3 6	44.5
7.5	25.8	17 550	1.8	MR 3I 126 - 38 × 300 132 MB S3 6	44.5
7.5	25.6	17 700	2.5	MR 3I 140 - 38 × 300 132 MB S3 6	44.9
7.5	26.7	17 000	3.55	MR 3I 160 - 38 × 300 132 MB S3 6	43.1
7.5	28.6	15 850	1.5	MR 3I 125 - 28 × 250 112 MC S3 4	61.2
7.5	29.2	15 550	1.5	MR 3I 125 - 38 × 300 132 M 4	59.9
7.5	28.6	15 850	1.9	MR 3I 126 - 28 × 250 112 MC S3 4	61.2
7.5	29.2	15 550	2	MR 3I 126 - 38 × 300 132 M 4	59.9
7.5	28.1	16 150	2.65	MR 3I 140 - 28 × 250 112 MC S3 4	62.3
7.5	28.7	15 800	2.65	MR 3I 140 - 38 × 300 132 M 4	61.0
7.5	26.7	17 000	3.55	MR 3I 160 - 38 × 300 132 M 4	65.6
7.5	30.5	14 900	1.06	MR 3I 101 - 38 × 300 132 MB S3 6	37.7
7.5	33.3	13 600	1.18	MR 3I 101 - 38 × 300 132 MB S3 6	34.5
7.5	30.6	14 800	1	MR 3I 101 - 28 × 250 112 MC S3 4	57.1
7.5	31.7	14 350	1.6	MR 3I 125 - 28 × 250 112 MC S3 4	55.3
7.5	31.9	14 200	1.6	MR 3I 125 - 38 × 300 132 M 4	54.8
7.5	31.7	14 350	2.24	MR 3I 126 - 28 × 250 112 MC S3 4	55.3
7.5	31.9	14 200	2	MR 3I 126 - 38 × 300 132 M 4	54.8
7.5	31.4	14 450	3	MR 3I 140 - 28 × 250 112 MC S3 4	55.7
7.5	31.6	14 350	2.8	MR 3I 140 - 38 × 300 132 M 4	55.4
7.5	30.5	14 900	4.25	MR 3I 160 - 38 × 300 132 M 4	57.4
7.5	37.2	12 200	0.95	MR 3I 100 - 28 × 250 112 MC S3 4	47.1
7.5	33.8	13 400	1.12	MR 3I 101 - 28 × 250 112 MC S3 4	51.7
7.5	37.2	12 200	1.32	MR 3I 101 - 28 × 250 112 MC S3 4	47.1
7.5	34.6	13 150	1.18	MR 3I 101 - 38 × 300 132 M 4	50.6
7.5	34.8	13 050	1.8	MR 3I 125 - 28 × 250 112 MC S3 4	50.2
7.5	35.5	12 750	1.8	MR 3I 125 - 38 × 300 132 M 4	49.3
7.5	34.8	13 050	2.36	MR 3I 126 - 28 × 250 112 MC S3 4	50.2
7.5	35.5	12 750	2.36	MR 3I 126 - 38 × 300 132 M 4	49.3
7.5	34.5	13 150	3.15	MR 3I 140 - 28 × 250 112 MC S3 4	50.8
7.5	34.9	13 000	3.35	MR 3I 140 - 38 × 300 132 M 4	50.2
7.5	40.6	11 150	1.06	MR 3I 100 - 28 × 250 112 MC S3 4	43.1
7.5	40.6	11 150	1.4	MR 3I 101 - 28 × 250 112 MC S3 4	43.1
7.5	38.3	11 850	1.18	MR 3I 101 - 38 × 300 132 M 4	45.7
7.5	37.9	12 000	1.9	MR 3I 125 - 28 × 250 112 MC S3 4	46.2
7.5	39.3	11 550	2	MR 3I 125 - 38 × 300 132 M 4	44.5
7.5	37.9	12 000	2.36	MR 3I 126 - 28 × 250 112 MC S3 4	46.2
7.5	39.3	11 550	2.65	MR 3I 126 - 38 × 300 132 M 4	44.5
7.5	37.5	12 100	3.35	MR 3I 140 - 28 × 250 112 MC S3 4	46.7
7.5	39.0	11 650	3.75	MR 3I 140 - 38 × 300 132 M 4	44.9
7.5	42.3	10 750	1.06	MR 3I 100 - 38 × 300 132 M 4	41.4
7.5	46.4	9 780	1.18	MR 3I 100 - 38 × 300 132 M 4	37.7
7.5	42.3	10 750	1.4	MR 3I 101 - 38 × 300 132 M 4	41.4
7.5	46.4	9 780	1.6	MR 3I 101 - 38 × 300 132 M 4	37.7
7.5	42.2	10 750	2.12	MR 3I 125 - 28 × 250 112 MC S3 4	41.5
7.5	46.7	9 720	2.36	MR 3I 125 - 28 × 250 112 MC S3 4	37.5
7.5	43.3	10 500	2.24	MR 3I 125 - 38 × 300 132 M 4	40.5
7.5	42.2	10 750	2.8	MR 3I 126 - 28 × 250 112 MC S3 4	41.5
7.5	46.7	9 720	3.15	MR 3I 126 - 28 × 250 112 MC S3 4	37.5
7.5	43.3	10 500	3	MR 3I 126 - 38 × 300 132 M 4	40.5
7.5	46.6	9 740	4	MR 3I 140 - 38 × 300 132 M 4	37.6
7.5	47.4	9 770	1.9	MR 2I 125 - 38 × 300 132 MB S3 6	24.3
7.5	47.0	9 650	1.18	MR 3I 100 - 28 × 250 112 MC S3 4	37.2
7.5	50.7	8 940	1.25	MR 3I 100 - 38 × 300 132 M 4	34.5
7.5	47.0	9 650	1.6	MR 3I 101 - 28 × 250 112 MC S3 4	37.2
7.5	50.7	8 940	1.7	MR 3I 101 - 38 × 300 132 M 4	34.5
7.5	51.4	8 830	2.65	MR 3I 125 - 28 × 250 112 MC S3 4	34.1
7.5	47.1	9 640	2.24	MR 3I 125 - 38 × 300 132 M 4	37.2
7.5	52.4	8 660	2.65	MR 3I 125 - 38 × 300 132 M 4	33.4
7.5	47.1	9 640	2.8	MR 3I 126 - 38 × 300 132 M 4	37.2
7.5	52.4	8 660	3.35	MR 3I 126 - 38 × 300 132 M 4	33.4
7.5	55.9	8 120	0.95	MR 3I 81 - 28 × 250 112 MC S3 4	31.3
7.5	56.1	8 080	1.4	MR 3I 100 - 28 × 250 112 MC S3 4	31.2
7.5	58.7	7 730	1.5	MR 3I 100 - 38 × 300 132 M 4	29.8
7.5	56.1	8 080	1.8	MR 3I 101 - 28 × 250 112 MC S3 4	31.2
7.5	58.7	7 730	2	MR 3I 101 - 38 × 300 132 M 4	29.8
7.5	58.0	7 830	2.8	MR 3I 125 - 38 × 300 132 M 4	30.2
7.5	60.5	7 650	2.65	MR 2I 125 - 38 × 300 132 MB S3 6	19.0
7.5	63.9	7 100	1.06	MR 3I 81 - 28 × 250 112 MC S3 4	27.4
7.5	61.7	7 360	1.5	MR 3I 100 - 28 × 250 112 MC S3 4	28.4
7.5	61.7	7 360	2.12	MR 3I 101 - 28 × 250 112 MC S3 4	28.4
7.5	63.8	7 110	3.15	MR 3I 125 - 38 × 300 132 M 4	27.4
7.5	72.1	6 290	1.18	MR 3I 81 - 28 × 250 112 MC S3 4	24.3
7.5	67.4	6 730	1.7	MR 3I 100 - 28 × 250 112 MC S3 4	26.0
7.5	70.1	6 470	1.7	MR 3I 100 - 38 × 300 132 M 4	25.0
7.5	67.4	6 730	2.24	MR 3I 101 - 28 × 250 112 MC S3 4	26.0
7.5	70.1	6 470	2.24	MR 3I 101 - 38 × 300 132 M 4	25.0
7.5	74.5	6 090	3.75	MR 3I 125 - 38 × 300 132 M 4	23.5
7.5	74.7	6 200	1.5	MR 2I 100 - 28 × 250 112 MC S3 4	23.4
7.5	72.1	6 420	2.8	MR 2I 125 - 38 × 300 132 M 4	24.3
7.5	78.0	5 820	1.9	MR 3I 100 - 28 × 250 112 MC S3 4	22.4
7.5	77.0	5 890	1.9	MR 3I 100 - 38 × 300 132 M 4	22.7
7.5	78.0	5 820	2.65	MR 3I 101 - 28 × 250 112 MC S3 4	22.4
7.5	77.0	5 890	2.5	MR 3I 101 - 38 × 300 132 M 4	22.7
7.5	82.9	5 480	4.25	MR 3I 125 - 38 × 300 132 M 4	21.1
7.5	76.8	6 030	1.6	MR 2I 100 - 38 × 300 132 MB S3 6	15.0
7.5	85.0	5 340	1.06	MR 3I 80 - 28 × 250 112 MC S3 4	20.6
7.5	85.0	5 340	1.4	MR 3I 81 - 28 × 250 112 MC S3 4	20.6
7.5	86.2	5 270	2.12	MR 3I 100 - 28 × 250 112 MC S3 4	20.3
7.5	84.2	5 390	2.12	MR 3I 100 - 38 × 300 132 M 4	20.8
7.5	86.2	5 270	3	MR 3I 101 - 28 × 250 112 MC S3 4	20.3
7.5	84.2	5 390	2.8	MR 3I 101 - 38 × 300 132 M 4	20.8
7.5	93.4	4 960	2	MR 2I 100 - 38 × 300 132 MB S3 6	12.3
7.5	90.8	5 100	2	MR 2I 100 - 28 × 250 112 MC S3 4	19.3
7.5	93.4	4 960	2.5	MR 2I 101 - 38 × 300 132 MB S3 6	12.3
7.5	90.8	5 100	2.36	MR 2I 101 - 28 × 250 112 MC S3 4	19.3
7.5	92.1	5 030	4	MR 2I 125 - 38 × 300 132 M 4	19.0
7.5	94.7	4 790	1.18	MR 3I 80 - 28 × 250 112 MC S3 4	18.5
7.5	94.7	4 790	1.6	MR 3I 81 - 28 × 250 112 MC S3 4	18.5
7.5	97.4	4 660	2.36	MR 3I 100 - 38 × 300 132 M 4	18.0
7.5	97.4	4 660	3.15	MR 3I 101 - 38 × 300 132 M 4	18.0
7.5	101	4 590	2.24	MR 2I 100 - 28 × 250 112 MC S3 4	17.3
7.5	101	4 590	3	MR 2I 101 - 28 × 250 112 MC S3 4	17.3
7.5	109	4 170	1.32	MR 3I 80 - 28 × 250 112 MC S3 4	16.1
7.5	109	4 170	1.8	MR 3I 81 - 28 × 250 112 MC S3 4	16.1
7.5	108	4 220	2.65	MR 3I 100 - 38 × 300 132 M 4	16.3
7.5	108	4 220	3.55	MR 3I 101 - 38 × 300 132 M 4	16.3
7.5	108	4 300	1.18	MR 2I 80 - 28 × 250 112 MC S3 4	16.3
7.5	109	4 250	1.4	MR 2I 81 - 28 × 250 112 MB S3 6	10.6
7.5	108	4 300	1.4	MR 2I 81 - 28 × 250 112 MC S3 4	16.3
7.5	112	4 150	2.65	MR 2I 100 - 28 × 250 112 MC S3 4	15.7
7.5	117	3 960	2.36	MR 2I 100 - 38 × 300 132 M 4	15.0
7.5	112	4 150	3.35	MR 2I 101 - 28 × 250 112 MC S3 4	15.7
7.5	121	3 840	1.32	MR 2I 80 - 28 × 250 112 MC S3 4	14.5
7.5	121	3 840	1.7	MR 2I 81 - 28 × 250 112 MC S3 4	14.5
7.5	127	3 640	2.8	MR 2I 100 - 28 × 250 112 MC S3 4	13.8

Motor (cat. TX) with efficiency value not according to IE3 class (IEC 60034-30); the nominal power and nameplate data refer to intermittent duty S3 70%.

1) Powers valid for continuous duty S1; **increase** possible for S2 ... S10 (ch. 2b) in which case P_2 and M_2 increase and fs decreases proportionately.
2) For complete designation when ordering, see ch. 3.

Motor power P_1 hp 1)	Output speed n_2 rpm	Output torque T_2 lb in	Service factor fs	2)	Gear ratio i
7.5	136	3 410	1.6	MR 2I 80 - 38 × 300 132 MB S3 6	8.46
7.5	134	3 450	1.6	MR 2I 80 - 28 × 250 112 MC S3 4	13.0
7.5	136	3 420	1.32	MR 2I 80 - 38 × 300 132 M 4	12.9
7.5	136	3 410	2	MR 2I 81 - 38 × 300 132 MB S3 6	8.46
7.5	134	3 450	2	MR 2I 81 - 28 × 250 112 MC S3 4	13.0
7.5	141	3 300	3.15	MR 2I 100 - 28 × 250 112 MC S3 4	12.5
7.5	142	3 260	3	MR 2I 100 - 38 × 300 132 M 4	12.3
7.5	142	3 260	3.75	MR 2I 101 - 38 × 300 132 M 4	12.3
7.5	153	3 020	1.8	MR 2I 80 - 38 × 300 132 MB S3 6	7.50
7.5	149	3 110	1.7	MR 2I 80 - 28 × 250 112 MC S3 4	11.8
7.5	153	3 020	2.36	MR 2I 81 - 38 × 300 132 MB S3 6	7.50
7.5	149	3 110	2.12	MR 2I 81 - 28 × 250 112 MC S3 4	11.8
7.5	154	3 000	3.55	MR 2I 100 - 28 × 250 112 MC S3 4	11.3
7.5	158	2 930	3.55	MR 2I 100 - 38 × 300 132 M 4	11.1
7.5	175	2 650	1.12	MR 2I 64 - 28 × 250 112 MC S3 4	10.0
7.5	166	2 800	1.9	MR 2I 80 - 28 × 250 112 MC S3 4	10.6
7.5	187	2 480	2.12	MR 2I 80 - 28 × 250 112 MC S3 4	9.36
7.5	166	2 790	1.7	MR 2I 80 - 38 × 300 132 M 4	10.6
7.5	186	2 490	2	MR 2I 80 - 38 × 300 132 M 4	9.41
7.5	181	2 560	2.8	MR 2I 81 - 38 × 300 132 MB S3 6	6.36
7.5	166	2 800	2.5	MR 2I 81 - 28 × 250 112 MC S3 4	10.6
7.5	187	2 480	2.8	MR 2I 81 - 28 × 250 112 MC S3 4	9.36
7.5	166	2 790	2.12	MR 2I 81 - 38 × 300 132 M 4	10.6
7.5	186	2 490	2.65	MR 2I 81 - 38 × 300 132 M 4	9.41
7.5	169	2 740	4	MR 2I 100 - 28 × 250 112 MC S3 4	10.4
7.5	175	2 650	4	MR 2I 100 - 38 × 300 132 M 4	10.0
7.5	196	2 360	1.06	MR 2I 63 - 28 × 250 112 MC S3 4	8.91
7.5	196	2 360	1.32	MR 2I 64 - 28 × 250 112 MC S3 4	8.91
7.5	207	2 240	2.36	MR 2I 80 - 38 × 300 132 M 4	8.46
7.5	207	2 240	3	MR 2I 81 - 38 × 300 132 M 4	8.46
7.5	192	2 420	4.25	MR 2I 100 - 38 × 300 132 M 4	9.13
7.5	219	2 120	1.25	MR 2I 63 - 28 × 250 112 MC S3 4	8.00
7.5	219	2 120	1.6	MR 2I 64 - 28 × 250 112 MC S3 4	8.00
7.5	220	2 100	2.5	MR 2I 80 - 28 × 250 112 MC S3 4	7.95
7.5	233	1 980	2.65	MR 2I 80 - 38 × 300 132 M 4	7.50
7.5	220	2 100	3.35	MR 2I 81 - 28 × 250 112 MC S3 4	7.95
7.5	233	1 980	3.55	MR 2I 81 - 38 × 300 132 M 4	7.50
7.5	242	1 910	1.32	MR 2I 63 - 28 × 250 112 MC S3 4	7.23
7.5	242	1 910	1.8	MR 2I 64 - 28 × 250 112 MC S3 4	7.23
7.5	245	1 890	2.8	MR 2I 80 - 28 × 250 112 MC S3 4	7.13
7.5	245	1 890	3.75	MR 2I 81 - 28 × 250 112 MC S3 4	7.13
7.5	266	1 740	1.5	MR 2I 63 - 28 × 250 112 MC S3 4	6.57
7.5	266	1 740	2	MR 2I 64 - 28 × 250 112 MC S3 4	6.57
7.5	282	1 640	3.15	MR 2I 80 - 28 × 250 112 MC S3 4	6.20
7.5	275	1 680	3.15	MR 2I 80 - 38 × 300 132 M 4	6.36
7.5	311	1 490	1.7	MR 2I 63 - 28 × 250 112 MC S3 4	5.63
7.5	311	1 490	2.12	MR 2I 64 - 28 × 250 112 MC S3 4	5.63
7.5	306	1 510	3.35	MR 2I 80 - 38 × 300 132 M 4	5.71
7.5	346	1 340	1.9	MR 2I 63 - 28 × 250 112 MC S3 4	5.06
7.5	346	1 340	2.12	MR 2I 64 - 28 × 250 112 MC S3 4	5.06
7.5	353	1 310	4	MR 2I 80 - 38 × 300 132 M 4	4.96
7.5	438	1 060	2	MR 2I 63 - 28 × 250 112 MC S3 4	4.00
7.5	438	1 060	2.12	MR 2I 64 - 28 × 250 112 MC S3 4	4.00
7.5	441	1 050	4.25	MR 2I 80 - 38 × 300 132 M 4	3.96
10	9.35	64 750	1.18	MR 3I 180 - 38 × 300 132 MC S3 6	123
10	11.5	52 750	1.18	MR 3I 160 - 38 × 300 132 MC S3 6	100
10	11.4	53 000	1.6	MR 3I 180 - 38 × 300 132 MC S3 6	101
10	11.2	54 050	1.4	MR 3I 180 - 42 × 350 160 M 6	103
10	13.7	44 050	1.4	MR 3I 160 - 42 × 350 160 M 6	83.8
10	14.7	41 300	1.32	MR 3I 160 - 38 × 300 132 MB 4	119
10	13.7	44 300	1.9	MR 3I 180 - 42 × 350 160 M 6	84.2
10	14.2	42 550	1.8	MR 3I 180 - 38 × 300 132 MB 4	123
10	18.8	32 100	1.32	MR 3I 140 - 38 × 300 132 MC S3 6	61.0
10	18.8	32 100	1.32	MR 3I 140 - 42 × 350 160 M 6	61.0
10	17.5	34 650	1.8	MR 3I 160 - 38 × 300 132 MB 4	100
10	17.4	34 850	2.36	MR 3I 180 - 38 × 300 132 MB 4	101

Motor power P_1 hp 1)	Output speed n_2 rpm	Output torque T_2 lb in	Service factor fs	2)	Gear ratio i
10	21.0	28 850	1	MR 3I 126 - 38 × 300 132 MC S3 6	54.8
10	20.8	29 150	1.4	MR 3I 140 - 38 × 300 132 MC S3 6	55.4
10	20.8	29 150	1.4	MR 3I 140 - 42 × 350 160 M 6	55.4
10	20.9	28 950	2.12	MR 3I 160 - 38 × 300 132 MB 4	83.8
10	20.8	29 100	2.8	MR 3I 180 - 38 × 300 132 MB 4	84.2
10	23.3	25 900	1.18	MR 3I 126 - 38 × 300 132 MC S3 6	49.3
10	23.3	25 900	1.18	MR 3I 126 - 42 × 350 160 M 6	49.3
10	23.4	25 900	1	MR 3I 126 - 38 × 300 132 MB 4	74.8
10	22.9	26 400	1.6	MR 3I 140 - 38 × 300 132 MC S3 6	50.2
10	23.4	25 900	1.5	MR 3I 140 - 38 × 300 132 MB 4	74.8
10	23.1	26 150	2.36	MR 3I 160 - 38 × 300 132 MC S3 6	49.7
10	21.8	27 800	2.24	MR 3I 160 - 42 × 350 160 M 6	52.8
10	23.6	25 600	3.15	MR 3I 180 - 38 × 300 132 MC S3 6	48.7
10	25.8	23 400	1	MR 3I 125 - 38 × 300 132 MC S3 6	44.5
10	25.8	23 400	1.32	MR 3I 126 - 38 × 300 132 MC S3 6	44.5
10	25.6	23 600	1.9	MR 3I 140 - 38 × 300 132 MC S3 6	44.9
10	26.5	22 800	1.8	MR 3I 140 - 42 × 350 160 M 6	43.4
10	26.7	22 700	2.65	MR 3I 160 - 38 × 300 132 MC S3 6	43.1
10	27.1	22 350	3.75	MR 3I 180 - 42 × 350 160 M 6	42.5
10	29.2	20 700	1.12	MR 3I 125 - 38 × 300 132 MB 4	59.9
10	29.2	20 700	1.5	MR 3I 126 - 38 × 300 132 MB 4	59.9
10	28.7	21 100	2	MR 3I 140 - 38 × 300 132 MB 4	61.0
10	26.7	22 700	2.65	MR 3I 160 - 38 × 300 132 MB 4	65.6
10	26.5	22 800	3.75	MR 3I 180 - 38 × 300 132 MB 4	65.9
10	31.9	18 950	1.18	MR 3I 125 - 38 × 300 132 MB 4	54.8
10	33.0	18 350	1.7	MR 3I 126 - 42 × 350 160 M 6	34.8
10	31.9	18 950	1.5	MR 3I 126 - 38 × 300 132 MB 4	54.8
10	33.8	17 900	2.36	MR 3I 140 - 38 × 300 132 MC S3 6	34.0
10	31.6	19 150	2.12	MR 3I 140 - 38 × 300 132 MB 4	55.4
10	30.5	19 850	3.15	MR 3I 160 - 38 × 300 132 MB 4	57.4
10	35.5	17 050	1.32	MR 3I 125 - 38 × 300 132 MB 4	49.3
10	35.5	17 050	1.8	MR 3I 126 - 38 × 300 132 MB 4	49.3
10	37.8	16 000	2.8	MR 3I 140 - 38 × 300 132 MC S3 6	30.4
10	34.9	17 350	2.5	MR 3I 140 - 38 × 300 132 MB 4	50.2
10	35.2	17 200	3.75	MR 3I 160 - 38 × 300 132 MB 4	49.7
10	38.6	15 700	1	MR 3I 101 - 38 × 300 132 MC S3 6	29.8
10	39.3	15 400	1.5	MR 3I 125 - 38 × 300 132 MB 4	44.5
10	39.3	15 400	2	MR 3I 126 - 38 × 300 132 MB 4	44.5
10	39.0	15 500	2.8	MR 3I 140 - 38 × 300 132 MB 4	44.9
10	40.6	14 900	4	MR 3I 160 - 38 × 300 132 MB 4	43.1
10	42.3	14 300	1.06	MR 3I 101 - 38 × 300 132 MB 4	41.4
10	46.4	13 050	1.18	MR 3I 101 - 38 × 300 132 MB 4	37.7
10	43.3	14 000	1.7	MR 3I 125 - 38 × 300 132 MB 4	40.5
10	43.3	14 000	2.24	MR 3I 126 - 38 × 300 132 MB 4	40.5
10	42.8	14 150	3	MR 3I 140 - 38 × 300 132 MB 4	40.9
10	46.6	13 000	3	MR 3I 140 - 38 × 300 132 MB 4	37.6
10	50.7	11 900	1.32	MR 3I 101 - 38 × 300 132 MB 4	34.5
10	47.1	12 850	1.7	MR 3I 125 - 38 × 300 132 MB 4	37.2
10	52.4	11 550	2	MR 3I 125 - 38 × 300 132 MB 4	33.4
10	47.1	12 850	2.12	MR 3I 126 - 38 × 300 132 MB 4	37.2
10	52.4	11 550	2.5	MR 3I 126 - 38 × 300 132 MB 4	33.4
10	51.4	11 750	3.55	MR 3I 140 - 38 × 300 132 MB 4	34.0
10	58.7	10 300	1.12	MR 3I 100 - 38 × 300 132 MB 4	29.8
10	58.7	10 300	1.5	MR 3I 101 - 38 × 300 132 MB 4	29.8
10	58.0	10 450	2.12	MR 3I 125 - 38 × 300 132 MB 4	30.2
10	58.0	10 450	3	MR 3I 126 - 38 × 300 132 MB 4	30.2
10	57.5	10 500	4	MR 3I 140 - 38 × 300 132 MB 4	30.4
10	60.5	10 200	2	MR 2I 125 - 38 × 300 132 MC S3 6	19.0
10	56.8	10 900	1.7	MR 2I 125 - 42 × 350 160 M 6	20.3
10	64.0	9 450	1.18	MR 3I 100 - 38 × 300 132 MC S3 6	18.0
10	64.0	9 450	1.6	MR 3I 101 - 38 × 300 132 MC S3 6	18.0
10	63.8	9 480	2.36	MR 3I 125 - 38 × 300 132 MB 4	27.4
10	63.8	9 480	3.15	MR 3I 126 - 38 × 300 132 MB 4	27.4
10	70.1	8 630	1.32	MR 3I 100 - 38 × 300 132 MB 4	25.0
10	70.1	8 630	1.7	MR 3I 101 - 38 × 300 132 MB 4	25.0
10	74.5	8 120	2.8	MR 3I 125 - 38 × 300 132 MB 4	23.5
10	74.5	8 120	3.75	MR 3I 126 - 38 × 300 132 MB 4	23.5
10	74.7	8 270	1.12	MR 2I 100 - 28 × 250 132 MB B5R 4	23.4
10	75.7	8 160	2.65	MR 2I 125 - 38 × 300 132 MC S3 6	15.2
10	72.5	8 520	2.36	MR 2I 125 - 42 × 350 160 M 6	15.9
10	72.1	8 560	2.12	MR 2I 125 - 38 × 300 132 MB 4	24.3

Motor (cat. TX) with efficiency value not according to IE3 class (IEC 60034-30); the nominal power and nameplate data refer to intermittent duty S3 70%.

1) Powers valid for continuous duty S1; **increase** possible for S2 ... S10 (ch. 2b) in which case P_2 and M_2 increase and fs decreases proportionately.

2) For complete designation when ordering, see ch. 3.

* Mounting position **B5R** (see table ch. 2b).

Motor power P_1 hp 1)	Output speed n_2 rpm	Output torque T_2 lb in	Service factor fs	2)	Gear ratio i
10	77.0	7 860	1.4	MR 3I 100 - 38 × 300 132 MB 4	22.7
10	77.0	7 860	1.9	MR 3I 101 - 38 × 300 132 MB 4	22.7
10	82.9	7 300	3.15	MR 3I 125 - 38 × 300 132 MB 4	21.1
10	76.8	8 040	1.18	MR 2I 100 - 38 × 300 132 MC S3 6	15.0
10	76.8	8 040	1.18	MR 2I 100 - 42 × 350 160 M 6	15.0
10	81.3	7 590	2.8	MR 2I 125 - 38 × 300 132 MC S3 6	14.1
10	84.2	7 180	1.5	MR 3I 100 - 38 × 300 132 MB 4	20.8
10	84.2	7 180	2.12	MR 3I 101 - 38 × 300 132 MB 4	20.8
10	93.4	6 610	1.5	MR 2I 100 - 38 × 300 132 MC S3 6	12.3
10	93.4	6 610	1.5	MR 2I 100 - 42 × 350 160 M 6	12.3
10	90.8	6 800	1.5	MR 2I 100 - 28 × 250 132 MB B5R 4	19.3
10	93.4	6 610	1.9	MR 2I 101 - 38 × 300 132 MC S3 6	12.3
10	93.4	6 610	1.9	MR 2I 101 - 42 × 350 160 M 6	12.3
10	90.8	6 800	1.8	MR 2I 101 - 28 × 250 132 MB B5R 4	19.3
10	92.1	6 710	3	MR 2I 125 - 38 × 300 132 MB 4	19.0
10	92.1	6 710	3.75	MR 2I 126 - 38 × 300 132 MB 4	19.0
10	97.4	6 210	1.8	MR 3I 100 - 38 × 300 132 MB 4	18.0
10	97.4	6 210	2.36	MR 3I 101 - 38 × 300 132 MB 4	18.0
10	104	5 950	1.8	MR 2I 100 - 38 × 300 132 MC S3 6	11.1
10	104	5 950	1.8	MR 2I 100 - 42 × 350 160 M 6	11.1
10	101	6 120	1.7	MR 2I 100 - 28 × 250 132 MB B5R 4	17.3
10	104	5 950	2.24	MR 2I 101 - 38 × 300 132 MC S3 6	11.1
10	104	5 950	2.24	MR 2I 101 - 42 × 350 160 M 6	11.1
10	101	6 120	2.12	MR 2I 101 - 28 × 250 132 MB B5R 4	17.3
10	103	5 970	3.55	MR 2I 125 - 38 × 300 132 MB 4	16.9
10	108	5 620	2	MR 3I 100 - 38 × 300 132 MB 4	16.3
10	108	5 620	2.65	MR 3I 101 - 38 × 300 132 MB 4	16.3
10	108	5 740	1.06	MR 2I 81 - 28 × 250 132 MB B5R 4	16.3
10	115	5 380	2	MR 2I 100 - 38 × 300 132 MC S3 6	10.0
10	112	5 540	2	MR 2I 100 - 28 × 250 132 MB B5R 4	15.7
10	117	5 280	1.7	MR 2I 100 - 38 × 300 132 MB 4	15.0
10	115	5 380	2.65	MR 2I 101 - 38 × 300 132 MC S3 6	10.0
10	115	5 380	2.65	MR 2I 101 - 42 × 350 160 M 6	10.0
10	112	5 540	2.5	MR 2I 101 - 28 × 250 132 MB B5R 4	15.7
10	115	5 360	4	MR 2I 125 - 38 × 300 132 MB 4	15.2
10	121	5 110	1	MR 2I 80 - 28 × 250 132 MB B5R 4	14.5
10	121	5 110	1.32	MR 2I 81 - 28 × 250 132 MB B5R 4	14.5
10	126	4 900	2.24	MR 2I 100 - 38 × 300 132 MC S3 6	9.13
10	133	4 650	2.24	MR 2I 100 - 42 × 350 160 M 6	8.67
10	127	4 850	2.12	MR 2I 100 - 28 × 250 132 MB B5R 4	13.8
10	126	4 900	3	MR 2I 101 - 38 × 300 132 MC S3 6	9.13
10	133	4 650	2.8	MR 2I 101 - 42 × 350 160 M 6	8.67
10	127	4 850	2.65	MR 2I 101 - 28 × 250 132 MB B5R 4	13.8
10	124	4 990	4.25	MR 2I 125 - 38 × 300 132 MB 4	14.1
10	134	4 600	1.18	MR 2I 80 - 28 × 250 132 MB B5R 4	13.0
10	136	4 560	1	MR 2I 80 - 38 × 300 132 MB 4	12.9
10	134	4 600	1.5	MR 2I 81 - 28 × 250 132 MB B5R 4	13.0
10	141	4 390	2.36	MR 2I 100 - 28 × 250 132 MB B5R 4	12.5
10	142	4 350	2.24	MR 2I 100 - 38 × 300 132 MB 4	12.3
10	141	4 390	3.15	MR 2I 101 - 28 × 250 132 MB B5R 4	12.5
10	142	4 350	2.8	MR 2I 101 - 38 × 300 132 MB 4	12.3
10	138	4 480	4.75	MR 2I 125 - 38 × 300 132 MB 4	12.7
10	149	4 150	1.25	MR 2I 80 - 28 × 250 132 MB B5R 4	11.8
10	153	4 030	1.8	MR 2I 81 - 38 × 300 132 MC S3 6	7.50
10	149	4 150	1.6	MR 2I 81 - 28 × 250 132 MB B5R 4	11.8
10	158	3 910	2.65	MR 2I 100 - 38 × 300 132 MB 4	11.1
10	158	3 910	3.35	MR 2I 101 - 38 × 300 132 MB 4	11.1
10	166	3 730	1.4	MR 2I 80 - 28 × 250 132 MB B5R 4	10.6
10	187	3 300	1.6	MR 2I 80 - 28 × 250 132 MB B5R 4	9.36
10	166	3 730	1.32	MR 2I 80 - 38 × 300 132 MB 4	10.6
10	186	3 320	1.5	MR 2I 80 - 38 × 300 132 MB 4	9.41
10	166	3 730	1.8	MR 2I 81 - 28 × 250 132 MB B5R 4	10.6
10	187	3 300	2.12	MR 2I 81 - 28 × 250 132 MB B5R 4	9.36
10	166	3 730	1.6	MR 2I 81 - 38 × 300 132 MB 4	10.6
10	186	3 320	1.9	MR 2I 81 - 38 × 300 132 MB 4	9.41
10	175	3 540	3	MR 2I 100 - 38 × 300 132 MB 4	10.0
10	175	3 540	4	MR 2I 101 - 38 × 300 132 MB 4	10.0

Motor power P_1 hp 1)	Output speed n_2 rpm	Output torque T_2 lb in	Service factor fs	2)	Gear ratio i
10	207	2 990	1.7	MR 2I 80 - 38 × 300 132 MB 4	8.46
10	207	2 990	2.24	MR 2I 81 - 38 × 300 132 MB 4	8.46
10	192	3 220	3.35	MR 2I 100 - 38 × 300 132 MB 4	9.13
10	210	2 950	3.55	MR 2I 100 - 38 × 300 132 MB 4	8.35
10	219	2 820	1.18	MR 2I 64 - 28 × 250 132 MB B5R 4	8.00
10	233	2 650	2	MR 2I 80 - 38 × 300 132 MB 4	7.50
10	233	2 650	2.65	MR 2I 81 - 38 × 300 132 MB 4	7.50
10	242	2 550	1.4	MR 2I 64 - 28 × 250 132 MB B5R 4	7.23
10	245	2 520	2.12	MR 2I 80 - 28 × 250 132 MB B5R 4	7.13
10	245	2 520	2.8	MR 2I 81 - 28 × 250 132 MB B5R 4	7.13
10	243	2 550	4.25	MR 2I 100 - 38 × 300 132 MB 4	7.22
10	266	2 320	1.5	MR 2I 64 - 28 × 250 132 MB B5R 4	6.57
10	275	2 250	2.36	MR 2I 80 - 38 × 300 132 MB 4	6.36
10	275	2 250	3.15	MR 2I 81 - 38 × 300 132 MB 4	6.36
10	311	1 990	1.6	MR 2I 64 - 28 × 250 132 MB B5R 4	5.63
10	306	2 020	2.65	MR 2I 80 - 38 × 300 132 MB 4	5.71
10	306	2 020	3.15	MR 2I 81 - 38 × 300 132 MB 4	5.71
10	346	1 790	1.6	MR 2I 64 - 28 × 250 132 MB B5R 4	5.06
10	353	1 750	3	MR 2I 80 - 38 × 300 132 MB 4	4.96
10	353	1 750	3.15	MR 2I 81 - 38 × 300 132 MB 4	4.96
10	438	1 410	1.6	MR 2I 64 - 28 × 250 132 MB B5R 4	4.00
10	441	1 400	3.15	MR 2I 80 - 38 × 300 132 MB 4	3.96
12.4	14.7	51 200	1.06	MR 3I 160 - 38 × 300 132 MB S3 4	119
12.4	14.2	52 750	1.4	MR 3I 180 - 38 × 300 132 MB S3 4	123
12.4	17.5	43 000	1.4	MR 3I 160 - 38 × 300 132 MB S3 4	100
12.4	17.4	43 200	1.9	MR 3I 180 - 38 × 300 132 MB S3 4	101
12.4	20.9	35 900	1.7	MR 3I 160 - 38 × 300 132 MB S3 4	83.8
12.4	20.8	36 100	2.24	MR 3I 180 - 38 × 300 132 MB S3 4	84.2
12.4	23.4	32 100	1.18	MR 3I 140 - 38 × 300 132 MB S3 4	74.8
12.4	29.2	25 650	1.18	MR 3I 126 - 38 × 300 132 MB S3 4	59.9
12.4	28.7	26 150	1.6	MR 3I 140 - 38 × 300 132 MB S3 4	61.0
12.4	26.7	28 100	2.12	MR 3I 160 - 38 × 300 132 MB S3 4	65.6
12.4	26.5	28 250	3	MR 3I 180 - 38 × 300 132 MB S3 4	65.9
12.4	31.9	23 500	1.18	MR 3I 126 - 38 × 300 132 MB S3 4	54.8
12.4	31.6	23 750	1.7	MR 3I 140 - 38 × 300 132 MB S3 4	55.4
12.4	30.5	24 600	2.5	MR 3I 160 - 38 × 300 132 MB S3 4	57.4
12.4	30.6	24 500	3.55	MR 3I 180 - 38 × 300 132 MB S3 4	57.1
12.4	35.5	21 100	1.12	MR 3I 125 - 38 × 300 132 MB S3 4	49.3
12.4	35.5	21 100	1.4	MR 3I 126 - 38 × 300 132 MB S3 4	49.3
12.4	34.9	21 500	2	MR 3I 140 - 38 × 300 132 MB S3 4	50.2
12.4	35.2	21 300	3	MR 3I 160 - 38 × 300 132 MB S3 4	49.7
12.4	36.0	20 850	3.75	MR 3I 180 - 38 × 300 132 MB S3 4	48.7
12.4	39.3	19 100	1.18	MR 3I 125 - 38 × 300 132 MB S3 4	44.5
12.4	39.3	19 100	1.6	MR 3I 126 - 38 × 300 132 MB S3 4	44.5
12.4	39.0	19 250	2.24	MR 3I 140 - 38 × 300 132 MB S3 4	44.9
12.4	40.6	18 500	3.15	MR 3I 160 - 38 × 300 132 MB S3 4	43.1
12.4	46.4	16 150	0.95	MR 3I 101 - 38 × 300 132 MB S3 4	37.7
12.4	43.3	17 350	1.32	MR 3I 125 - 38 × 300 132 MB S3 4	40.5
12.4	43.3	17 350	1.8	MR 3I 126 - 38 × 300 132 MB S3 4	40.5
12.4	42.8	17 500	2.36	MR 3I 140 - 38 × 300 132 MB S3 4	40.9
12.4	46.6	16 100	2.5	MR 3I 140 - 38 × 300 132 MB S3 4	37.6
12.4	46.4	16 150	3.75	MR 3I 160 - 38 × 300 132 MB S3 4	37.7
12.4	50.7	14 800	1.06	MR 3I 101 - 38 × 300 132 MB S3 4	34.5
12.4	47.1	15 950	1.4	MR 3I 125 - 38 × 300 132 MB S3 4	37.2
12.4	52.4	14 300	1.6	MR 3I 125 - 38 × 300 132 MB S3 4	33.4
12.4	47.1	15 950	1.7	MR 3I 126 - 38 × 300 132 MB S3 4	37.2
12.4	52.4	14 300	2	MR 3I 126 - 38 × 300 132 MB S3 4	33.4
12.4	51.4	14 600	2.8	MR 3I 140 - 38 × 300 132 MB S3 4	34.0
12.4	58.7	12 800	1.18	MR 3I 101 - 38 × 300 132 MB S3 4	29.8
12.4	58.0	12 950	1.7	MR 3I 125 - 38 × 300 132 MB S3 4	30.2
12.4	58.0	12 950	2.36	MR 3I 126 - 38 × 300 132 MB S3 4	30.2
12.4	57.5	13 050	3.35	MR 3I 140 - 38 × 300 132 MB S3 4	30.4
12.4	63.8	11 750	1.9	MR 3I 125 - 38 × 300 132 MB S3 4	27.4
12.4	63.8	11 750	2.65	MR 3I 126 - 38 × 300 132 MB S3 4	27.4

Motor (cat. TX) with efficiency value not according to IE3 class (IEC 60034-30); the nominal power and nameplate data refer to intermittent duty S3 70%.

1) Powers valid for continuous duty S1; **increase** possible for S2 ... S10 (ch. 2b) in which case P_2 and M_2 increase and fs decreases proportionately.

2) For complete designation when ordering, see ch. 3.

* Mounting position **B5R** (see table ch. 2b).

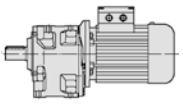
Motor power P_1 hp 1)	Output speed n_2 rpm	Output torque T_2 lb in	Service factor fs	2)	Gear ratio i
12.4	70.1	10 700	1.06	**MR 3I 100 - 38 × 300** 132 MB S3 4	25.0
12.4	70.1	10 700	1.4	**MR 3I 101 - 38 × 300** 132 MB S3 4	25.0
12.4	74.5	10 050	2.24	**MR 3I 125 - 38 × 300** 132 MB S3 4	23.5
12.4	74.5	10 050	3	**MR 3I 126 - 38 × 300** 132 MB S3 4	23.5
12.4	67.1	11 200	3.75	**MR 3I 140 - 38 × 300** 132 MB S3 4	26.1
12.4	72.1	10 600	1.7	**MR 2I 125 - 38 × 300** 132 MB S3 4	24.3
12.4	77.0	9 740	1.12	**MR 3I 100 - 38 × 300** 132 MB S3 4	22.7
12.4	77.0	9 740	1.5	**MR 3I 101 - 38 × 300** 132 MB S3 4	22.7
12.4	82.9	9 050	2.5	**MR 3I 125 - 38 × 300** 132 MB S3 4	21.1
12.4	82.9	9 050	3.35	**MR 3I 126 - 38 × 300** 132 MB S3 4	21.1
12.4	84.2	8 910	1.25	**MR 3I 100 - 38 × 300** 132 MB S3 4	20.8
12.4	84.2	8 910	1.7	**MR 3I 101 - 38 × 300** 132 MB S3 4	20.8
12.4	92.1	8 320	2.36	**MR 2I 125 - 38 × 300** 132 MB S3 4	19.0
12.4	92.1	8 320	3	**MR 2I 126 - 38 × 300** 132 MB S3 4	19.0
12.4	97.4	7 700	1.4	**MR 3I 100 - 38 × 300** 132 MB S3 4	18.0
12.4	97.4	7 700	2	**MR 3I 101 - 38 × 300** 132 MB S3 4	18.0
12.4	103	7 410	2.8	**MR 2I 125 - 38 × 300** 132 MB S3 4	16.9
12.4	103	7 410	3.55	**MR 2I 126 - 38 × 300** 132 MB S3 4	16.9
12.4	108	6 970	1.6	**MR 3I 100 - 38 × 300** 132 MB S3 4	16.3
12.4	108	6 970	2.12	**MR 3I 101 - 38 × 300** 132 MB S3 4	16.3
12.4	117	6 550	1.4	**MR 2I 100 - 38 × 300** 132 MB S3 4	15.0
12.4	115	6 650	3.15	**MR 2I 125 - 38 × 300** 132 MB S3 4	15.2
12.4	124	6 190	3.35	**MR 2I 125 - 38 × 300** 132 MB S3 4	14.1
12.4	142	5 390	1.8	**MR 2I 100 - 38 × 300** 132 MB S3 4	12.3
12.4	142	5 390	2.24	**MR 2I 101 - 38 × 300** 132 MB S3 4	12.3
12.4	138	5 560	3.75	**MR 2I 125 - 38 × 300** 132 MB S3 4	12.7
12.4	158	4 850	2.12	**MR 2I 100 - 38 × 300** 132 MB S3 4	11.1
12.4	158	4 850	2.65	**MR 2I 101 - 38 × 300** 132 MB S3 4	11.1
12.4	153	5 020	4.25	**MR 2I 125 - 38 × 300** 132 MB S3 4	11.5
12.4	166	4 620	1.06	**MR 2I 80 - 38 × 300** 132 MB S3 4	10.6
12.4	186	4 120	1.25	**MR 2I 80 - 38 × 300** 132 MB S3 4	9.41
12.4	166	4 620	1.32	**MR 2I 81 - 38 × 300** 132 MB S3 4	10.6
12.4	186	4 120	1.6	**MR 2I 81 - 38 × 300** 132 MB S3 4	9.41
12.4	175	4 390	2.36	**MR 2I 100 - 38 × 300** 132 MB S3 4	10.0
12.4	175	4 390	3.15	**MR 2I 101 - 38 × 300** 132 MB S3 4	10.0
12.4	207	3 700	1.4	**MR 2I 80 - 38 × 300** 132 MB S3 4	8.46
12.4	207	3 700	1.8	**MR 2I 81 - 38 × 300** 132 MB S3 4	8.46
12.4	192	3 990	2.65	**MR 2I 100 - 38 × 300** 132 MB S3 4	9.13
12.4	210	3 650	2.8	**MR 2I 100 - 38 × 300** 132 MB S3 4	8.35
12.4	192	3 990	3.55	**MR 2I 101 - 38 × 300** 132 MB S3 4	9.13
12.4	210	3 650	4	**MR 2I 101 - 38 × 300** 132 MB S3 4	8.35
12.4	233	3 280	1.6	**MR 2I 80 - 38 × 300** 132 MB S3 4	7.50
12.4	233	3 280	2.12	**MR 2I 81 - 38 × 300** 132 MB S3 4	7.50
12.4	243	3 160	3.35	**MR 2I 100 - 38 × 300** 132 MB S3 4	7.22
12.4	275	2 780	1.9	**MR 2I 80 - 38 × 300** 132 MB S3 4	6.36
12.4	275	2 780	2.5	**MR 2I 81 - 38 × 300** 132 MB S3 4	6.36
12.4	268	2 860	3.75	**MR 2I 100 - 38 × 300** 132 MB S3 4	6.53
12.4	306	2 500	2.12	**MR 2I 80 - 38 × 300** 132 MB S3 4	5.71
12.4	306	2 500	2.65	**MR 2I 81 - 38 × 300** 132 MB S3 4	5.71
12.4	353	2 170	2.36	**MR 2I 80 - 38 × 300** 132 MB S3 4	4.96
12.4	353	2 170	2.65	**MR 2I 81 - 38 × 300** 132 MB S3 4	4.96
12.4	441	1 730	2.5	**MR 2I 80 - 38 × 300** 132 MB S3 4	3.96
12.4	441	1 730	2.65	**MR 2I 81 - 38 × 300** 132 MB S3 4	3.96
15	13.7	66 450	1.25	**MR 3I 180 - 42 × 350** 160 L 6	84.2
15	14.2	63 800	1.18	**MR 3I 180 - 38 × 300** 132 MC S3 4	123
15	17.1	53 200	1.12	**MR 3I 160 - 42 × 350** 160 L 6	67.4
15	17.5	52 000	1.18	**MR 3I 160 - 38 × 300** 132 MC S3 4	100
15	17.4	52 250	1.6	**MR 3I 180 - 38 × 300** 132 MC S3 4	101
15	17.0	53 300	1.4	**MR 3I 180 - 42 × 350** 160 M 4	103
15	20.9	43 450	1.4	**MR 3I 160 - 38 × 300** 132 MC S3 4	83.8
15	20.9	43 450	1.4	**MR 3I 160 - 42 × 350** 160 M 4	83.8
15	20.8	43 650	1.9	**MR 3I 180 - 38 × 300** 132 MC S3 4	84.2
15	20.8	43 650	1.9	**MR 3I 180 - 42 × 350** 160 M 4	84.2
15	22.9	39 600	1.06	**MR 3I 140 - 42 × 350** 160 L 6	50.2

Motor power P_1 hp 1)	Output speed n_2 rpm	Output torque T_2 lb in	Service factor fs	2)	Gear ratio i
15	26.5	34 200	1.18	**MR 3I 140 - 42 × 350** 160 L 6	43.4
15	25.9	35 000	1.7	**MR 3I 160 - 42 × 350** 160 M 4	67.4
15	25.8	35 150	2.36	**MR 3I 180 - 42 × 350** 160 M 4	67.8
15	29.8	30 400	1	**MR 3I 126 - 42 × 350** 160 L 6	38.5
15	29.2	31 050	1	**MR 3I 126 - 38 × 300** 132 MC S3 4	59.9
15	28.7	31 650	1.32	**MR 3I 140 - 38 × 300** 132 MC S3 4	61.0
15	28.7	31 650	1.32	**MR 3I 140 - 42 × 350** 160 M 4	61.0
15	28.7	31 600	2	**MR 3I 160 - 42 × 350** 160 L 6	40.0
15	26.7	34 000	1.8	**MR 3I 160 - 38 × 300** 132 MC S3 4	65.6
15	26.5	34 200	2.5	**MR 3I 180 - 38 × 300** 132 MC S3 4	65.9
15	29.3	30 900	2.65	**MR 3I 180 - 42 × 350** 160 M 4	59.6
15	33.0	27 500	1.12	**MR 3I 126 - 42 × 350** 160 L 6	34.8
15	31.9	28 450	1	**MR 3I 126 - 38 × 300** 132 MC S3 4	54.8
15	32.8	27 700	1.6	**MR 3I 140 - 42 × 350** 160 L 6	35.1
15	31.6	28 750	1.4	**MR 3I 140 - 38 × 300** 132 MC S3 4	55.4
15	31.6	28 750	1.4	**MR 3I 140 - 42 × 350** 160 M 4	55.4
15	30.5	29 750	2.12	**MR 3I 160 - 38 × 300** 132 MC S3 4	57.4
15	30.4	29 800	1.9	**MR 3I 160 - 42 × 350** 160 M 4	57.5
15	30.6	29 650	2.8	**MR 3I 180 - 38 × 300** 132 MC S3 4	57.1
15	33.0	27 550	3.15	**MR 3I 180 - 42 × 350** 160 M 4	53.1
15	35.5	25 550	1.18	**MR 3I 126 - 38 × 300** 132 MC S3 4	49.3
15	35.5	25 550	1.18	**MR 3I 126 - 42 × 350** 160 M 4	49.3
15	34.9	26 050	1.6	**MR 3I 140 - 38 × 300** 132 MC S3 4	50.2
15	34.9	26 050	1.6	**MR 3I 140 - 42 × 350** 160 M 4	50.2
15	35.2	25 800	2.5	**MR 3I 160 - 38 × 300** 132 MC S3 4	49.7
15	33.1	27 400	2.24	**MR 3I 160 - 42 × 350** 160 M 4	52.8
15	33.2	27 350	3.15	**MR 3I 180 - 38 × 300** 132 MC S3 4	52.7
15	36.0	25 250	3.15	**MR 3I 180 - 38 × 300** 132 MC S3 4	48.7
15	39.3	23 100	1	**MR 3I 125 - 38 × 300** 132 MC S3 4	44.5
15	40.8	22 250	1	**MR 3I 125 - 42 × 350** 160 M 4	42.9
15	39.3	23 100	1.32	**MR 3I 126 - 38 × 300** 132 MC S3 4	44.5
15	40.8	22 250	1.25	**MR 3I 126 - 42 × 350** 160 M 4	42.9
15	39.0	23 250	1.8	**MR 3I 140 - 38 × 300** 132 MC S3 4	44.9
15	40.4	22 500	1.8	**MR 3I 140 - 42 × 350** 160 M 4	43.4
15	40.6	22 350	2.65	**MR 3I 160 - 38 × 300** 132 MC S3 4	43.1
15	37.9	23 950	2.65	**MR 3I 160 - 42 × 350** 160 M 4	46.2
15	38.0	23 850	3.55	**MR 3I 180 - 42 × 350** 160 M 4	46.0
15	43.3	21 000	1.12	**MR 3I 125 - 38 × 300** 132 MC S3 4	40.5
15	45.4	20 000	1.12	**MR 3I 125 - 42 × 350** 160 M 4	38.5
15	43.3	21 000	1.5	**MR 3I 126 - 38 × 300** 132 MC S3 4	40.5
15	45.4	20 000	1.5	**MR 3I 126 - 42 × 350** 160 M 4	38.5
15	42.8	21 200	2	**MR 3I 140 - 38 × 300** 132 MC S3 4	40.9
15	46.6	19 500	2	**MR 3I 140 - 38 × 300** 132 MC S3 4	37.6
15	44.5	20 350	2	**MR 3I 140 - 42 × 350** 160 M 4	39.3
15	46.4	19 550	3.15	**MR 3I 160 - 38 × 300** 132 MC S3 4	37.7
15	43.7	20 750	3	**MR 3I 160 - 42 × 350** 160 M 4	40.0
15	47.1	19 300	1.12	**MR 3I 125 - 38 × 300** 132 MC S3 4	37.2
15	52.4	17 300	1.32	**MR 3I 125 - 38 × 300** 132 MC S3 4	33.4
15	50.2	18 050	1.25	**MR 3I 125 - 42 × 350** 160 M 4	34.8
15	47.1	19 300	1.4	**MR 3I 126 - 38 × 300** 132 MC S3 4	37.2
15	52.4	17 300	1.7	**MR 3I 126 - 38 × 300** 132 MC S3 4	33.4
15	50.2	18 050	1.7	**MR 3I 126 - 42 × 350** 160 M 4	34.8
15	51.4	17 650	2.36	**MR 3I 140 - 38 × 300** 132 MC S3 4	34.0
15	49.9	18 200	2.36	**MR 3I 140 - 42 × 350** 160 M 4	35.1
15	50.4	18 000	3.35	**MR 3I 160 - 42 × 350** 160 M 4	34.7
15	58.7	15 450	1	**MR 3I 101 - 38 × 300** 132 MC S3 4	29.8
15	58.0	15 650	1.4	**MR 3I 125 - 38 × 300** 132 MC S3 4	30.2
15	55.3	16 400	1.4	**MR 3I 125 - 42 × 350** 160 M 4	31.7
15	58.0	15 650	1.9	**MR 3I 126 - 38 × 300** 132 MC S3 4	30.2
15	55.3	16 400	1.9	**MR 3I 126 - 42 × 350** 160 M 4	31.7
15	57.5	15 750	2.65	**MR 3I 140 - 38 × 300** 132 MC S3 4	30.4
15	54.7	16 600	2.5	**MR 3I 140 - 42 × 350** 160 M 4	32.0
15	53.6	16 950	3.55	**MR 3I 160 - 38 × 300** 132 MC S3 4	32.7
15	57.6	15 750	3.75	**MR 3I 160 - 42 × 350** 160 M 4	30.4
15	63.8	14 250	1.6	**MR 3I 125 - 38 × 300** 132 MC S3 4	27.4
15	60.1	15 100	1.4	**MR 3I 125 - 42 × 350** 160 M 4	29.1
15	63.8	14 250	2.12	**MR 3I 126 - 38 × 300** 132 MC S3 4	27.4
15	60.1	15 100	1.8	**MR 3I 126 - 42 × 350** 160 M 4	29.1
15	59.5	15 250	2.5	**MR 3I 140 - 42 × 350** 160 M 4	29.4
15	65.7	13 800	3	**MR 3I 140 - 42 × 350** 160 M 4	26.6
15	66.4	13 950	4	**MR 2I 160 - 42 × 350** 160 L 6	17.3

Motor (cat. TX) with efficiency value not according to IE3 class (IEC 60034-30); the nominal power and nameplate data refer to intermittent duty S3 70%.

1) Powers valid for continuous duty S1; **increase** possible for S2 ... S10 (ch. 2b) in which case P_2 and M_2 increase and fs decreases proportionately.
2) For complete designation when ordering, see ch. 3.

Gearmotors selection tables



Motor power P_1 hp 1)	Output speed n_2 rpm	Output torque T_2 lb in	Service factor fs	2)	Gear ratio i
15	70.1	12 950	1.12	**MR 3I 101 - 38 × 300** 132 MC S3 4	25.0
15	74.5	12 200	1.9	**MR 3I 125 - 38 × 300** 132 MC S3 4	23.5
15	67.0	13 550	1.6	**MR 3I 125 - 42 × 350** 160 M 4	26.1
15	74.1	12 250	1.8	**MR 3I 125 - 42 × 350** 160 M 4	23.6
15	74.5	12 200	2.5	**MR 3I 126 - 38 × 300** 132 MC S3 4	23.5
15	67.0	13 550	2.12	**MR 3I 126 - 42 × 350** 160 M 4	26.1
15	74.1	12 250	2.5	**MR 3I 126 - 42 × 350** 160 M 4	23.6
15	67.1	13 550	3.15	**MR 3I 140 - 38 × 300** 132 MC S3 4	26.1
15	74.2	12 200	3.15	**MR 3I 140 - 38 × 300** 132 MC S3 4	23.6
15	73.5	12 350	3.35	**MR 3I 140 - 42 × 350** 160 M 4	23.8
15	72.1	12 850	1.4	**MR 2I 125 - 38 × 300** 132 MC S3 4	24.3
15	77.0	11 800	1.25	**MR 3I 101 - 38 × 300** 132 MC S3 4	22.7
15	82.9	10 950	2.12	**MR 3I 125 - 38 × 300** 132 MC S3 4	21.1
15	81.5	11 150	2	**MR 3I 125 - 42 × 350** 160 M 4	21.5
15	82.9	10 950	2.8	**MR 3I 126 - 38 × 300** 132 MC S3 4	21.1
15	81.5	11 150	2.65	**MR 3I 126 - 42 × 350** 160 M 4	21.5
15	84.2	10 800	1.06	**MR 3I 100 - 38 × 300** 132 MC S3 4	20.8
15	84.2	10 800	1.4	**MR 3I 101 - 38 × 300** 132 MC S3 4	20.8
15	85.7	10 600	4	**MR 3I 140 - 42 × 350** 160 M 4	20.4
15	93.4	9 920	1	**MR 2I 100 - 42 × 350** 160 L 6	12.3
15	93.4	9 920	1.25	**MR 2I 101 - 42 × 350** 160 L 6	12.3
15	92.1	10 050	2	**MR 2I 125 - 38 × 300** 132 MC S3 4	19.0
15	86.4	10 750	1.7	**MR 2I 125 - 42 × 350** 160 M 4	20.3
15	90.6	10 250	2.8	**MR 2I 126 - 42 × 350** 160 L 6	12.7
15	92.1	10 050	2.5	**MR 2I 126 - 38 × 300** 132 MC S3 4	19.0
15	92.1	10 050	3.55	**MR 2I 140 - 38 × 300** 132 MC S3 4	19.0
15	97.4	9 320	1.18	**MR 3I 100 - 38 × 300** 132 MC S3 4	18.0
15	97.4	9 320	1.6	**MR 3I 101 - 38 × 300** 132 MC S3 4	18.0
15	95.2	9 530	2.36	**MR 3I 125 - 42 × 350** 160 M 4	18.4
15	106	8 570	2.65	**MR 3I 125 - 42 × 350** 160 M 4	16.5
15	95.2	9 530	3.15	**MR 3I 126 - 42 × 350** 160 M 4	18.4
15	106	8 570	3.55	**MR 3I 126 - 42 × 350** 160 M 4	16.5
15	104	8 920	1.18	**MR 2I 100 - 42 × 350** 160 L 6	11.1
15	104	8 920	1.5	**MR 2I 101 - 42 × 350** 160 L 6	11.1
15	103	8 960	2.36	**MR 2I 125 - 38 × 300** 132 MC S3 4	16.9
15	103	8 960	3	**MR 2I 126 - 38 × 300** 132 MC S3 4	16.9
15	108	8 430	1.32	**MR 3I 100 - 38 × 300** 132 MC S3 4	16.3
15	108	8 430	1.8	**MR 3I 101 - 38 × 300** 132 MC S3 4	16.3
15	115	8 080	1.32	**MR 2I 100 - 42 × 350** 160 L 6	10.0
15	117	7 920	1.18	**MR 2I 100 - 38 × 300** 132 MC S3 4	15.0
15	117	7 920	1.18	**MR 2I 100 - 42 × 350** 160 M 4	15.0
15	115	8 080	1.8	**MR 2I 101 - 42 × 350** 160 L 6	10.0
15	115	8 050	2.65	**MR 2I 125 - 38 × 300** 132 MC S3 4	15.2
15	110	8 400	2.36	**MR 2I 125 - 42 × 350** 160 M 4	15.9
15	115	8 050	3.55	**MR 2I 126 - 38 × 300** 132 MC S3 4	15.2
15	110	8 400	2.8	**MR 2I 126 - 42 × 350** 160 M 4	15.9
15	110	8 400	4	**MR 2I 140 - 42 × 350** 160 M 4	15.9
15	133	6 980	1.5	**MR 2I 100 - 42 × 350** 160 L 6	8.67
15	133	6 980	1.9	**MR 2I 101 - 42 × 350** 160 L 6	8.67
15	124	7 490	2.8	**MR 2I 125 - 38 × 300** 132 MC S3 4	14.1
15	124	7 490	2.8	**MR 2I 125 - 42 × 350** 160 M 4	14.1
15	124	7 490	3.55	**MR 2I 126 - 42 × 350** 160 M 4	14.1
15	142	6 520	1.5	**MR 2I 100 - 38 × 300** 132 MC S3 4	12.3
15	142	6 520	1.5	**MR 2I 100 - 42 × 350** 160 M 4	12.3
15	147	6 320	2.24	**MR 2I 101 - 42 × 350** 160 L 6	7.85
15	142	6 520	1.8	**MR 2I 101 - 38 × 300** 132 MC S3 4	12.3
15	142	6 520	1.8	**MR 2I 101 - 42 × 350** 160 M 4	12.3
15	138	6 720	3.15	**MR 2I 125 - 38 × 300** 132 MC S3 4	12.7
15	138	6 720	3.15	**MR 2I 125 - 42 × 350** 160 M 4	12.7
15	158	5 860	1.7	**MR 2I 100 - 38 × 300** 132 MC S3 4	11.1
15	158	5 860	1.7	**MR 2I 100 - 42 × 350** 160 M 4	11.1
15	161	5 750	2.5	**MR 2I 101 - 42 × 350** 160 L 6	7.14
15	158	5 860	2.24	**MR 2I 101 - 38 × 300** 132 MC S3 4	11.1
15	158	5 860	2.24	**MR 2I 101 - 42 × 350** 160 M 4	11.1
15	153	6 070	3.55	**MR 2I 125 - 38 × 300** 132 MC S3 4	11.5
15	154	6 030	3.35	**MR 2I 125 - 42 × 350** 160 M 4	11.4

Motor power P_1 hp 1)	Output speed n_2 rpm	Output torque T_2 lb in	Service factor fs	2)	Gear ratio i
15	186	4 980	1	**MR 2I 80 - 38 × 300** 132 MC S3 4	9.41
15	166	5 590	1.06	**MR 2I 81 - 38 × 300** 132 MC S3 4	10.6
15	186	4 980	1.32	**MR 2I 81 - 38 × 300** 132 MC S3 4	9.41
15	175	5 310	2	**MR 2I 100 - 38 × 300** 132 MC S3 4	10.0
15	175	5 310	2	**MR 2I 100 - 42 × 350** 160 M 4	10.0
15	175	5 310	2.65	**MR 2I 101 - 38 × 300** 132 MC S3 4	10.0
15	175	5 310	2.65	**MR 2I 101 - 42 × 350** 160 M 4	10.0
15	168	5 520	3.75	**MR 2I 125 - 38 × 300** 132 MC S3 4	10.4
15	171	5 410	4	**MR 2I 125 - 42 × 350** 160 M 4	10.2
15	207	4 480	1.18	**MR 2I 80 - 38 × 300** 132 MC S3 4	8.46
15	207	4 480	1.5	**MR 2I 81 - 38 × 300** 132 MC S3 4	8.46
15	192	4 830	2.12	**MR 2I 100 - 38 × 300** 132 MC S3 4	9.13
15	210	4 420	2.36	**MR 2I 100 - 38 × 300** 132 MC S3 4	8.35
15	202	4 590	2.24	**MR 2I 100 - 42 × 350** 160 M 4	8.67
15	192	4 830	3	**MR 2I 101 - 38 × 300** 132 MC S3 4	9.13
15	210	4 420	3.15	**MR 2I 101 - 38 × 300** 132 MC S3 4	8.35
15	202	4 590	2.8	**MR 2I 101 - 42 × 350** 160 M 4	8.67
15	189	4 890	4.25	**MR 2I 125 - 42 × 350** 160 M 4	9.24
15	233	3 970	1.32	**MR 2I 80 - 38 × 300** 132 MC S3 4	7.50
15	233	3 970	1.8	**MR 2I 81 - 38 × 300** 132 MC S3 4	7.50
15	223	4 150	2.5	**MR 2I 100 - 42 × 350** 160 M 4	7.85
15	223	4 150	3.35	**MR 2I 101 - 42 × 350** 160 M 4	7.85
15	243	3 820	2.8	**MR 2I 100 - 38 × 300** 132 MC S3 4	7.22
15	245	3 780	2.8	**MR 2I 100 - 42 × 350** 160 M 4	7.14
15	243	3 820	3.75	**MR 2I 101 - 38 × 300** 132 MC S3 4	7.22
15	245	3 780	3.75	**MR 2I 101 - 42 × 350** 160 M 4	7.14
15	275	3 370	1.5	**MR 2I 80 - 38 × 300** 132 MC S3 4	6.36
15	275	3 370	2.12	**MR 2I 81 - 38 × 300** 132 MC S3 4	6.36
15	268	3 460	3	**MR 2I 100 - 38 × 300** 132 MC S3 4	6.53
15	268	3 460	3	**MR 2I 100 - 42 × 350** 160 M 4	6.53
15	306	3 020	1.7	**MR 2I 80 - 38 × 300** 132 MC S3 4	5.71
15	306	3 020	2.12	**MR 2I 81 - 38 × 300** 132 MC S3 4	5.71
15	310	2 990	3.55	**MR 2I 100 - 42 × 350** 160 M 4	5.65
15	353	2 630	2	**MR 2I 80 - 38 × 300** 132 MC S3 4	4.96
15	353	2 630	2.12	**MR 2I 81 - 38 × 300** 132 MC S3 4	4.96
15	334	2 770	3.15	**MR 2I 100 - 38 × 300** 132 MC S3 4	5.23
15	342	2 710	3.75	**MR 2I 100 - 42 × 350** 160 M 4	5.11
15	441	2 100	2.12	**MR 2I 80 - 38 × 300** 132 MC S3 4	3.96
15	441	2 100	2.12	**MR 2I 81 - 38 × 300** 132 MC S3 4	3.96
15	427	2 170	4	**MR 2I 100 - 42 × 350** 160 M 4	4.10
20	17.0	71 050	1.06	**MR 3I 180 - 42 × 350** 160 L 4	103
20	20.9	57 900	1.06	**MR 3I 160 - 42 × 350** 160 L 4	83.8
20	21.7	55 850	1.5	**MR 3I 180 - 48 × 350** 180 L 6	53.1
20	20.8	58 200	1.4	**MR 3I 180 - 42 × 350** 160 L 4	84.2
20	25.9	46 650	1.32	**MR 3I 160 - 42 × 350** 160 L 4	67.4
20	27.1	44 700	1.9	**MR 3I 180 - 48 × 350** 180 L 6	42.5
20	25.8	46 850	1.7	**MR 3I 180 - 42 × 350** 160 L 4	67.8
20	28.7	42 200	1	**MR 3I 140 - 42 × 350** 160 L 4	61.0
20	28.7	42 150	1.5	**MR 3I 160 - 48 × 350** 180 L 6	40.0
20	29.3	41 250	2	**MR 3I 180 - 42 × 350** 160 L 4	59.6
20	31.6	38 300	1.06	**MR 3I 140 - 42 × 350** 160 L 4	55.4
20	30.4	39 750	1.4	**MR 3I 160 - 42 × 350** 160 L 4	57.5
20	33.0	36 700	2.36	**MR 3I 180 - 42 × 350** 160 L 4	53.1
20	34.9	34 700	1.25	**MR 3I 140 - 42 × 350** 160 L 4	50.2
20	33.1	36 500	1.7	**MR 3I 160 - 42 × 350** 160 L 4	52.8
20	40.4	30 000	1.32	**MR 3I 140 - 42 × 350** 160 L 4	43.4
20	37.9	31 950	1.9	**MR 3I 160 - 42 × 350** 160 L 4	46.2
20	38.0	31 800	2.65	**MR 3I 180 - 42 × 350** 160 L 4	46.0
20	41.2	29 350	2.8	**MR 3I 180 - 42 × 350** 160 L 4	42.5
20	45.4	26 650	1.12	**MR 3I 126 - 42 × 350** 160 L 4	38.5
20	44.5	27 150	1.5	**MR 3I 140 - 42 × 350** 160 L 4	39.3
20	43.7	27 700	2.24	**MR 3I 160 - 42 × 350** 160 L 4	40.0
20	44.7	27 100	3	**MR 3I 180 - 42 × 350** 160 L 4	39.2
20	50.2	24 100	1.25	**MR 3I 126 - 42 × 350** 160 L 4	34.8
20	49.9	24 250	1.7	**MR 3I 140 - 42 × 350** 160 L 4	35.1
20	50.4	24 000	2.5	**MR 3I 160 - 42 × 350** 160 L 4	34.7
20	50.2	24 100	3.55	**MR 3I 180 - 42 × 350** 160 L 4	34.9

Motor (cat. TX) with efficiency value not according to IE3 class (IEC 60034-30); the nominal power and nameplate data refer to intermittent duty S3 70%.

1) Powers valid for continuous duty S1; **increase** possible for S2 ... S10 (ch. 2b) in which case P_2 and M_2 increase and fs decreases proportionately.
2) For complete designation when ordering, see ch. 3.

Motor power P_1 hp 1)	Output speed n_2 rpm	Output torque T_2 lb in	Service factor fs	2)	Gear ratio i
20	55.3	21 900	1.06	MR 3I 125 - 42 × 350 160 L 4	31.7
20	55.3	21 900	1.4	MR 3I 126 - 42 × 350 160 L 4	31.7
20	54.7	22 100	1.9	MR 3I 140 - 42 × 350 160 L 4	32.0
20	57.6	21 000	2.8	MR 3I 160 - 42 × 350 160 L 4	30.4
20	57.9	20 900	4	MR 3I 180 - 42 × 350 160 L 4	30.2
20	60.7	20 350	2.5	MR 2I 160 - 48 × 350 180 L 6	19.0
20	60.1	20 100	1.06	MR 3I 125 - 42 × 350 160 L 4	29.1
20	62.6	19 350	1.6	MR 3I 126 - 48 × 350 180 L 6	18.4
20	60.1	20 100	1.32	MR 3I 126 - 42 × 350 160 L 4	29.1
20	59.5	20 350	1.9	MR 3I 140 - 42 × 350 160 L 4	29.4
20	65.7	18 400	2.24	MR 3I 140 - 42 × 350 160 L 4	26.6
20	66.4	18 600	3	MR 2I 160 - 48 × 350 180 L 6	17.3
20	67.0	18 050	1.25	MR 3I 125 - 42 × 350 160 L 4	26.1
20	74.1	16 350	1.4	MR 3I 125 - 42 × 350 160 L 4	23.6
20	67.0	18 050	1.6	MR 3I 126 - 42 × 350 160 L 4	26.1
20	74.1	16 350	1.8	MR 3I 126 - 42 × 350 160 L 4	23.6
20	73.5	16 450	2.5	MR 3I 140 - 42 × 350 160 L 4	23.8
20	66.5	18 200	3.35	MR 3I 160 - 42 × 350 160 L 4	26.3
20	74.1	16 350	3.75	MR 3I 160 - 42 × 350 160 L 4	23.6
20	81.5	14 850	1.5	MR 3I 125 - 42 × 350 160 L 4	21.5
20	81.5	14 850	2	MR 3I 126 - 42 × 350 160 L 4	21.5
20	82.6	14 950	4	MR 2I 160 - 48 × 350 180 L 6	13.9
20	85.7	14 100	3	MR 3I 140 - 42 × 350 160 L 4	20.4
20	90.0	13 750	1.5	MR 2I 125 - 48 × 350 180 L 6	12.8
20	86.4	14 300	1.25	MR 2I 125 - 42 × 350 160 L 4	20.3
20	90.0	13 750	1.8	MR 2I 126 - 48 × 350 180 L 6	12.8
20	90.0	13 750	2.5	MR 2I 140 - 48 × 350 180 L 6	12.8
20	92.3	13 400	3.75	MR 2I 160 - 42 × 350 160 L 4	19.0
20	95.2	12 700	1.8	MR 3I 125 - 42 × 350 160 L 4	18.4
20	106	11 450	2	MR 3I 125 - 42 × 350 160 L 4	16.5
20	95.2	12 700	2.36	MR 3I 126 - 42 × 350 160 L 4	18.4
20	106	11 450	2.65	MR 3I 126 - 42 × 350 160 L 4	16.5
20	94.9	12 750	3	MR 3I 140 - 42 × 350 160 L 4	18.4
20	101	12 250	1.7	MR 2I 125 - 48 × 350 180 L 6	11.4
20	101	12 250	2.12	MR 2I 126 - 48 × 350 180 L 6	11.4
20	100	12 350	3	MR 2I 140 - 48 × 350 180 L 6	11.5
20	101	12 250	4.25	MR 2I 160 - 42 × 350 160 L 4	17.3
20	110	11 200	1.8	MR 2I 125 - 42 × 350 160 L 4	15.9
20	113	11 000	2.5	MR 2I 126 - 48 × 350 180 L 6	10.2
20	110	11 200	2.12	MR 2I 126 - 42 × 350 160 L 4	15.9
20	110	11 200	3.15	MR 2I 140 - 42 × 350 160 L 4	15.9
20	124	9 980	2.12	MR 2I 125 - 42 × 350 160 L 4	14.1
20	124	9 980	2.65	MR 2I 126 - 42 × 350 160 L 4	14.1
20	123	10 100	3.75	MR 2I 140 - 42 × 350 160 L 4	14.3
20	142	8 690	1.12	MR 2I 100 - 42 × 350 160 L 4	12.3
20	142	8 690	1.4	MR 2I 101 - 42 × 350 160 L 4	12.3
20	138	8 960	2.36	MR 2I 125 - 42 × 350 160 L 4	12.7
20	138	8 960	3.15	MR 2I 126 - 42 × 350 160 L 4	12.7
20	158	7 820	1.32	MR 2I 100 - 42 × 350 160 L 4	11.1
20	158	7 820	1.7	MR 2I 101 - 42 × 350 160 L 4	11.1
20	154	8 040	2.5	MR 2I 125 - 42 × 350 160 L 4	11.4
20	154	8 040	3.15	MR 2I 126 - 42 × 350 160 L 4	11.4
20	175	7 080	1.5	MR 2I 100 - 42 × 350 160 L 4	10.0
20	175	7 080	1.9	MR 2I 101 - 42 × 350 160 L 4	10.0
20	171	7 220	3	MR 2I 125 - 42 × 350 160 L 4	10.2
20	171	7 220	3.75	MR 2I 126 - 42 × 350 160 L 4	10.2
20	202	6 120	1.6	MR 2I 100 - 42 × 350 160 L 4	8.67
20	202	6 120	2.12	MR 2I 101 - 42 × 350 160 L 4	8.67
20	189	6 520	3.15	MR 2I 125 - 42 × 350 160 L 4	9.24
20	208	5 930	3.55	MR 2I 125 - 42 × 350 160 L 4	8.40
20	223	5 540	1.9	MR 2I 100 - 42 × 350 160 L 4	7.85
20	223	5 540	2.5	MR 2I 101 - 42 × 350 160 L 4	7.85
20	245	5 040	2	MR 2I 100 - 42 × 350 160 L 4	7.14
20	245	5 040	2.8	MR 2I 101 - 42 × 350 160 L 4	7.14
20	243	5 070	4.25	MR 2I 125 - 42 × 350 160 L 4	7.19

Motor power P_1 hp 1)	Output speed n_2 rpm	Output torque T_2 lb in	Service factor fs	2)	Gear ratio i
20	268	4 610	2.24	MR 2I 100 - 42 × 350 160 L 4	6.53
20	268	4 610	3	MR 2I 101 - 42 × 350 160 L 4	6.53
20	271	4 560	4.5	MR 2I 125 - 42 × 350 160 L 4	6.46
20	310	3 990	2.65	MR 2I 100 - 42 × 350 160 L 4	5.65
20	310	3 990	3.35	MR 2I 101 - 42 × 350 160 L 4	5.65
20	342	3 610	2.8	MR 2I 100 - 42 × 350 160 L 4	5.11
20	342	3 610	3.35	MR 2I 101 - 42 × 350 160 L 4	5.11
20	427	2 890	3	MR 2I 100 - 42 × 350 160 L 4	4.10
25	25.9	58 300	1.06	MR 3I 160 - 48 × 350 180 M 4	67.4
25	25.8	58 600	1.4	MR 3I 180 - 48 × 350 180 M 4	67.8
25	29.3	51 550	1.6	MR 3I 180 - 48 × 350 180 M 4	59.6
25	31.8	47 550	1.32	MR 3I 160 - 55 × 400 200 LR 6	36.2
25	30.4	49 700	1.12	MR 3I 160 - 48 × 350 180 M 4	57.5
25	33.0	45 900	1.9	MR 3I 180 - 48 × 350 180 M 4	53.1
25	36.7	41 200	1.5	MR 3I 160 - 55 × 400 200 LR 6	31.3
25	33.1	45 650	1.32	MR 3I 160 - 48 × 350 180 M 4	52.8
25	40.4	37 500	1.06	MR 3I 140 - 48 × 350 180 M 4	43.4
25	37.9	39 950	1.6	MR 3I 160 - 48 × 350 180 M 4	46.2
25	38.0	39 750	2.12	MR 3I 180 - 48 × 350 180 M 4	46.0
25	41.2	36 700	2.24	MR 3I 180 - 48 × 350 180 M 4	42.5
25	44.5	33 950	1.25	MR 3I 140 - 48 × 350 180 M 4	39.3
25	43.7	34 600	1.8	MR 3I 160 - 48 × 350 180 M 4	40.0
25	44.7	33 850	2.36	MR 3I 180 - 48 × 350 180 M 4	39.2
25	50.2	30 100	1	MR 3I 126 - 48 × 350 180 M 4	34.8
25	49.9	30 350	1.4	MR 3I 140 - 48 × 350 180 M 4	35.1
25	50.4	30 000	2	MR 3I 160 - 48 × 350 180 M 4	34.7
25	50.2	30 150	2.8	MR 3I 180 - 48 × 350 180 M 4	34.9
25	55.3	27 350	1.12	MR 3I 126 - 48 × 350 180 M 4	31.7
25	54.7	27 650	1.5	MR 3I 140 - 48 × 350 180 M 4	32.0
25	57.6	26 250	2.36	MR 3I 160 - 48 × 350 180 M 4	30.4
25	57.9	26 150	3.35	MR 3I 180 - 48 × 350 180 M 4	30.2
25	60.1	25 150	1.06	MR 3I 126 - 48 × 350 180 M 4	29.1
25	59.5	25 400	1.5	MR 3I 140 - 48 × 350 180 M 4	29.4
25	65.7	23 000	1.8	MR 3I 140 - 48 × 350 180 M 4	26.6
25	64.1	23 600	3.55	MR 3I 180 - 48 × 350 180 M 4	27.3
25	67.0	22 600	1	MR 3I 125 - 48 × 350 180 M 4	26.1
25	74.1	20 400	1.12	MR 3I 125 - 48 × 350 180 M 4	23.6
25	67.0	22 600	1.32	MR 3I 126 - 48 × 350 180 M 4	26.1
25	74.1	20 400	1.5	MR 3I 126 - 48 × 350 180 M 4	23.6
25	73.5	20 550	2	MR 3I 140 - 48 × 350 180 M 4	23.8
25	66.5	22 750	2.65	MR 3I 160 - 48 × 350 180 M 4	26.3
25	74.1	20 400	3	MR 3I 160 - 48 × 350 180 M 4	23.6
25	81.5	18 550	1.18	MR 3I 125 - 48 × 350 180 M 4	21.5
25	81.5	18 550	1.6	MR 3I 126 - 48 × 350 180 M 4	21.5
25	85.7	17 650	2.36	MR 3I 140 - 48 × 350 180 M 4	20.4
25	85.3	17 750	3.35	MR 3I 160 - 48 × 350 180 M 4	20.5
25	92.3	16 700	3	MR 2I 160 - 48 × 350 180 M 4	19.0
25	95.2	15 900	1.4	MR 3I 125 - 48 × 350 180 M 4	18.4
25	106	14 300	1.6	MR 3I 125 - 48 × 350 180 M 4	16.5
25	95.2	15 900	1.9	MR 3I 126 - 48 × 350 180 M 4	18.4
25	106	14 300	2.12	MR 3I 126 - 48 × 350 180 M 4	16.5
25	94.9	15 950	2.36	MR 3I 140 - 48 × 350 180 M 4	18.4
25	101	15 300	3.55	MR 2I 160 - 48 × 350 180 M 4	17.3
25	107	14 400	1.25	MR 2I 125 - 48 × 350 180 M 4	16.3
25	110	14 050	4	MR 2I 160 - 48 × 350 180 M 4	15.9
25	129	11 950	1.7	MR 2I 125 - 55 × 400 200 LR 6	8.91
25	129	11 950	2.12	MR 2I 126 - 55 × 400 200 LR 6	8.91
25	128	12 100	3	MR 2I 140 - 55 × 400 200 LR 6	9.00
25	126	12 300	4.75	MR 2I 160 - 48 × 350 180 M 4	13.9
25	137	11 250	1.7	MR 2I 125 - 48 × 350 180 M 4	12.8
25	137	11 250	2.12	MR 2I 126 - 48 × 350 180 M 4	12.8
25	137	11 250	3	MR 2I 140 - 48 × 350 180 M 4	12.8

1) Powers valid for continuous duty S1; **increase** possible for S2 ... S10 (ch. 2b) in which case P_2 and M_2 increase and fs decreases proportionately.
2) For complete designation when ordering, see ch. 3.

Motor power P_1 hp 1)	Output speed n_2 rpm	Output torque T_2 lb in	Service factor fs	2)		Gear ratio i
25	154	10 050	2	MR 2I 125 - 48 × 350 180 M	4	11.4
25	154	10 050	2.5	MR 2I 126 - 48 × 350 180 M	4	11.4
25	152	10 150	3.55	MR 2I 140 - 48 × 350 180 M	4	11.5
25	182	8 500	1.12	MR 2I 100 - 48 × 350 180 M	4	9.64
25	182	8 500	1.4	MR 2I 101 - 48 × 350 180 M	4	9.64
25	171	9 020	2.36	MR 2I 125 - 48 × 350 180 M	4	10.2
25	171	9 020	3	MR 2I 126 - 48 × 350 180 M	4	10.2
25	202	7 650	1.32	MR 2I 100 - 48 × 350 180 M	4	8.67
25	202	7 650	1.7	MR 2I 101 - 48 × 350 180 M	4	8.67
25	189	8 150	2.65	MR 2I 125 - 48 × 350 180 M	4	9.24
25	208	7 410	2.8	MR 2I 125 - 48 × 350 180 M	4	8.40
25	189	8 150	3.55	MR 2I 126 - 48 × 350 180 M	4	9.24
25	208	7 410	3.75	MR 2I 126 - 48 × 350 180 M	4	8.40
25	223	6 920	1.5	MR 2I 100 - 48 × 350 180 M	4	7.85
25	223	6 920	2	MR 2I 101 - 48 × 350 180 M	4	7.85
25	245	6 300	1.6	MR 2I 100 - 48 × 350 180 M	4	7.14
25	245	6 300	2.24	MR 2I 101 - 48 × 350 180 M	4	7.14
25	243	6 340	3.35	MR 2I 125 - 48 × 350 180 M	4	7.19
25	268	5 760	1.8	MR 2I 100 - 48 × 350 180 M	4	6.53
25	268	5 760	2.36	MR 2I 101 - 48 × 350 180 M	4	6.53
25	271	5 700	3.75	MR 2I 125 - 48 × 350 180 M	4	6.46
25	310	4 980	2.12	MR 2I 100 - 48 × 350 180 M	4	5.65
25	310	4 980	2.65	MR 2I 101 - 48 × 350 180 M	4	5.65
25	342	4 510	2.24	MR 2I 100 - 48 × 350 180 M	4	5.11
25	342	4 510	2.65	MR 2I 101 - 48 × 350 180 M	4	5.11
25	427	3 610	2.36	MR 2I 100 - 48 × 350 180 M	4	4.10
25	427	3 610	2.65	MR 2I 101 - 48 × 350 180 M	4	4.10
30	24.6	73 650	1.12	MR 3I 180 - 55 × 400 200 L	6	46.7
30	25.8	70 300	1.18	MR 3I 180 - 48 × 350 180 L	4	67.8
30	27.7	65 550	1.32	MR 3I 180 - 55 × 400 200 L	6	41.5
30	29.3	61 850	1.32	MR 3I 180 - 48 × 350 180 L	4	59.6
30	31.8	57 050	1.12	MR 3I 160 - 55 × 400 200 L	6	36.2
30	30.4	59 650	0.95	MR 3I 160 - 48 × 350 180 L	4	57.5
30	33.0	55 050	1.6	MR 3I 180 - 48 × 350 180 L	4	53.1
30	36.7	49 450	1.25	MR 3I 160 - 55 × 400 200 L	6	31.3
30	33.1	54 800	1.12	MR 3I 160 - 48 × 350 180 L	4	52.8
30	34.6	52 450	1.6	MR 3I 180 - 55 × 400 200 L	6	33.2
30	37.9	47 900	1.32	MR 3I 160 - 48 × 350 180 L	4	46.2
30	38.0	47 700	1.8	MR 3I 180 - 48 × 350 180 L	4	46.0
30	41.2	44 050	1.9	MR 3I 180 - 48 × 350 180 L	4	42.5
30	44.5	40 750	1	MR 3I 140 - 48 × 350 180 L	4	39.3
30	43.7	41 550	1.5	MR 3I 160 - 48 × 350 180 L	4	40.0
30	44.7	40 650	1.9	MR 3I 180 - 48 × 350 180 L	4	39.2
30	49.9	36 400	1.18	MR 3I 140 - 48 × 350 180 L	4	35.1
30	50.4	36 000	1.6	MR 3I 160 - 48 × 350 180 L	4	34.7
30	50.2	36 200	2.36	MR 3I 180 - 48 × 350 180 L	4	34.9
30	54.7	33 200	1.25	MR 3I 140 - 48 × 350 180 L	4	32.0
30	57.6	31 500	1.9	MR 3I 160 - 48 × 350 180 L	4	30.4
30	57.9	31 350	2.8	MR 3I 180 - 48 × 350 180 L	4	30.2
30	59.5	30 500	1.25	MR 3I 140 - 48 × 350 180 L	4	29.4
30	65.7	27 650	1.5	MR 3I 140 - 48 × 350 180 L	4	26.6
30	64.1	28 300	3	MR 3I 180 - 48 × 350 180 L	4	27.3
30	67.0	27 100	1.06	MR 3I 126 - 48 × 350 180 L	4	26.1
30	74.1	24 500	1.18	MR 3I 126 - 48 × 350 180 L	4	23.6
30	73.5	24 700	1.7	MR 3I 140 - 48 × 350 180 L	4	23.8
30	66.5	27 300	2.24	MR 3I 160 - 48 × 350 180 L	4	26.3
30	74.1	24 500	2.5	MR 3I 160 - 48 × 350 180 L	4	23.6
30	73.6	24 700	3.15	MR 3I 180 - 48 × 350 180 L	4	23.8
30	73.6	25 200	2	MR 2I 160 - 55 × 400 200 L	6	15.6
30	71.4	25 950	2.8	MR 2I 180 - 55 × 400 200 L	6	16.1
30	81.5	22 250	1	MR 3I 125 - 48 × 350 180 L	4	21.5
30	81.5	22 250	1.32	MR 3I 126 - 48 × 350 180 L	4	21.5
30	80.5	23 000	2.36	MR 2I 160 - 55 × 400 200 L	6	14.3
30	77.6	23 850	3.15	MR 2I 180 - 55 × 400 200 L	6	14.8

Motor power P_1 hp 1)	Output speed n_2 rpm	Output torque T_2 lb in	Service factor fs	2)		Gear ratio i
30	85.7	21 200	2	MR 3I 140 - 48 × 350 180 L	4	20.4
30	85.3	21 300	2.8	MR 3I 160 - 48 × 350 180 L	4	20.5
30	90.0	20 600	1	MR 2I 125 - 55 × 400 200 L	6	12.8
30	90.0	20 600	1.18	MR 2I 126 - 55 × 400 200 L	6	12.8
30	90.0	20 600	1.7	MR 2I 140 - 55 × 400 200 L	6	12.8
30	92.3	20 050	2.5	MR 2I 160 - 48 × 350 180 L	4	19.0
30	89.6	20 650	3.35	MR 2I 180 - 48 × 350 180 L	4	19.5
30	95.2	19 050	1.18	MR 3I 125 - 48 × 350 180 L	4	18.4
30	106	17 150	1.32	MR 3I 125 - 48 × 350 180 L	4	16.5
30	95.2	19 050	1.6	MR 3I 126 - 48 × 350 180 L	4	18.4
30	106	17 150	1.7	MR 3I 126 - 48 × 350 180 L	4	16.5
30	94.9	19 150	2	MR 3I 140 - 48 × 350 180 L	4	18.4
30	101	18 350	2.8	MR 2I 160 - 48 × 350 180 L	4	17.3
30	97.4	19 000	4	MR 2I 180 - 48 × 350 180 L	4	18.0
30	113	16 450	1.32	MR 2I 125 - 55 × 400 200 L	6	10.2
30	107	17 300	1.06	MR 2I 125 - 48 × 350 180 L	4	16.3
30	113	16 450	1.7	MR 2I 126 - 55 × 400 200 L	6	10.2
30	110	16 800	2.36	MR 2I 140 - 55 × 400 200 L	6	10.4
30	110	16 850	3.35	MR 2I 160 - 48 × 350 180 L	4	15.9
30	129	14 350	1.4	MR 2I 125 - 55 × 400 200 L	6	8.91
30	129	14 350	1.8	MR 2I 126 - 55 × 400 200 L	6	8.91
30	128	14 500	2.5	MR 2I 140 - 55 × 400 200 L	6	9.00
30	126	14 750	4	MR 2I 160 - 48 × 350 180 L	4	13.9
30	144	12 900	1.7	MR 2I 125 - 55 × 400 200 L	6	8.00
30	137	13 550	1.5	MR 2I 125 - 48 × 350 180 L	4	12.8
30	144	12 900	2.12	MR 2I 126 - 55 × 400 200 L	6	8.00
30	137	13 550	1.8	MR 2I 126 - 48 × 350 180 L	4	12.8
30	141	13 150	3	MR 2I 140 - 55 × 400 200 L	6	8.15
30	137	13 550	2.5	MR 2I 140 - 48 × 350 180 L	4	12.8
30	145	12 750	4.5	MR 2I 160 - 48 × 350 180 L	4	12.1
30	154	12 050	1.7	MR 2I 125 - 48 × 350 180 L	4	11.4
30	159	11 650	2.5	MR 2I 126 - 55 × 400 200 L	6	7.23
30	154	12 050	2.12	MR 2I 126 - 48 × 350 180 L	4	11.4
30	152	12 200	3	MR 2I 140 - 48 × 350 180 L	4	11.5
30	171	10 800	1.9	MR 2I 125 - 48 × 350 180 L	4	10.2
30	171	10 800	2.5	MR 2I 126 - 48 × 350 180 L	4	10.2
30	168	11 050	3.55	MR 2I 140 - 48 × 350 180 L	4	10.4
30	189	9 780	2.12	MR 2I 125 - 48 × 350 180 L	4	9.24
30	208	8 890	2.36	MR 2I 125 - 48 × 350 180 L	4	8.40
30	189	9 780	2.8	MR 2I 126 - 48 × 350 180 L	4	9.24
30	208	8 890	3.15	MR 2I 126 - 48 × 350 180 L	4	8.40
30	243	7 610	2.8	MR 2I 125 - 48 × 350 180 L	4	7.19
30	243	7 610	3.75	MR 2I 126 - 48 × 350 180 L	4	7.19
30	271	6 840	3.15	MR 2I 125 - 48 × 350 180 L	4	6.46
30	342	5 410	3.15	MR 2I 125 - 48 × 350 180 L	4	5.11
40	37.5	64 550	1.25	MR 3I 180 - 55 × 400 200 L	4	46.7
40	42.1	57 450	1.5	MR 3I 180 - 55 × 400 200 L	4	41.5
40	48.4	50 000	1.25	MR 3I 160 - 55 × 400 200 L	4	36.2
40	48.6	49 800	1.7	MR 3I 180 - 55 × 400 200 L	4	36.0
40	52.7	45 950	1.8	MR 3I 180 - 55 × 400 200 L	4	33.2
40	55.9	43 350	1.4	MR 3I 160 - 55 × 400 200 L	4	31.3
40	57.1	42 400	1.8	MR 3I 180 - 55 × 400 200 L	4	30.7
40	65.7	36 850	1.12	MR 3I 140 - 48 × 350 200 L	B5R 4	26.6
40	64.4	37 550	1.5	MR 3I 160 - 55 × 400 200 L	4	27.2
40	64.1	37 750	2.12	MR 3I 180 - 55 × 400 200 L	4	27.3
40	73.5	32 900	1.32	MR 3I 140 - 48 × 350 200 L	B5R 4	23.8
40	73.7	32 850	1.8	MR 3I 160 - 55 × 400 200 L	4	23.8
40	74.0	32 700	2.65	MR 3I 180 - 55 × 400 200 L	4	23.7
40	81.9	29 550	2.8	MR 3I 180 - 55 × 400 200 L	4	21.4
40	85.7	28 250	1.5	MR 3I 140 - 48 × 350 200 L	B5R 4	20.4
40	85.0	28 500	2.12	MR 3I 160 - 55 × 400 200 L	4	20.6
40	94.9	25 500	1.5	MR 3I 140 - 48 × 350 200 L	B5R 4	18.4
40	94.7	25 550	2.36	MR 3I 160 - 55 × 400 200 L	4	18.5
40	94.0	25 750	3	MR 3I 180 - 55 × 400 200 L	4	18.6

1) Powers valid for continuous duty S1; **increase** possible for S2 ... S10 (ch. 2b) in which case M_2 increases and fs decreases proportionately.
2) For complete designation when ordering, see ch. 3.
* Mounting position **B5R** (see table ch. 2b).
* In case of ambient temperature > 30 °C check the thermal power (ch. 4).

Motor power P_1 hp 1)	Output speed n_2 rpm	Output torque T_2 lb in	Service factor fs	2)		Gear ratio i
40	109	22 200	2.65	**MR 3I 160 - 55 × 400** 200 L	4	16.1
40	112	22 050	2.24	**MR 2I 160 - 55 × 400** 200 L	4	15.6
40	109	22 700	3	**MR 2I 180 - 55 × 400** 200 L	4	16.1
40	118	20 900	3.55	**MR 2I 180 - 55 × 400** 200 L	4	14.8
40	123	20 150	2.65	**MR 2I 160 - 55 × 400** 200 L	4	14.3
40	137	18 050	1.12	**MR 2I 125 - 55 × 400** 200 L	4	12.8
40	137	18 050	1.32	**MR 2I 126 - 55 × 400** 200 L	4	12.8
40	137	18 050	1.9	**MR 2I 140 - 55 × 400** 200 L	4	12.8
40	133	18 500	3	**MR 2I 160 - 55 × 400** 200 L	4	13.1
40	133	18 600	4	**MR 2I 180 - 55 × 400** 200 L	4	13.2
40	154	16 050	1.25	**MR 2I 125 - 55 × 400** 200 L	4	11.4
40	154	16 050	1.6	**MR 2I 126 - 55 × 400** 200 L	4	11.4
40	152	16 250	2.24	**MR 2I 140 - 55 × 400** 200 L	4	11.5
40	153	16 200	3.55	**MR 2I 160 - 55 × 400** 200 L	4	11.5
40	171	14 450	1.5	**MR 2I 125 - 55 × 400** 200 L	4	10.2
40	171	14 450	1.9	**MR 2I 126 - 55 × 400** 200 L	4	10.2
40	168	14 700	2.65	**MR 2I 140 - 55 × 400** 200 L	4	10.4
40	176	14 050	4	**MR 2I 160 - 55 × 400** 200 L	4	9.94
40	196	12 600	1.6	**MR 2I 125 - 55 × 400** 200 L	4	8.91
40	196	12 600	2	**MR 2I 126 - 55 × 400** 200 L	4	8.91
40	194	12 700	2.8	**MR 2I 140 - 55 × 400** 200 L	4	9.00
40	219	11 300	1.8	**MR 2I 125 - 55 × 400** 200 L	4	8.00
40	219	11 300	2.36	**MR 2I 126 - 55 × 400** 200 L	4	8.00
40	215	11 500	3.35	**MR 2I 140 - 55 × 400** 200 L	4	8.15
40	242	10 200	2	**MR 2I 125 - 55 × 400** 200 L	4	7.23
40	242	10 200	2.8	**MR 2I 126 - 55 × 400** 200 L	4	7.23
40	240	10 300	3.35	**MR 2I 140 - 55 × 400** 200 L	4	7.29
40	266	9 280	2.24	**MR 2I 125 - 55 × 400** 200 L	4	6.57
40	266	9 280	3	**MR 2I 126 - 55 × 400** 200 L	4	6.57
40	280	8 820	3.35	**MR 2I 140 - 55 × 400** 200 L	4	6.25
40	311	7 940	2.65	**MR 2I 125 - 55 × 400** 200 L	4	5.63
40	311	7 940	3.35	**MR 2I 126 - 55 × 400** 200 L	4	5.63
40	346	7 140	3	**MR 2I 125 - 55 × 400** 200 L	4	5.06
40	346	7 140	3.35	**MR 2I 126 - 55 × 400** 200 L	4	5.06
40	438	5 650	3	**MR 2I 125 - 55 × 400** 200 L	4	4.00
50	37.5	80 650	1	**MR 3I 180 - 60 × 450** 225 S	4	46.7
50	42.1	71 800	1.18	**MR 3I 180 - 60 × 450** 225 S	4	41.5
50	48.4	62 500	1	**MR 3I 160 - 60 × 450** 225 S	4	36.2
50	48.6	62 250	1.32	**MR 3I 180 - 60 × 450** 225 S	4	36.0
50	52.7	57 450	1.4	**MR 3I 180 - 60 × 450** 225 S	4	33.2
50	55.9	54 150	1.12	**MR 3I 160 - 60 × 450** 225 S	4	31.3
50	57.1	53 000	1.5	**MR 3I 180 - 60 × 450** 225 S	4	30.7
50	64.4	46 950	1.25	**MR 3I 160 - 60 × 450** 225 S	4	27.2
50	64.1	47 200	1.7	**MR 3I 180 - 60 × 450** 225 S	4	27.3
50	73.7	41 050	1.5	**MR 3I 160 - 60 × 450** 225 S	4	23.8
50	74.0	40 900	2.12	**MR 3I 180 - 60 × 450** 225 S	4	23.7
50	81.9	36 900	2.24	**MR 3I 180 - 60 × 450** 225 S	4	21.4
50	85.0	35 600	1.7	**MR 3I 160 - 60 × 450** 225 S	4	20.6
50	94.7	31 950	1.9	**MR 3I 160 - 60 × 450** 225 S	4	18.5
50	94.0	32 200	2.36	**MR 3I 180 - 60 × 450** 225 S	4	18.6
50	109	27 750	2.12	**MR 3I 160 - 60 × 450** 225 S	4	16.1
50	137	22 500	2.12	**MR 2I 160 - 60 × 450** 225 S	4	12.8
50	133	23 200	3	**MR 2I 180 - 60 × 450** 225 S	4	13.1
50	145	21 350	3.35	**MR 2I 180 - 60 × 450** 225 S	4	12.1
50	150	20 600	2.5	**MR 2I 160 - 60 × 450** 225 S	4	11.7
50	163	18 900	2.8	**MR 2I 160 - 60 × 450** 225 S	4	10.7
50	163	19 000	4	**MR 2I 180 - 60 × 450** 225 S	4	10.8
50	175	17 650	1.9	**MR 2I 140 - 60 × 450** 225 S	4	10.0
50	187	16 550	3.35	**MR 2I 160 - 60 × 450** 225 S	4	9.37
50	194	15 900	2.24	**MR 2I 140 - 60 × 450** 225 S	4	9.00
50	188	16 450	4	**MR 2I 180 - 60 × 450** 225 S	4	9.33

Motor power P_1 hp 1)	Output speed n_2 rpm	Output torque T_2 lb in	Service factor fs	2)		Gear ratio i
50	215	14 400	2.65	**MR 2I 140 - 60 × 450** 225 S	4	8.15
50	215	14 350	4	**MR 2I 160 - 60 × 450** 225 S	4	8.12
50	240	12 850	2.65	**MR 2I 140 - 60 × 450** 225 S	4	7.29
50	280	11 050	2.65	**MR 2I 140 - 60 × 450** 225 S	4	6.25
50	310	9 970	2.65	**MR 2I 140 - 60 × 450** 225 S	4	5.65
60	42.1	86 150	1	**MR 3I 180 - 60 × 450** 225 M	4	41.5
60	48.6	74 700	1.12	**MR 3I 180 - 60 × 450** 225 M	4	36.0
60	52.7	68 950	1.18	**MR 3I 180 - 60 × 450** 225 M	4	33.2
60	57.1	63 600	1.25	**MR 3I 180 - 60 × 450** 225 M	4	30.7
60	64.4	56 350	1	**MR 3I 160 - 60 × 450** 225 M	4	27.2
60	64.1	56 650	1.5	**MR 3I 180 - 60 × 450** 225 M	4	27.3
60	73.7	49 300	1.18	**MR 3I 160 - 60 × 450** 225 M	4	23.8
60	74.0	49 100	1.7	**MR 3I 180 - 60 × 450** 225 M	4	23.7
60	81.9	44 300	1.9	**MR 3I 180 - 60 × 450** 225 M	4	21.4
60	85.0	42 700	1.4	**MR 3I 160 - 60 × 450** 225 M	4	20.6
60	94.7	38 350	1.6	**MR 3I 160 - 60 × 450** 225 M	4	18.5
60	94.0	38 600	2	**MR 3I 180 - 60 × 450** 225 M	4	18.6
60	109	33 300	1.8	**MR 3I 160 - 60 × 450** 225 M	4	16.1
60	137	27 050	1.8	**MR 2I 160 - 60 × 450** 225 M	4	12.8
60	133	27 850	2.5	**MR 2I 180 - 60 × 450** 225 M	4	13.1
60	145	25 600	2.8	**MR 2I 180 - 60 × 450** 225 M	4	12.1
60	150	24 700	2.12	**MR 2I 160 - 60 × 450** 225 M	4	11.7
60	163	22 700	2.36	**MR 2I 160 - 60 × 450** 225 M	4	10.7
60	163	22 800	3.35	**MR 2I 180 - 60 × 450** 225 M	4	10.8
60	175	21 200	1.6	**MR 2I 140 - 60 × 450** 225 M	4	10.0
60	187	19 850	2.8	**MR 2I 160 - 60 × 450** 225 M	4	9.37
60	194	19 050	1.9	**MR 2I 140 - 60 × 450** 225 M	4	9.00
60	188	19 750	3.35	**MR 2I 180 - 60 × 450** 225 M	4	9.33
60	215	17 250	2.12	**MR 2I 140 - 60 × 450** 225 M	4	8.15
60	215	17 200	3.35	**MR 2I 160 - 60 × 450** 225 M	4	8.12
60	240	15 450	2.12	**MR 2I 140 - 60 × 450** 225 M	4	7.29
60	240	15 450	3.35	**MR 2I 160 - 60 × 450** 225 M	4	7.29
60	280	13 250	2.12	**MR 2I 140 - 60 × 450** 225 M	4	6.25
60	276	13 400	3.35	**MR 2I 160 - 60 × 450** 225 M	4	6.34
60	310	11 950	2.12	**MR 2I 140 - 60 × 450** 225 M	4	5.65
75	52.7	86 150	0.95	**MR 3I 180 - 60 × 450** 250 M	B5R 4	33.2
75	57.1	79 500	1	**MR 3I 180 - 60 × 450** 250 M	B5R 4	30.7
75	64.1	70 800	1.18	**MR 3I 180 - 60 × 450** 250 M	B5R 4	27.3
75	74.0	61 350	1.4	**MR 3I 180 - 60 × 450** 250 M	B5R 4	23.7
75	81.9	55 400	1.5	**MR 3I 180 - 60 × 450** 250 M	B5R 4	21.4
75	94.0	48 300	1.6	**MR 3I 180 - 60 × 450** 250 M	B5R 4	18.6
75	137	33 800	1.4	**MR 2I 160 - 65 × 550** 250 M	4	12.8
75	133	34 800	2	**MR 2I 180 - 65 × 550** 250 M	4	13.1
75	145	32 050	2.24	**MR 2I 180 - 65 × 550** 250 M	4	12.1
75	150	30 900	1.7	**MR 2I 160 - 65 × 550** 250 M	4	11.7
75	163	28 350	1.9	**MR 2I 160 - 65 × 550** 250 M	4	10.7
75	163	28 500	2.65	**MR 2I 180 - 65 × 550** 250 M	4	10.8
75	187	24 800	2.24	**MR 2I 160 - 65 × 550** 250 M	4	9.37
75	188	24 700	2.65	**MR 2I 180 - 65 × 550** 250 M	4	9.33
75	208	22 300	2.65	**MR 2I 180 - 65 × 550** 250 M	4	8.43
75	215	21 500	2.65	**MR 2I 160 - 65 × 550** 250 M	4	8.12
75	240	19 300	2.65	**MR 2I 160 - 65 × 550** 250 M	4	7.29
75	238	19 450	2.65	**MR 2I 180 - 65 × 550** 250 M	4	7.35
75	276	16 800	2.65	**MR 2I 160 - 65 × 550** 250 M	4	6.34
100	170	36 350	1.9	**MR 2I 180 - 75 × 550** 280 S	4	10.3
100	185	33 450	2.12	**MR 2I 180 - 75 × 550** 280 S	4	9.48
100	207	29 800	2.12	**MR 2I 180 - 75 × 550** 280 S	4	8.44
100	239	25 800	2.12	**MR 2I 180 - 75 × 550** 280 S	4	7.31
100	265	23 300	2.12	**MR 2I 180 - 75 × 550** 280 S	4	6.60
100	304	20 300	2.12	**MR 2I 180 - 75 × 550** 280 S	4	5.76

1) Powers valid for continuous duty S1; **increase** possible for S2 ... S10 (ch. 2b) in which case M_2 increases and fs decreases proportionately.
2) For complete designation when ordering, see ch. 3.
* Mounting position **B5R** (see table ch. 2b).
* In case of ambient temperature **>** 30 °C check the thermal power (ch. 4).
** Check the thermal power.

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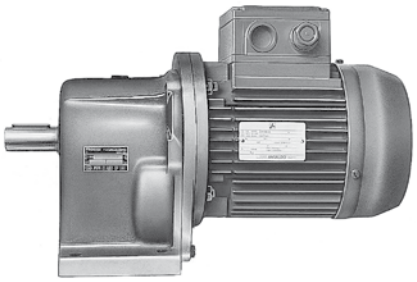
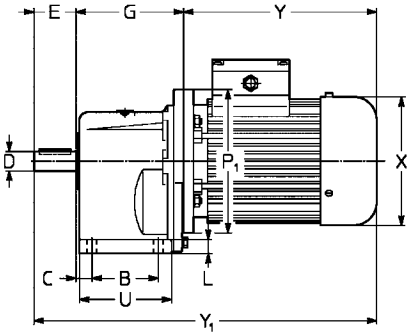
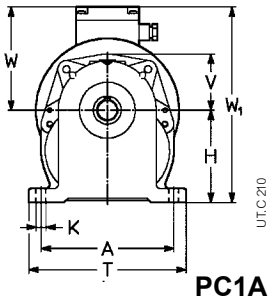
Designs, dimensions, mounting positions and lubricant quantities 3.8



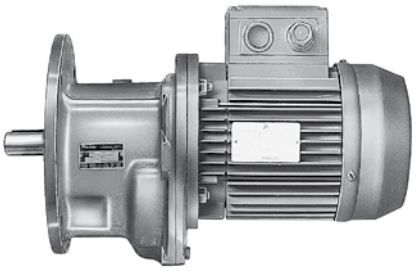


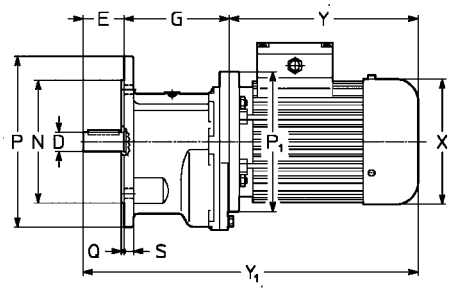
MR 2I, 3I 32 ... 41

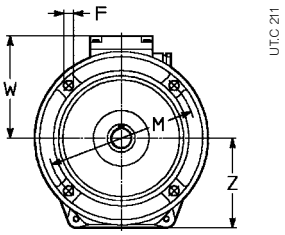


Standard **design**[1)]
Mounting position B3, B6, B7, B8, V5, V6

PC1A







Standard **design**[1)]
Mounting position B5, V1, V3

FC1A

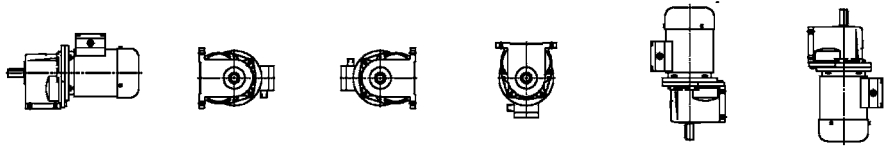
Size red.	Size motor	A	B	C	D Ø	E	F Ø	G	H h11	K Ø	L	M Ø	N Ø h6	P Ø	Q	S	T	U	V Z	P1 Ø	X Ø ≈	Y ≈	Y ≈ 2)	Y1 ≈	Y1 ≈ 2)	W ≈	W1 ≈	Mass lb 11)	Mass lb HB	Mass lb HBZ
	B5																												
32	**63**	115	53	20	16	30	9.5	98-88[5)]	75	9.5	10	115	95	140	3	10	139	77	48	140	123	189	244	317	372	95	170	9	20	24
	71[4)]																		73	140	138	235	297	363	425	112	187	9	26	33
40	**63**	132	63	19	19	40	9.5	113	90	9.5	12	130	110	160	3.5	10	156	92	56	140	123	189	244	342	397	95	185	15	26	31
	71																		87	160	138	216	278	369	431	112	202	15	33	40
	80[3)]																			160	156	254	323	407	476	121	211	15	42	51
41	**63**	132	63	34	24	36	9.5	128-113[5)]	90	9.5	12	130	110	160	3.5	10	156	92	56	140	123	189	244	353	408	95	185	15	26	31
	71																		87	160	138	216	278	380	442	112	202	15	33	40
	80[3)]																			160	156	254	323	418	487	121	211	15	42	51

1) See ch. 3 for motor design.
2) Values valid for brake motor.
3) Mounting position **B5A** (see ch. 2b).
4) Mounting position **B5R** (see ch. 2b).
5) Dimensions of shaft end shoulder and flange surface respectively.
6) For size 51 $\mathbf{Y}_1$ is -8 mm.
7) For motor shaft **H** is -15 mm, $\mathbf{H}_0$ +15 mm.
8) For motor shaft **H** is -8 mm, $\mathbf{H}_0$ +8 mm.
9) For motor shaft **H** is -29 mm, $\mathbf{H}_0$ +29 mm.
10) Two of the motor flange holes are slotted (see ch. 2b).
11) Values valid for gearmotor without motor.
12) **Brake motor** cat. TX **not possible**.

Mounting positions and grease quantities [gal]

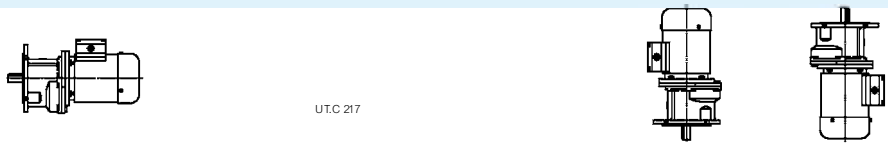
Design

PC1A



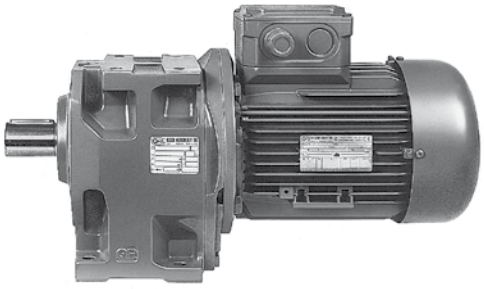
Size	B3, B6 B7, B8	V5, V6
32	0.31	0.55
40,41	0.57	1.04

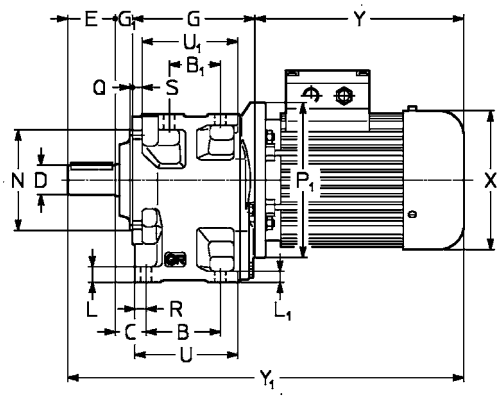
FC1A



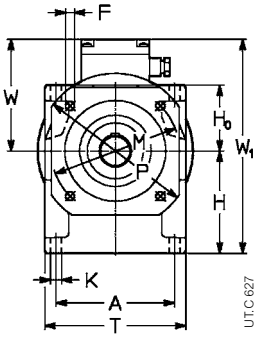
Size	B5	V1, V3
32	0.22	0.4
40,41	0.42	0.77

Designs, dimensions, mounting positions and lubricant quantities 3.8





MR 2I, 3I 50 ... 180



UC2A

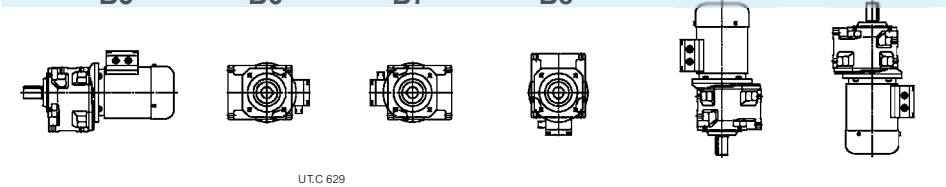
Standard design[1)]

Mounting position B3, B6, B7, B8, V5, V6

Size red.	Size motor	A	B	B1	C	D Ø	E	F Ø	G	G1	H h11	H0 h11	K Ø	L	L1	M Ø	N Ø h6	P Ø / Q 0 +2	R	S	T	U	U1	P1 Ø	X Ø ≈	Y ≈ HB	Y ≈ HBZ	Y1 ≈ HB	Y1 ≈ HBZ	W ≈ TX	W1 ≈	Mass lb 11)	Mass lb HB	Mass lb HBZ
50 51	63[10)] 71 80 90 100[4) 12)] 112[4) 12)]	124	76	52	30.5	24 **(50)** 28 **(51)**	50 **(50)** 42 **(51)**	9.5	128	16	106	71	11.5	17	12	130	110	160 3.5	13.5	10	148	110	100	140 160 200 200 200 200	123 138 156 176 194 218	189 216 233 287 337 362	244 278 302 366 – –	383 410 427 481 531 548	438 472 496 560 – –	95 112 121 141 151 163	201 218 227 247 257 269	26 26 26 26 26 26	37 44 53 68 84 88	42 51 62 82 – –
63 64	71 80 90 100 112 132[4)]	153	96	66	36.5	32 **(63)** 38 **(64)**	58	11.5	158	19	132	85	14	20	14	165	130	200 3.5	16	12	182	136	124	160 200 200 250 250 250	138 156 176 194 218 257	216 233 287 310 336 480	278 302 366 405 435 –	451 468 522 545 571 715	513 537 601 640 670 –	112 121 141 151 163 194	244 253 273 283 295 326	44 44 44 44 44 44	62 71 86 101 121 172	68 79 99 115 141 –
80 81	80 90 100 112 132	192	123	87	43	38 **(80)** 48 **(81)**	80	14	197 200	22	160	106	16	24	17	215	180	250 4	19	14	226	171	157	200 200 250 250 300	156 176 194 218 257	233 287 310 336 445	302 366 405 435 553	532 586 609 635 747	601 665 704 734 855	121 141 151 163 194	281 301 311 323 354	77 77 77 77 77	104 119 134 154 229	112 132 148 174 256
100 101	90 100 112 132 160 180M	240	160	119	51.5	48 **(100)** 55 **(101)**	82	14	242 258	27	195	132	18	28.5	20	265	230	300 4	22.5	16	280	214	198	200 250 250 300 350 350	176 194 218 257 315 360	287 310 336 445 540 550	366 405 435 553 630 690	638 661 687 796 907 917	717 756 786 904 997 1057	141 151 163 194 240 278	336 346 358 389 435 473	137 137 137 137 137 137	179 194 214 289 408 602	192 207 234 315 489 708
125 126	100 112 132 160 180 200	297	200	151	59	60 **(125)** 70 **(126)**	105	18	297 299	30	236	160	22	35	25	300	250	350 5	26.5	19	345	264	245	250 250 300 350 350 400	194 218 257 315 360 400	310 336 445 540 590 650	405 435 553 630 725 760	742 768 877 972 1022 1084	837 867 985 1062 1157 1194	151 163 194 240 278 310	396 399 430 476 514 546	243 243 243 243 243 243	300 320 395 514 772 761	313 340 421 595 877 866
140	100 112 132 160 180 200 225	297	218	169	59	80	130	18	315 317 339	30	250 7)	160 7)	22	35	25	300	250	350 5	26.5	19	345	282	263	250 250 300 350 350 400 450	194 218 257 315 360 400 450	310 336 445 540 590 650 680	405 435 553 630 725 760 –	785 811 920 1015 1065 1127 1179	880 910 1028 1105 1200 1237 –	151 163 194 240 278 310 330	410 410 429 475 513 545 565	271 271 271 271 271 271 271	328 348 423 542 800 789 999	342 368 450 624 906 895 –
160	132 160 180 200 225 250	373	250	191	68.5	90	130	22	366 368 380	34	295 8)	200 8)	27	42	30	400	350	450 5	31.5	22	430	326	304	300 350 350 400 450 550	257 315 360 400 450 485	445 540 590 650 680 736	553 630 725 760 – –	975 1070 1120 1180 1212 1280	1083 1160 1255 1290 – –	194 240 278 310 330 375	495 527 565 597 617 662	430 430 430 430 430 430	582 701 959 948 1157 1473	608 783 1065 1054 – –
180	132 160 180 200 225 250 280	373	275	216	68.5	100	165	22	391 393 405	34	315 9)	200 9)	27	42	30	400	350	450 5	31.5	22	430	351	329	300 350 350 400 450 550 550	257 315 360 400 450 485 550	445 540 590 650 680 736 928	553 630 725 760 – – –	1035 1130 1180 1240 1272 1340 1532	1143 1220 1315 1350 – – –	194 240 278 310 330 375 405	515 526 564 596 616 661 691	481 481 481 481 481 481 481	633 752 1010 999 1208 1523 1984	659 833 1116 1105 – – –

See notes on page 62

Mounting positions and oil quantities [gal]



Size	B3	B6, B7	B8, V6	V5
50, 51	0.21	0.29	0.29	0.37
63, 64	0.42	0.58	0.58	0.74
80, 81	0.82	1.1	1.1	1.50
100, 101	1.5	1.9	2.1	2.6
125, 126	2.7	3.4	3.9	4.8
140	3.1	3.9	4.4	5.5
160	5.2	6.6	7.4	9.2
180	6.1	7.7	8.5	10.6

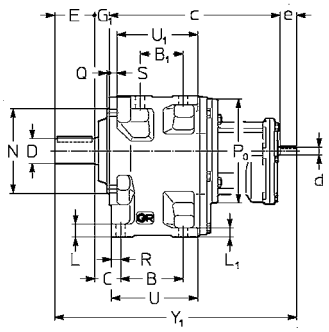
Combined gear reducer and gearmotor units 3.9

Nominal torques for final gear reducer

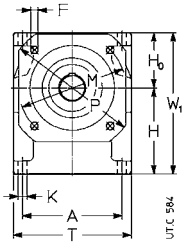
M_{N2} [lb in] for $n_2 \leq$ **11,2** rpm [3]	η final	i final	Final gear reducer	+	Initial gear reducer or gearmotor
3,000	0.94	30	**MR 3I 63-19×160 - 30** [1]	+	**R 2I** or **MR 2I, 3I 40**
4,000		30	**MR 3I 64-19×160 - 30** [1]	+	**R 2I** or **MR 2I, 3I 40**
6,000		32.8	**MR 3I 80-19×160 - 32.8** [1]	+	**R 2I** or **MR 2I, 3I 40**
8,000		49.8	**MR 3I 81-19×160 - 49.8** [1]	+	**R 2I** or **MR 2I, 3I 40**
11,800		32	**MR 3I 100-24×200 - 32**	+	**R 2I, 3I** or **MR 2I, 3I 50** [2]
16,000		53.1	**MR 3I 101-24×200 - 53.1**	+	**R 2I, 3I** or **MR 2I, 3I 50** [2]
23,600		34.1	**MR 3I 125-28×250 - 34.1**	+	**R 2I, 3I** or **MR 2I, 3I 63** [2]
31,500		50.2	**MR 3I 126-28×250 - 50.2**	+	**R 2I, 3I** or **MR 2I, 3I 63** [2]
45,000		55.7	**MR 3I 140-28×250 - 55.7**	+	**R 2I, 3I** or **MR 2I, 3I 63** [2]
63,000		49.7	**MR 3I 160-38×300 - 49.7**	+	**R 2I, 3I** or **MR 2I, 3I 80** [2]
85,000		57.1	**MR 3I 180-38×300 - 57.1**	+	**R 2I, 3I** or **MR 2I, 3I 80** [2]

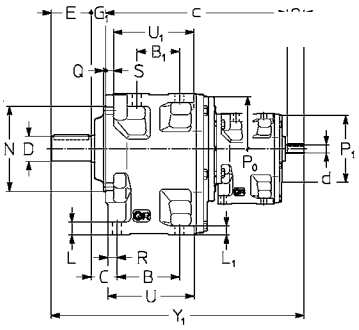
For initial gear reducer or gearmotor performance data see ch. 3.5 and 3.7.
1) Final gearmotor has a 160 mm motor mounting flange (see dimension P_0 ch. 3.8).
2) Gear reducer in design «Oversized B5 flange» (see ch. 5); moreover, size 63 has the low speed shaft reduced to 28 mm: «Oversized B5 flange - Ø 28».
3) Provided that f_S is always ≥ 0.8, it can be reduced by **1.06** for $n_2 = 2.8 \div 0.71$ rpm, by **1.12** for $n_2 \leq 0.71$ rpm.

Combined unit dimensions [1] 3.10

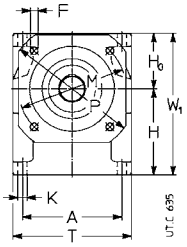


MR 3I 63 ... 81 + R 2I, 3I ...





MR 3I 100 ... 180 + R 2I, 3I ...

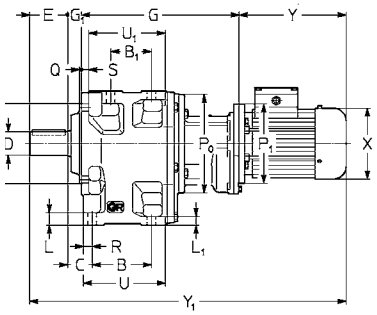


1) For design, mounting position and lubricant quantity of single gear reducers, see ch. 3.6 and 3.8.

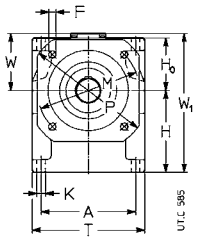
Notes of page 65.
1) For high speed shaft or motor shaft **H** is -15 mm, $\mathbf{H}_0$ +15 mm.
2) For high speed shaft or motor shaft **H** is -8 mm, $\mathbf{H}_0$ +8 mm.
3) For high speed shaft or motor shaft **H** is -29 mm, $\mathbf{H}_0$ +29 mm.
4) Values valid for brake motor.
5) Values valid for gearmotor without motor.

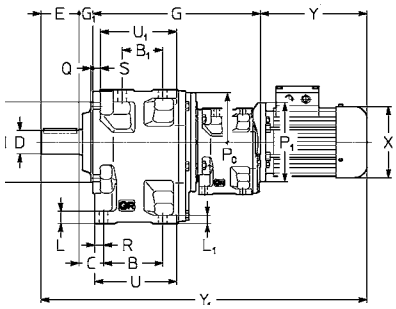
Combined unit dimensions

Gear reducer size final	Gear reducer size initial	A	B / B_1	C	c	D Ø	E	d Ø R2I e $i_N \le 12,5$	Y_1 R2I e $i_N \le 12,5$	d Ø R2I e $i_N \ge 16$	Y_1 R2I e $i_N \ge 16$	d Ø R3I e $i_N \le 80$	Y_1 R3I e $i_N \le 80$	d Ø R3I e $i_N \ge 100$	Y_1 R3I e $i_N \ge 100$	F Ø	G_1	H h11 / H_0 h11	K Ø	L / L_1	M Ø h6	N Ø h6	P Ø / Q^{0}_{+2}	P_0 Ø	P_1 Ø	R	S	T	U / U_1	W_1	Mass lb
MR 3I 63 64	**R 2I 40**	153	96 66	36.5	280	32 38	58	11 23	380	11 23	380	– –	– –	– –	– –	11.5	19	132 85	14	20 14	165	130	200 3.5	160	–	16	12	182	136 124	217	60
MR 3I 80 81	**R 2I 40**	192	123 87	43	319	38 48	80	11 23	444	11 23	444	– –	– –	– –	– –	14	22	160 106	16	24 17	215	180	250 4	160	–	19	14	226	171 157	266	93
MR 3I 100 101	**R 2I. 3I 50**	240	160 119	51.5	396	48 55	82	14 30	535	14 30	535	11 23	528	11 23	528	14	27	195 132	18	28.5 20	265	230	300 4	200	140	22.5	16	280	214 198	327	74
MR 3I 125 126	**R 2I. 3I 63**	297	200 151	59	484	60 70	105	19 40	649	16 30	649	14 30	649	14 30	649	18	30	236 160	22	35 25	300	250	350 5	250	160	26.5	19	345	264 245	396	163
MR 3I 140	**R 2I. 3I 63**	297	218 169	59	502	80	130	11 23	692	16 30	692	14 30	692	14 30	692	18	30	250[1] 160[1]	22	35 25	300	250	350 5	250	160	26.5	19	345	282 263	410	315
MR 3I 160	**R 2I. 3I 80**	373	250 191	68.5	596	90	130	11 23	800	19 40	800	19 40	800	16 30	790	22	34	295[2] 200[2]	27	42 30	400	350	450 5	300	200	31.5	22	430	326 304	495	507
MR 3I 180	**R 2I. 3I 80**	373	275 216	68.5	621	100	165	11 23	800	19 40	860	19 40	860	16 30	850	22	34	315[3] 200[3]	27	42 30	400	350	450 5	300	200	31.5	22	430	351 329	515	558

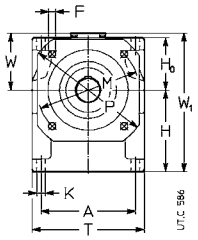


MR 3I 63 ... 81 + MR 2I, 3I ...





MR 3I 100 ... 180 + R 2I, 3I ...



Size gear reducer final	Size gear reducer initial	Size motor B5	A	B / B_1	C	D Ø	E	F Ø	G	G_1	H h11 / H_0 h11	K Ø	L / L_1	M Ø h6	N Ø	P Ø / Q 0 +2	R	S	T	U / U_1	P_0 Ø	P_1 Ø	X Ø	Y 4)	Y_1 4)	W	W_1	Massa Mass lb 5)	4)
MR 3I 63 64	**MR 2I, 3I 40**	**63**	153	96	36.5	32	58	11.5	271	19	132	14	20	165	130	200	16	12	182	136	160	140	123	189	244	537	592	95	227	60	75
		71		66		**(63)**					85		14			3.5				124		160	138	216	278	564	626	112	244	60	84
						38																								77	
						(64)																									
MR 3I 80 81	**MR 2I, 3I 40**	**63**	192	123	43	38	80	14	310	22	160	16	24	215	180	250	19	14	226	171	160	140	123	189	244	601	656	95	266	93	104	108
		71		87		**(80)**					106		17			4				157		160	138	216	278	628	690	112	272	93	110	117
		80[B5A]				48																160	156	254	323	666	735	121	281	93	119	128
						(81)																									
MR 3I 100 101	**MR 2I, 3I 50**	**63**	240	160	51.5	48	82	14	386	27	195	18	28.5	265	230	300	22.5	16	280	214	200	140	123	189	244	684	739	95	327	163	174	179
		71		119		**(100)**					132		20			4				198		160	138	216	278	711	773	112	327	163	181	187
		80				55																200	156	233	302	728	797	121	327	163	190	198
		90				**(101)**																200	176	287	366	782	861	141	336	163	205	218
MR 3I 125 126	**MR 2I, 3I 63**	**71**	297	200	59	60	105	18	474	30	236	22	35	300	250	350	26.5	19	345	264	250	160	138	216	278	825	887	112	396	287	304	311
		80		151		**(125)**					160		25			5				245		200	156	233	302	842	911	121	396	287	313	322
		90				70																200	176	287	366	896	975	141	396	287	328	342
		100				**(126)**																250	194	310	405	919	1014	151	396	287	344	357
MR 3I 140	**MR 2I, 3I 63**	**71**	297	218	59	80	130	18	492	30	250	22	35	300	250	350	26.5	19	345	282	250	160	138	216	278	868	930	112	410	315	333	340
		80		169							160		25			5				263		200	156	233	302	885	954	121	410	315	342	351
		90									1)											200	176	287	366	939	1018	141	410	315	357	370
		100																				250	194	310	405	962	1057	151	410	315	373	386
		112																				250	218	336	435	988	1087	163	410	315	392	412
MR 3I 160	**MR 2I, 3I 80**	**80**	373	250	68.5	90	130	22	585	34	295	27	42	400	350	450	31.5	22	430	326	300	200	156	233	302	982	1051	121	495	507	534	542
		90		191							200		30			5				304		200	176	287	366	1036	1115	141	495	507	549	562
		100									2)											250	194	310	405	1059	1154	151	495	507	564	578
		112																				250	218	336	435	1085	1184	163	495	507	584	604
		132							588													300	257	445	553	1197	1305	194	495	507	659	686
MR 3I 180	**MR 2I, 3I 80**	**80**	373	275	68.5	100	165	22	610	37	315	27	42	400	350	450	31.5	22	430	351	300	200	156	233	302	1045	1114	121	515	558	584	593
		90		216							200		30			5				329		200	176	287	366	1099	1178	141	515	558	600	613
		100									3)											250	194	310	405	1122	1217	151	515	558	615	628
		112																				250	218	336	435	1148	1247	163	515	558	635	655
		132							613													300	257	445	553	1260	1368	194	515	558	710	736

See notes on page 52.

Radial loads[1] F_{r1} [daN] on high speed shaft end 3.11

Radial loads generated on the shaft end by a drive connecting gear reducer and motor must be less than or equal to those given in the relevant table.
The radial load F_{r1} given by the following formula refers to most common drives:

$$F_{r1} = \frac{189{,}090 \cdot P_1}{d \cdot n_1}\ [\text{lb}] \quad \text{for timing belt drive}$$

$$F_{r1} = \frac{345{,}050 \cdot P_1}{d \cdot n_1}\ [\text{lb}] \quad \text{for V-belt drive}$$

where: P_1 [hp] is power required at the input side of the gear reducer, n_1 [rpm] is the speed, d [in] is the pitch diameter.

Radial loads given in the table are valid for overhung loads on centre line of high speed shaft end, i.e. operating at a distance of 0.5 · e (e = shaft end length) from the shoulder. If they operate at 0.315 · e multiply by 1.25; if they operate at 0.8 · e multiply by 0.8.

	Gear reducer																
	32	40		50	50		63	63		80	80	100, 101		125, 126, 140		160, 180	
			51 $i_N \le 12{,}5$	51 $i_N \ge 16$	51	64 $i_N \le 12{,}5$	64 $i_N \ge 16$	64	81 $i_N \le 12{,}5$	81 $i_N \ge 16$	81						
n_1 rpm	R 2I	R 2I	R 2I	R 2I	R 3I	R 2I	R 2I	R 3I	R 2I	R 2I	R 3I	R 2I	R 3I	R2I	R 3I	R 2I	R 3I
1 400	11.2	17	42.5	26.5	17	67	42.5	26.5	106	67	42.5	170	67	265	170	425	265
1 120	11.8	18	45	28	18	71	45	28	112	71	45	180	71	280	180	450	280
900	12.5	19	47.5	30	19	75	47.5	30	118	75	47.5	190	75	300	190	475	300
710	14	21.2	53	33.5	21.2	85	53	33.5	132	85	53	212	85	335	212	530	335
560	15	22.4	56	35.5	22.4	90	56	35.5	140	90	56	224	90	355	224	560	355
450	16	23.6	60	37.5	23.6	95	60	37.5	150	95	60	236	95	375	236	600	375
355	18	26.5	67	42.5	26.5	106	67	42.5	170	106	67	265	106	425	265	670	425

1) An axial load of up to 0.2 times the value in the table is permissible, simultaneously with the radial load. If exceeded consult us.

IMPORTANT: tabulated values for radial load F_{r1} can increase considerably in certain instances (direction of rotation, angular position of load, etc.). **Consult us** if need be.

Radial F_{r2} [lb] or axial loads F_{a2} [lb] on low speed shaft end 3.12

Axial loads F_{a2}

Permissible F_{a2} is shown in the column where direction of rotation of low speed shaft (black or white arrow) and direction of the axial force (solid or broken arrow) correspond to those of the gear reducer in question.
Wherever possible, choose the load conditions corresponding to the **column** with **highest** admissible values.

Radial loads F_{r2}

Radial loads generated on the shaft end by a drive connecting gear reducer and machine must be less than or equal to those given in the relevant table.

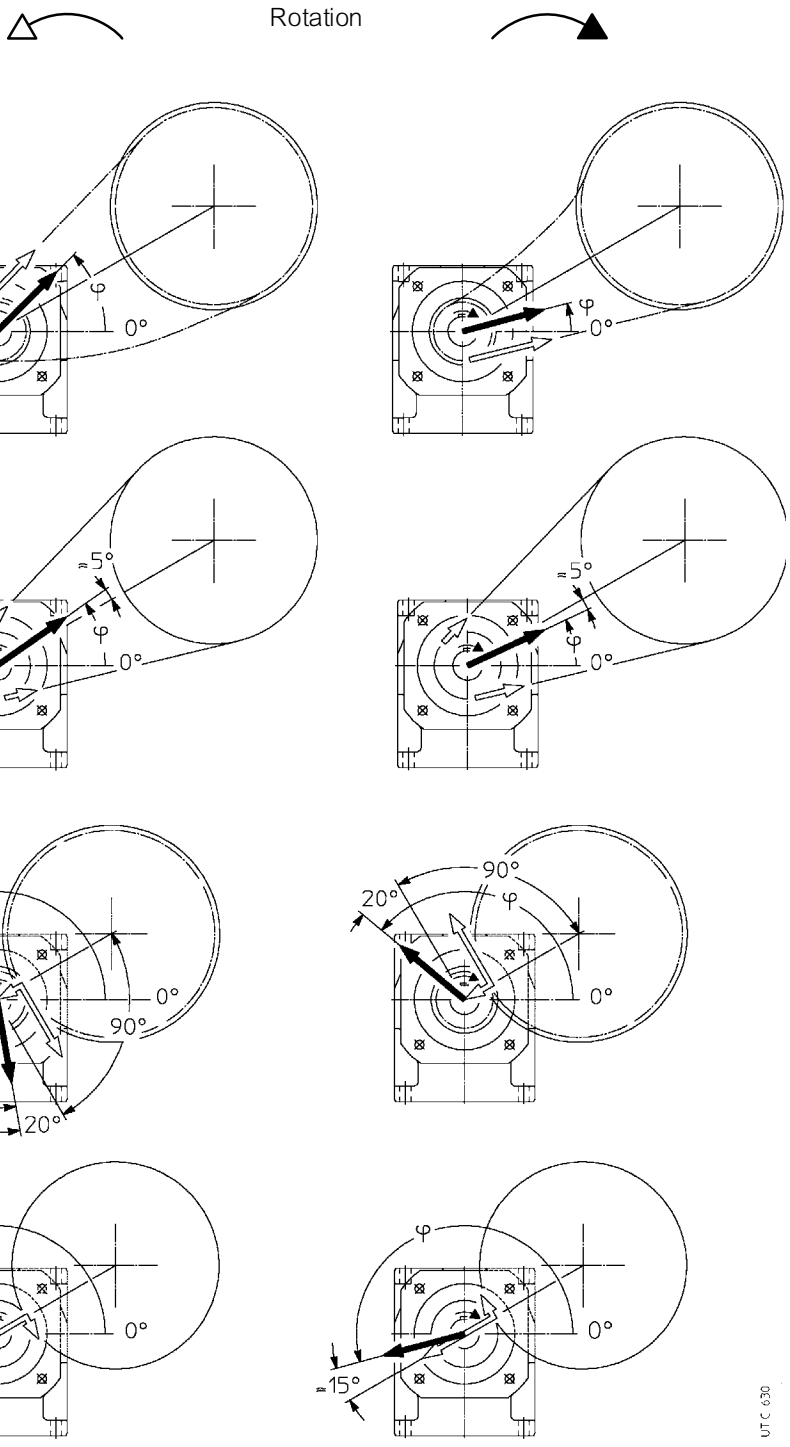
Normally, radial loads on low speed shaft ends are considerable: in fact there is a tendency to connect the gear reducer to the machine by means of a transmission with high transmission ratio (economizing on the gear reducer) and with small diameters (economizing on the drive, and for requirements dictated by overall dimensions).
Bearing life and wear (which also affect gears unfavourably) and low speed shaft strength, clearly impose limits on permissible radial load.

The high value which radial load may take on, and the importance of not exceeding permissible values, make it necessary to take full advantage of the gear reducer's possibilities.
Permissible radial loads given in the table are therefore based on: the product of speed n_2 [min^{-1}] multiplied by bearing life L_h [h] required, the direction of rotation, the angular position φ [°] of the load and torque M_2 [lb in] required.

Radial loads given in the table are valid for overhung loads on centre line of low speed shaft end, i.e. operating at a distance of 0.5 · E (E = shaft end length) from the shoulder. If operating at 0.315 · E multiply by 1.25; if operating at 0.8 · E multiply by 0.8.

Radial F_{r2} [lb] or axial loads F_{a2} [lb] on low speed shaft end 3.12

Radial load F_{r2} for most common drives has the following value and angular position:



$$F_{r2} = \frac{126{,}060 \cdot P_2}{d \cdot n_2} \text{ [lb]}$$

for chain drive (lifting in general); for timing belt drive replace 126,060 with 189,090

$$F_{r2} = \frac{315{,}050 \cdot P_2}{d \cdot n_2} \text{ [lb]}$$

for V-belt drive

$$F_{r2} = \frac{134{,}112 \cdot P_2}{d \cdot n_2} \text{ [lb]}$$

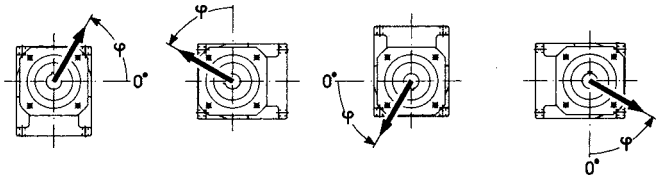
for spur gear pair drive

$$F_{r2} = \frac{447{,}546 \cdot P_2}{d \cdot n_2} \text{ [lb]}$$

for friction wheel drive (rubber-on-metal)

where: P_2 [hp] is power required at the output side of the gear reducer, n_2 [rpm] is the speed, d [in] is the pitch diameter.

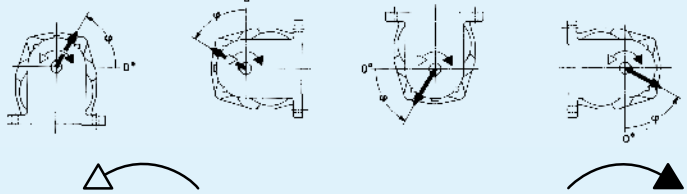
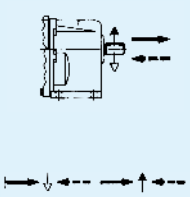
IMPORTANT: 0° coincides with a half line parallel to the bolted base of the housing as shown above, and therefore it follows the rotation of the housing, as shown below.



In the flanged design (sizes 32 ... 41), 0° remains in the same position, as per the same shape of the housing.

Radial F_{r2} [lb] or axial loads F_{a2} [lb] on low speed shaft end 3.12

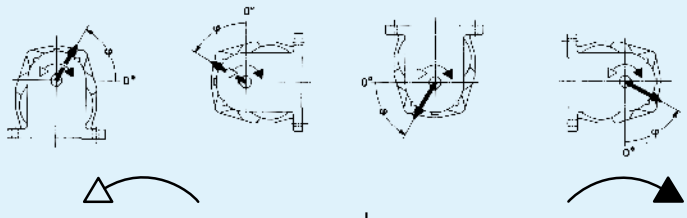
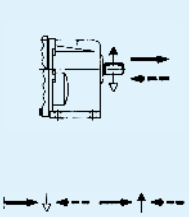
size **32**

$n_2 \cdot L_h$	T_2	F_{r2} [1) 2)]																F_{a2} [1)]			
																					
rpm h	lb in	0	45	90	135	180	225	270	315	0	45	90	135	180	225	270	315				
900,000	315	280	280	280	280	280	280	280	280	280	280	280	265	265	280	280	280	80	160	160	80
	224	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	80	160	160	80
	160	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	80	160	160	80
1,120,000	315	236	236	265	280	280	280	280	265	280	280	265	236	224	265	280	280	80	160	160	80
	224	250	250	280	280	280	280	280	280	280	280	280	250	236	280	280	280	80	160	160	80
	160	265	265	280	280	280	280	280	280	280	280	280	265	250	280	280	280	80	160	160	80
1,400,000	224	224	236	250	280	280	250	265	265	280	280	250	224	212	250	280	280	80	160	160	80
	160	236	250	265	280	280	280	280	280	280	280	265	236	224	265	280	280	80	160	160	80
	112	250	265	265	280	280	280	280	280	280	280	265	250	250	265	280	280	80	160	160	80
1,800,000	224	212	212	236	280	265	224	236	250	250	265	236	200	190	236	280	280	75	160	160	75
	160	224	224	250	280	280	280	280	250	280	280	236	224	212	236	265	280	80	160	160	80
	112	236	236	250	280	280	280	280	250	280	280	250	236	224	250	265	280	80	160	160	80
2,240,000	224	190	190	212	250	250	224	236	212	250	250	212	190	180	200	224	250	80	160	160	80
	160	200	200	224	265	265	224	250	224	265	265	224	200	190	224	250	280	80	160	160	80
	112	212	212	224	265	265	265	250	236	280	265	224	212	200	224	250	280	80	160	160	80
2,800,000	224	160	180	190	250	250	200	212	190	212	212	200	160	170	190	236	250	80	160	160	80
	160	180	190	200	250	250	212	224	212	236	236	200	180	180	200	236	265	80	160	160	80
	112	200	200	212	236	250	250	236	224	265	250	212	200	190	212	236	265	80	160	160	80
3,550,000	160	170	180	190	236	224	190	200	200	212	212	190	170	160	190	212	236	80	150	160	71
	112	180	190	200	224	236	224	212	200	236	236	200	180	180	200	212	236	80	160	160	80
4,500,000	160	150	160	180	212	190	170	180	180	180	200	170	150	140	180	200	224	80	140	160	56
	112	170	170	180	212	224	200	200	190	212	212	180	170	160	180	200	224	80	140	160	80
5,600,000	112	150	150	170	190	200	180	190	170	190	200	170	150	140	170	190	212	80	132	160	71
max									**280**									**80**	**160**	**160**	**80**

1) An axial load of up 0,2 times the value in the table is permissible, simultaneously with the radial load and vice versa. If exceeded consult us.

Radial F_{r2} [lb] or axial loads F_{a2} [lb] on low speed shaft end

size **40**

$n_2 \cdot L_h$	T_2	F_{r2} [1) 2)]								F_{a2} [1)]											
																					
rpm h	lb in	0	45	90	135	180	225	270	315	0	45	90	135	180	225	270	315				
710,000	630	335	315	375	450	375	300	355	375	355	400	375	335	300	355	400	450	250	125	125	250
	450	355	355	400	450	450	400	425	400	450	450	400	355	335	375	450	450	250	125	125	250
	315	375	400	425	450	450	450	450	425	450	450	425	375	375	400	450	450	250	125	125	250
900,000	630	335	335	375	450	400	355	375	375	400	425	355	335	315	375	450	375	250	100	125	250
	450	355	355	375	450	450	425	425	400	450	450	375	355	335	375	425	450	250	125	125	250
	315	375	375	400	450	450	450	425	400	450	450	400	375	355	400	425	450	250	125	125	250
1,120,000	630	280	300	315	450	315	280	265	315	315	355	315	280	265	315	375	425	250	67	125	250
	450	300	315	335	450	355	315	315	355	355	375	335	300	280	335	400	450	250	125	125	250
	315	315	335	355	425	425	375	400	355	400	400	355	315	315	355	400	450	250	125	125	250
1,400,000	450	265	280	315	400	315	265	280	335	315	335	300	265	236	315	375	425	250	125	125	250
	315	300	300	335	400	375	335	355	335	375	355	315	300	280	335	375	400	250	125	125	250
	224	315	315	335	375	400	400	355	335	400	375	335	315	300	335	355	400	250	125	125	250
1,800,000	450	236	250	300	375	280	224	236	300	265	300	280	236	212	280	335	375	250	100	125	250
	315	265	250	300	355	355	300	315	315	335	335	300	265	250	300	335	375	250	125	125	250
	224	280	300	315	355	375	355	335	315	375	355	315	280	280	315	335	375	250	125	125	250
2,240,000	450	212	236	265	315	300	236	250	265	265	300	250	212	200	250	300	315	250	63	125	250
	315	236	250	280	335	315	265	280	280	300	315	265	236	224	280	315	355	250	125	125	250
	224	265	265	280	335	335	315	315	300	335	335	280	265	250	280	315	355	250	125	125	250
2,800,000	450	212	212	236	300	250	180	190	236	224	250	236	200	180	224	280	300	250	45	125	236
	315	224	224	250	315	280	224	236	265	265	280	250	212	200	250	300	335	250	112	125	250
	224	236	236	265	315	315	280	300	265	315	315	265	236	224	265	300	335	250	125	125	250
3,550,000	315	200	212	236	300	236	200	212	236	236	250	224	190	180	224	280	315	250	90	125	224
	224	212	224	236	300	300	250	265	250	280	280	236	212	200	236	280	300	250	125	125	224
4,500,000	315	180	190	212	280	212	180	180	224	212	224	200	180	160	212	250	300	250	67	125	200
	224	200	200	224	265	265	224	236	224	250	250	212	200	190	224	250	280	250	112	125	212
5,600,000	224	180	190	200	250	236	200	212	212	224	224	200	180	170	200	236	265	250	90	125	180
max									**450**									**250**	**125**	**125**	**250**

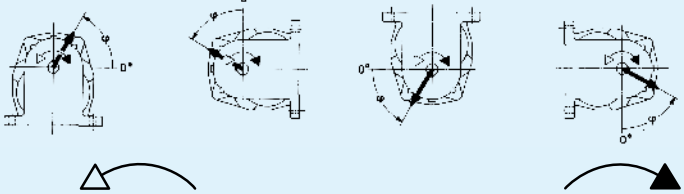
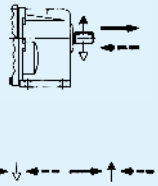
size **41**

710,000	630	475	475	530	560	425	335	400	500	400	450	500	450	450	500	560	500	315	150	160	315
	450	500	500	530	560	560	530	560	530	560	560	530	475	475	500	560	560	315	160	160	315
	315	500	500	530	560	560	560	560	530	560	560	530	500	500	530	560	560	315	160	160	315
900,000	630	425	425	475	560	450	400	425	475	450	475	475	400	400	450	530	425	315	150	160	315
	450	450	450	500	560	560	475	530	475	500	560	475	450	425	475	530	560	315	160	160	315
	315	475	475	500	530	560	560	530	500	560	560	500	475	450	475	530	560	315	160	160	315
1,120,000	630	375	375	425	500	355	315	300	425	355	400	425	355	355	400	500	475	315	106	160	315
	450	400	425	450	500	475	375	450	450	425	475	450	400	400	425	500	530	315	160	160	315
	315	425	425	450	500	530	530	500	450	530	500	450	425	425	450	500	530	315	160	160	315
1,400,000	450	375	375	425	475	400	315	375	400	355	425	400	355	355	400	475	475	315	160	160	315
	315	400	400	425	475	500	475	450	425	500	475	425	375	375	400	450	500	315	160	160	315
	224	400	400	425	450	475	475	450	425	475	475	425	400	400	425	450	475	315	160	160	315
1,800,000	450	355	355	375	450	335	250	315	375	315	355	375	335	335	355	425	425	315	150	160	315
	315	355	355	400	425	450	400	425	375	450	450	375	355	355	375	425	475	315	160	160	315
	224	375	375	400	425	450	450	425	400	450	425	400	375	375	375	425	450	315	160	160	315
2,240,000	450	315	315	355	400	335	265	280	335	300	335	335	300	300	335	400	355	315	106	160	315
	315	335	335	355	400	425	355	400	355	375	400	355	335	315	355	400	425	315	160	160	315
	224	355	355	355	400	400	400	375	355	425	400	355	335	335	355	375	425	315	160	160	315
2,800,000	450	300	300	335	375	280	200	236	315	250	280	315	265	280	300	355	335	315	150	160	280
	315	315	315	335	375	355	300	335	335	335	375	335	300	300	315	355	400	315	160	160	300
	224	315	315	335	355	375	375	355	335	400	375	335	315	315	335	355	400	315	160	160	315
3,550,000	315	280	280	315	355	315	250	280	300	280	315	315	265	265	300	335	355	315	125	160	265
	224	300	300	315	335	355	355	335	315	375	355	315	300	280	315	335	355	315	160	160	300
4,500,000	315	250	265	280	335	250	200	236	280	236	265	280	250	236	265	315	335	315	100	160	236
	224	265	280	300	315	335	315	315	280	335	335	300	265	265	280	315	335	315	160	160	265
5,600,000	224	250	265	280	300	315	300	300	265	300	315	280	250	250	250	300	315	315	140	160	236
max									**560**									**315**	**160**	**160**	**315**

1) An axial load of up 0,2 times the value in the table is permissible, simultaneously with the radial load and vice versa. If exceeded consult us.

Radial F_{r2} [daN] or axial loads F_{a2} [daN] on low speed shaft end 3.12

size **50**

$n_2 \cdot L_h$	T_2	F_{r2} [1) 2)]								F_{a2} [1)]											
																					
rpm h	lb in	0	45	90	135	180	225	270	315	0	45	90	135	180	225	270	315				
710,000	1 120	670	630	670	750	630	630	800	800	500	750	800	750	670	670	750	500	224	450	450	224
	800	710	670	750	800	710	710	800	800	710	800	750	800	710	710	750	670	224	450	450	224
	1 120	630	560	600	710	530	530	800	750	400	630	800	670	600	630	630	400	224	450	450	224
900,000	800	670	630	670	710	710	750	800	750	630	800	750	710	630	670	710	630	224	450	450	224
	560	670	670	670	750	800	800	800	750	800	800	750	710	670	670	710	800	224	450	450	224
	1 120	560	500	530	600	425	450	670	670	315	500	710	600	560	560	500	315	224	450	450	170
1,120,000	800	600	560	600	670	630	630	800	710	560	750	710	630	600	600	670	560	224	450	450	224
	560	630	600	630	670	710	710	750	710	710	750	710	670	630	630	670	710	224	450	450	224
	800	560	500	530	630	560	560	750	630	475	670	670	600	530	560	600	475	224	450	450	224
1,400,000	560	600	560	560	630	710	710	710	630	630	710	670	600	560	600	630	630	224	450	450	224
	400	600	560	600	630	670	710	710	630	710	670	670	630	600	600	630	670	224	450	450	224
	800	500	450	475	560	475	475	670	600	375	560	630	530	500	500	560	400	224	450	450	212
1,800,000	560	530	500	530	600	630	630	670	600	560	670	630	560	530	530	560	560	224	450	450	224
	400	560	530	530	600	630	670	630	600	630	630	600	560	560	560	600	630	224	450	450	224
	800	450	400	425	530	400	400	600	530	315	475	560	500	450	450	475	315	224	450	450	150
2,240,000	560	475	450	475	530	530	560	630	560	475	630	560	500	475	475	530	475	224	450	450	224
	400	500	475	500	530	600	630	600	560	600	600	560	530	500	500	530	560	224	450	450	224
	800	400	375	400	450	335	335	530	500	250	375	530	450	400	425	400	250	224	400	450	112
2,800,000	560	450	400	425	500	475	500	600	500	425	560	530	475	450	450	475	425	224	400	450	224
	400	475	450	450	500	560	600	560	500	530	560	530	475	450	475	500	530	224	450	450	224
	560	400	375	400	450	425	425	530	475	355	500	475	425	400	400	450	355	224	375	450	180
3,550,000	400	425	400	425	450	500	530	530	475	475	530	475	450	425	425	450	475	224	400	450	224
	560	355	335	355	425	355	375	500	425	300	425	450	400	355	375	400	300	224	335	450	140
4,500,000	400	375	355	375	425	450	475	475	450	425	475	450	400	375	375	425	425	224	355	450	212
	560	335	315	315	375	315	315	450	400	250	355	425	355	335	335	355	250	224	315	450	112
5,600,000	400	355	335	335	375	400	425	450	400	355	450	425	375	355	355	375	375	224	335	450	180
max									**800**									**224**	**450**	**450**	**224**

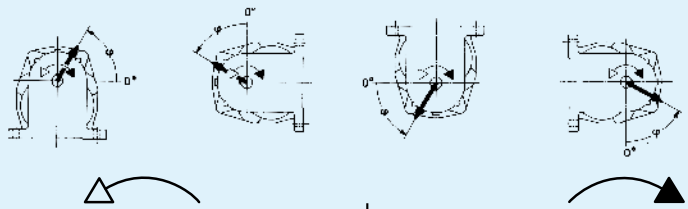
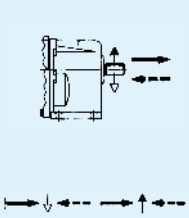
size **51**

450,000	1 600	850	800	850	950	950	950	950	950	950	950	950	950	850	850	950	950	265	530	530	265
	1 120	850	800	800	950	950	950	950	950	950	950	950	900	850	850	950	950	265	530	530	265
560,000	1 600	710	630	670	850	800	850	950	900	630	950	950	800	710	710	850	630	265	530	530	265
	1 120	750	710	750	850	950	950	950	900	950	950	950	850	750	750	850	950	265	530	530	265
	800	800	750	800	900	950	950	950	900	950	950	950	850	800	800	850	950	265	530	530	265
710,000	1 600	630	560	600	750	670	710	950	850	500	800	900	710	630	630	750	500	265	530	530	265
	1 120	710	630	670	800	950	950	950	850	900	950	900	750	710	710	800	900	265	530	530	265
	800	750	710	710	800	900	950	950	850	950	950	850	800	750	750	800	900	265	530	530	265
900,000	1 600	560	500	530	710	530	560	900	750	355	600	800	630	560	600	630	355	265	530	530	180
	1 120	630	600	630	750	900	900	900	750	750	900	800	710	630	630	710	750	265	530	530	265
	800	670	630	670	750	850	900	900	800	900	850	800	710	670	670	750	850	265	530	530	265
1,120,000	1 600	500	425	475	630	425	450	750	670	224	425	750	600	500	530	425	224	265	530	530	100
	1 120	600	530	560	670	750	800	850	710	630	850	750	630	560	600	670	630	265	530	530	265
	800	630	560	600	670	800	850	850	710	850	800	750	670	630	630	670	750	265	530	530	265
1,400,000	1 120	530	475	500	630	630	670	800	670	530	800	710	600	530	530	600	530	265	530	530	265
	800	560	530	560	630	750	800	750	670	750	750	670	600	560	560	630	710	265	530	530	265
	560	600	560	600	630	710	750	750	670	750	750	670	630	600	600	630	710	265	530	530	265
1,800,000	1 120	475	425	450	560	560	560	750	600	425	670	630	530	475	475	560	425	265	530	530	200
	800	530	475	500	600	710	750	710	630	670	710	630	560	500	530	600	670	265	530	530	265
	560	560	530	530	600	670	710	710	630	710	670	630	600	560	560	600	670	265	530	530	265
2,240,000	1 120	425	375	400	500	450	475	710	560	315	500	600	475	425	425	500	315	265	530	530	132
	800	475	425	450	530	630	670	670	560	560	670	600	500	475	475	530	560	265	530	530	265
	560	500	475	475	560	630	670	630	560	630	630	600	530	500	500	530	600	265	530	530	265
2,800,000	1 120	375	335	355	475	355	375	600	500	224	400	560	450	375	400	400	224	265	475	530	90
	800	425	375	400	500	560	600	630	530	475	630	560	475	425	425	475	475	265	530	530	224
	560	450	425	450	500	600	630	600	530	600	600	560	475	450	450	500	560	265	530	530	265
3,550,000	800	375	355	375	450	500	500	600	475	400	600	500	425	375	400	450	400	265	475	530	180
	560	425	375	400	475	560	600	560	500	560	560	500	450	425	425	475	530	265	500	530	265
4,500,000	800	355	315	335	425	400	425	560	450	315	500	475	375	355	355	400	315	265	425	530	125
	560	375	355	375	425	500	560	530	450	500	530	475	400	375	375	425	475	265	450	530	236
5,600,000	800	315	280	300	375	335	355	530	400	250	400	425	355	315	315	375	250	265	375	530	90
	560	355	315	335	400	475	530	500	425	450	475	425	375	335	355	375	450	265	400	530	190
max									**950**									**265**	**530**	**530**	**265**

1) An axial load of up 0,2 times the value in the table is permissible, simultaneously with the radial load and vice versa. If exceeded consult us.

Radial F_{r2} [daN] or axial loads F_{a2} [daN] on low speed shaft end 3.12

size **63**

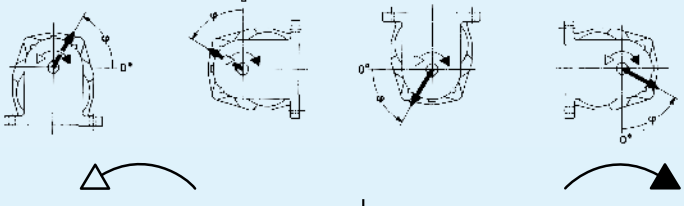
$n_2 \cdot L_h$	T_2	F_{r2} [1) 2)]								F_{a2} [1)]											
																					
rpm h	lb in	0	45	90	135	180	225	270	315	0	45	90	135	180	225	270	315				
450,000	2 240	1 000	1 120	1 180	1 180	800	850	1 180	1 060	1 000	1 180	1 000	950	1 060	1 180	1 180	1 060	670	335	335	670
560,000	2 240	950	1 060	1 180	1 000	630	670	1 060	950	850	1 060	900	850	950	1 180	1 180	900	670	335	335	670
	1 600	1 000	1 060	1 180	1 180	1 060	1 060	1 120	1 000	1 180	1 120	950	950	1 000	1 180	1 180	1 180	670	335	335	670
710,000	2 240	850	950	1 120	800	475	500	850	850	710	1 000	800	750	850	1 060	1 120	710	670	335	335	670
	1 600	900	1 000	1 120	1 180	900	950	1 000	950	1 060	1 000	900	850	950	1 120	1 180	1 060	670	335	335	670
900,000	2 240	800	900	1 060	560	335	335	630	800	560	850	750	670	800	1 000	900	560	670	265	335	670
	1 600	850	900	1 060	1 060	750	750	950	850	900	950	800	800	850	1 000	1 120	950	670	335	335	670
	1 120	900	950	1 000	1 120	1 060	1 060	950	900	1 060	950	900	850	900	1 000	1 120	1 120	670	335	335	670
1,120,000	2 240	710	800	950	355	236	250	400	710	400	670	670	630	710	900	750	425	670	170	335	670
	1 600	750	850	950	900	630	630	850	750	750	850	750	710	750	950	1 120	800	670	335	335	670
	1 120	800	850	950	1 000	950	950	900	800	1 000	900	800	750	850	950	1 060	1 060	670	335	335	670
1,400,000	1 600	710	750	900	750	500	500	800	710	670	800	670	630	710	850	950	670	670	315	335	670
	1 120	750	800	900	950	850	850	800	750	950	850	710	710	750	900	1 000	950	670	335	335	670
	800	800	850	900	950	950	900	850	800	900	850	750	750	800	900	950	950	670	335	335	670
1,800,000	1 600	630	710	850	600	375	400	670	630	530	750	600	560	630	800	850	560	670	236	335	670
	1 120	670	750	850	900	710	710	750	710	850	750	670	630	710	800	900	850	670	335	335	670
	800	710	750	850	900	900	850	750	710	850	750	710	670	710	800	900	900	670	335	335	670
2,240,000	1 600	560	630	750	450	265	280	500	560	425	630	530	500	600	750	710	425	670	160	335	630
	1 120	630	670	750	850	600	600	670	630	710	710	600	600	630	750	850	710	670	335	335	670
	800	670	710	750	800	800	750	710	670	800	710	630	630	670	750	850	850	670	335	335	670
2,800,000	1 600	530	600	710	300	160	170	335	530	335	500	475	450	530	670	560	335	670	112	335	600
	1 120	560	630	710	710	500	500	630	560	600	630	560	530	600	670	800	630	670	280	335	630
	800	600	630	710	750	710	710	630	600	750	670	600	560	600	710	750	800	670	335	335	630
3,550,000	1 120	530	560	670	600	400	425	600	530	530	600	500	475	530	630	750	530	670	224	335	560
	800	560	600	670	710	630	630	600	560	710	600	530	530	560	630	710	710	670	335	335	600
4,500,000	1 120	475	530	630	500	315	335	530	475	425	530	450	425	475	600	670	450	670	170	335	500
	800	500	530	600	670	530	530	560	500	600	560	500	475	500	600	670	630	670	280	335	530
5,600,000	1 120	425	475	560	375	236	250	425	425	355	500	400	375	425	530	560	355	670	118	335	450
	800	450	500	560	630	450	450	500	475	530	500	450	425	475	560	630	530	670	224	335	475
max								**1180**										**670**	**335**	**335**	**670**

size **64**

335,000	3 150	1 320	1 500	1 500	1 500	1 120	1 180	1 500	1 320	1 400	1 500	1 250	1 180	1 320	1 500	1 500	1 500	850	425	425	850
450,000	3 150	1 180	1 320	1 500	1 320	900	900	1 320	1 180	1 180	1 320	1 120	1 060	1 180	1 500	1 500	1 180	850	425	425	850
	2 240	1 250	1 400	1 500	1 500	1 500	1 500	1 400	1 250	1 500	1 400	1 250	1 180	1 250	1 500	1 500	1 500	850	425	425	850
560,000	3 150	1 060	1 180	1 500	1 060	670	670	1 180	1 060	950	1 250	1 000	950	1 060	1 400	1 500	1 000	850	425	425	850
	2 240	1 180	1 250	1 400	1 500	1 250	1 250	1 250	1 180	1 500	1 320	1 120	1 060	1 180	1 400	1 500	1 500	850	425	425	850
	1 600	1 250	1 320	1 400	1 500	1 500	1 400	1 320	1 250	1 500	1 320	1 180	1 180	1 250	1 400	1 500	1 500	850	425	425	850
710,000	3 150	950	1 120	1 320	800	450	475	900	1 000	750	1 120	900	850	1 000	1 250	1 250	800	850	375	425	850
	2 240	1 060	1 180	1 320	1 500	1 060	1 120	1 180	1 060	1 250	1 180	1 000	1 000	1 060	1 320	1 500	1 320	850	425	425	850
	1 600	1 120	1 180	1 320	1 400	1 400	1 320	1 250	1 120	1 400	1 250	1 120	1 060	1 120	1 320	1 500	1 500	850	425	425	850
900,000	3 150	900	1 000	1 250	500	265	265	560	900	560	900	800	750	900	1 180	1 000	600	850	236	425	850
	2 240	950	1 060	1 250	1 250	900	900	1 120	950	1 120	1 120	950	900	1 000	1 180	1 400	1 120	850	425	425	850
	1 600	1 000	1 120	1 250	1 320	1 250	1 250	1 120	1 060	1 320	1 120	1 000	950	1 060	1 180	1 320	1 400	850	425	425	850
1,120,000	3 150	800	900	1 180	425	224	236	280	800	400	670	710	670	800	1 060	750	400	850	118	425	850
	2 240	900	1 000	1 180	1 060	710	710	1 000	900	900	1 000	850	800	900	1 120	1 320	950	850	425	425	850
	1 600	950	1 000	1 120	1 250	1 120	1 120	1 000	950	1 180	1 060	900	900	950	1 120	1 250	1 250	850	425	425	850
1,400,000	2 240	800	900	1 060	900	560	560	900	800	750	950	750	710	800	1 000	1 180	800	850	355	425	850
	1 600	850	950	1 060	1 180	950	1 000	950	900	1 120	950	850	800	900	1 060	1 180	1 120	850	425	425	850
	1 120	900	950	1 060	1 120	1 120	1 060	950	900	1 120	1 000	900	900	950	1 060	1 120	1 180	850	425	425	850
1,800,000	2 240	750	850	1 000	670	400	425	750	750	630	850	670	630	750	950	1 000	630	850	265	425	850
	1 600	800	900	1 000	1 120	850	850	900	800	950	900	750	750	800	950	1 120	1 000	850	425	425	850
	1 120	850	900	1 000	1 060	1 060	1 000	900	850	1 000	900	850	800	850	950	1 060	1 120	850	425	425	850
2,240,000	2 240	670	750	950	450	250	265	500	670	475	750	600	560	670	900	800	500	850	160	425	850
	1 600	710	800	900	950	670	670	800	710	850	800	670	670	710	900	1 060	850	850	375	425	850
	1 120	750	850	900	950	1 000	900	850	750	950	850	750	710	800	900	1 000	1 000	850	425	425	850
2,800,000	2 240	600	670	850	375	224	236	265	600	355	560	530	500	600	800	630	355	850	90	425	750
	1 600	670	750	850	800	560	560	750	670	710	750	630	600	670	850	1 000	710	850	315	425	800
	1 120	710	750	850	900	900	850	750	710	900	800	670	670	750	850	950	950	850	425	425	850
3,550,000	1 600	600	670	800	670	425	450	670	600	600	670	560	530	600	750	900	600	850	236	425	710
	1 120	630	710	800	850	750	750	710	630	850	710	630	600	670	750	900	900	850	400	425	750
4,500,000	1 600	530	630	750	500	300	315	500	530	475	630	500	475	530	710	750	500	850	170	425	670
	1 120	600	630	750	800	630	670	630	600	750	670	560	530	600	710	800	750	850	335	425	670
5,600,000	1 600	475	560	670	315	250	265	335	475	375	560	450	425	475	630	630	375	850	100	400	600
	1 120	530	600	670	750	530	560	600	530	630	600	500	500	530	670	750	670	850	265	425	600
max								**1500**										**850**	**425**	**425**	**850**

Radial F_{r2} [lb] or axial loads F_{a2} [lb] on low speed shaft end

size **80**

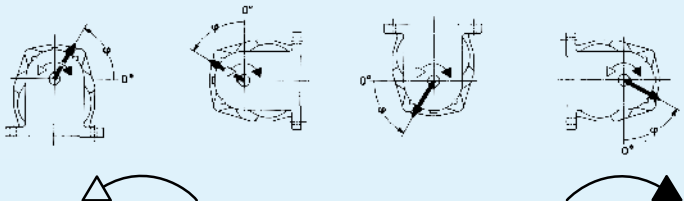
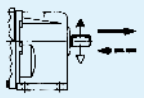
$n_2 \cdot L_h$	T_2	F_{r2} [1) 2)]								F_{a2} [1)]											
																					
rpm h	lb in	0	45	90	135	180	225	270	315	0	45	90	135	180	225	270	315				
355,000	4 500	1 800	1 600	1 700	1 800	1 600	1 700	1 800	1 800	1 320	1 800	1 800	1 800	1 700	1 700	1 800	1 320	500	1 000	1 000	500
	3 150	1 800	1 600	1 700	1 800	1 800	1 800	1 800	1 800	1 500	1 800	1 800	1 320	1 800	1 800	1 800	1 500	500	1 000	1 000	500
450,000	4 500	1 600	1 400	1 500	1 800	1 320	1 400	1 800	1 800	1 060	1 600	1 800	1 700	1 600	1 600	1 700	1 060	500	1 000	1 000	500
	3 150	1 700	1 600	1 600	1 800	1 800	1 800	1 800	1 800	1 700	1 800	1 800	1 800	1 700	1 700	1 800	1 700	500	1 000	1 000	500
560,000	4 500	1 400	1 250	1 320	1 600	1 120	1 120	1 700	1 800	800	1 250	1 800	1 600	1 400	1 400	1 320	850	500	1 000	1 000	500
	3 150	1 500	1 400	1 500	1 700	1 600	1 700	1 800	1 800	1 400	1 800	1 800	1 700	1 500	1 500	1 700	1 400	500	1 000	1 000	500
	2 240	1 600	1 500	1 600	1 700	1 800	1 800	1 800	1 800	1 800	1 800	1 800	1 700	1 600	1 600	1 700	1 800	500	1 000	1 000	500
710,000	4 500	1 320	1 180	1 180	1 320	900	950	1 500	1 700	600	1 000	1 700	1 400	1 250	1 320	1 060	630	500	1 000	1 000	375
	3 150	1 400	1 250	1 320	1 500	1 400	1 400	1 800	1 700	1 180	1 700	1 700	1 500	1 400	1 400	1 500	1 250	500	1 000	1 000	500
	2 240	1 500	1 400	1 400	1 600	1 800	1 800	1 800	1 700	1 700	1 800	1 700	1 600	1 500	1 500	1 600	1 700	500	1 000	1 000	500
900,000	4 500	1 180	1 060	1 120	1 060	710	750	1 180	1 500	400	710	1 600	1 320	1 180	1 180	750	400	500	1 000	1 000	224
	3 150	1 250	1 180	1 180	1 400	1 250	1 250	1 700	1 500	1 000	1 400	1 600	1 400	1 250	1 250	1 400	1 000	500	1 000	1 000	500
	2 240	1 320	1 250	1 320	1 400	1 600	1 600	1 700	1 500	1 400	1 700	1 600	1 400	1 320	1 320	1 400	1 400	500	1 000	1 000	500
1,120,000	4 500	1 060	900	950	850	530	560	950	1 400	224	425	1 500	1 180	1 060	1 060	475	236	500	1 000	1 000	90
	3 150	1 180	1 060	1 120	1 250	1 000	1 060	1 500	1 400	850	1 180	1 500	1 250	1 180	1 180	1 250	850	500	1 000	1 000	500
	2 240	1 250	1 180	1 180	1 320	1 400	1 400	1 600	1 400	1 250	1 600	1 400	1 320	1 250	1 250	1 320	1 250	500	1 000	1 000	500
1,400,000	3 150	1 060	950	1 000	1 180	900	900	1 320	1 320	670	1 000	1 320	1 180	1 060	1 060	1 060	670	500	1 000	1 000	375
	2 240	1 120	1 060	1 120	1 250	1 250	1 250	1 500	1 320	1 120	1 400	1 320	1 180	1 120	1 120	1 250	1 120	500	1 000	1 000	500
	1 600	1 180	1 120	1 120	1 250	1 400	1 500	1 400	1 320	1 320	1 400	1 320	1 250	1 180	1 180	1 250	1 320	500	1 000	1 000	500
1,800,000	3 150	950	900	900	1 060	710	750	1 120	1 180	500	800	1 250	1 060	950	950	850	500	500	1 000	1 000	265
	2 240	1 060	950	1 000	1 120	1 060	1 120	1 400	1 180	950	1 250	1 250	1 120	1 060	1 060	1 120	950	500	1 000	1 000	500
	1 600	1 120	1 000	1 060	1 180	1 250	1 320	1 320	1 180	1 250	1 320	1 250	1 120	1 060	1 060	1 120	1 250	500	1 000	1 000	500
2,240,000	3 150	900	750	800	850	560	600	950	1 120	335	600	1 180	1 000	850	900	630	355	500	900	1 000	150
	2 240	950	900	900	1 060	950	950	1 250	1 120	800	1 120	1 180	1 000	950	950	1 000	800	500	1 000	1 000	450
	1 600	1 000	950	950	1 060	1 180	1 180	1 250	1 120	1 060	1 180	1 120	1 060	1 000	1 000	1 060	1 060	500	1 000	1 000	500
2,800,000	3 150	800	710	750	670	425	450	750	1 000	170	315	1 120	900	800	800	355	170	500	850	1 000	63
	2 240	630	800	850	950	800	850	1 120	1 060	670	950	1 060	950	850	850	950	670	500	900	1 000	335
	1 600	900	850	900	1 000	1 060	1 060	1 180	1 060	950	1 120	1 060	950	900	900	950	950	500	950	1 000	500
3,550,000	2 240	800	710	750	900	670	710	1 000	950	530	800	1 000	900	800	800	850	530	500	800	1 000	265
	1 600	850	800	800	900	950	950	1 060	950	850	1 060	1 000	900	850	850	900	850	500	850	1 000	450
4,500,000	2 240	710	630	670	800	560	600	900	900	400	630	950	800	710	710	670	425	500	710	900	180
	1 600	750	710	750	850	800	850	1 000	900	710	950	900	850	750	750	850	710	500	750	1 000	355
5,600,000	2 240	670	600	600	670	450	475	750	850	315	500	850	710	630	630	560	315	500	670	1 000	112
	1 600	710	630	670	750	710	710	950	850	600	850	850	750	710	710	750	600	500	670	1 000	300
max		**1 800**																**500**	**1 000**	**1 000**	**500**

size **81**

710,000	6 300	2 240	2 240	2 240	2 240	2 240	2 240	2 240	2 240	2 120	2 240	2 240	2 240	2 240	2 240	2 240	2 120	—	1 250	1 250	—
900,000	6 300	2 240	2 000	2 120	2 240	2 240	2 240	2 240	2 240	1 800	2 240	2 240	2 240	2 240	2 240	2 240	1 800	—	1 250	1 250	—
	4 500	2 240	2 240	2 240	2 240	2 240	2 240	2 240	2 240	2 240	2 240	2 240	2 240	2 240	2 240	2 240	2 240	—	1 250	1 250	—
1,120,000	6 300	2 000	1 900	1 900	2 240	2 120	2 120	2 240	2 240	1 320	2 000	2 240	2 240	2 000	2 000	2 240	1 400	—	1 250	1 250	—
	4 500	2 240	2 000	2 120	2 240	2 240	2 240	2 240	2 240	2 240	2 240	2 240	2 240	2 240	2 240	2 240	2 240	—	1 250	1 250	—
	3 150	2 240	2 240	2 240	2 240	2 240	2 240	2 240	2 240	2 240	2 240	2 240	2 240	2 240	2 240	2 240	2 240	—	1 250	1 250	—
1,400,000	4 500	2 000	1 900	2 000	2 240	2 240	2 240	2 240	2 240	2 240	2 240	2 240	2 240	2 000	2 000	2 240	2 240	—	1 250	1 250	—
	3 150	2 120	2 000	2 120	2 240	2 240	2 240	2 240	2 240	2 240	2 240	2 240	2 240	2 120	2 120	2 240	2 240	—	1 250	1 250	—
	2 240	2 240	2 120	2 120	2 240	2 240	2 240	2 240	2 240	2 240	2 240	2 240	2 240	2 240	2 240	2 240	2 240	—	1 250	1 250	—
1,800,000	4 500	1 900	1 800	1 800	2 120	2 240	2 240	2 240	2 240	2 000	2 240	2 240	2 000	1 900	1 900	2 000	2 000	—	1 250	1 250	—
	3 150	2 000	1 900	1 900	2 120	2 240	2 240	2 240	2 240	2 240	2 240	2 240	2 120	2 000	2 000	2 120	2 240	—	1 250	1 250	—
	2 240	2 000	2 000	2 000	2 120	2 240	2 240	2 240	2 240	2 240	2 240	2 240	2 120	2 000	2 000	2 120	2 240	—	1 250	1 250	—
2,240,000	4 500	1 800	1 600	1 700	1 900	2 000	2 000	2 240	2 120	1 500	2 120	2 120	1 900	1 700	1 700	1 900	1 500	—	1 250	1 250	—
	3 150	1 800	1 700	1 800	2 000	2 240	2 240	2 240	2 120	2 240	2 240	2 120	1 900	1 800	1 800	1 900	2 120	—	1 250	1 250	—
	2 240	1 900	1 800	1 900	2 000	2 240	2 240	2 240	2 120	2 240	2 240	2 120	2 000	1 900	1 900	2 000	2 120	—	1 250	1 250	—
2,800,000	4 500	1 600	1 400	1 500	1 800	1 800	1 800	2 240	1 900	1 250	1 800	2 000	1 800	1 600	1 600	1 800	1 250	—	1 250	1 250	—
	3 150	1 700	1 600	1 700	1 800	2 120	2 240	2 240	1 900	2 000	2 120	2 000	1 800	1 700	1 700	1 800	2 000	—	1 250	1 250	—
	2 240	1 800	1 700	1 700	1 900	2 000	2 120	2 120	1 900	2 120	2 120	2 000	1 800	1 800	1 800	1 900	2 000	—	1 250	1 250	—
3,550,000	3 150	1 600	1 500	1 500	1 700	2 000	2 000	2 000	1 800	1 800	2 000	1 900	1 700	1 600	1 600	1 700	1 900	—	1 250	1 250	—
	2 240	1 700	1 600	1 600	1 800	1 900	2 000	2 000	1 800	2 000	2 000	1 900	1 700	1 600	1 700	1 700	1 900	—	1 250	1 250	—
4,500,000	3 150	1 400	1 320	1 400	1 600	1 800	1 800	1 900	1 700	1 600	1 900	1 800	1 600	1 400	1 400	1 600	1 600	—	1 250	1 250	—
	2 240	1 500	1 400	1 500	1 600	1 800	1 900	1 900	1 700	1 900	1 800	1 700	1 600	1 500	1 500	1 600	1 800	—	1 250	1 250	—
5,600,000	3 150	1 320	1 250	1 250	1 500	1 600	1 600	1 800	1 600	1 400	1 800	1 600	1 400	1 320	1 320	1 500	1 400	—	1 250	1 250	—
	2 240	1 400	1 320	1 320	1 500	1 700	1 800	1 800	1 600	1 700	1 700	1 600	1 500	1 400	1 400	1 500	1 600	—	1 250	1 250	—
max		**2 800**																**—**	**1 250**	**1 250**	**—**

Radial F_{r2} [lb] or axial loads F_{a2} [lb] on low speed shaft end

size **100**

$n_2 \cdot L_h$	T_2	F_{r2} [1) 2)]								F_{a2} [1)]											
																					
rpm h	lb in	0	45	90	135	180	225	270	315	0	45	90	135	180	225	270	315				
280,000	9 000	2 800	2 800	2 800	2 800	2 240	2 240	2 800	2 800	2 800	2 800	2 800	2 800	2 800	2 800	2 800	2 800	1 600	800	800	1 600
355,000	9 000	2 650	2 800	2 800	2 650	1 800	1 900	2 800	2 650	2 360	2 800	2 500	2 500	2 800	2 800	2 800	2 360	1 600	800	800	1 600
450,000	9 000	2 500	2 800	2 800	2 120	1 400	1 400	2 360	2 360	1 900	2 800	2 240	2 240	2 500	2 800	2 800	2 000	1 600	800	800	1 600
	6 300	2 650	2 800	2 800	2 800	2 500	2 500	2 800	2 650	2 800	2 800	2 500	2 360	2 650	2 800	2 800	2 800	1 600	800	800	1 600
560,000	9 000	2 240	2 500	2 800	1 700	1 000	1 060	1 800	2 240	1 600	2 360	2 120	2 000	2 240	2 800	2 500	1 600	1 600	800	800	1 600
	6 300	2 360	2 650	2 800	2 800	2 000	2 120	2 500	2 360	2 500	2 650	2 240	2 240	2 360	2 800	2 800	2 500	1 600	800	800	1 600
	4 500	2 500	2 650	2 800	2 800	2 800	2 800	2 650	2 500	2 800	2 650	2 360	2 360	2 500	2 800	2 800	2 800	1 600	800	800	1 600
710,000	9 000	2 000	2 240	2 800	1 180	670	710	1 320	2 000	1 250	1 900	1 900	1 800	2 000	2 650	2 120	1 250	1 600	600	800	1 600
	6 300	2 120	2 360	2 650	2 500	1 800	1 800	2 360	2 120	2 120	2 360	2 120	2 000	2 240	2 650	2 800	2 120	1 600	800	800	1 600
	4 500	2 240	2 500	2 650	2 800	2 500	2 500	2 360	2 240	2 800	2 500	2 240	2 120	2 360	2 650	2 800	2 800	1 600	800	800	1 600
900,000	9 000	1 800	2 120	2 500	630	335	335	750	1 800	900	1 500	1 700	1 600	1 800	2 360	1 600	950	1 600	355	800	1 600
	6 300	2 000	2 240	2 500	2 000	1 400	1 400	2 120	2 000	1 800	2 240	1 900	1 800	2 000	2 360	2 650	1 800	1 600	800	800	1 600
	4 500	2 120	2 240	2 500	2 650	2 120	2 240	2 240	2 120	2 360	2 240	2 000	2 000	2 120	2 360	2 650	2 500	1 600	800	800	1 600
1,120,000	9 000	1 700	1 900	2 240	850	450	475	950	1 700	950	1 600	1 500	1 400	1 700	2 120	1 700	1 000	1 600	375	800	1 600
	6 300	1 800	2 000	2 360	1 700	1 120	1 120	1 800	1 800	1 500	2 000	1 700	1 700	1 800	2 240	2 240	1 500	1 600	750	800	1 600
	4 500	1 900	2 000	2 240	2 500	1 900	1 900	2 000	1 900	2 120	2 120	1 900	1 800	1 900	2 240	2 500	2 120	1 600	800	800	1 600
1,400,000	6 300	1 700	1 800	2 120	1 320	850	900	1 500	1 700	1 250	1 800	1 600	1 500	1 700	2 000	1 900	1 250	1 600	560	800	1 600
	4 500	1 800	1 900	2 120	2 120	1 600	1 700	1 900	1 800	1 900	1 900	1 700	1 700	1 800	2 120	2 360	1 900	1 600	800	800	1 600
	3 150	1 800	1 900	2 120	2 240	2 120	2 120	1 900	1 800	2 120	2 000	1 800	1 800	1 900	2 000	2 240	2 240	1 600	800	800	1 600
1,800,000	6 300	1 500	1 700	2 000	1 000	600	630	1 120	1 500	1 000	1 500	1 400	1 320	1 500	1 900	1 600	1 000	1 600	400	800	1 600
	4 500	1 600	1 800	2 000	1 900	1 320	1 400	1 800	1 600	1 700	1 800	1 600	1 500	1 700	1 900	2 240	1 700	1 600	800	800	1 600
	3 150	1 700	1 800	2 000	2 120	1 900	1 900	1 800	1 700	2 000	1 800	1 700	1 600	1 700	1 900	2 120	2 120	1 600	800	800	1 600
2,240,000	6 300	1 320	1 500	1 900	530	280	280	600	1 320	750	1 180	1 250	1 180	1 320	1 800	1 250	750	1 600	224	800	1 400
	4 500	1 500	1 600	1 800	1 600	1 120	1 120	1 600	1 500	1 400	1 600	1 400	1 320	1 500	1 800	2 000	1 400	1 600	630	800	1 500
	3 150	1 600	1 700	1 800	1 900	1 600	1 700	1 700	1 500	1 800	1 700	1 500	1 500	1 600	1 800	1 900	1 900	1 600	800	800	1 600
2,800,000	6 300	1 250	1 400	1 700	710	375	375	800	1 250	800	1 180	1 120	1 060	1 250	1 600	1 320	800	1 600	250	800	1 400
	4 500	1 320	1 500	1 700	1 320	900	950	1 400	1 320	1 180	1 500	1 250	1 250	1 320	1 700	1 700	1 180	1 600	500	800	1 320
	3 150	1 400	1 500	1 700	1 800	1 400	1 400	1 500	1 400	1 600	1 500	1 400	1 320	1 400	1 700	1 800	1 700	1 600	800	800	1 400
3,550,000	4 500	1 250	1 320	1 600	1 120	710	710	1 180	1 250	1 000	1 320	1 180	1 120	1 250	1 500	1 500	1 000	1 600	375	800	1 250
	3 150	1 320	1 400	1 600	1 700	1 250	1 250	1 400	1 320	1 400	1 400	1 250	1 250	1 320	1 500	1 700	1 400	1 600	670	800	1 250
4,500,000	4 500	1 120	1 250	1 500	850	500	530	950	1 120	800	1 180	1 060	1 000	1 120	1 400	1 250	800	1 600	265	800	1 120
	3 150	1 180	1 250	1 400	1 400	1 060	1 060	1 250	1 180	1 250	1 320	1 120	1 120	1 180	1 400	1 600	1 250	1 600	560	800	1 180
5,600,000	4 500	1 000	1 120	1 320	425	236	236	500	1 000	630	950	950	900	1 000	1 250	1 000	630	1 600	160	800	1 000
	3 150	1 060	1 180	1 320	1 250	850	900	1 180	1 060	1 060	1 180	1 060	1 000	1 120	1 320	1 500	1 060	1 600	450	800	1 060
max								**2 800**										**1 600**	**800**	**800**	**1 600**

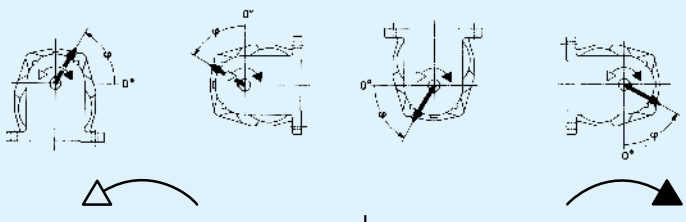
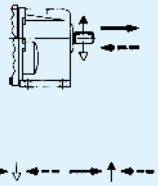
size **101**

560,000	12 500	3 550	3 550	3 550	3 550	2 800	2 800	3 550	3 550	3 550	3 550	3 550	3 550	3 550	3 550	3 550	3 550	2 000	—	—	2 000
710,000	12 500	3 550	3 550	3 550	3 350	2 120	2 240	3 550	3 550	3 550	3 550	3 550	3 350	3 550	3 550	3 550	3 550	2 000	—	—	2 000
900,000	12 500	3 350	3 550	3 550	2 500	1 600	1 600	2 800	3 350	3 000	3 550	3 150	3 150	3 350	3 550	3 550	3 000	2 000	—	—	2 000
	9 000	3 550	3 550	3 550	3 550	3 550	3 550	3 550	3 550	3 550	3 550	3 550	3 350	3 550	3 550	3 550	3 550	2 000	—	—	2 000
1,120,000	12 500	3 150	3 550	3 550	1 700	1 000	1 000	2 000	3 150	2 500	3 550	3 000	2 800	3 150	3 550	3 550	2 500	2 000	—	—	2 000
	9 000	3 350	3 550	3 550	3 550	3 150	3 350	3 550	3 350	3 550	3 550	3 150	3 150	3 350	3 550	3 550	3 550	2 000	—	—	2 000
	6 300	3 550	3 550	3 550	3 550	3 550	3 550	3 550	3 550	3 550	3 550	3 350	3 350	3 550	3 550	3 550	3 550	2 000	—	—	2 000
1,400,000	9 000	3 150	3 350	3 550	3 350	2 360	2 500	3 350	3 150	3 350	3 350	3 000	2 800	3 150	3 550	3 550	3 350	2 000	—	—	2 000
	6 300	3 150	3 350	3 550	3 550	3 550	3 550	3 350	3 150	3 550	3 550	3 150	3 150	3 350	3 550	3 550	3 550	2 000	—	—	2 000
	4 500	3 350	3 550	3 550	3 550	3 550	3 550	3 550	3 350	3 550	3 550	3 350	3 150	3 350	3 550	3 550	3 550	2 000	—	—	2 000
1,800,000	9 000	2 800	3 150	3 550	2 800	1 900	2 000	3 150	2 800	3 000	3 150	2 800	2 650	2 800	3 350	3 550	3 000	2 000	—	—	2 000
	6 300	3 000	3 150	3 550	3 550	3 350	3 550	3 150	3 000	3 550	3 350	3 000	2 800	3 000	3 350	3 550	3 550	2 000	—	—	2 000
	4 500	3 150	3 350	3 550	3 550	3 550	3 550	3 350	3 150	3 550	3 350	3 150	3 000	3 150	3 350	3 550	3 550	2 000	—	—	2 000
2,240,000	9 000	2 650	2 800	3 350	2 240	1 500	1 500	2 500	2 650	2 500	3 000	2 500	2 360	2 650	3 150	3 550	2 500	2 000	—	—	2 000
	6 300	2 800	3 000	3 350	3 550	3 000	3 150	3 000	2 800	3 350	3 000	2 650	2 650	2 800	3 150	3 550	3 350	2 000	—	—	2 000
	4 500	2 800	3 000	3 350	3 350	3 350	3 350	3 000	2 800	3 350	3 150	2 800	2 800	3 000	3 150	3 350	3 550	2 000	—	—	2 000
2,800,000	9 000	2 360	2 650	3 150	1 700	1 060	1 120	1 900	2 360	2 120	2 650	2 240	2 120	2 360	3 000	3 150	2 120	2 000	—	—	2 000
	6 300	2 500	2 800	3 150	3 350	2 650	2 650	2 800	2 500	3 000	2 800	2 500	2 360	2 650	3 000	3 350	3 150	2 000	—	—	2 000
	4 500	2 650	2 800	3 150	3 150	3 150	3 150	2 800	2 650	3 150	2 800	2 650	2 500	2 650	3 000	3 350	3 350	2 000	—	—	2 000
3,550,000	6 300	2 360	2 500	2 800	2 800	2 240	2 360	2 500	2 360	2 650	2 650	2 240	2 240	2 360	2 800	3 150	2 800	2 000	—	—	2 000
	4 500	2 500	2 650	280	3 000	3 000	2 800	2 650	2 500	3 000	2 650	2 360	2 360	2 500	2 800	3 150	3 150	2 000	—	—	2 000
4,500,000	6 300	2 120	2 360	2 650	2 360	1 700	1 800	2 360	2 120	2 360	2 360	2 120	2 000	2 240	2 650	3 000	2 360	2 000	—	—	2 000
	4 500	2 240	2 360	2 650	2 800	2 800	2 650	2 500	2 240	2 800	2 500	2 240	2 120	2 360	2 650	2 800	3 000	2 000	—	—	2 000
5,600,000	6 300	2 000	2 240	2 500	2 000	1 320	1 400	2 240	2 000	2 000	2 240	1 900	1 800	2 000	2 360	2 800	2 000	2 000	—	—	2 000
	4 500	2 120	2 240	2 500	2 650	2 360	2 500	2 240	2 120	2 650	2 240	2 000	2 000	2 120	2 360	2 650	2 800	2 000	—	—	2 000
max								**3 550**										**2 000**	**—**	**—**	**2 000**

1) An axial load of up to 2 times the value in the table is permissible (for size 101, only if it acts in the direction whose permissible values are given in the table), simultaneously with the radial load and vice versa. If exceeded consult us.

Radial F_{r2} [lb] or axial loads F_{a2} [lb] on low speed shaft end

size **125**

$n_2 \cdot L_h$	T_2	F_{r2} [1) 2)]								F_{a2} [1)]											
																					
rpm h	lb in	0	45	90	135	180	225	270	315	0	45	90	135	180	225	270	315				
560,000	18 000	4 500	4 500	4 500	4 500	4 500	4 500	4 500	4 500	4 250	4 500	4 500	4 500	4 500	4 250	3 750	3 750	1 250	2 500	2 500	1 250
710,000	18 000	4 500	4 500	4 500	4 500	4 500	4 500	4 500	4 500	3 750	4 250	4 500	4 500	4 500	3 750	3 350	3 350	1 250	2 500	2 500	1 250
900,000	18 000	4 500	4 000	4 000	4 500	4 500	4 500	4 500	4 500	3 350	3 750	4 000	4 500	4 250	3 150	2 800	3 000	1 250	2 500	2 500	1 250
	12 500	4 500	4 250	4 250	4 500	4 500	4 500	4 500	4 500	4 000	4 500	4 500	4 500	4 500	4 250	3 750	3 750	1 250	2 500	2 500	1 250
1,120,000	18 000	4 000	3 550	3 750	4 250	4 250	4 250	4 500	4 500	3 000	3 350	3 550	4 000	3 550	2 650	2 360	2 500	1 250	2 500	2 500	1 250
	12 500	4 250	4 000	4 000	4 500	4 500	4 500	4 500	4 500	3 550	4 000	4 250	4 500	4 250	3 750	3 350	3 350	1 250	2 500	2 500	1 250
	9 000	4 500	4 250	4 250	4 500	4 500	4 500	4 500	4 500	4 250	4 500	4 500	4 500	4 500	4 250	4 000	4 000	1 250	2 500	2 500	1 250
1,400,000	12 500	4 000	3 550	3 750	4 000	4 500	4 500	4 500	4 500	3 350	3 550	4 000	4 250	4 000	3 350	3 000	3 150	1 250	2 500	2 500	1 250
	9 000	4 000	3 750	3 750	4 250	4 500	4 500	4 500	4 500	3 750	4 000	4 500	4 250	4 000	4 000	3 550	3 550	1 250	2 500	2 500	1 250
	6 300	4 250	4 000	4 000	4 250	4 500	4 500	4 500	4 500	4 250	4 500	4 500	4 250	4 250	4 000	4 000	4 000	1 250	2 500	2 500	1 250
1,800,000	12 500	3 750	3 350	3 350	3 750	4 500	4 500	4 500	4 250	3 000	3 350	3 550	4 000	3 550	3 000	2 650	2 800	1 250	2 500	2 500	1 250
	9 000	3 750	3 550	3 550	3 750	4 250	4 500	4 500	4 250	3 550	3 750	4 000	4 000	3 750	3 550	3 350	3 350	1 250	2 500	2 500	1 250
	6 300	4 000	3 750	3 750	4 000	4 250	4 500	4 500	4 250	3 750	4 000	4 250	4 000	3 750	3 750	3 750	3 750	1 250	2 500	2 500	1 250
2,240,000	12 500	3 350	3 150	3 150	3 550	3 750	4 000	4 500	4 000	2 650	3 000	3 150	3 550	3 350	2 650	2 360	2 360	1 250	2 500	2 500	1 250
	9 000	3 550	3 350	3 350	3 550	4 000	4 250	4 250	4 000	3 150	3 350	3 550	3 750	3 550	3 350	3 000	3 000	1 250	2 500	2 500	1 250
	6 300	3 550	3 350	3 550	3 550	4 000	4 250	4 250	3 750	3 550	3 750	4 000	3 750	3 550	3 550	3 350	3 350	1 250	2 500	2 500	1 250
2,800,000	12 500	3 150	2 800	2 800	3 350	3 350	3 550	4 250	3 750	2 360	2 650	3 000	3 350	3 150	2 240	2 000	2 120	1 250	2 500	2 500	1 250
	9 000	3 350	3 150	3 150	3 350	3 750	4 000	4 000	3 750	2 800	3 150	3 350	3 550	3 350	3 000	2 650	2 650	1 250	2 500	2 500	1 250
	6 300	3 350	3 150	3 150	3 350	3 750	4 000	3 750	3 550	3 150	3 350	3 550	3 550	3 350	3 350	3 150	3 150	1 250	2 500	2 500	1 250
3,550,000	9 000	3 150	2 800	2 800	3 150	3 550	3 750	3 750	3 350	2 650	2 800	3 150	3 350	3 000	2 650	2 360	2 360	1 250	2 500	2 500	1 250
	6 300	3 150	3 000	3 000	3 150	3 550	3 750	3 550	3 350	3 000	3 150	3 350	3 350	3 150	3 150	2 800	2 800	1 250	2 500	2 500	1 250
4,500,000	9 000	2 800	2 650	2 650	3 000	3 350	3 550	3 550	3 150	2 360	2 500	2 800	3 000	2 800	2 360	2 120	2 120	1 250	2 500	2 500	1 250
	6 300	3 000	2 800	2 800	3 000	3 350	3 550	3 350	3 150	2 650	2 800	3 150	3 150	2 800	2 800	2 650	2 500	1 250	2 500	2 500	1 250
5,600,000	9 000	2 650	2 360	2 360	2 650	3 150	3 150	3 350	3 000	2 120	2 360	2 500	2 800	2 500	2 120	1 900	1 900	1 250	2 500	2 500	1 250
	6 300	2 650	2 500	2 500	2 800	3 150	3 350	3 150	3 000	2 500	2 650	2 800	2 800	2 650	2 500	2 360	2 360	1 250	2 500	2 500	1 250
max		**4 500**																**1 250**	**2 500**	**2 500**	**1 250**

size **126**

280,000	25 000	5 600	5 600	5 600	5 600	5 600	5 600	5 600	5 600	5 000	5 600	5 600	5 600	5 600	5 300	4 500	4 500	1 600	3 150	3 150	1 600
355,000	25 000	5 600	5 600	5 600	5 600	5 600	5 600	5 600	5 600	4 500	5 300	5 600	5 600	5 600	4 500	3 750	4 000	1 600	3 150	3 150	1 600
450,000	25 000	5 600	5 300	5 300	5 600	5 300	5 300	5 600	5 600	4 000	4 500	5 000	5 600	5 300	3 750	3 350	3 350	1 600	3 150	3 150	1 600
	18 000	5 600	5 600	5 600	5 600	5 600	5 600	5 600	5 600	5 000	5 600	5 600	5 600	5 600	5 300	4 750	4 750	1 600	3 150	3 150	1 600
560,000	25 000	5 300	4 750	4 750	5 600	4 500	4 750	5 600	5 600	3 350	4 000	4 500	5 000	4 500	3 150	2 800	3 000	1 600	3 150	3 150	1 600
	18 000	5 600	5 300	5 300	5 600	5 600	5 600	5 600	5 600	4 500	5 000	5 600	5 600	5 600	4 750	4 000	4 000	1 600	3 150	3 150	1 600
	12 500	5 600	5 600	5 600	5 600	5 600	5 600	5 600	5 600	5 300	5 600	5 600	5 600	5 600	5 600	5 000	5 000	1 600	3 150	3 150	1 600
710,000	25 000	5 000	4 500	4 500	5 000	3 750	4 000	5 600	5 600	2 800	3 550	3 750	4 250	3 550	2 500	2 240	2 500	1 600	3 150	3 150	1 500
	18 000	5 300	4 750	5 000	5 600	5 600	5 600	5 600	5 600	4 000	4 500	5 000	5 600	5 300	4 250	3 550	3 550	1 600	3 150	3 150	1 600
	12 500	5 600	5 000	5 300	5 600	5 600	5 600	5 600	5 600	4 750	5 300	5 600	5 600	5 300	5 000	4 500	4 750	1 600	3 150	3 150	1 600
900,000	25 000	4 500	4 000	4 000	4 250	3 150	3 350	5 000	5 600	2 000	3 150	3 350	3 350	2 800	1 900	1 700	2 000	1 600	3 150	3 150	1 060
	18 000	4 750	4 500	4 500	5 000	4 750	5 000	5 600	5 600	3 550	4 000	4 500	5 000	4 750	3 550	3 150	3 150	1 600	3 150	3 150	1 600
	12 500	5 000	4 750	4 750	5 300	5 600	5 600	5 600	5 600	4 250	4 750	5 000	5 300	5 000	4 500	4 000	4 000	1 600	3 150	3 150	1 600
1,120,000	25 000	4 250	3 550	3 550	3 550	2 650	2 650	4 250	5 300	1 400	2 360	2 800	2 650	1 900	1 250	1 180	1 500	1 600	3 150	3 150	710
	18 000	4 500	4 000	4 000	4 750	4 250	4 250	5 600	5 300	3 150	3 550	4 000	4 500	4 250	3 150	2 650	2 800	1 600	3 150	3 150	1 600
	12 500	4 750	4 250	4 500	4 750	5 300	5 600	5 600	5 300	4 000	4 250	4 750	5 000	4 750	4 000	3 550	3 550	1 600	3 150	3 150	1 600
1,400,000	18 000	4 250	3 750	3 750	4 250	3 750	3 750	5 300	5 000	2 800	3 150	3 550	4 000	3 750	2 650	2 240	2 360	1 600	3 150	3 150	1 600
	12 500	4 250	4 000	4 000	4 500	5 000	5 000	5 300	5 000	3 550	3 750	4 250	4 750	4 250	3 750	3 350	3 350	1 600	3 150	3 150	1 600
	9 000	4 500	4 250	4 250	4 500	5 000	5 300	5 300	5 000	4 000	4 250	4 750	4 750	4 500	4 250	4 000	3 750	1 600	3 150	3 150	1 600
1,800,000	18 000	3 750	3 350	3 350	4 000	3 150	3 350	4 750	4 750	2 360	2 800	3 150	3 550	3 150	2 240	1 900	2 000	1 600	3 150	3 150	1 320
	12 500	4 000	3 750	3 750	4 250	4 500	4 500	5 000	4 750	3 150	3 550	4 000	4 250	4 000	3 350	3 000	3 000	1 600	3 150	3 150	1 600
	9 000	4 250	4 000	4 000	4 250	4 750	5 000	5 000	4 500	3 750	4 000	4 250	4 500	4 000	4 000	3 550	3 550	1 600	3 150	3 150	1 600
2,240,000	18 000	3 550	3 150	3 150	3 550	2 650	2 800	4 000	4 250	1 800	2 500	2 800	3 000	2 500	1 700	1 500	1 700	1 600	3 150	3 150	1 000
	12 500	3 750	3 350	3 350	3 750	3 750	4 000	4 750	4 250	2 800	3 150	3 550	4 000	3 550	3 000	2 650	2 650	1 600	3 150	3 150	1 600
	9 000	3 750	3 550	3 550	4 000	4 250	4 750	4 500	4 250	3 350	3 550	4 000	4 000	3 750	3 550	3 150	3 150	1 600	3 150	3 150	1 600
2,800,000	18 000	3 350	2 800	2 800	3 000	2 240	2 240	3 550	4 000	1 400	2 120	2 360	2 360	1 900	1 250	1 180	1 320	1 600	3 150	3 150	750
	12 500	3 350	3 150	3 150	3 550	3 350	3 550	4 500	4 000	2 500	3 000	3 150	3 550	3 350	2 650	2 240	2 240	1 600	3 150	3 150	1 600
	9 000	3 550	3 350	3 350	3 550	4 000	4 250	4 250	4 000	3 150	3 350	3 550	3 750	3 550	3 150	3 000	2 800	1 600	3 150	3 150	1 600
3,550,000	12 500	3 150	2 800	3 000	3 350	3 150	3 150	4 250	3 750	2 240	2 650	2 800	3 350	3 150	2 240	2 000	2 000	1 600	3 150	3 150	1 400
	9 000	3 350	3 150	3 150	3 350	3 750	4 000	4 000	3 750	2 800	3 000	3 350	3 550	3 350	3 000	2 650	2 650	1 600	3 150	3 150	1 600
4,500,000	12 500	3 000	2 650	2 650	3 150	2 650	2 800	3 750	3 550	2 000	2 360	2 500	3 000	2 650	1 900	1 700	1 800	1 600	3 150	3 150	1 180
	9 000	3 150	2 800	2 800	3 150	3 350	3 550	3 750	3 550	2 500	2 800	3 000	3 350	3 150	2 650	2 360	2 360	1 600	3 150	3 150	1 600
5,600,000	12 500	2 800	2 360	2 500	2 800	2 240	2 360	3 350	3 350	1 700	2 000	2 240	2 500	2 240	1 600	1 320	1 500	1 600	2 800	3 150	950
	9 000	2 800	2 650	2 650	3 000	3 150	3 150	3 550	3 350	2 240	2 500	2 800	3 150	2 800	2 360	2 000	2 000	1 600	3 000	3 150	1 500
max		**5 600**																**1 600**	**3 150**	**3 150**	**1 600**

Radial F_{r2} [lb] or axial loads F_{a2} [lb] on low speed shaft end

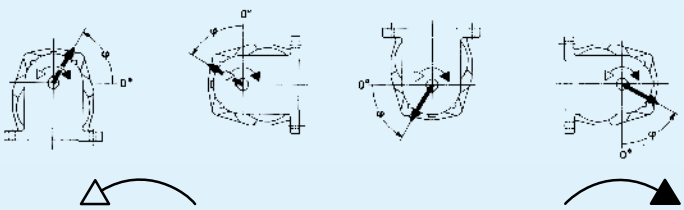
size **140**

$n_2 \cdot L_h$	T_2	F_{r2} [1) 2)]								F_{a2} [1)]											
rpm h	lb in	0	45	90	135	180	225	270	315	0	45	90	135	180	225	270	315				
280,000	35 500	7 100	7 100	7 100	7 100	7 100	7 100	7 100	7 100	6 300	7 100	7 100	7 100	7 100	6 700	6 000	6 000	2 000	4 000	4 000	2 000
	25 000	7 100	7 100	7 100	7 100	7 100	7 100	7 100	7 100	7 100	7 100	7 100	7 100	7 100	7 100	7 100	7 100	2 000	4 000	4 000	2 000
	18 000	7 100	7 100	7 100	7 100	7 100	7 100	7 100	7 100	7 100	7 100	7 100	7 100	7 100	7 100	7 100	7 100	2 000	4 000	4 000	2 000
355,000	35 500	7 100	6 700	6 700	7 100	7 100	7 100	7 100	7 100	6 000	6 700	7 100	7 100	7 100	6 000	5 000	5 000	2 000	4 000	4 000	2 000
	25 000	7 100	7 100	7 100	7 100	7 100	7 100	7 100	7 100	7 100	7 100	7 100	7 100	7 100	7 100	6 700	6 700	2 000	4 000	4 000	2 000
	18 000	7 100	7 100	7 100	7 100	7 100	7 100	7 100	7 100	7 100	7 100	7 100	7 100	7 100	7 100	7 100	7 100	2 000	4 000	4 000	2 000
450,000	35 500	7 100	6 300	6 300	7 100	6 700	6 700	7 100	7 100	5 000	6 000	6 700	7 100	7 100	5 000	4 250	4 500	2 000	4 000	4 000	2 000
	25 000	7 100	6 700	6 700	7 100	7 100	7 100	7 100	7 100	6 300	7 100	7 100	7 100	7 100	7 100	6 000	6 000	2 000	4 000	4 000	2 000
	18 000	7 100	7 100	7 100	7 100	7 100	7 100	7 100	7 100	7 100	7 100	7 100	7 100	7 100	7 100	7 100	7 100	2 000	4 000	4 000	2 000
560,000	35 500	6 300	5 600	5 600	6 300	5 600	6 000	7 100	5 600	4 250	5 300	6 000	7 100	6 300	4 250	3 550	3 750	2 000	4 000	4 000	2 000
	25 000	6 700	6 300	6 300	6 700	7 100	7 100	7 100	7 100	5 600	6 300	7 100	7 100	6 700	6 300	5 300	5 300	2 000	4 000	4 000	2 000
	18 000	7 100	6 700	6 700	7 100	7 100	7 100	7 100	7 100	6 700	7 100	7 100	7 100	7 100	6 700	6 300	6 300	2 000	4 000	4 000	2 000
710,000	35 500	6 000	5 300	5 300	5 600	5 000	5 000	7 100	7 100	3 550	4 500	5 300	6 000	5 300	3 550	3 000	3 150	2 000	4 000	4 000	2 000
	25 000	6 300	5 600	6 000	6 300	7 100	7 100	7 100	7 100	5 300	6 000	6 700	6 700	6 300	5 600	4 750	4 750	2 000	4 000	4 000	2 000
	18 000	6 300	6 000	6 000	6 700	7 100	7 100	7 100	7 100	6 000	6 700	7 100	6 700	6 300	6 300	6 000	6 000	2 000	4 000	4 000	2 000
900,000	35 500	5 600	4 750	4 750	4 750	4 000	4 250	6 300	6 700	2 650	4 000	4 500	5 000	4 000	2 800	2 360	2 500	2 000	4 000	4 000	1 700
	25 000	6 000	5 300	5 300	6 000	6 300	6 300	7 100	6 700	4 750	5 300	6 000	6 300	5 600	5 000	4 250	4 250	2 000	4 000	4 000	2 000
	18 000	6 000	5 600	5 600	6 000	6 700	7 100	7 100	6 700	5 600	6 000	6 700	6 300	6 000	6 000	5 300	5 300	2 000	4 000	4 000	2 000
1,120,000	35 500	5 000	4 250	4 250	3 750	3 350	3 350	5 600	6 300	1 900	3 150	3 750	4 000	3 000	2 000	1 700	1 900	2 000	4 000	4 000	1 180
	25 000	5 300	4 750	4 750	5 300	5 300	5 600	7 100	6 300	4 000	4 750	5 300	6 000	5 300	4 250	3 550	3 550	2 000	4 000	4 000	2 000
	18 000	5 600	5 000	5 300	5 600	6 300	6 700	6 700	6 300	5 000	5 600	6 000	6 000	5 600	5 300	4 750	4 750	2 000	4 000	4 000	2 000
1,400,000	25 000	5 000	4 500	4 500	5 000	4 750	5 000	6 300	6 000	3 550	4 250	4 750	5 600	5 000	3 550	3 150	3 150	2 000	4 000	4 000	2 000
	18 000	5 300	4 750	4 750	5 300	6 000	6 300	6 300	6 000	4 500	5 000	5 600	5 600	5 000	4 750	4 250	4 250	2 000	4 000	4 000	2 000
	12 500	5 300	5 000	5 000	5 300	6 000	6 300	6 300	6 000	5 300	5 600	6 000	5 600	5 300	5 300	5 000	5 000	2 000	4 000	4 000	2 000
1,800,000	25 000	4 500	4 000	4 000	4 500	4 000	4 250	6 000	5 600	3 150	3 750	4 250	5 000	4 500	3 150	2 650	2 800	2 000	4 000	4 000	2 000
	18 000	4 750	4 500	4 500	4 750	5 600	5 600	6 000	5 600	4 000	4 500	5 000	5 300	4 750	4 500	3 750	3 750	2 000	4 000	4 000	2 000
	12 500	5 000	4 750	4 750	5 000	5 600	6 000	6 000	5 300	4 750	5 000	5 600	5 300	5 000	4 750	4 750	4 500	2 000	4 000	4 000	2 000
2,240,000	25 000	4 250	3 550	3 750	3 750	3 550	3 550	5 000	5 000	2 500	3 350	3 750	4 250	3 550	2 500	2 120	2 240	2 000	4 000	4 000	1 600
	18 000	4 500	4 000	4 000	4 500	5 000	5 000	5 600	5 000	3 550	4 000	4 500	4 750	4 500	3 750	3 350	3 350	2 000	4 000	4 000	2 000
	12 500	4 500	4 250	4 250	4 500	5 000	5 300	5 300	5 000	4 250	4 750	5 000	4 750	4 500	4 500	4 250	4 000	2 000	4 000	4 000	2 000
2,800,000	25 000	3 750	3 350	3 350	3 350	3 000	3 000	4 750	4 750	1 900	2 800	3 150	3 550	3 000	2 000	1 700	1 900	2 000	4 000	4 000	1 180
	18 000	4 000	3 750	3 750	4 250	4 250	4 500	5 300	4 750	3 350	3 750	4 250	4 500	4 000	3 350	3 000	3 000	2 000	4 000	4 000	2 000
	12 500	4 250	4 000	4 000	4 250	4 750	5 000	5 000	4 750	3 750	4 250	4 750	4 500	4 250	4 000	3 750	3 750	2 000	4 000	4 000	2 000
3,550,000	18 000	3 750	3 350	3 350	3 750	3 750	4 000	5 000	4 500	3 000	3 350	3 750	4 250	3 750	3 000	2 500	2 650	2 000	4 000	4 000	2 000
	12 500	4 000	3 550	3 550	4 000	4 500	4 750	4 750	4 500	3 550	3 750	4 250	4 250	4 000	3 750	3 350	3 350	2 000	4 000	4 000	2 000
4,500,000	18 000	3 550	3 150	3 150	3 550	3 350	3 350	4 500	4 250	2 500	3 000	3 350	3 750	3 550	2 650	2 240	2 240	2 000	4 000	4 000	1 700
	12 500	3 550	3 350	3 350	3 750	4 250	4 500	4 500	4 000	3 150	3 550	4 000	3 750	3 550	3 350	3 150	3 000	2 000	4 000	4 000	2 000
5,600,000	18 000	3 150	2 800	2 800	3 150	2 800	3 000	4 000	3 750	2 120	2 650	3 000	3 350	3 150	2 120	1 800	1 900	2 000	3 750	4 000	1 320
	12 500	3 350	3 150	3 150	3 350	3 750	4 000	4 250	3 750	2 800	3 150	3 550	3 550	3 350	3 150	2 650	2 650	2 000	3 750	4 000	2 000
max									**7 100**									**2 000**	**4 000**	**4 000**	**2 000**

1) An axial load of up 0,2 times the value in the table is permissible, simultaneously with the radial load and vice versa. If exceded consult us.
2) An unfavourable direction of load can limit F_{r2} to $0,9 \cdot F_{r2max}$.

Radial F_{r2} [lb] or axial loads F_{a2} [lb] on low speed shaft end 3.12

size **160**

$n_2 \cdot L_h$	T_2	F_{r2} [1) 2)]								F_{a2} [1)]											
																					
rpm h	lb in	0	45	90	135	180	225	270	315	0	45	90	135	180	225	270	315				
224,000	50 000	9 000	9 000	9 000	9 000	9 000	8 500	8 000	9 000	9 000	9 000	9 000	9 000	9 000	9 000	9 000	9 000	5 000	2 500	2 500	5 000
	35 500	9 000	9 000	9 000	9 000	9 000	9 000	9 000	9 000	9 000	9 000	9 000	9 000	9 000	9 000	9 000	9 000	5 000	2 500	2 500	5 000
	25 000	9 000	9 000	9 000	9 000	9 000	9 000	9 000	9 000	9 000	9 000	9 000	9 000	9 000	9 000	9 000	9 000	5 000	2 500	2 500	5 000
280,000	50 000	9 000	9 000	9 000	9 000	8 000	7 500	7 100	8 000	9 000	9 000	9 000	9 000	9 000	9 000	9 000	9 000	5 000	2 500	2 500	5 000
	35 500	9 000	9 000	9 000	9 000	9 000	9 000	9 000	9 000	9 000	9 000	9 000	9 000	9 000	9 000	9 000	9 000	5 000	2 500	2 500	5 000
	25 000	9 000	9 000	9 000	9 000	9 000	9 000	9 000	9 000	9 000	9 000	9 000	9 000	9 000	9 000	9 000	9 000	5 000	2 500	2 500	5 000
355,000	50 000	9 000	9 000	9 000	8 500	7 500	6 300	6 300	7 100	9 000	9 000	8 500	8 500	9 000	9 000	9 000	9 000	5 000	2 500	2 500	5 000
	35 500	9 000	9 000	9 000	9 000	9 000	8 500	8 500	9 000	9 000	9 000	9 000	9 000	9 000	9 000	9 000	9 000	5 000	2 500	2 500	5 000
	25 000	9 000	9 000	9 000	9 000	9 000	9 000	9 000	9 000	9 000	9 000	9 000	9 000	9 000	9 000	9 000	9 000	5 000	2 500	2 500	5 000
450,000	50 000	8 500	9 000	8 000	7 500	6 300	5 600	5 300	6 000	9 000	9 000	7 500	7 500	8 500	9 000	9 000	9 000	5 000	2 500	2 500	5 000
	35 500	9 000	9 000	9 000	9 000	8 000	7 500	7 500	8 500	9 000	9 000	8 500	8 500	9 000	9 000	9 000	9 000	5 000	2 500	2 500	5 000
	25 000	9 000	9 000	9 000	9 000	9 000	9 000	9 000	9 000	9 000	9 000	9 000	9 000	9 000	9 000	9 000	9 000	5 000	2 500	2 500	5 000
560,000	50 000	6 700	8 000	7 100	6 700	5 600	4 750	4 250	5 000	8 000	8 000	7 100	6 700	8 000	9 000	9 000	8 000	5 000	2 500	2 500	5 000
	35 500	8 000	9 000	9 000	8 000	7 100	6 700	6 700	7 500	9 000	8 500	7 500	7 500	8 500	9 000	9 000	9 000	5 000	2 500	2 500	5 000
	25 000	8 500	9 000	9 000	9 000	8 500	8 000	8 000	8 500	9 000	9 000	8 000	8 000	8 500	9 000	9 000	9 000	5 000	2 500	2 500	5 000
710,000	50 000	5 600	6 700	6 300	6 000	4 750	3 750	3 550	4 000	6 700	7 100	6 300	6 300	7 100	9 000	9 000	6 700	5 000	2 360	2 500	5 000
	35 500	7 500	8 500	8 000	7 100	6 300	6 000	6 000	6 700	9 000	8 000	7 100	7 100	7 500	9 000	9 000	9 000	5 000	2 500	2 500	5 000
	25 000	8 000	8 500	9 000	8 500	7 500	7 100	7 100	8 000	9 000	8 000	7 500	7 500	8 000	9 000	9 000	9 000	5 000	2 500	2 500	5 000
900,000	50 000	4 250	5 300	5 300	5 000	3 550	3 150	2 650	3 000	5 600	6 300	5 600	5 600	6 700	8 500	8 500	5 600	5 000	1 700	2 500	5 000
	35 500	7 100	8 000	7 100	6 300	5 600	5 000	5 000	5 600	8 500	7 100	6 300	6 300	7 100	8 500	9 000	8 500	5 000	2 500	2 500	5 000
	25 000	7 500	8 000	8 000	7 500	7 100	6 300	6 700	7 100	8 500	7 500	7 100	6 700	7 500	8 500	9 000	9 000	5 000	2 500	2 500	5 000
1,120,000	50 000	3 000	4 000	4 500	4 250	2 650	2 360	1 900	2 000	4 500	5 000	5 300	5 000	6 000	8 000	7 500	4 750	5 000	1 120	2 500	5 000
	35 500	6 300	7 100	6 300	6 000	5 000	4 500	4 250	5 000	7 100	6 700	6 000	6 000	6 700	8 000	9 000	7 500	5 000	2 500	2 500	5 000
	25 000	6 700	7 500	7 500	6 700	6 300	6 000	6 000	6 700	8 000	7 100	6 300	6 300	6 700	8 000	8 500	8 500	5 000	2 500	2 800	5 000
1,400,000	35 500	6 000	6 300	5 600	5 300	4 500	3 750	3 550	4 250	6 300	6 300	5 300	5 300	6 000	7 500	8 500	6 300	5 000	2 500	2 500	5 000
	25 000	6 300	6 700	6 700	6 300	5 600	5 300	5 300	6 000	7 500	6 300	6 000	6 000	6 300	7 500	8 000	8 000	5 000	2 500	2 500	5 000
	18 000	6 300	6 700	7 500	6 700	6 300	6 300	6 300	6 300	7 500	6 700	6 300	6 300	6 700	7 100	8 000	8 000	5 000	2 500	2 500	5 000
1,800,000	35 500	4 750	5 600	5 000	4 500	4 000	3 350	3 150	3 350	5 600	5 600	5 000	4 750	5 600	7 100	7 500	5 600	5 000	2 120	2 500	5 000
	25 000	6 000	6 300	6 300	5 600	5 000	4 750	4 750	5 300	7 100	6 000	5 300	5 300	6 000	6 700	7 500	7 500	5 000	2 500	2 500	5 000
	18 000	6 000	6 300	6 700	6 300	6 000	5 600	5 600	6 000	6 700	6 300	5 600	5 600	6 300	6 700	7 500	7 500	5 000	2 500	2 500	5 000
2,240,000	35 500	3 750	4 500	4 250	4 000	3 350	2 650	2 360	2 650	4 750	5 000	4 500	4 500	5 000	6 300	6 700	4 750	5 000	1 600	2 500	5 000
	25 000	5 300	6 000	5 600	5 000	4 500	4 000	4 000	4 750	6 300	5 600	5 000	5 000	5 300	6 300	7 100	6 700	5 000	2 500	2 500	5 000
	18 000	5 600	6 000	6 300	5 600	5 300	5 000	5 000	5 600	6 300	5 600	5 300	5 300	5 600	6 300	6 700	6 700	5 000	2 500	2 500	5 000
2,800,000	35 500	3 000	3 750	3 750	3 550	2 500	2 120	1 900	2 000	3 750	4 250	4 000	4 000	4 750	6 000	6 000	4 000	5 000	1 180	2 500	5 000
	9 000	5 000	5 600	4 500	5 000	4 000	3 550	3 550	4 000	6 000	5 300	4 500	4 500	5 000	6 000	6 700	6 000	5 000	2 500	2 500	5 000
	18 000	5 300	5 600	5 600	5 300	4 750	4 500	4 500	5 000	6 000	5 300	4 750	4 750	5 300	6 000	6 300	6 300	5 000	2 500	2 500	5 000
3,550,000	25 000	4 500	5 000	4 500	4 250	3 550	3 150	3 150	3 550	5 300	4 750	4 250	4 250	4 750	6 300	6 300	5 300	5 000	2 240	2 500	5 000
	18 000	4 750	5 300	5 300	4 750	4 500	4 000	4 250	4 750	5 600	5 000	4 500	4 500	4 750	5 600	6 000	6 300	5 000	2 500	2 500	5 000
4,500,000	25 000	4 250	4 500	4 000	3 550	3 150	2 800	2 650	3 000	4 500	4 500	3 750	3 750	4 250	5 300	6 000	4 750	5 000	1 900	2 500	5 000
	18 000	4 500	4 750	4 750	4 500	4 000	3 750	3 550	4 250	5 300	4 500	4 250	4 000	4 500	5 300	5 600	5 600	5 000	2 500	2 650	5 000
5,600,000	25 000	3 350	3 750	3 550	3 350	2 800	2 360	2 120	2 500	4 000	4 000	3 550	3 350	4 000	4 750	5 300	4 000	5 000	1 500	2 500	4 500
	18 000	4 000	4 500	4 250	4 000	3 550	3 350	3 350	3 750	5 000	4 250	3 750	3 750	4 250	4 750	5 300	5 300	5 000	2 500	2 500	4 750
max		**9 000**																**5 000**	**2 500**	**2 800**	**5 000**

1) An axial load of up 0,2 times the value in the table is permissible, simultaneously with the radial load and vice versa. If exceded consult us.

Radial F_{r2} [lb] or axial loads F_{a2} [lb] on low speed shaft end

size **180**

$n_2 \cdot L_h$	T_2	F_{r2} [1) 2)]								F_{a2} [1)]											
rpm h	lb in	0	45	90	135	180	225	270	315	0	45	90	135	180	225	270	315				
224,000	71 000	11 200	11 200	11 200	11 200	10 000	9 000	9 000	10 600	11 200	11 200	11 200	11 200	11 200	11 200	11 200	11 200	6 300	3 150	3 150	6 300
	50 000	11 200	11 200	11 200	11 200	11 200	11 200	11 200	11 200	11 200	11 200	11 200	11 200	11 200	11 200	11 200	11 200	6 300	3 150	3 150	6 300
	35 500	11 200	11 200	11 200	11 200	11 200	11 200	11 200	11 200	11 200	11 200	11 200	11 200	11 200	11 200	11 200	11 200	6 300	3 150	3 150	6 300
280,000	71 000	11 200	11 200	11 200	10 000	9 000	8 000	8 000	9 000	11 200	11 200	10 600	10 600	11 200	11 200	11 200	11 200	6 300	3 150	3 150	6 300
	50 000	11 200	11 200	11 200	11 200	11 200	10 000	10 600	11 200	11 200	11 200	11 200	11 200	11 200	11 200	11 200	11 200	6 300	3 150	3 150	6 300
	35 500	11 200	11 200	11 200	11 200	11 200	11 200	11 200	11 200	11 200	11 200	11 200	11 200	11 200	11 200	11 200	11 200	6 300	3 150	3 150	6 300
355,000	71 000	10 600	11 200	10 600	9 000	8 000	6 700	6 700	8 000	10 000	11 200	9 500	9 500	11 200	11 200	11 200	10 600	6 300	3 150	3 150	6 300
	50 000	11 200	11 200	11 200	11 200	10 000	9 500	9 500	10 600	11 200	11 200	10 600	10 600	11 200	11 200	11 200	11 200	6 300	3 150	3 150	6 300
	35 500	11 200	11 200	11 200	11 200	11 200	10 600	11 200	11 200	11 200	11 200	11 200	11 200	11 200	11 200	11 200	11 200	6 300	3 150	3 150	6 300
450,000	71 000	9 500	10 600	9 000	8 000	6 700	6 000	5 600	6 700	9 000	10 000	9 000	9 000	10 000	11 200	11 200	11 200	6 300	3 150	3 150	6 300
	50 000	10 600	11 200	11 200	10 000	9 000	8 500	8 500	9 500	11 200	10 600	9 500	9 500	10 600	11 200	11 200	11 200	6 300	3 150	3 150	6 300
	35 500	10 600	11 200	11 200	11 200	10 000	9 500	10 000	10 600	11 200	10 600	10 000	10 000	10 600	11 200	11 200	11 200	6 300	3 150	3 150	6 300
560,000	71 000	7 500	9 000	8 000	7 100	5 000	4 750	4 500	5 300	7 500	9 000	8 000	8 000	9 500	11 200	11 200	7 500	6 300	3 150	3 150	6 300
	50 000	9 500	10 600	10 000	9 000	8 000	7 500	7 500	8 500	11 200	10 000	9 000	9 000	9 500	11 200	11 200	11 200	6 300	3 150	3 150	6 300
	35 500	10 000	10 600	11 200	10 000	9 500	9 000	9 000	9 500	11 200	10 000	9 500	9 500	10 000	11 200	11 200	11 200	6 300	3 150	3 150	6 300
710,000	71 000	6 300	7 500	7 100	6 300	3 750	4 000	3 550	4 250	6 300	7 500	7 500	7 500	8 500	10 600	10 000	6 300	6 300	2 650	3 150	6 300
	50 000	9 000	10 000	9 000	8 000	7 100	6 300	6 300	7 500	9 500	9 000	8 500	8 500	9 000	10 600	11 200	10 000	6 300	3 150	3 150	6 300
	35 500	9 500	10 000	10 000	9 500	8 500	8 000	8 500	9 000	10 600	9 500	9 000	9 000	9 500	10 600	11 200	11 200	6 300	3 150	3 150	6 300
900,000	71 000	4 500	6 000	6 000	4 500	2 650	2 650	2 650	3 000	5 000	6 300	6 700	6 700	8 000	10 000	8 500	5 000	6 300	1 900	3 150	6 300
	50 000	8 500	9 000	8 500	7 500	6 300	5 600	5 600	6 700	8 500	8 500	7 500	7 500	8 500	10 000	11 200	8 500	6 300	3 150	3 150	6 300
	35 500	8 500	9 000	9 500	8 500	7 500	7 100	7 500	8 500	9 500	9 000	8 000	8 000	9 000	9 500	10 600	10 600	6 300	3 150	3 150	6 300
1,120,000	71 000	2 800	4 500	4 750	2 650	1 400	1 500	1 700	1 800	3 750	5 000	6 000	6 000	7 100	9 000	6 700	3 750	6 300	1 120	3 150	6 300
	50 000	7 500	8 500	7 500	6 300	5 600	4 750	4 750	5 600	7 500	8 000	6 700	6 700	7 500	9 000	10 000	7 500	6 300	3 150	3 150	6 300
	35 500	8 000	8 500	8 500	7 500	7 100	6 300	6 700	7 500	9 000	8 000	7 500	7 500	8 000	9 000	10 000	10 000	6 300	3 150	3 150	6 300
1,400,000	50 000	6 700	7 500	6 700	6 000	4 750	4 250	4 000	4 750	6 300	7 100	6 300	6 300	7 100	8 500	9 000	6 700	6 300	3 150	3 150	6 300
	35 500	7 500	8 000	8 000	7 100	6 300	6 000	6 000	6 700	8 500	7 500	6 700	6 700	7 500	8 500	9 500	9 000	6 300	3 150	3 150	6 300
	25 000	7 500	8 000	8 500	8 000	7 500	7 100	7 100	7 500	8 500	7 500	7 100	7 100	7 500	8 500	9 000	9 000	6 300	3 150	3 150	6 300
1,800,000	50 000	5 600	6 700	6 000	5 000	3 750	3 550	3 350	3 750	5 300	6 300	6 000	6 000	6 700	8 000	8 500	5 600	6 300	2 500	3 150	6 300
	35 500	6 700	7 500	7 100	6 300	5 600	5 300	5 300	6 000	8 000	7 100	6 300	6 300	7 100	8 000	9 000	8 000	6 300	3 150	3 150	6 300
	25 000	7 100	7 500	8 000	7 100	6 700	6 300	6 300	7 100	8 000	7 100	6 700	6 700	7 100	8 000	8 500	8 500	6 300	3 150	3 150	6 300
2,240,000	50 000	4 500	5 300	5 000	4 500	2 800	2 800	2 500	3 000	4 500	5 300	5 300	5 300	6 000	7 500	7 100	4 500	6 300	1 900	3 150	6 300
	35 500	6 300	7 100	6 300	5 600	5 000	4 500	4 500	5 300	6 700	6 300	6 000	5 600	6 300	7 500	8 500	7 100	6 300	3 150	3 150	6 300
	25 000	6 700	7 100	7 100	6 700	6 000	5 600	6 000	6 300	7 500	6 700	6 300	6 300	6 700	7 500	8 000	8 000	6 300	3 150	3 150	6 300
2,800,000	50 000	3 350	4 250	4 250	3 350	1 900	2 000	1 900	2 240	3 550	4 500	4 750	4 750	5 600	7 100	6 000	3 750	6 300	1 400	3 000	6 300
	35 500	6 000	6 300	6 000	5 000	4 500	4 000	3 750	4 500	6 000	6 000	5 300	5 300	6 000	7 100	8 000	6 000	6 300	3 150	3 150	6 300
	25 000	6 000	6 700	6 700	6 000	5 600	5 000	5 300	6 000	7 100	6 300	5 600	5 600	6 300	7 100	7 500	7 500	6 300	3 150	3 150	6 300
3,550,000	35 500	5 300	6 000	5 300	4 500	4 000	3 350	3 350	4 000	5 300	5 600	4 750	4 750	5 600	6 700	7 100	5 300	6 300	2 650	3 150	6 300
	25 000	5 600	6 300	6 300	5 600	5 000	4 750	4 750	5 300	6 300	5 600	5 300	5 300	5 600	6 300	7 100	7 100	6 300	3 150	3 150	6 300
4,500,000	35 500	4 750	5 300	4 500	4 000	3 350	3 000	2 800	3 350	4 500	5 000	4 500	4 500	5 000	6 300	6 700	4 500	6 300	2 240	3 150	6 000
	25 000	5 300	5 600	5 600	5 000	4 500	4 000	4 250	4 750	6 000	5 300	4 750	4 750	5 300	6 000	6 700	6 300	6 300	3 150	3 150	6 300
5,600,000	35 500	3 750	4 500	4 000	3 550	2 500	2 360	2 240	2 650	3 750	4 500	400	4 000	4 750	5 600	5 600	3 750	6 300	1 800	3 150	5 600
	25 000	4 750	5 300	5 000	4 500	4 000	3 550	3 550	4 250	5 600	5 000	4 500	4 500	5 000	5 600	6 300	5 600	6 300	3 150	3 150	6 000
max									**11 200**									**6 300**	**3 150**	**3 150**	**6 300**

1) An axial load of up 0,2 times the value in the table is permissible, simultaneously with the radial load and vice versa. If exceded consult us.
2) An unfavourable direction of load can limit F_{r2} to $0,9 \cdot F_{r2max}$

Efficiency η:

– gear reducer with 2 gear pairs (2l) 0.96, with 3 gear pairs (3l) 0.94; for $M_2 \ll M_{N2}$, η could considerably decrease; consult us.

Overloads

Where a gear reducer is subjected to high static and dynamic overloads, the need arises for verifying that such overloads will always remain lower than $\mathbf{2 \cdot M_{N2}}$ (see ch. 3.5; see ch. 3.7 where $M_{N2} = M_2 \cdot fs$).

Overloads are normally generated when one has:

– starting on full load (especially for high inertias and low transmission ratios), braking, shocks;

– gear reducers in which the low speed shaft becomes driving member due to driven machine inertia;

– applied power higher than that required; other static or dynamic causes.

The following general observations on overloads are accompanied by some formulae for carrying out evaluations in certain typical instances. Where no evaluation is possible, install safety devices which will keep values within $\mathbf{2 \cdot M_{N2}}$.

Starting torque

When starting on full load (especially for high inertias and low transmission ratios) verify that $\mathbf{2 \cdot M_{N2}}$ is equal to or greater than starting torque, by using the following formula:

$$M_2\,\text{start} = \left(\frac{M\,\text{start}}{M_N} \cdot M_2\,\text{available} - M_2\,\text{required}\right)\frac{J}{J + J_0} + M_2\,\text{required}$$

where:
M_2 required is torque absorbed by the machine through work and frictions;
M_2 available is output torque due to the motor's nominal power;
J_0 is the moment of inertia (of mass) of the motor;
J is the external moment of inertia (of mass) in kg m^2 (gear reducers, couplings, driven machine) referred to the motor shaft;
for other symbols see ch. 2b.

NOTE: when seeking to verify that starting torque is sufficiently high for starting, take into account starting friction, if any, in evaluating M_2 required.

Stopping machines with high kinetic energy (high moments of inertia combined with high speeds) with brake motor

Verify braking stress by means of the formula:

$$\left(\frac{Mf}{\eta} \cdot i + M_2\,\text{required}\right)\frac{J}{J + J_0} - M_2\,\text{required} \leq 2 \cdot M_{N2}$$

where:
Mf is the braking torque setting (see table in ch. 2b); for other symbols see above and ch. 1.

Operation with brake motor

Starting time ta and revolutions of motor φa_1

$$ta = \frac{(J_0 + J) \cdot n_1}{25{,}605\left(M\,\text{start} - \dfrac{M_2\,\text{required}}{i}\right)}\,[\text{s}]; \qquad \varphi a_1 = \frac{ta \cdot n_1}{19.1}\,[\text{rad}]$$

Braking time tf and revolutions of motor φf_1

$$tf = \frac{(J_0 + J) \cdot n_1}{25{,}605\left(Mf + \dfrac{M_2\,\text{required}}{i}\right)}\,[\text{s}]; \qquad \varphi f_1 = \frac{tf \cdot n_1}{19.1}\,[\text{rad}]$$

where:
M start [daN m] is motor starting torque $\left(\frac{63{,}025 \cdot P_1}{n_1} \cdot \frac{M\,\text{start}}{M_N}\right)$ (see ch. 2b);

Mf [daN m] is the braking torque setting of the motor (see ch. 2b);
for other symbols see above and ch. 1.

Assuming a regular air-gap and ambient humidity, and utilizing suitable electrical equipment, repetition of the braking action, as affected by variation in temperature of the brake and by the state of wear of friction surface, is approx ± 0.1 · φf_1.

Duration of friction surface

As a rough guide, the number of applications permissible between successive adjustments of the air-gap is given by the formula:

$$\frac{W \cdot 10^5}{Mf \cdot \varphi f_1}$$

where:
W [MJ] is the work of friction between successive adjustments of the airgap as indicated in the table; for other symbols see above.

The air-gap should measure between 0.25 minimum and 0.6 maximum; as a rule, 5 adjustments can be made.

Motor size	W MJ
63	10,6
71	14
80	18
90	24
100	24
112	45
132	67
160, 180M	90
180L, 200	125

Low speed shaft angular backlash and torsional stiffness

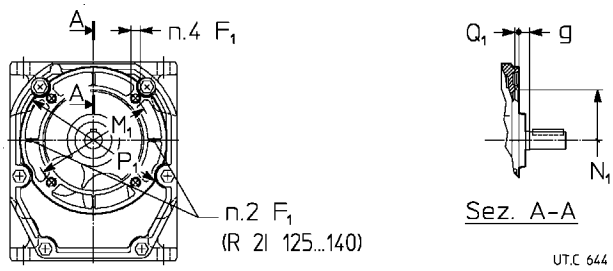
A rough guide for the angular backlash (high speed shaft being locked) is given in the table. Values vary according to temperature and transmission ratio.
Also the **approx.** values for low speed shaft torsional stiffness – high speed shaft being locked – are given in the table according to the train of gears.
On request it is possible to supply gear reducers with **reduced backlash** (sizes 32 ... 41 excluded) lower than or equal to the minimum values stated on the table.

1) At the distance of 1 m from the low speed shaft centre, angular backlash in mm is obtained by multiplying the value stated in the table by 1 000 (1 rad = 3438').

Gear reducer size	Angular backlash [rad][1]		Torsional stiffness [lb in/']	
	min	max	R, MR 2I	R, MR 3I
32	0.0050	0.0100	14	8
40	0.0045	0.0090	28	15.9
41	0.0045	0.0090	31	17.7
50	0.0036	0.0071	66	38.1
51	0.0036	0.0071	75	42.5
63	0.0032	0.0063	133	75
64	0.0032	0.0063	150	84
80	0.0028	0.0056	265	150
81	0.0028	0.0056	296	168
100	0.0023	0.0050	531	296
101	0.0025	0.0050	593	332
125	0.0022	0.0044	1044	593
126	0.0022	0.0044	1168	664
140	0.0022	0.0044	1328	752
160	0.0020	0.0040	2089	1168
180	0.0020	0.0040	2965	1682

Gear reducers input face

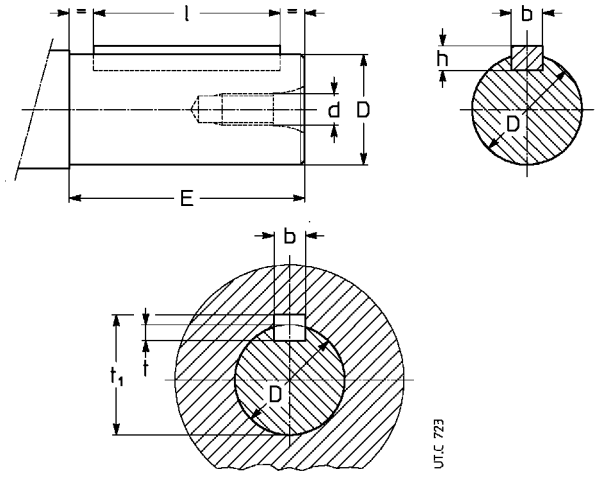
The input face of gear reducers (size ≥ 50) has a flange with tapped holes and «hole» centering for eventual fitting of motor support, etc. The use of threaded holes closed with dowel, if any, requires the removal of dowel (avoiding eventual oil loss) and the readjustment of sealant.



Gear reducer size	F_1 1)	g ≈	M_1 Ø	N_1 Ø H7	P_1 Ø	Q_1
50, 51	M 8	9,5	115[2]	95	140	4
63, 64	M 8	10	130	110	160	4.5
80, 81	M 10	10,5	165	130	200	4.5
100, 101	M 12	11	215	180	250	5
125, 126, 140	M 12[6]	14[3]	265	230	300	5
160, 180	M 16	19[3]	350	300	400	6

1) Working length of thread 1,05 F_1, 1,5 F_1 for R 2I 125 ... 180.
2) The two upper holes are on a diameter M_1 of 130 mm: consult us.
3) For R 3I **g** dimension is -4 mm (sizes 125 ... 140), -6 mm (sizes 160 and 180).

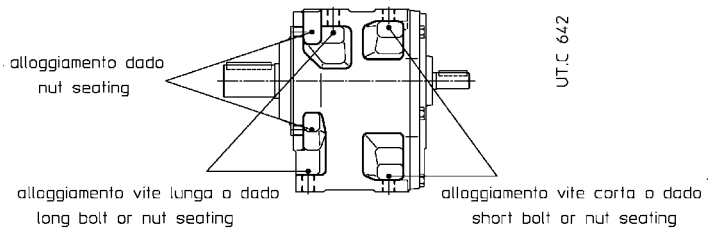
Shaft end



1) Values in brackets are for short shaft end.

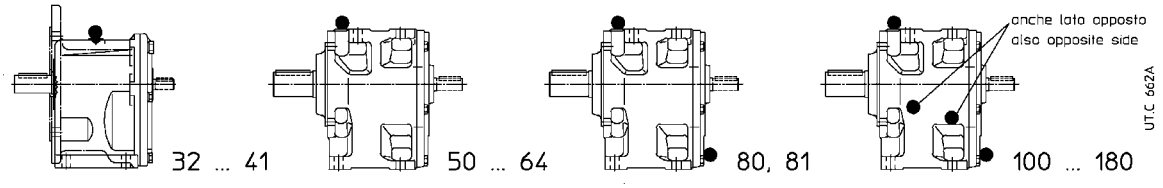
Shaft end D Ø	E[1]	d Ø	Parallel key b × h × l[1]	Keyway b	t	t_1
11 j 6	23 (20)	M 5	4 × 4 × 18 (12)	4	2.5	12.7
14 j 6	30	M 6	5 × 5 × 25	5	3	16.2
16 j 6	30	M 6	5 × 5 × 25	5	3	18.2
19 j 6	40	M 6	6 × 6 × 36	6	3.5	21.7
24 j 6	50 (36)	M 8	8 × 7 × 45 (25)	8	4	27.2
28 j 6	60 (42)	M 8	8 × 7 × 45 (36)	8	4	31.2
32 k 6	80 (58)	M 10	10 × 8 × 70 (50)	10	5	35.3
38 k 6	80 (58)	M 10	10 × 8 × 70 (50)	10	5	41.3
42 k 6	110	M 12	12 × 8 × 90	12	5	45.3
45 k 6	82	M 12	14 × 9 × 70	14	5.5	48.8
48 k 6	82 (80)	M 12	14 × 9 × 70	14	5.5	51.8
55 m 6	82	M 12	16 × 10 × 70	16	6	59.3
60 m 6	105	M 16	18 × 11 × 90	18	7	64.4
70 m 6	105	M 16	20 × 12 × 90	20	7.5	74.9
80 m 6	130	M 20	22 × 14 × 110	22	9	85.4
90 m 6	130	M 20	25 × 14 × 110	25	9	95.4
100 m 6	165	M 24	28 × 16 × 140	28	10	106.4

Fixing bolt dimensions for gear reducer feet



Gear reducer size	Short bolt UNI 5737-88 (l max)	Long bolt UNI 5737-88 (l max)
50, 51	M 10 × 30	M 10 × 35
63, 64	M 12 × 35	M 12 × 40
80, 81	M 14 × 40	M 14 × 50
100, 101	M 16 × 50	M 16 × 60
125, 126, 140	M 20 × 60	M 20 × 70
160, 180	M 24 × 70	M 24 × 90

Plug position



Maximum bending moment of flange MR

In case of assembly of motors supplied by the customer, verify that the static bending moment M_b generated by motor weight on the counter flange of gear reducer is lower than the value allowed M_{bmax}, stated in the table:

$$M_b \leq M_{bmax}$$

where:

$M_b = G \cdot (X + HF) / 1000$ [lb in]

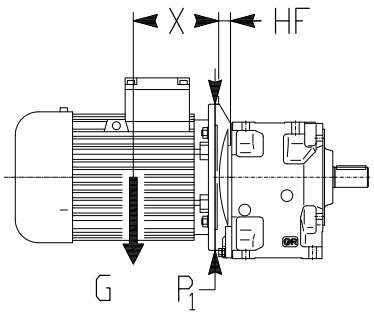
G [lb] motor weight; numerically nearly equal to motor mass, expressed in lb

X [in] distance from motor center of gravity from fl ange surface

HF [in] given in the table, according to gear reducer size and flange diameter P_1.

Very long and thin motors, though with bending moments within the prescribed limits, may generate anomalous vibrations during the operation. In these cases it is necessary to foresee a proper additional motor support (see motor specific documentation).

Loads higher than permissible loads may be present in dynamical applications where the gearmotor is subjected to translations, rotations or oscillations: consult us for the study of every specific case



Max allowable bending moment M_{bmax} and HF dimension

Gear reducer size	P_1 Ø	2I HF in	2I M_{bmax} lb in	3I HF in	3I M_{bmax} lb in
32	140	0.43	**1239**	0.43	**1239**
40, 41	140	0.47	**2213**	13,5	**2213**
	160	0.47	**2213**	13,5	**2213**
50, 51	140	–	**–**	0.63	**2478**
	160	0.63	**2478**	0.63	**2478**
	200	0.63	**3540**	0.63	**3540**
63, 64	160	–	**–**	0.75	**4425**
	200	0.75	**4425**	0.75	**4425**
	250	0.75	**7966**	–	**–**
80, 81	200	0.87	**9913**	0.87	**9913**
	250	0.87	**9913**	0.87	**9913**
	300	0.96	**14161**	–	**–**
100, 101	200	–	**–**	0.94	**12391**
	250	0.94	**12391**	0.94	**12391**
	300	0.94	**12391**	0.94	**12391**
	350	1.57	**12391**	–	**–**
125 ... 140	250	–	**–**	1.12	**22127**
	300	1.12	**22127**	1.12	**22127**
	350	1.12	**22127**	1.12	**22127**
	400	1.18	**22127**	–	**–**
	450	2.07	**27880**	–	**–**
160, 180	300	–	**–**	1.34	**49564**
	350	1.34	**49564**	1.34	**49564**
	400	1.34	**49564**	1.34	**49564**
	450	1.42	**49564**	1.42	**49564**
	550	1.89	**49564**	–	–

4

Installation and maintenance

General

Be sure that the structure on which gear reducer or gearmotor is fitted is plane, levelled and sufficiently dimensioned in order to assure fitting stability and vibration absence, keeping in mind all transmitted forces due to the masses, to the torque, to the radial and axial loads.

Position the gear reducer or gearmotor so as to allow a free passage of air for cooling both gear reducer and motor (especially at motor fan side).

Avoid: any obstruction to the air-flow; heat sources near the gear reducer that might affect the temperature of cooling-air and of gear reducer for radiation; insufficient air recycle or any other factor hindering the steady dissipation of heat.

Mount the gear reducer so as not to receive vibrations.

When external loads are present use pins or locking blocks, if necessary.

When fitting gear reducer and machine and/or gear reducer and eventual flange **B5** it is recommended to use **locking adhesives** such as LOCTITE on the fastening screws (also on flange mating surfaces).

For outdoor installation or in a hostile environment protect the gear reducer or gearmotor with anticorrosion paint. Added protection may be afforded by water-repellent grease (especially around the rotary seating of seal rings and the accessible zones of shaft end).

Gear reducers and gearmotors should be protected wherever possible, and by whatever appropriate means, from solar radiation and extremes of weather; weather protection **becomes essential** when high or low speed shafts are vertically disposed, or where the motor is installed vertical with fan uppermost.
For ambient temperatures greater than 124 °F (40 °C) or less than 32 °F (0 °C), consult us.

Before wiring-up the gearmotor, make sure that motor voltage corresponds to input voltage. If the direction of rotation is not as desired, invert two phases at the terminals.

Star-delta starting should be adopted for starting on no load (or with a very small load) and/or when the necessity is for smooth starts, low starting current and limited stresses.

If overloads are imposed for long periods of time, or if shocks or danger of jamming are envisaged, then motor-protections, electronic torque limiters, fluid couplings, safety couplings, control units or other suitable devices should be fitted.

Where duty cycles involve a high number of starts on-load, it is advisable to utilize **thermal probes** (fitted on the wiring) for motor protection; a thermal overload relay is unsuitable since its threshold must be set higher than the motor's nominal current rating.

Use varistors to limit voltage peaks due to contactors.

Warning! Bearing life, good shaft and coupling running depend on alignment precision between the shafts. Carefully align the gear reducer with the motor and the driven machine (with the aid of shims if need be), interposing flexible couplings whenever possible.

Whenever a leakage of lubricant could cause heavy damages, increase the frequency of inspections and/or envisage appropriate control devices (e.g.: remote oil level gauge, lubricant for food industry, etc.).

In polluting surroundings, take suitable precautions against lubricant contamination through seal rings or other.

Gear reducer or gearmotor should not be put into service before it has been incorporated on a machine which is conform to 2006/42/EC directive.
For brake or non-standard motors, consult us for specific information.

Fitting of components to shaft ends

It is recommended that the bore of parts keyed to shaft ends is machined to H7 tolerance; for low speed shaft ends, tolerance must be **K7** when load is not uniform and light. Other details are given in the «Shaft end» table (ch. 3.13).
Before mounting, clean mating surfaces thoroughly and lubricate against seizure and fretting corrosion.
Installing and removal operations should be carried out with **pullers** and **jacking screws** using the tapped hole at the shaft butt-end; for H7/m6 and K7/j6 fits it is advisable that the part to be keyed is pre-heated to a temperature of 176 ÷ 212 °F (80 ÷ 100 °C).

Lubrication

Gear pairs and bearings are oil-bath or splash lubricated excluding sizes 32 ... 41 which are grease lubricated.

Sizes 32 ... 41: gear reducers are supplied **filled with synthetic grease** (SHELL Gadus S5, MOBIL SHX Polyrex 005), providing lubrication «**for life**» – assuming pollution-free surroundings.

Sizes 50 ... 81: gear reducers are supplied **filled with synthetic oil** (KLÜBER Klübersynth GH 6-220, MOBIL Glygoyle 220, SHELL Omala S4 WE 220) providing lubrication «**for life**» – assuming pollution-free surroundings. Ambient temperature range 32 ÷ 104 °F (0 ÷ 40 °C) with peaks of −4 °F (20 °C) and +122 °F (50 °C).

Important: verify mounting position keeping in mind that if gear reducer is installed in a mounting position which differs from the one indicated on the name plate, it could require the addition of the difference between the two quantities of lubricant given in ch. 3.6 and 3.8, by way of the housing filler hole.

Sizes 100 ... 180: gear reducers are supplied **without oil**; before putting into service, fill to the specified level with **mineral oil** having the ISO viscosity grade given in the table.

1) Lubricant quantities stated on ch. 3.6 and 3.8 are approximate for provisioning. The exact oil quantity the gear reducer is to be filled with is definitely given by the level.

When it is required to increase oil change interval («long life»), the ambient temperature range, and/or reduce oil temperature, use **synthetic oil** with polyalphaolefines basis (PAO), always suggested, or with polyglycol basis (PAG) having ISO viscosity grade as indicated in the table.

Manufacturer	**PAO synthetic oil**	PAG synthetic oil	Mineral Oil
AGIP	Blasia SX	Blasia S	Blasia
ARAL	Degol PAS	Degol GS	Degol BG
BP	Enersyn EPX	Enersyn SG-XP	Energol GR XP
CASTROL	Alphasyn EP	Optiflex A	Alpha SP
FUCHS	Renolin Unisys	Renolin PG	CLP Renolin CLP
KLÜBER	Klübersynth GEM4	Klübersynth GH6	Klüberoil GEM1
MOBIL	Mobil SHC Gear	Mobil Glygoyle	Mobilgear 600 XP
SHELL	Omala S4 GX	Omala S4 WE	Omala S2 G
TEXACO	Pinnacle	Synlube CLP	Meropa
TOTAL	Carter SH	Carter SY	Carter EP

ISO viscosity grade
Mean kinematic viscosity [cSt] at 104 °F (40 °C).

Speed n_2 min^{-1}	Ambient temperature[2] [°F] mineral oil 32 ÷ 50	mineral oil 50 ÷ 104	synthetic oil 32 ÷ 104
> 224	150	150	150
224 ÷ 22,4	150	220	220
22,4 ÷ 5,6	220	320	320
< 5,6	320	460	460

2) Peaks of 50 °F (10 °C) above and 50 °F (10 °C) (68 °F (20 °C) for synthetic oil) below the ambient temperature range are acceptable.

An overall guide to **oil-change interval** is given in the table, and assumes pollution-free surroundings. Where heavy overloads are present, halve the values.

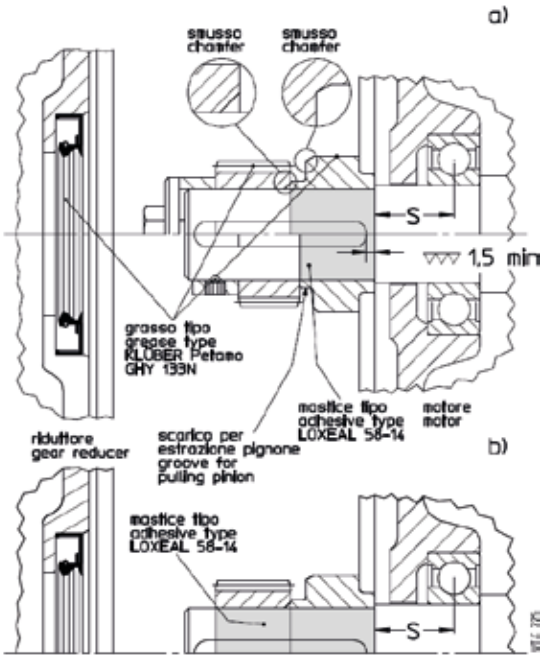
Oil temperature [°F]	Oil-change interval [h] mineral oil	synthetic oil
≤ 149	8,000	25,000
149 ÷ 176	4 000	18,000
176 ÷ 203	2,000	12,500

Combined gear reducer and gearmotor units: lubrication remains independent, thus data relative to each single gear reducer hold good.

Seal rings: duration depends on several factors such as dragging speed, temperature, ambient conditions, etc.; as a rough guide; it can vary from 3 150 to 12 500 h.

Warning: for gear reducers sizes 100 ... 180, before unscrewing the filler plug with valve (symbol ⊸) wait until the unit has cooled and then open with caution.

Motor replacement



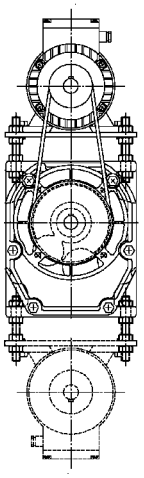
Motor size	Min dynamic load capacity [lb in]		Max dimension 'S'
	Front	Rear	mm
63	39,828	29,650	16
71	55,760	42,041	18
80	79,657	59,300	20
90	116,830	88,507	22.5
100	177,015	132,762	25
112	221,269	168,164	28
132	314,201	234,545	33.5
160	420,410	296,500	37.5
180	557,597	398,284	40
200	708,060	495,642	45
225	885,075	628,403	47.5
250	1,106,343	796,567	53
280	1,416,119	991,283	56

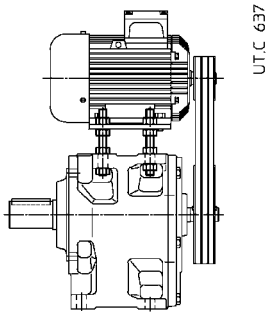
As all gearmotors are fitted with **standard** motors, motor replacement is extremely easy. Simply observe the following instructions:

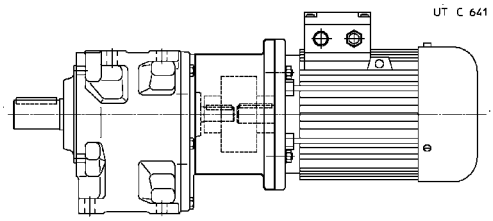
- be sure that the mating surfaces are machined under accuracy rating (IEC 60072-1);
- clean surfaces to be fitted thoroughly;
- check that the fit-tolerance (push-fit) between hole and shaft end is K6/j6 for D ≤ 28 mm, J6/k6 for D ≥ 38 mm;
- in the event of a lowered keyway, replace the motor keyway with the one supplied with the gear reducer; adjust the keyway length to the motor shaft, if need be; check that between the top and the bottom of the hole keyway there is a backlash of 0.1 ÷ 0.2 mm; in the event of output shaft keyway, lock the key by pins;
- make sure tha the motors have bearing location and overhang (distance S) as shown in the table;
- assemble on motor shaft, as follows:
- the **spacer** pre-heated at **149 °F** (**65 °C**) sealing the motor shaft part with **locking adhesive type LOXEAL 58-14** and ensuring that between keyway and motor shaft shoulder there is a ground helical section of at least 1.5 mm; pay attention **not to damage the external surface** of spacer;
- **the key** in the keyway, taking care that a brief segment of at least 0,9 times the pinion width;
- the pinion pre-heated at **176 ÷ 212 °F** (**80 ÷ 100 °C**);
- **the axial fastening system** where foreseen (head self-locking screw with base, spacer, or hub clamp with one or more dowels, fig. a); for the cases foreseen **without axial fastening** (fig. b), seal with **locking adhesive type LOXEAL 58-14** also the motor shaft section below the **pinion**;
- in the event of axial fastening system with hub clamp and dowels, be sure tha these ones do not overhang from spacer external surface: screw the dowel and matrix the motor shaft with a tip;
- grease the pinion teeth, the sealing ring rotary seat and the seal ring (with KLÜBER Petamo GHY 133N), and assemble carefully, **paying attention not to damage the seal ring lip due to accidental shock with the pinion toothing.**

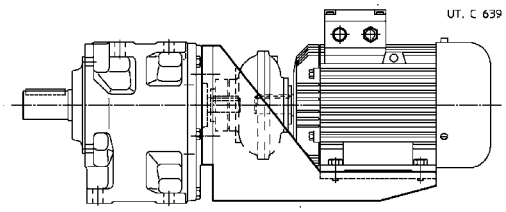
Systems of motor-gear reducer mounting

The strength and shape of housing offer **advantageous** systems of motor-gear reducer mounting: gearmotor with belt drive, mechanic or hydraulic coupling.









5

Accessories and non-standard designs

Strengthened high speed shaft bearings

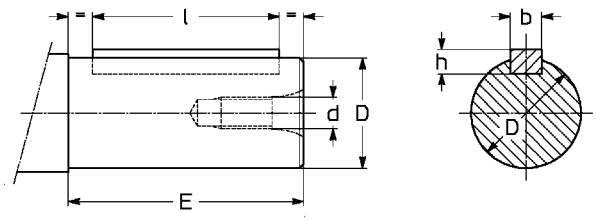
Gear reducer R 2I sizes 50, 63, 80 and sizes 51, 64, 81 with $i_N \geq 16$ and R 3I sizes 63 ... 101 can be supplied with cylindrical roller bearings on high speed shaft so as to allow high radial loads, values **x 1.6** (ch. 13); this design is standard for all remaining gear reducers, which present cylindrical roller or taper roller bearings as a standard.

Supplementary description when ordering by **designation**: **strengthened high speed shaft bearings**.

Non-standard low speed shaft end

The gear reducers and gearmotors size 40 ... 101 can be supplied with non-standard low speed shaft end; dimensions as per following table.

Gear reducer size	D Ø	E	d Ø	Keyway b x h x l
40 [1]	20 g6	40	M6	6 x 6 x 36
41	20 j6	36	M6	6 x 6 x 25
50	25 j6	50	M8	8 x 7 x 45
51	25 j6	42	M8	8 x 7 x 36
63, 64	30 k6	58	M10	8 x 7 x 45
63 [1]	35 g6	58	M10	10 x 8 x 50
64	35 k6	58	M10	10 x 8 x 50
80 [1]	40 g6	80	M12	12 x 8 x 70
81	40 k6	80	M12	12 x 8 x 70
100 [1]	50 g6	82	M12	14 x 9 x 70
101	50 k6	82	M12	14 x 9 x 70



1) Shaft end without shoulder.

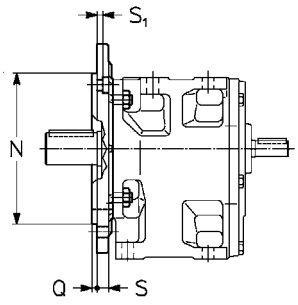
Supplementary description when ordering by **designation**: **nonstandard low speed shaft end, D ...** (dimension D Ø).

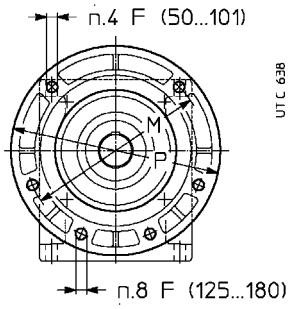
Oversized B5 flange (low speed shaft)

All gear reducers and gearmotors (sizes ≥ 50) can be supplied with oversized B5 flange (always having through holes) supplied separately (complete wth stud bolts) or fitted on standard B5 flange – if indicated when ordering –. Flange plane coincides with low speed shaft end shoulder.

The gear reducer is to be fastened after having fastened the flange on the machine.

Locking adhesives such as LOCTITE, should be used both on screws and coupling surfaces.





Gear reducer size	F Ø	M Ø	N Ø h6	P Ø	Q	S	S_1 [1]
50, 51	10.5	165	130	200	3.5	12	5.5
63, 64	13	215	180	250	4	14	6.5
80, 81	13	265	230	300	4	15	9
100, 101	17	300	250	350	5	17	10.5
125, 126, 140	17[8]	400	350	450	5	17	–
160, 180	17[8]	500	450	550	5	20	–

1) Screw type UNI 5931-84

Supplementary description when ordering by **designation**: **oversized B5 flange**.

Design for agitators and aerators

This design has been specifically developed for aerators and agitators.

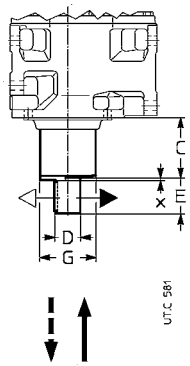
In addition to the rigid and precise **single-piece** housing, **universal** mounting, taper roller bearings (sizes 125 ... 180), the main features of this **reliable compact and economic** design are:

- extended bearing housing to improve radial and axial load ratings (sizes ≥ 125: taper roller bearings) and to reduce overhangs;
- plentiful low speed shaft end diameter;
- double seals on the low speed shaft with chromium plated raceway;
- space between double seals packed with grease and top hat arrangement which acts as water splash guard for aerators;
- **oil** lubricated bearing on low speed shaft end side; additional stainless steel drain plug to facilitate complete oil drainage; all this ensures **total reliability** (gear pairs and bearings) during running and **minimum maintenance**;
- special single compound paint: antirust zinc primer plus blue RAL 5010 DIN 1843 synthetic paint.

Options:

- drip proof cover for motor (standard protection IP 55);
- special dual compound paint;
- remote oil level and/or oil temperature indicator with threshold signal (sizes ≥ 160).
- oversized B5 flange.

Axial load F_{a2} on low speed shaft end can be doubled according to direction of rotation for combinations **2** (as shown in the ch. 3.12 and in table) which are to be **preferred;** (for sizes 81 and 101 consult us for values of F_{a2}).



Gear reducer size	C	D Ø	E	G Ø	x ≈ 1)	Axial load F_{a2}			
						← ↓	← ↑	→ ↓	→ ↑
80, 81	112	45 k6	82	104	—	1	2	2	1
100, 101	137	55 m6	82	126	—	2	1	1	2
125, 126	139	70 m6	105	140	3	1	2	2	1
140	140	80 m6	130	159	3	1	2	2	1
160	168	90 m6	130	183	4	2	1	1	2
180	158	100 m6	165	226	4	2	1	1	2

1) Thickness of protection disc.

Supplementary description when ordering by **designation**: **design for agitators**.

Gear reducer design ATEX II 2 GD and 3 GD

Coaxial gear reducers and gearmotors (sizes 32 ... 41 excluding) may be supplied according to European Community Directive ATEX 2014/34/EU in order to be used in potentially explosive atmospheres :

- category **2 GD** (for operation in zones 1 (G = gas), 21 (D = dust); **probable** presence of explosive atmosphere) and **3 GD** (for operation in zones 2 (gas), 22 (dust): **improbable** presence of explosive atmosphere) - with surface temperature T 275 °F (135 °C) (T4).

These are the main variations of the product:

- fluoro-rubber seal rings;
- metal plugs; filler plug with filter and valve;
- special name plate with ATEX mark and indication of application limits.
- external protection tested on a water-soluble dual-compound polyurethane **conductive** enamel, **color grey** RAL 7040, corrosivity class C3 ISO 12944-2;
- **«**ATEX instructions**»** manual.

For category 2 GD, depending on **minimum** control **intervals**, also:

- 2 GD monthly control
- double seal rings on low speed shaft;
- 2 GD quarterly control (size 100 ... 180)
- double seal rings on low speed shaft;
- oil temperature probe;
- bearing temperature probe, if any;

this solution is advisable when the gear reducer has difficult acces or when a decrease in control frequency is required.
Operating ambient temperature: - 4 ÷ 104 °F (-20 ÷ +40 °C).

The **«ATEX operating instructions»** (with the additional documentation, if any) are **integral part of the supply** of each gear reducer; every indication stated in it must be carefully applied. In case of needs, consult us.

Gear reducer size selection

Determine the size of gear reducer as indicated in ch. 5 considering following additional limitations:
– maximum input speed $\mathbf{n_1 \leq 1\,500}$ rpm;
– **service factor requested** determined according to ch. 3.4 increased with the factors stated in following table - **never lower than 1**.

Verify, at last, that the applied power P_1 is lower than or equal to nominal thermal power $\boldsymbol{Pt}_N$ multiplied by thermal factors $\boldsymbol{ft}_2$ ... $\boldsymbol{ft}_5$ (see ch 4) and by corrective factor $\boldsymbol{ft}_{ATEX}$ given in the following table.

ATEX design **corrective factors** for required service factor $\boldsymbol{fs}$ and nominal thermal power $\boldsymbol{Pt}_N$.

Categoria ATEX - ATEX Category	$\boldsymbol{fs}_{ATEX}$	$\boldsymbol{ft}_{ATEX}$
2 GD	1,18	0,8
3 GD	1,06	0,9

Motor category selection

In the table on the right the minimum features of motors to be installed with Rossi gear reducers in ATEX design, in potentially explosive atmosphere areas.

Protection methods of electric tools:

EEx **e** increased safety;
EEx **d** flameproof enclosure;
EEx **de** combination of «d» and «e»;
EEx **nA** reduced sparkling

Zona **Zone**	**Riduttore** Rossi in esecuzione ATEX II Rossi **Gear reducer** ATEX II design	Categoria **motore** richiesta[1)] Required **motor** category[1)]	
1	2 GD	2 G EEx e 2 G EEx d 2 G EEx de	con termistori o Pt100 with thermistors or Pt100
21		2 D IP65	
1, 21		2 GD EEx e 2 GD EEx d 2 GD EEx de	
2	3 GD	3 G EEx nA	–
22		3 D IP54[2)]	–
2, 22		3 GD EEx nA	

1) The devices suitable for zone 1 are also suitable for zone 2, similarly the devices suitable for zone 21 are also suitable for zone 22.
2) For conductive dusts motor must be 2 D IP65.

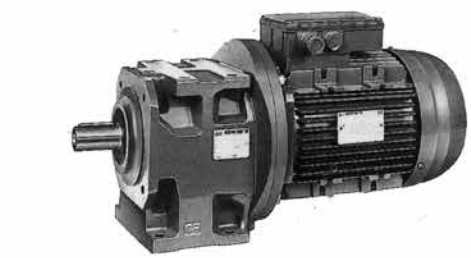
Supplementary description when ordering by **designation**[1)]:
design ATEX II ...

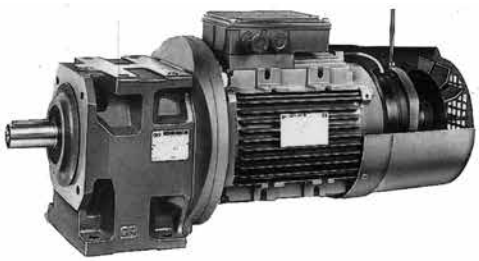
... **3 GD T4** sizes 50 ... 180
... **2 GD T4 monthly control** sizes 50 ... 180
... **2 GD T4 quarterly control** sizes 100 ... 180

1) For gearmotors, this designation refers to the only **gear reducer part.**

Miscellaneous

– Gearmotors with:
  – **brake motor** (also single-phase) with d.c. **safety and/or parking brake** (sizes 63 ... 132) having overall dimensions nearly the same of a standard motor and braking torque $M_f \geq M_N$, maximum economy; **suitable for running with inverter**, non-standard designs with axial independent cooling fan and/or encoder (see ch. 2b);
  – **two-speed motor** (standard, brake motor, brake motor with safety brake and/or parking brake, with flywheel) with 2.4, 2.6, 2.8, 2.12, 4.6, 4.8, 6.8 poles;





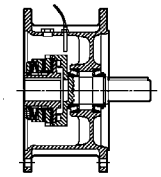
  – motor featuring: d.c. supply; single-phase; explosion-proof; with second shaft end; with non-standard protection, voltage and frequency; provided with devices against overloads and overheating;
  – **motor without fan** externally cooled **by natural convection** (sizes 63 ... 112); design for textile industry.
– **MLA unit, mechanical torque limiter on input shaft**, motor sizes **80 ... 200**.

Mechanical torque limiter unit to be interposed between gear reducer and B5 mounting position motor standardized to IEC (or wide belt or planetary motor-variator) or, in **combined units**, between the initial gear reducer and the final gear reducer.

Axially ultra-compact design: excellent load bearing with life lubricated double row angular contact ball bearings (motor size ≤ 112) or «O» disposed taper roller bearings.

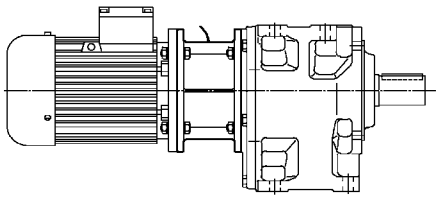
The unit protects the drive from accidental overloads by excluding inertia loads transmitted from up-line masses and down-line masses.

LA unit is friction type (friction surfaces without asbestos). When the transmitted torque tends to exceed the setting, the drive «slips» although **it remains** engaged and transmits torque equal to the limiter setting value; slipping stops as soon as the load returns to normal; in the case of very brief overloads the driven machine will continue normal operation (after decelerating or stopping) without requiring reset procedures.



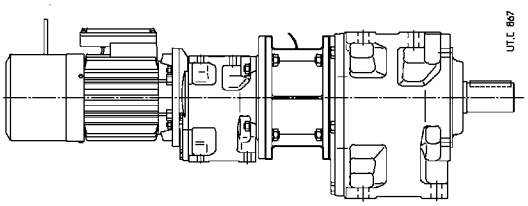
MLA

friction



MLA

mounted between gear reducer and motor or motor-variator



MLA

mounted onto combined units

***** on request

– Gearmotors with interposed compact clutch-brake or fluid coupling/brake unit.

– Semi-flexible low speed shaft couplings.
– Special paint options:
  – **external, single-compound**: antirust zinc primer plus blue RAL 5010 DIN 1843 synthetic paint (excluding 32 ... 41);
  – **external, dual-compound**: dual-compound epoxy-polyamidic antirust primer plus dual-compound blue RAL 5010 DIN 1843 polyurethane enamel;
  – **internal, dual-compound**: unaffected by polyglycol synthetic oils (sizes 100 ... 180).
– Special seal rings; double seal.

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6

Technical formulae

Main formulae concerning mechanical drives, according to the Technical System and International Unit System (SI).

Size	Con unità Sistema Tecnico With Technical System units		Con unità SI With SI units
starting or stopping **time** as a function of an acceleration or deceleration, of a starting or braking torque	$t = \frac{Gd^2 \cdot n}{375 \cdot M}$ [s]	$t = \frac{v}{a}$ [s]	$t = \frac{J \cdot \omega}{M}$ [s]
velocity in rotary motion	$v = \frac{\pi \cdot d \cdot n}{60} = \frac{d \cdot n}{19{,}1}$ [m/s]		$v = \omega \cdot r$ [m/s]
speed n and **angular velocity ω**	$n = \frac{60 \cdot v}{\pi \cdot d} = \frac{19{,}1 \cdot v}{d}$ [min^{-1}]		$\omega = \frac{v}{r}$ [rad/s]
acceleration or deceleration as a function of starting or stopping time		$a = \frac{v}{t}$ [m/s^2]	
angular acceleration or deceleration as a function of a starting or stopping time, of a starting or braking torque	$\alpha = \frac{n}{9.55 \cdot t}$ [rad/s^2] $\alpha = \frac{39.2 \cdot M}{Gd^2}$ [rad/s^2]		$\alpha = \frac{\omega}{t}$ [rad/s^2] $\alpha = \frac{M}{J}$ [rad/s^2]
starting or stopping **distance** as a function of an acceleration or deceleration, of a final or initial velocity		$s = \frac{a \cdot t^2}{2}$ [m] $\varphi = \frac{\alpha \cdot t^2}{2}$ [rad]	$s = \frac{v \cdot t}{2}$ [m]
starting or stopping **angle** as a function of an angular acceleration or deceleration, of a final or initial angular velocity	$\varphi = \frac{n \cdot t}{19.1}$ [rad]		$\varphi = \frac{\omega \cdot t}{2}$ [rad]
mass	$m = \frac{G}{g}$ $[\frac{kgf\ s^2}{m}]$		m è l'unità di massa [kg] m is the unit of mass [kg]
weight (weight force)	G è l'unità di peso (forza peso) [kgf] $G = m \cdot g$ [N] G is the unit of weight (weight force) [kgf]		
force in vertical (lifting), horizontal, inclined motion of translation (μ = coefficient of friction; φ = angle of inclination)	$F = G$ [kgf] $F = \mu \cdot G$ [kgf] $F = G\,(\mu \cdot \cos\varphi + \text{sen}\,\varphi)$ [kgf]		$F = m \cdot g$ [N] $F = \mu \cdot m \cdot g$ [N] $F = m \cdot g\,(\mu \cdot \cos\varphi + \text{sen}\,\varphi)$ [N]
dynamic moment Gd^2, moment of inertia J due to a motion of translation (numerically $J = \frac{Gd^2}{4}$)	$Gd^2 = \frac{365 \cdot G \cdot v^2}{n^2}$ [kgf m^2]		$J = \frac{m \cdot v^2}{\omega^2}$ [kg m^2]
torque as a function of a force, of a dynamic moment or of a moment of inertia, of a power	$M = \frac{F \cdot d}{2}$ [kgf m] $M = \frac{Gd^2 \cdot n}{375 \cdot t}$ [kgf m] $M = \frac{716 \cdot P}{n}$ [kgf m]		$M = F \cdot r$ [N m] $M = \frac{J \cdot \omega}{t}$ [N m] $M = \frac{P}{\omega}$ [N m]
work, energy in motion of translation, in rotary motion	$W = \frac{G \cdot v^2}{19{,}6}$ [kgf m] $W = \frac{Gd^2 \cdot n^2}{7160}$ [kgf m]		$W = \frac{m \cdot v^2}{2}$ [J] $W = \frac{J \cdot \omega^2}{2}$ [J]
power in motion of translation, in rotary motion	$P = \frac{F \cdot v}{75}$ [CV] $P = \frac{M \cdot n}{716}$ [CV]		$P = F \cdot v$ [W] $P = M \cdot \omega$ [W]
power available at the shaft of a single-phase motor ($\cos\varphi$ = power factor)	$P = \frac{U \cdot I \cdot \eta \cdot \cos\varphi}{736}$ [CV]		$P = U \cdot I \cdot \eta \cdot \cos\varphi$ [W]
power available at the shaft of a three-phase motor	$P = \frac{U \cdot I \cdot \eta \cdot \cos\varphi}{425}$ [CV]		$P = 1.73 \cdot U \cdot I \cdot \eta \cdot \cos\varphi$ [W]

Note. Acceleration or deceleration are understood constant; motion of translation and rotary motion are understood rectilinear and circular respectively.

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