



GCoolingSysteMS

Helical & Bevel helical

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Rossi

Bevel helical

G for Cooling Systems is a solution specifically designed for Wet Cooling Towers and W-Style Air Cooled Condensers. This system is designed to improve performance in terms of output torque, thermal management and noise levels.

The improved casing design makes it suitable for high-end painting cycles. Low noise levels and excellent gearbox cooling are achieved thanks to new cooling fan and fan cover design.

Features

Benefits

Optimized thermal management	→ High temperatures allowed
Integrated fan support	→ Easy installation and maintenance, improved performances
Improved casing design	→ Suitable for all range of painting protection levels
Reduced noise levels	→ Suitable for low noise applications
Integrated feet	→ Strong and stable fixing to customer structure, reduced vibration levels
Improved fan cover design	→ Optimized air flow and gearbox cooling

Technical specifications

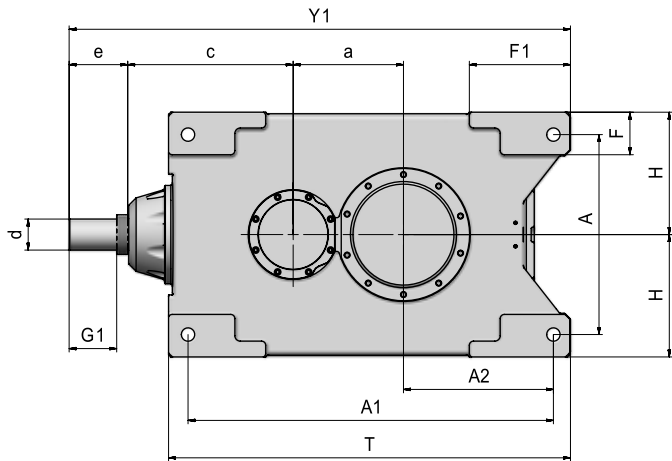
- 4 sizes (250, 283, 321, 360)
- Torque up to 23 600 N m
- Design according to CTI 111 and 167
- 3 designs available: radial fan, axial fan and without fan
- Improved thermal management



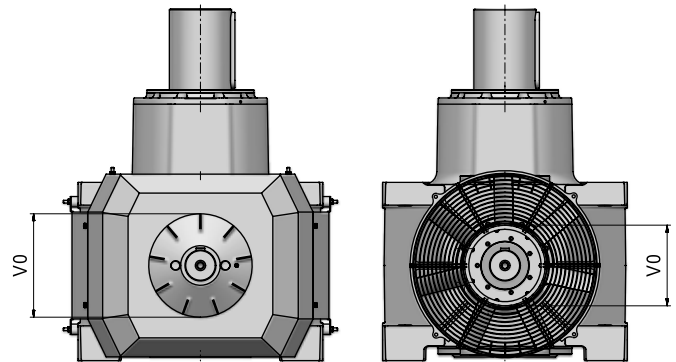
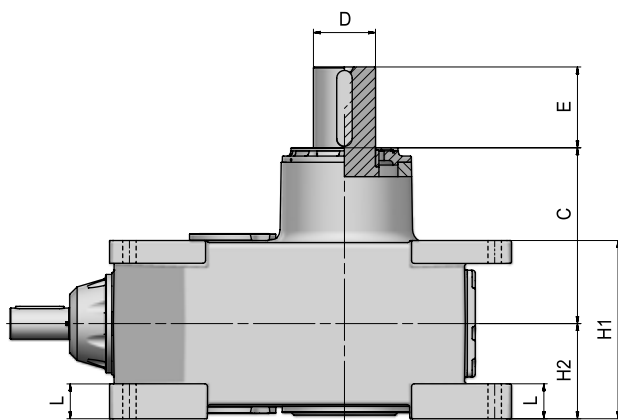
G_Cooling **S**ystems product range



G Cooling Systems Bevel Helical - Main dimensions



Size	a	A	A ₁	A ₂	C	D	E	F	F ₁	L	H	H ₁	H ₂	T
						Ø		≈	≈	≈				≈
250	250	450	825	340	407	140	195	97	244	92	280	421	226	930
283	280	450	855	340	423	140	195	97	244	92	280	421	226	960
321	320	580	1060	435	511	180	234	116	293	108	355	517	276	1166
360	360	580	1100	435	529	180	234	116	293	108	355	517	276	1206



Size	i_N	c	d	e	Y ₁	Radial Fan		Axial Fan	
						G ₁	V ₀	G ₁	V ₀
			Ø		≈	1)	Ø	1)	Ø
250	≤ 14	380	70	140	1164	115	235	70	170
	15 ... 18	357	55	110	1111	85	235	55	170
	≥ 19	357	48	110	1111	90	235	55	170
283	≤ 16	380	70	140	1194	115	235	70	170
	≥ 17	357	55	110	1141	85	235	55	170
321	≤ 14	480	90	170	1455	138	300	127	210
	≥ 15	480	70	140	1425	108	300	97	210
360	≤ 16	480	90	170	1495	138	300	127	210
	≥ 17	480	70	140	1465	108	300	97	210

1) High speed shaft end available length with fan cooling.

Rating torques and actual transmission ratios

Size	M _{N2 max} [N m] f _s _{AGMA} > 2 (L _h = 100 000 h, Reliability 90%) n ₁ = 1 000 - 1 800 min ⁻¹	Actual transmission ratios												
		i _N												
		10	10,6	11,2	11,8	12,5	13,2	14	15	16	17	18	19	20
250	10 600	10,154	10,462	11,167	11,786	12,692	13,077	13,958	14,868	16,012	16,497	17,609	18,857	20,308
283	14 000	10,000	10,571	11,143	11,846	12,667	13,214	13,929	14,808	15,833	16,670	17,571	18,680	19,974
321	18 000	9,846	10,667	11,250	11,923	12,308	13,333	13,750	15,041	15,527	16,821	17,346	19,077	19,692
360	23 600	10,143	10,429	11,077	12,167	12,500	13,036	13,846	15,208	15,625	16,445	17,467	19,186	19,712

Helical

G for Cooling Systems is a solution specifically designed for A-Style Air Cooled Condensers. This system is designed to improve performance in terms of output torque, thermal management and noise levels.

Patented double-oil chamber design to allow cold starts down to -15 °C without heating systems and increases thermal capacity and heat dissipation. Partially external lubrication circuit with wide range of high-end accessories to monitor and protect oil flow.

Features

Benefits

Special casings and bell housing design	→	High temperatures allowed
AGMA service factor > 2 according to CTI 167	→	High reliability
Bearings calculated life time > 100 000 h	→	Long life
Patented lubrication circuit	→	Reduced oil quantity, constantly oil bathed bearings
Oil flow protection accessories	→	Easier maintenance, lower downtimes
Low temperature operations	→	Cold starting down to -15 °C with no heaters

Technical specifications

- 4 sizes (250, 280, 320, 360)
- Torque up to 37 500 N m
- Design according to CTI 167
- Improved thermal management

G_C COOLING SYSTEMS product range



G Cooling Systems Helical - Main dimensions

Gearbox dimensions

Size	a	A	A ₁	A ₂	A ₃	c	C [max]	f	h	H	Ø K	L	R	R ₁	W ₂	Mass [kg]
250	430	510	/	530	225	616,5	800	286	218	300	33 (x4)	51	675	958	1 045	950
280	480	580	/	540	220	604	800	305	204	335	33 (x4)	42	652	934	1 118	1 070
320	545	610	1 050	570	240	725	1 000	359	303	350	39 (x6)	48,5	758	1 065	1 234	1 270
360	610	610	1 145	620	285	768	1 000	388	305	380	39 (x6)	48,5	800	1 108	1 328	1 450

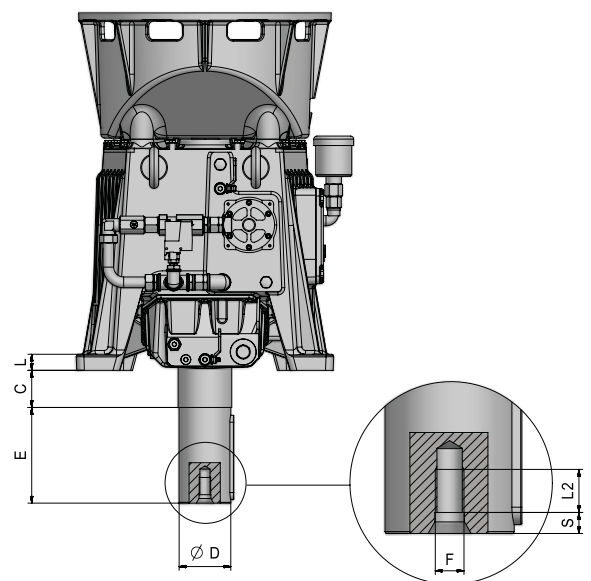
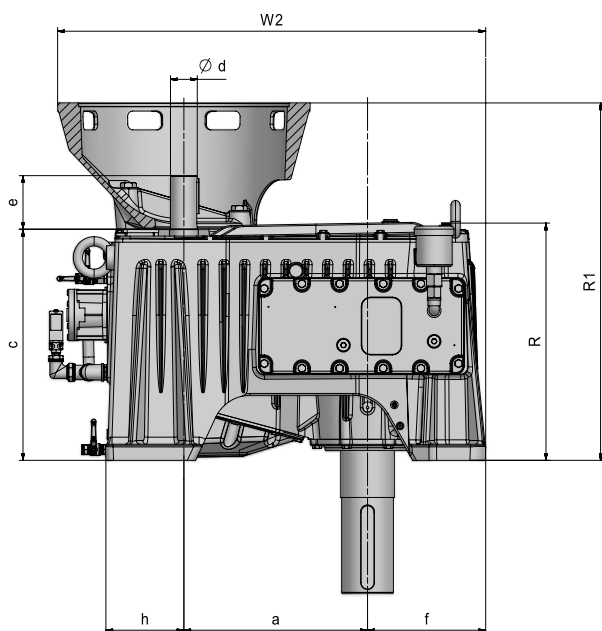
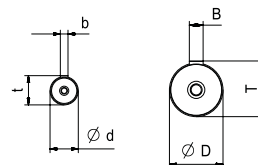
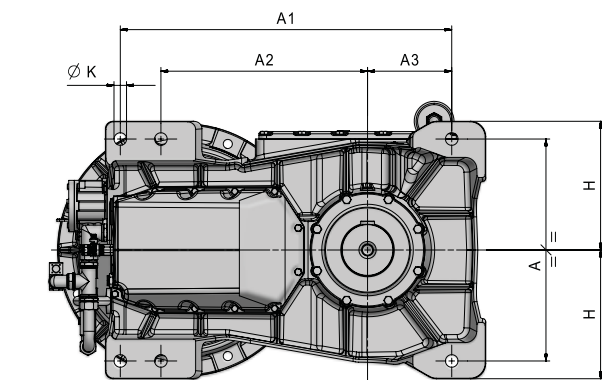
Input shaft dimensions

Size	d	e	t	b
250	70	140	74,5	20
280	70	140	74,5	20
320	90	150	95	25
360	90	150	95	25

Output shaft dimensions

Size	D [max]	E	T	B	F	S	L ₂
250	135	250	143	36	M30	22	45
280	135	250	143	36	M30	22	45
320	175	300	185	45	M36	27	54
360	175	300	185	45	M36	27	54

Rossi reserves the right for alterations. To assist in your planning, we recommend that you call your Rossi representative.



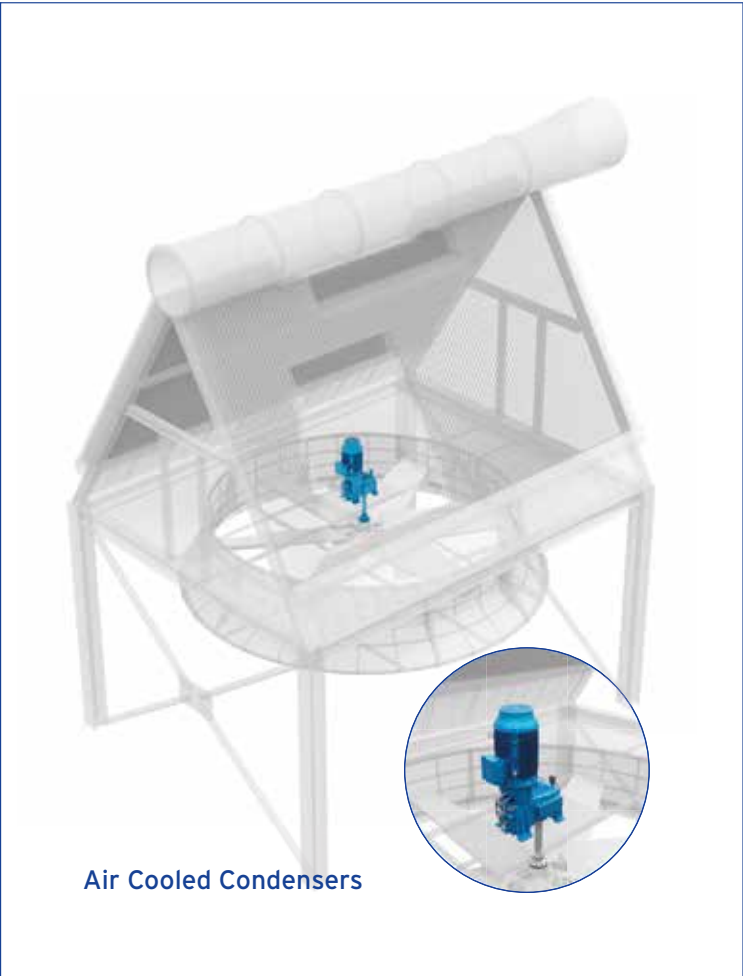
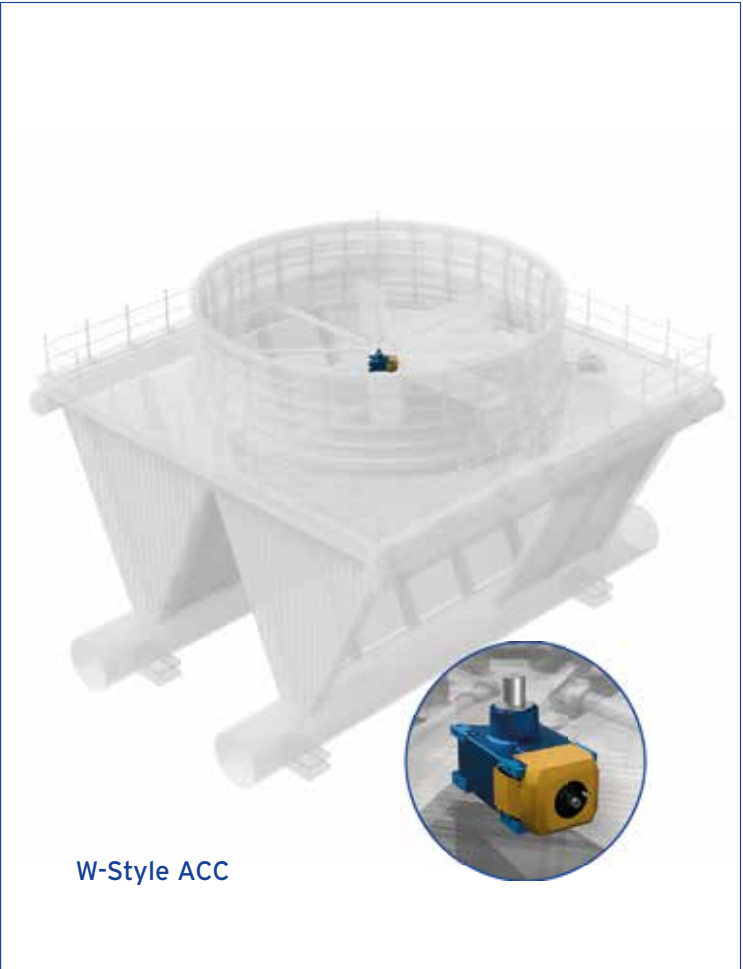
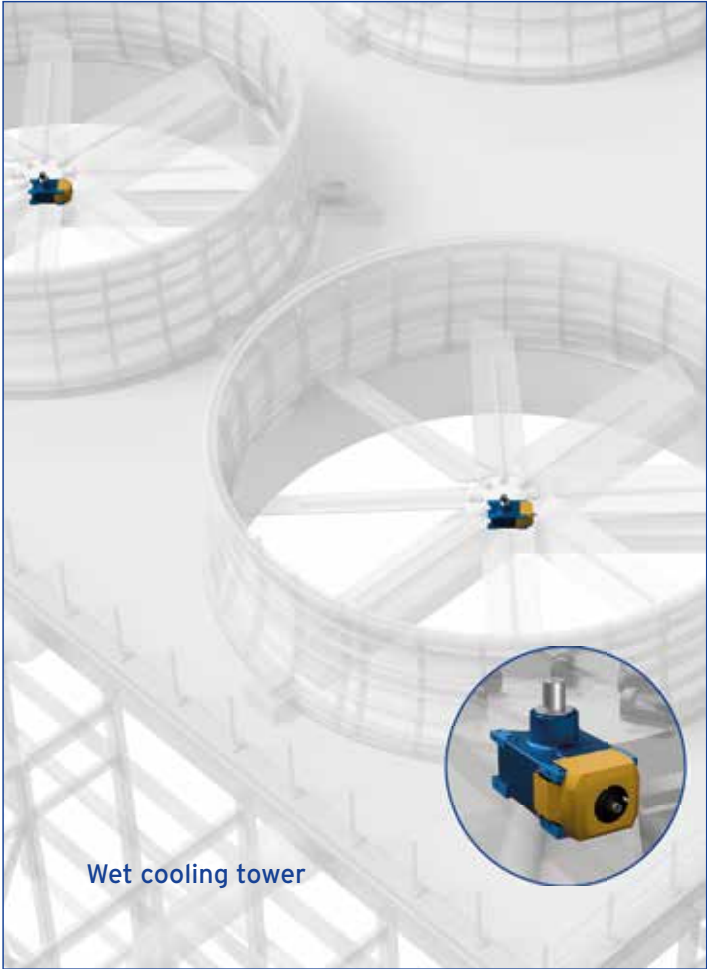
G Cooling Systems Helical - Technical features overview

Sizes		250		280		320		360	
i_N	n_1 [min ⁻¹]	i_{eff}	M_{N2} [N m]	i_{eff}	M_{N2} [N m]	i_{eff}	M_{N2} [N m]	i_{eff}	M_{N2} [N m]
10	1 000	10,7	14 500	10,4	23 000	9,95	28 000	10,7	-
	1 200		14 500		-		28 000		-
	1 500		14 500		-		-		-
	1 800		14 000		-		-		-
11,2	1 000	11,8	12 500	11,9	20 600	11,1	29 000	11,8	-
	1 200		12 200		20 000		29 000		-
	1 500		12 200		20 000		29 000		-
	1 800		12 200		-		-		-
12,5	1 000	13,0	11 200	13,3	20 000	12,9	25 700	13,1	-
	1 200		10 900		20 000		25 000		-
	1 500		10 900		20 000		24 300		-
	1 800		10 600		-		24 300		-
14	1 000	14,5	11 200	14,7	17 000	14,3	24 300	14,4	37 500
	1 200		11 200		17 000		24 300		36 500
	1 500		10 900		17 500		23 600		-
	1 800		10 900		17 000		23 000		-
16	1 000	16,7	13 200	15,7	20 600	15,9	25 000	16,0	35 500
	1 200		12 800		20 600		24 300		35 500
	1 500		12 800		20 600		24 300		-
	1 800		12 500		20 000		23 600		-
18	1 000	18,4	12 800	17,9	20 600	17,8	28 000	18,3	34 500
	1 200		12 500		20 600		27 200		34 500
	1 500		12 500		20 600		27 200		33 500
	1 800		12 500		20 000		26 500		-
20	1 000	20,4	11 200	20,1	20 600	20,6	26 500	20,3	36 500
	1 200		11 200		20 000		25 700		36 500
	1 500		11 200		19 500		25 700		35 500
	1 800		11 800		20 000		25 000		35 500
22,4	1 000	22,7	11 500	22,0	19 500	22,8	25 700	23,4	30 700
	1 200		11 200		17 500		25 000		30 700
	1 500		11 200		17 500		25 000		30 700
	1 800		11 200		17 000		24 300		30 000
25	1 000	25,7	8 750	24,6	20 000	25,0	25 700	25,7	31 500
	1 200		8 500		18 000		25 000		30 700
	1 500		8 500		17 500		25 000		30 000
	1 800		8 250		17 500		24 300		30 000

Nominal output torques [N m] according to CTI 167

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Examples of application





**ACC
G COOLING SYSTEMS SERIES**



**WET COOLING TOWER
G COOLING SYSTEMS SERIES**



**W-STYLE ACC
G COOLING SYSTEMS SERIES**



over
1,000 people around
the world



17 affiliated
companies



5,000 customers
worldwide



5 production
facilities
8 assembly
plants



over
70 years of
experience



18 authorized
service centers



Solutions for
an evolving
industry

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