



# Solutions for Air Cooled Condensers

# Dedicated gear units for Air Cooled Condensers

## Main benefits:

- Helical gearboxes in vertical mounting position
- Sizes: 250, 280, 320 and 360
- **High reliability**, AGMA service factor  $> 2$  according to CTI 167
- **Long life**, bearings calculated life time  $> 100\ 000$  h according to CTI 167
- Electric motor bolted bell housing with axial fan and heat exchanger for gearbox cooling
- Integrated foot mounted housing
- **Patented lubrication circuit**: no pressure, with slave pump, reduced oil quantity, and all oil bathed bearings
- Possibility of bidirectional oil slave pump
- Possibility of cold starting from to  $-15\ ^\circ\text{C}$  and oil temperature pre-heating
- Lower output bearing protected with dry well solutions

## Main applications of power generation industry:

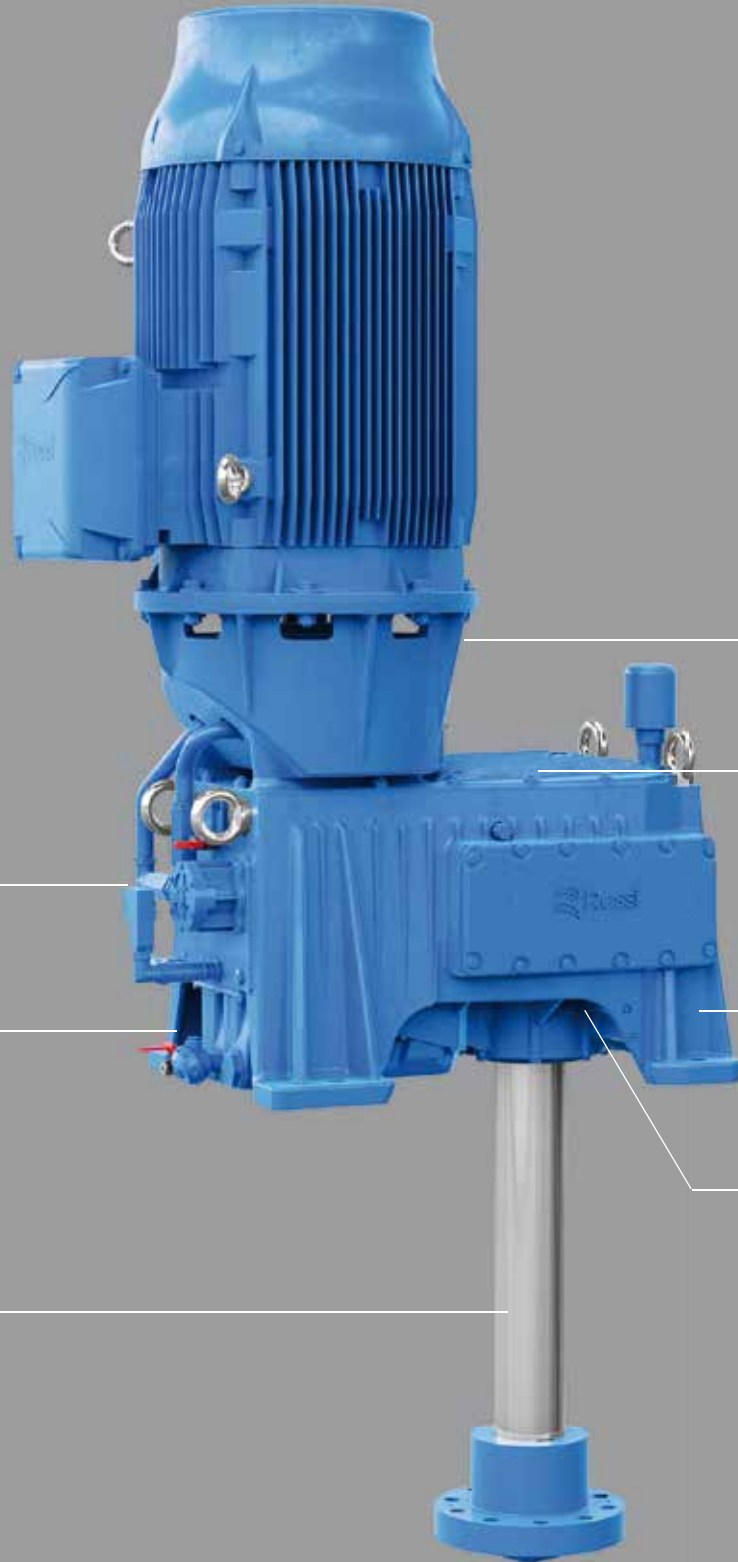
- biomass power plants
- gas-fired power plants
- waste incineration plants
- oil-fired power plants

## Technical features overview

Sizes		250		280		320		360	
$i_N$	$n_1$ [min <sup>-1</sup> ]	$i_{eff}$	$M_{N2}$ [Nm]	$i_{eff}$	$M_{N2}$ [Nm]	$i_{eff}$	$M_{N2}$ [Nm]	$i_{eff}$	$M_{N2}$ [Nm]
10	1 000	10,7	29 000	10,4	46 200	9,95	56 000	10,7	-
	1 200		29 000		-		56 000		-
	1 500		29 000		-		-		-
	1 800		28 000		-		-		-
11,2	1 000	11,8	25 000	11,9	41 200	11,1	58 000	11,8	-
	1 200		24 300		40 000		58 000		-
	1 500		24 300		40 000		58 000		-
	1 800		24 300		-		-		-
12,5	1 000	13,0	22 400	13,3	40 000	12,9	51 500	13,1	-
	1 200		21 800		40 000		50 000		-
	1 500		21 800		40 000		48 700		-
	1 800		21 200		-		48 700		-
14	1 000	14,5	22 400	14,7	33 500	14,3	48 700	14,4	75 000
	1 200		22 400		33 500		48 700		73 000
	1 500		21 800		34 500		47 500		-
	1 800		21 800		33 500		46 200		-
16	1 000	16,7	26 500	15,7	41 200	15,9	50 000	16,0	71 000
	1 200		25 700		41 200		48 700		71 000
	1 500		25 700		41 200		48 700		-
	1 800		25 000		40 000		47 500		-
18	1 000	18,4	25 700	17,9	41 200	17,8	56 000	18,3	69 000
	1 200		25 000		41 200		54 500		69 000
	1 500		25 000		41 200		54 500		67 000
	1 800		25 000		40 000		53 000		-
20	1 000	20,4	22 400	20,1	41 200	20,6	53 000	20,3	73 000
	1 200		22 400		40 000		51 500		73 000
	1 500		22 400		38 700		51 500		71 000
	1 800		23 600		40 000		50 000		71 000
22,4	1 000	22,7	23 000	22,0	38 700	22,8	51 500	23,4	61 500
	1 200		22 400		34 500		50 000		61 500
	1 500		22 400		34 500		50 000		61 500
	1 800		22 400		33 500		48 700		60 000
25	1 000	25,7	17 500	24,6	40 000	25,0	51 500	25,7	63 000
	1 200		17 000		35 500		50 000		61 500
	1 500		17 000		34 500		50 000		60 000
	1 800		16 500		34 500		48 700		60 000

Nominal output torques [Nm] according to CTI 167

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



Bolted motor bell housing with provision for axial fan

Top cover with air flow conveyor

Foot mounted single piece housing with cooling wings

External output support integrated in gearbox housing

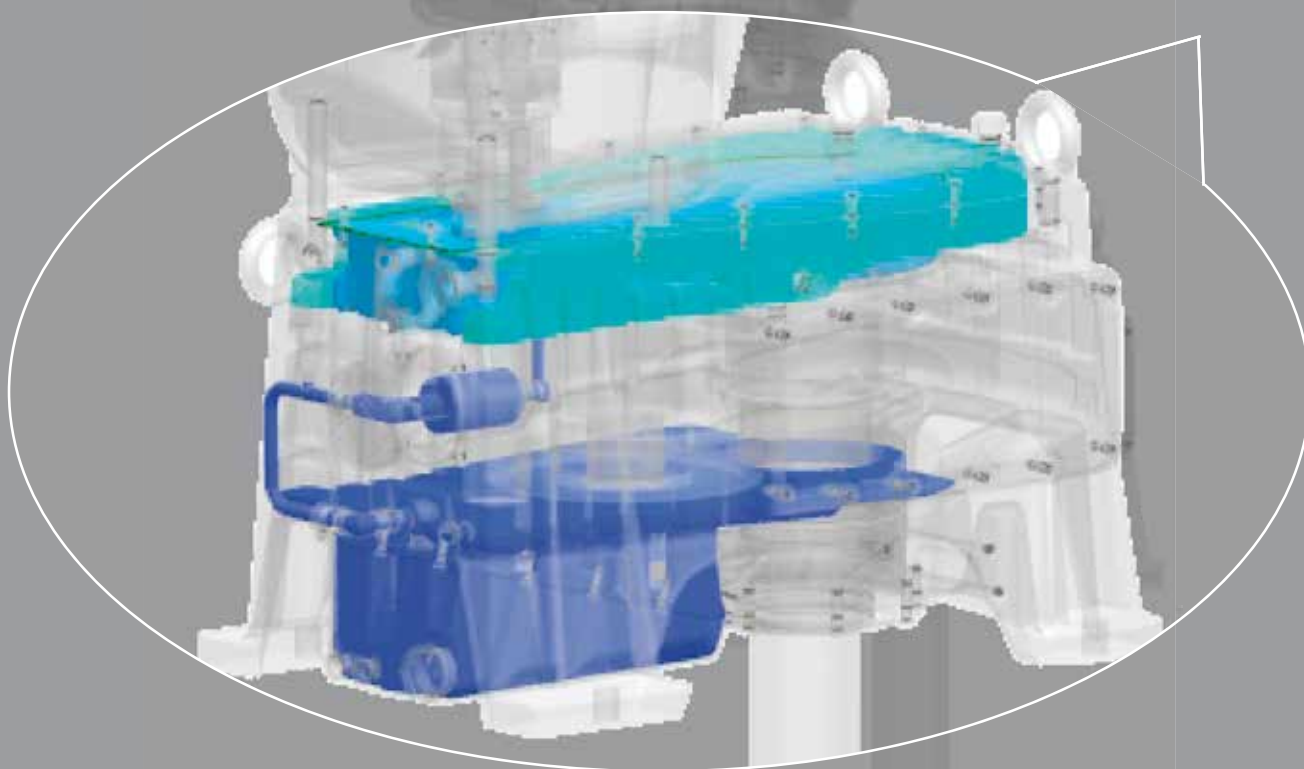
Integrated lubrication circuit with slave pump

Bottom oil tank suitable for easy pump maintenance

Special output shaft length according to customer requirements

## Patented lubrication circuit

Pressure free lubrication system. Two oil sumps always grant perfect bearing lubrication in any condition (even with low oil temperature).



## Technical features overview

**Gearbox dimensions**

Size	a	A	A1	A2	A3	c	C [max]	f	h	H	Ø K	L	R	R1	W2	Mass [kg]
250	430	510	/	530	225	616,5	800	286	218	300	33 (x4)	51	675	958	1045	950
280	480	580	/	540	220	604	800	305	204	335	33 (x4)	42	652	934	1118	1070
320	545	610	1065	580	255	725	1000	359	303	350	39 (x6)	48,5	758	1065	1234	1270
360	610	610	1145	620	285	768	1000	388	305	380	39 (x6)	48,5	800	1108	1328	1450

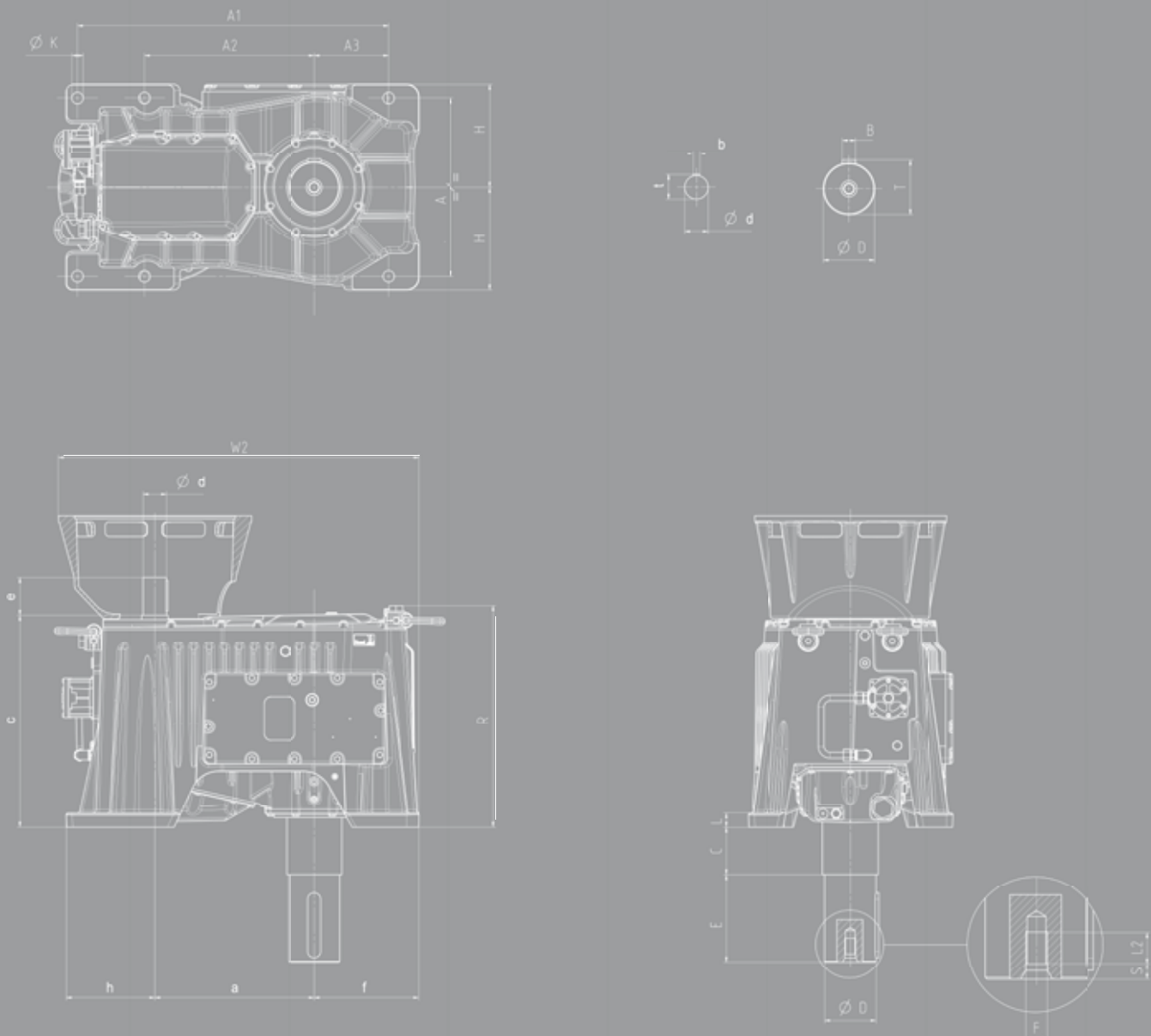
**Input shaft dimensions**

Size	d	e	t	b
250	70	140	74,5	20
280	70	140	74,5	20
320	90	170	95	25
360	90	170	95	25

**Output shaft dimensions**

Size	D	E	T	B	F	S	L2
250	135	250	143	36	M30 (4x)	22	45
280	135	250	143	36	M30 (4x)	22	45
320	175	300	185	45	M36 (6x)	27	54
360	175	300	185	45	M36 (6x)	27	54

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**Our philosophy**

# Solutions for an evolving industry

In the global marketplace, our customers, investors, partners value our products and services for two reasons: excellence and reliability. In Rossi S.p.A., a company of the Habasit Group, we have made of change a strategic lever for our growth. "Solutions for an evolving industry" fully expresses our corporate philosophy: we are a flexible and dynamic reality, able to satisfy all requirements of a continuously evolving industrial world thanks to our innovative solutions.

## **Cutting-edge manufacturing**

When it comes to high-performance and ground precision gear manufacturing, technology and experience are everything. Cutting-edge technology without experience can limit the benefit the final product has for the end user which is why we continue to take pride of our work. Cutting-edge technology can be bought, but how you control it is earned through experience.

## **Specialized housing machining**

High performance needs to be supported with important equipment and knowledge. For this reason, we dedicate special attention to machining all components, including housings for big sizes. High quality standard requirements can be reached using cutting-edge technology.

## **Test controls**

Systematic, extensive controls on every stage of the process (from materials to final controls under load using computerized brakes at the end of the assembly line) and their productivity allow quality to be produced and not just achieved through selection, and permit monitoring and improving the process itself. In addition customers can trust our solutions which have been fully tested and run in our testing room, being operationally certified before on site commissioning.



Solutions for  
an evolving  
industry

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