

W22

Water Cooled

Industrial Motors

Commercial &
Appliance Motors

Automation

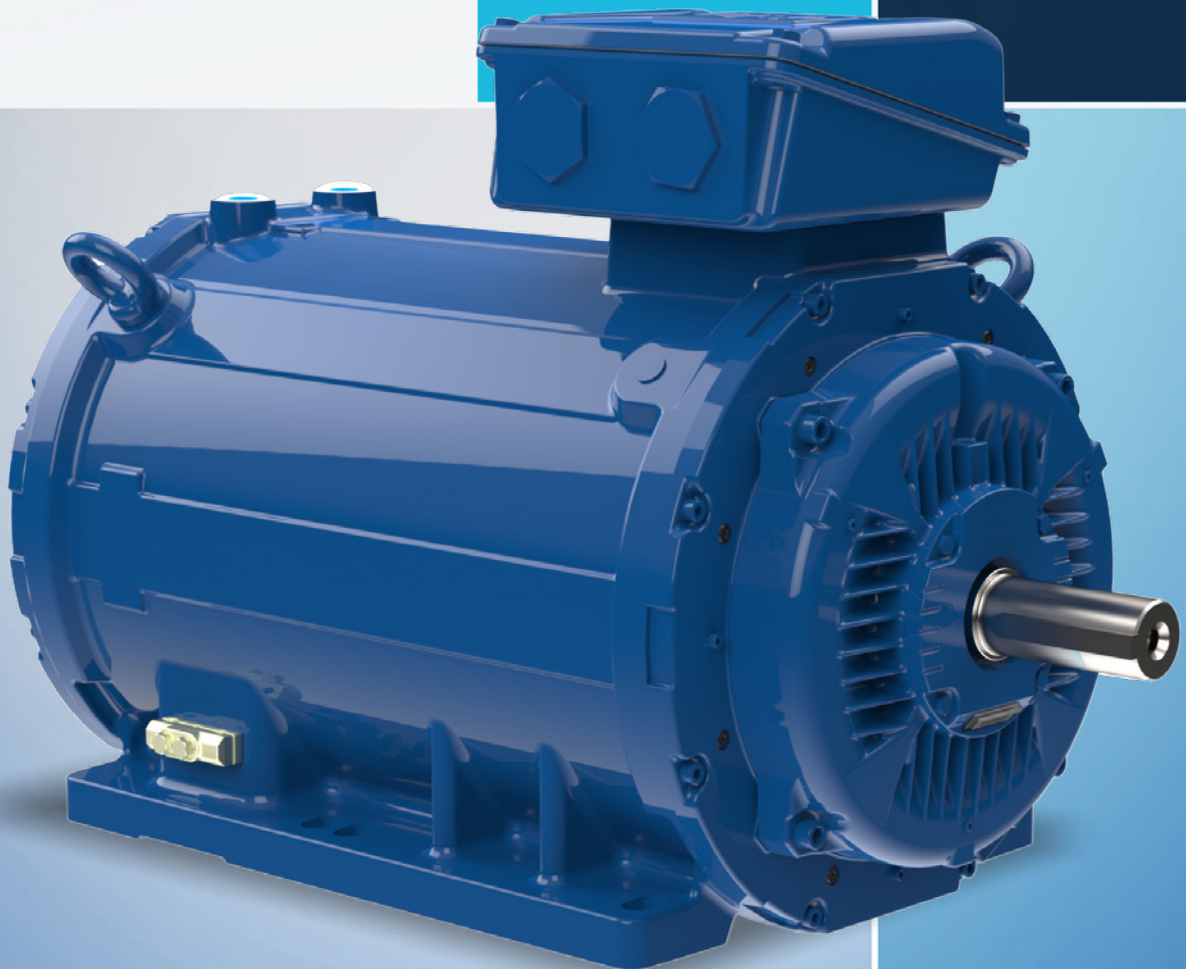
Digital &
Systems

Energy

Transmission &
Distribution

Coatings

NEMA Market



Driving efficiency and sustainability



W22 Water Cooled

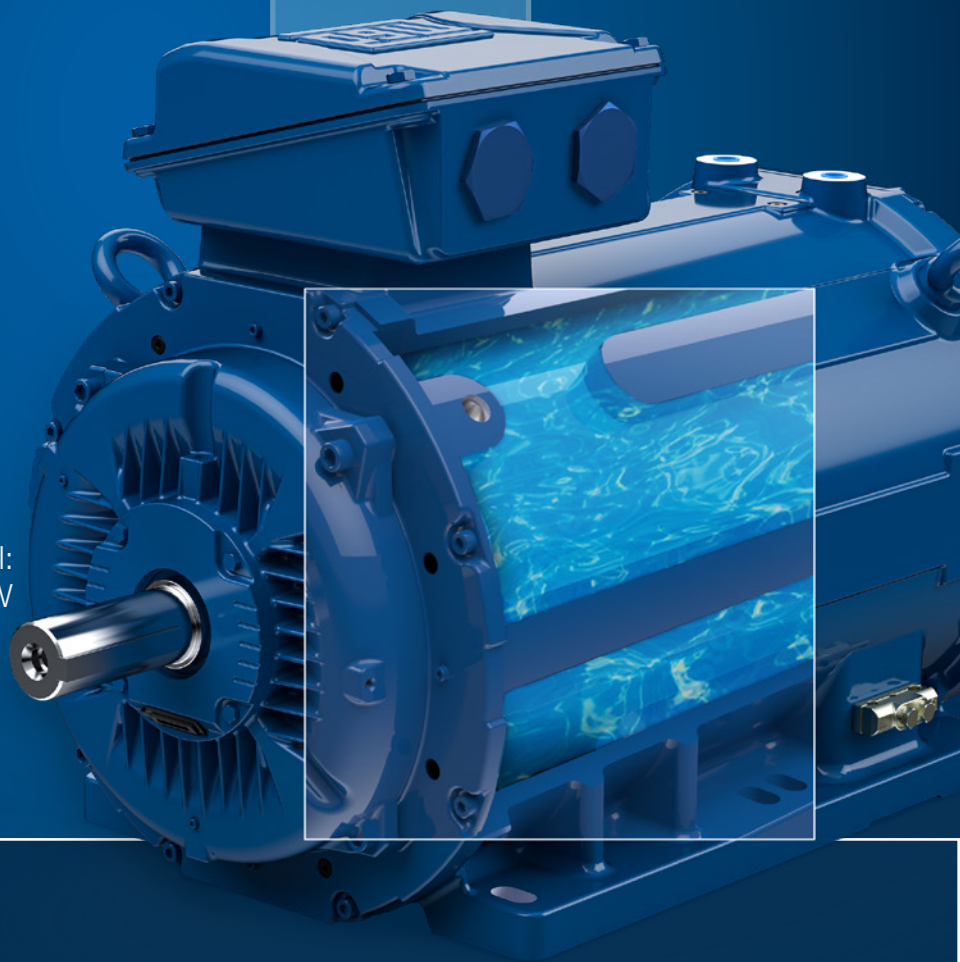
W22 Water Cooled motors are especially suitable for applications with limited space, hard-to-reach maintenance areas, air circulation limitations, and equipment where the process already requires a continuous water circuit. This prevents overheating and makes the W22 Water Cooled line an excellent choice for environments that demand controlled temperatures.

W22 Water Cooled motors can be used for a wide variety of applications and are mainly recommended where space and noise level reduction is required. They are also recommended for different applications including:

- Tunnel Boring Machines
- Injection Molding Machines
- Sanitation Stations
- Textile Industry
- Mining Equipment

Technical Featuresg

- Output: up to 450kW
- Number of poles: 2 to 6 poles
- Frames: 324, 404/5 e 506/7
- Voltage: up to 460 V
- Frequency: 60 Hz
- Service factor: 1,00
- Degree of Protection: IP55
- Insulation class: F or H
- Mounting: B3Tg Frame material: Cast iron
- Cooling system: IC71W
- Grounding terminals on frame and main terminal box



Driving efficiency and sustainability



Electrical Data

W22 Water Cooled - Super Premium Efficiency - 60 Hz - 460V

Output		Frame	Full Load Torque (ft.lb)	Locked Rotor Current I/In	Locked Rotor Torque Tl/Tn	Break-down Torque Tb/Tn	Inertia J (sq.ft.lb)	Allowable locked rotor time (s)		Weight (lb)	Sound dB(A)	Service Factor	460V							Full load current In (A)
								Rated speed (rpm)	% of full load											
									Efficiency				Power Factor							
kW	HP							Hot	Cold					50	75	100	50	75	100	
II Poles																				
30	40	324/6T	58.0	9.3	3.9	3.7	5.02	32	70	853	66.0	1.00	3575	91.5	93.1	94.1	0.72	0.81	0.85	47.1
37	50	324/6T	72.6	9.2	3.6	3.6	5.05	24	53	853	66.0	1.00	3570	93.1	94.2	94.5	0.69	0.79	0.83	59.2
45	60	324/6T	86.9	9.9	3.8	3.8	5.45	19	42	878	66.0	1.00	3575	93.2	94.4	95.0	0.65	0.76	0.81	73.4
55	75	324/6T	109	9.0	3.4	3.3	5.86	16	35	897	66.0	1.00	3570	93.8	94.7	95.0	0.70	0.80	0.84	86.5
75	100	324/6T	145	9.4	3.5	3.4	6.87	8	18	953	66.0	1.00	3567	94.0	94.8	95.0	0.68	0.78	0.83	119
90	125	404/5T	181	13.9	4.5	4.8	14.1	11	24	1530	69.0	1.00	3576	94.1	95.2	95.4	0.71	0.81	0.86	138
110	150	404/5T	218	11.6	3.7	3.9	14.1	10	22	1530	69.0	1.00	3570	94.6	95.3	95.4	0.77	0.85	0.88	164
150	200	404/5T	291	11.7	3.8	4.0	16.9	7	15	1647	69.0	1.00	3565	94.9	95.5	95.8	0.78	0.86	0.88	223
185	250	506/7T	361	10.2	2.8	3.8	56.8	32	70	3305	73.0	1.00	3584	95.3	96.2	96.2	0.75	0.83	0.87	277
220	300	506/7T	434	8.6	2.3	3.2	56.8	28	62	3305	73.0	1.00	3581	95.7	96.2	96.2	0.79	0.86	0.88	326
260	350	506/7T	507	7.4	2.0	2.7	56.8	24	53	3305	73.0	1.00	3575	96.0	96.2	96.2	0.82	0.88	0.89	381
300	400	506/7T	579	8.8	2.3	3.3	58.3	15	33	3338	73.0	1.00	3579	95.6	96.2	96.2	0.75	0.83	0.86	455
330	450	506/7T	652	7.7	1.9	2.8	62.1	19	42	3413	73.0	1.00	3575	96.2	96.2	96.2	0.82	0.87	0.89	484
370	500	506/7T	727	5.8	1.7	2.0	81.7	21	46	3764	73.0	1.00	3565	96.2	96.2	96.2	0.89	0.90	0.90	536
IV Poles																				
30	40	324/6T	116	8.9	3.5	3.5	8.83	25	55	871	66.0	1.00	1783	93.7	94.7	95.0	0.62	0.74	0.80	49.5
37	50	324/6T	145	9.1	3.7	3.8	9.72	20	44	904	66.0	1.00	1783	93.8	94.8	95.4	0.57	0.70	0.77	63.2
45	60	404/5T	174	12.7	4.5	4.8	28.0	22	48	1513	69.0	1.00	1790	94.4	95.5	95.8	0.60	0.73	0.80	73.7
55	75	404/5T	217	10.7	3.7	4.0	27.9	20	44	1513	69.0	1.00	1788	94.9	95.7	95.8	0.65	0.76	0.82	87.9
75	100	404/5T	290	10.7	3.9	4.1	28.7	15	33	1530	69.0	1.00	1787	94.9	95.7	96.2	0.63	0.75	0.81	121
90	125	404/5T	362	11.0	4.0	4.3	31.9	13	29	1594	69.0	1.00	1787	94.9	95.7	96.2	0.63	0.75	0.81	145
110	150	404/5T	435	10.6	3.9	4.0	35.9	11	24	1674	69.0	1.00	1786	95.1	95.9	96.2	0.65	0.77	0.82	175
150	200	506/7T	578	10.2	3.4	3.5	84.5	32	70	3277	73.0	1.00	1793	95.6	96.4	96.5	0.69	0.79	0.83	235
185	250	506/7T	723	9.8	3.2	3.3	84.3	23	51	3277	73.0	1.00	1792	95.4	96.2	96.5	0.66	0.77	0.82	293
220	300	506/7T	868	8.2	2.7	2.8	86.3	24	53	3316	73.0	1.00	1790	96.2	96.7	96.8	0.70	0.79	0.83	344
260	350	506/7T	1012	9.1	3.0	3.1	99.7	18	40	3473	73.0	1.00	1791	95.9	96.6	96.8	0.67	0.78	0.82	411
300	400	506/7T	1158	9.3	3.0	3.1	110	15	33	3599	73.0	1.00	1790	96.0	96.6	96.8	0.68	0.78	0.83	469
330	450	506/7T	1304	7.8	2.6	2.5	123	17	37	3751	73.0	1.00	1788	96.7	96.8	96.8	0.77	0.84	0.86	498
370	500	506/7T	1446	9.9	3.4	3.1	152	15	33	4101	73.0	1.00	1791	96.4	96.8	96.8	0.71	0.81	0.85	564
400	550	506/7T	1592	9.6	3.2	3.1	144	13	29	4015	73.0	1.00	1790	96.3	96.8	96.8	0.70	0.80	0.84	617
440	600	506/7T	1740	8.2	2.8	2.5	157	13	29	4165	73.0	1.00	1787	96.8	96.8	96.8	0.78	0.85	0.87	656
VI Poles																				
18.5	25	324/6T	109	7.9	3.0	3.4	14.9	48	106	950	66.0	1.00	1187	91.8	93.2	94.1	0.58	0.71	0.77	32.0
22	30	324/6T	131	8.3	3.0	3.4	15.4	36	79	964	66.0	1.00	1188	91.9	93.2	94.1	0.60	0.72	0.79	37.1
30	40	404/5T	174	10.8	3.9	4.1	38.1	36	79	1488	69.0	1.00	1191	93.4	94.5	95.0	0.60	0.73	0.79	50.2
37	50	404/5T	218	9.1	3.1	3.3	38.1	35	77	1488	69.0	1.00	1189	94.1	94.8	95.0	0.67	0.78	0.82	59.6
55	75	404/5T	327	10.6	4.0	3.8	45.8	25	55	1603	69.0	1.00	1190	94.2	95.0	95.4	0.63	0.75	0.81	89.3
90	125	506/7T	542	9.0	2.9	3.4	138	44	97	3239	73.0	1.00	1194	94.6	95.6	95.8	0.60	0.72	0.78	151
110	150	506/7T	651	9.0	2.9	3.3	146	41	90	3310	73.0	1.00	1194	94.8	95.7	96.2	0.61	0.73	0.79	182
150	200	506/7T	869	8.0	2.5	3.0	154	30	66	3376	73.0	1.00	1193	95.2	95.9	96.2	0.62	0.73	0.79	248
185	250	506/7T	1087	8.0	2.6	2.9	172	24	53	3502	73.0	1.00	1192	95.3	95.9	96.2	0.62	0.73	0.79	306
220	300	506/7T	1304	8.3	2.7	3.0	223	25	55	3881	73.0	1.00	1192	95.8	96.3	96.5	0.64	0.75	0.80	358
260	350	506/7T	1521	8.0	2.6	2.8	257	22	48	4128	73.0	1.00	1192	96.1	96.4	96.5	0.66	0.77	0.81	417
300	400	506/7T	1740	7.9	2.5	2.7	249	17	37	4068	73.0	1.00	1191	95.9	96.2	96.5	0.66	0.76	0.81	482
330	450	506/7T	1959	7.5	2.4	2.5	264	17	37	4185	73.0	1.00	1190	96.1	96.3	96.5	0.68	0.78	0.82	523

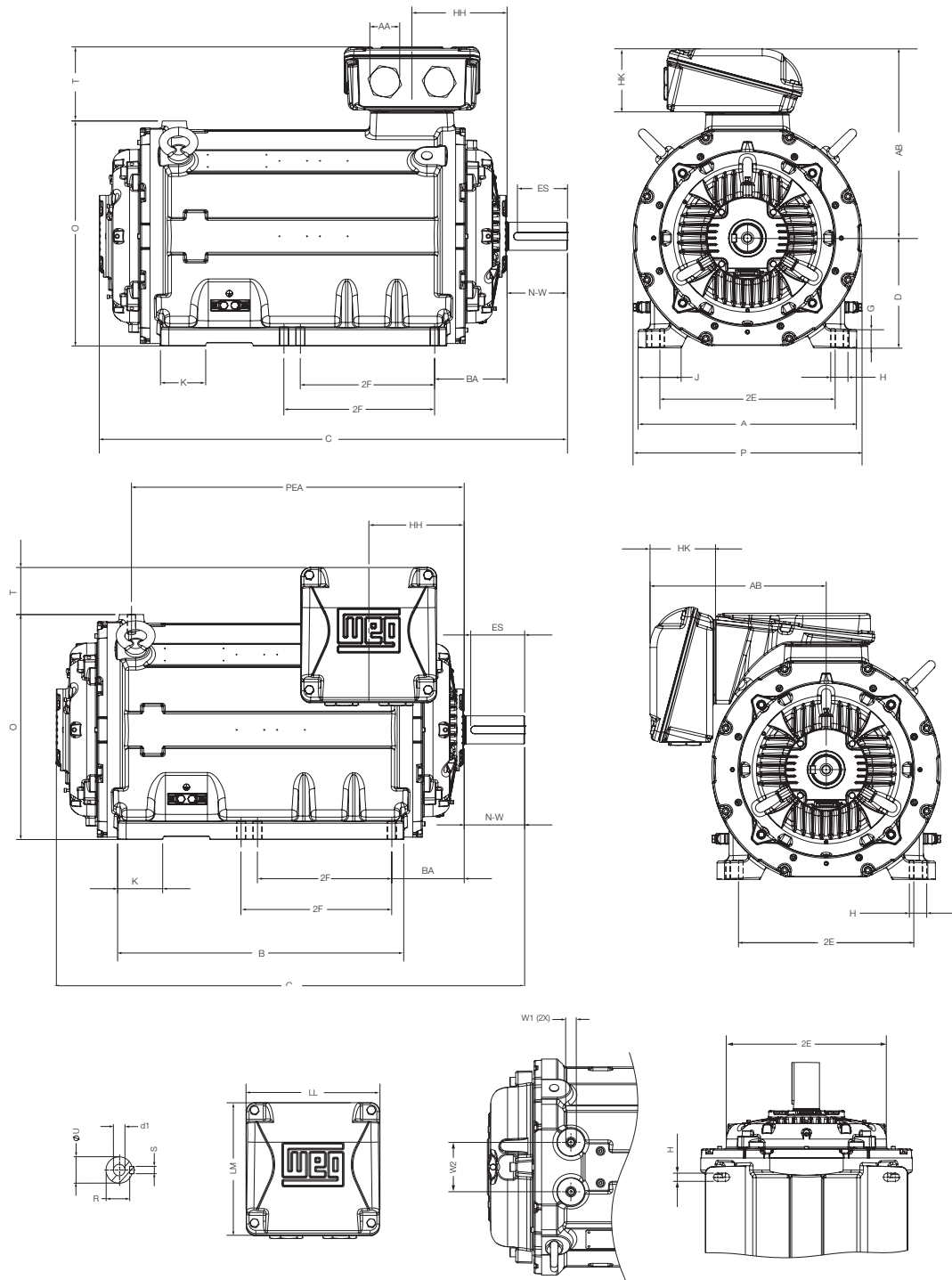
W22 Water Cooled - Premium Efficiency - 60 H - 460V

Output		Frame	Full Load Torque (ft.lb)	Locked Rotor Current I/Ln	Locked Rotor Torque Tl/Tn	Break-down Torque Tb/Tn	Inertia J (sq.ft.lb)	Allowable locked rotor time (s)		Weight (lb)	Sound dB(A)	Service Factor	460V							Full load current In (A)
								Rated speed (rpm)	% of full load											
									Efficiency				Power Factor							
kW	HP							Hot	Cold					50	75	100	50	75	100	
II Poles																				
30	40	324/6T	58.1	9.5	3.7	3.4	4.98	28	62	853	66.0	1.00	3570	91.6	92.4	92.4	0.71	0.80	0.84	48.5
37	50	324/6T	72.7	7.6	3.0	2.8	4.98	29	64	853	66.0	1.00	3565	92.6	93.0	93.0	0.75	0.83	0.86	58.1
45	60	324/6T	87.2	7.5	2.8	2.7	4.98	21	46	853	66.0	1.00	3565	93.0	93.6	93.6	0.74	0.82	0.85	71.0
55	75	324/6T	109	6.5	2.4	2.3	4.98	16	35	853	66.0	1.00	3550	93.4	93.6	93.6	0.78	0.84	0.86	85.8
75	100	324/6T	146	8.0	2.8	2.7	5.98	10	22	911	66.0	1.00	3560	93.4	94.1	94.1	0.70	0.80	0.84	119
90	125	404/5T	182	9.5	2.8	2.8	13.9	14	31	1532	69.0	1.00	3560	94.9	95.0	95.0	0.82	0.87	0.89	134
110	150	404/5T	218	9.5	3.1	3.2	13.9	11	24	1532	69.0	1.00	3565	94.9	95.0	95.0	0.79	0.86	0.88	165
150	200	404/5T	291	9.5	3.1	3.2	15.9	8	18	1614	69.0	1.00	3560	95.1	95.4	95.4	0.80	0.86	0.89	222
185	250	506/7T	363	9.5	1.7	2.3	56.5	21	46	3305	73.0	1.00	3570	95.8	95.8	95.8	0.86	0.89	0.90	269
220	300	506/7T	434	8.6	2.3	3.0	56.5	28	62	3305	73.0	1.00	3581	95.7	95.8	95.8	0.78	0.85	0.88	328
260	350	506/7T	507	7.4	2.0	2.5	56.5	24	53	3305	73.0	1.00	3575	95.8	95.8	95.8	0.81	0.87	0.89	383
300	400	506/7T	579	8.8	2.3	3.3	58.3	15	33	3338	73.0	1.00	3579	95.6	95.8	95.8	0.75	0.83	0.86	457
330	450	506/7T	652	7.6	1.9	2.6	61.8	19	42	3413	73.0	1.00	3575	95.8	95.8	95.8	0.81	0.87	0.88	491
370	500	506/7T*	727	5.8	1.7	1.8	81.3	20	44	3757	73.0	1.00	3565	95.8	95.8	95.8	0.88	0.90	0.90	539
400	550	506/7T	797	7.7	2.2	2.6	90.1	20	44	3929	73.0	1.00	3575	95.8	95.8	95.8	0.86	0.90	0.91	576
440	600	506/7T	868	10.4	2.9	3.9	91.9	12	26	3949	73.0	1.00	3582	95.8	95.8	95.8	0.78	0.85	0.88	655
IV Poles																				
30	40	324/6T	116	8.7	3.2	3.4	7.84	20	44	838	66.0	1.00	1783	92.1	93.4	94.1	0.59	0.71	0.78	51.3
37	50	324/6T	145	8.2	2.8	3.0	7.91	16	35	840	66.0	1.00	1782	93.6	94.3	94.5	0.65	0.76	0.81	60.7
45	60	324/6T	174	8.3	2.9	3.1	10.0	16	35	915	66.0	1.00	1782	94.2	94.9	95.0	0.62	0.74	0.80	74.3
55	75	404/5T	218	9.5	2.6	2.8	27.8	19	42	1513	69.0	1.00	1783	95.4	95.4	95.4	0.73	0.82	0.85	85.1
75	100	404/5T	290	9.5	3.4	3.7	27.8	15	33	1513	69.0	1.00	1786	95.2	95.4	95.4	0.65	0.77	0.82	120
90	125	404/5T	363	9.5	3.3	3.6	27.8	11	24	1513	69.0	1.00	1785	95.0	95.4	95.4	0.65	0.77	0.82	144
110	150	404/5T	436	9.5	3.3	3.5	30.2	9	20	1563	69.0	1.00	1783	95.0	95.6	95.8	0.66	0.77	0.82	176
150	200	506/7T	580	9.5	2.3	2.1	83.7	22	48	3274	73.0	1.00	1788	96.2	96.2	96.2	0.78	0.84	0.86	228
185	250	506/7T	723	9.5	3.2	3.1	84.3	24	53	3277	73.0	1.00	1792	95.4	96.2	96.2	0.66	0.77	0.82	294
220	300	506/7T	868	8.3	2.7	2.7	83.7	20	44	3277	73.0	1.00	1790	95.9	96.2	96.2	0.68	0.78	0.82	350
260	350	506/7T	1015	7.2	2.3	2.2	83.7	17	37	3279	73.0	1.00	1787	96.2	96.2	96.2	0.72	0.81	0.84	404
300	400	506/7T	1158	8.3	2.6	2.5	105	17	37	3537	73.0	1.00	1789	96.2	96.2	96.2	0.71	0.80	0.84	466
330	450	506/7T	1304	7.8	2.6	2.3	123	17	37	3751	73.0	1.00	1788	96.2	96.2	96.2	0.76	0.84	0.86	501
370	500	506/7T	1446	9.5	3.4	2.9	152	16	35	4101	73.0	1.00	1791	96.2	96.2	96.2	0.70	0.80	0.84	575
400	550	506/7T	1592	9.5	3.3	3.1	141	12	26	3980	73.0	1.00	1790	96.1	96.2	96.2	0.67	0.78	0.83	629
440	600	506/7T*	1740	8.1	2.7	2.4	159	12	26	4165	73.0	1.00	1787	96.2	96.2	96.2	0.83	0.87	0.88	652
VI Poles																				
18.5	25	324/6T	109	8.3	3.1	3.3	10.4	27	59	831	66.0	1.00	1187	90.4	92.1	93.0	0.58	0.70	0.77	32.4
22	30	324/6T	131	7.5	2.9	3.2	10.4	24	53	831	66.0	1.00	1185	90.8	92.3	93.0	0.55	0.68	0.75	39.6
30	40	404/5T	175	9.5	2.1	2.5	38.0	34	75	1488	69.0	1.00	1185	94.1	94.1	94.1	0.72	0.81	0.85	47.1
37	50	404/5T	218	9.0	3.0	3.2	38.0	35	77	1488	69.0	1.00	1189	94.1	94.1	94.1	0.64	0.76	0.81	60.9
55	75	404/5T	327	9.5	3.3	3.4	38.0	20	44	1499	69.0	1.00	1190	94.0	94.5	94.5	0.61	0.73	0.79	92.5
90	125	506/7T	543	7.4	2.3	2.5	137	56	123	3241	73.0	1.00	1193	95.0	95.0	95.0	0.65	0.76	0.81	147
110	150	506/7T	651	9.5	2.4	2.5	137	25	55	3241	73.0	1.00	1193	95.3	95.8	95.8	0.64	0.75	0.80	180
150	200	506/7T	869	7.2	2.2	2.7	137	26	57	3241	73.0	1.00	1192	95.2	95.7	95.8	0.64	0.75	0.80	246
185	250	506/7T	1088	6.7	2.0	2.2	146	24	53	3312	73.0	1.00	1190	95.5	95.8	95.8	0.67	0.77	0.81	299
220	300	506/7T	1305	7.3	2.2	2.4	167	18	40	3468	73.0	1.00	1191	95.2	95.7	95.8	0.64	0.75	0.79	365

Mechanical Data

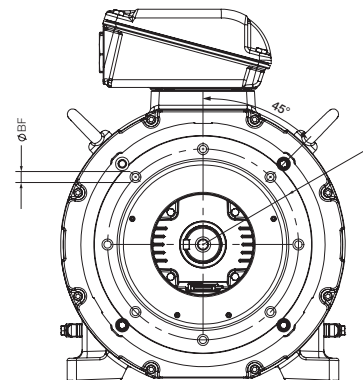
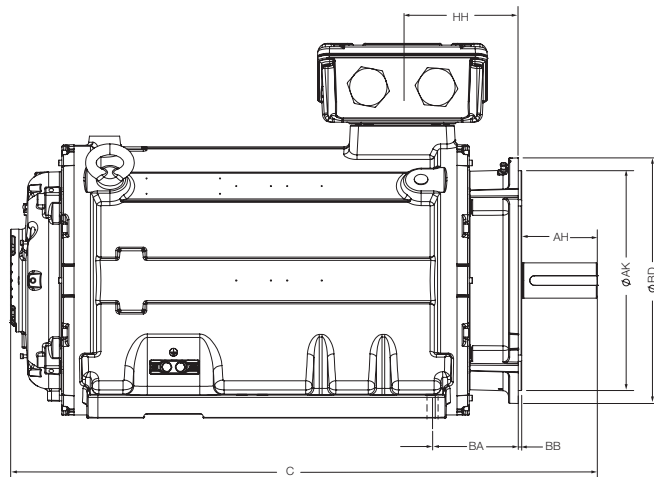
FRAMES	FEET										KEYWAY			SHAFT END			EXTERNAL					BEARINGS						
	2E	2F	H	BA	D	J	A	K	B	G	S	R	ES	N-W	ØU	D1	C	P	AB	O	T	D.E.	N.D.E.					
324TS	12,500	10,500	12,000	17,000	5,177	8,000	2,952	15,157	-	19,153	1,181	0,500	1,591	2,900	3,750	1,875	UNC 5/8"	31,851	17,245	13,682	16,674	5,020	6312-C4	6212-C4				
324T												0,500	1,844	4,080	5,250	2,125		33,272										
404/5TS	15,984	12,244	13,740	24,000	6,614	10,000	3,956	19,921	4,055	26,161	1,594	0,500	1,845	2,505	4,250	2,125	UNC 3/4"	41,457	20,867	17,284	20,512	6,772	6314-C4	6314-C4				
404/5T												0,750	2,449	5,137	7,250	2,875		44,469					6316-C4					
506/7TS	20,000	20,000	24,803	28,000	8,503	12,500	4,620	24,724	12,933	32,736	1,929	0,750	2,449	5,137	7,250	2,875		51,851					27,010	23,662	25,886	10,276	6316-C4	6314-C4
506/7T												0,875	3,134	8,224	10,630	3,625		52,855									6322-C4	6316-C4

FRAMES	T. BOX			SIDEWAY TERMINAL BOX					WATER INLET AND OUTLET			TERMINAL BOX	
	HK	HH	AA	AB	O	HB	T	P	W1	W2	PEA	LL	LM
324TS	4,586	7,952	2xNPT 2"	-					2x G1/2"	3,938	21,418	8,977	8,504
324T													
404/5TS	5,964	8,681	2xNPT 3"	17,284	20,512	12,422	4,764	20,536	2x G1 - 1/2"	4,725	30,355	12,363	12,245
404/5T													
506/7TS	8,937	11,122		23,308	25,886	14,351	5,630	27,796		8,662	37,461	15,906	17,225
506/7T													



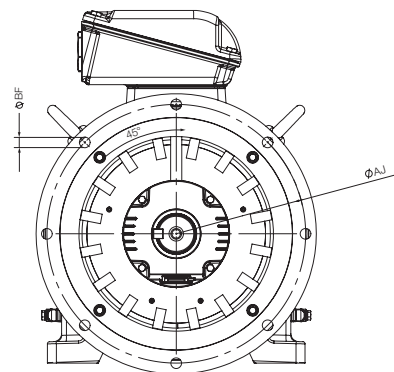
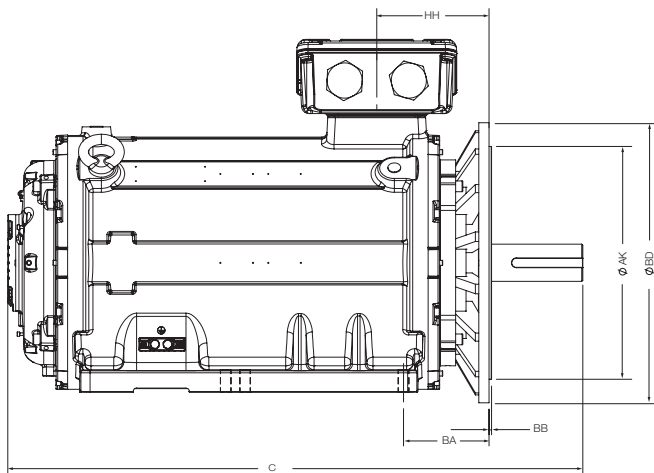
Flange - C

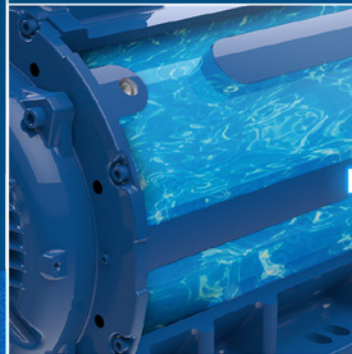
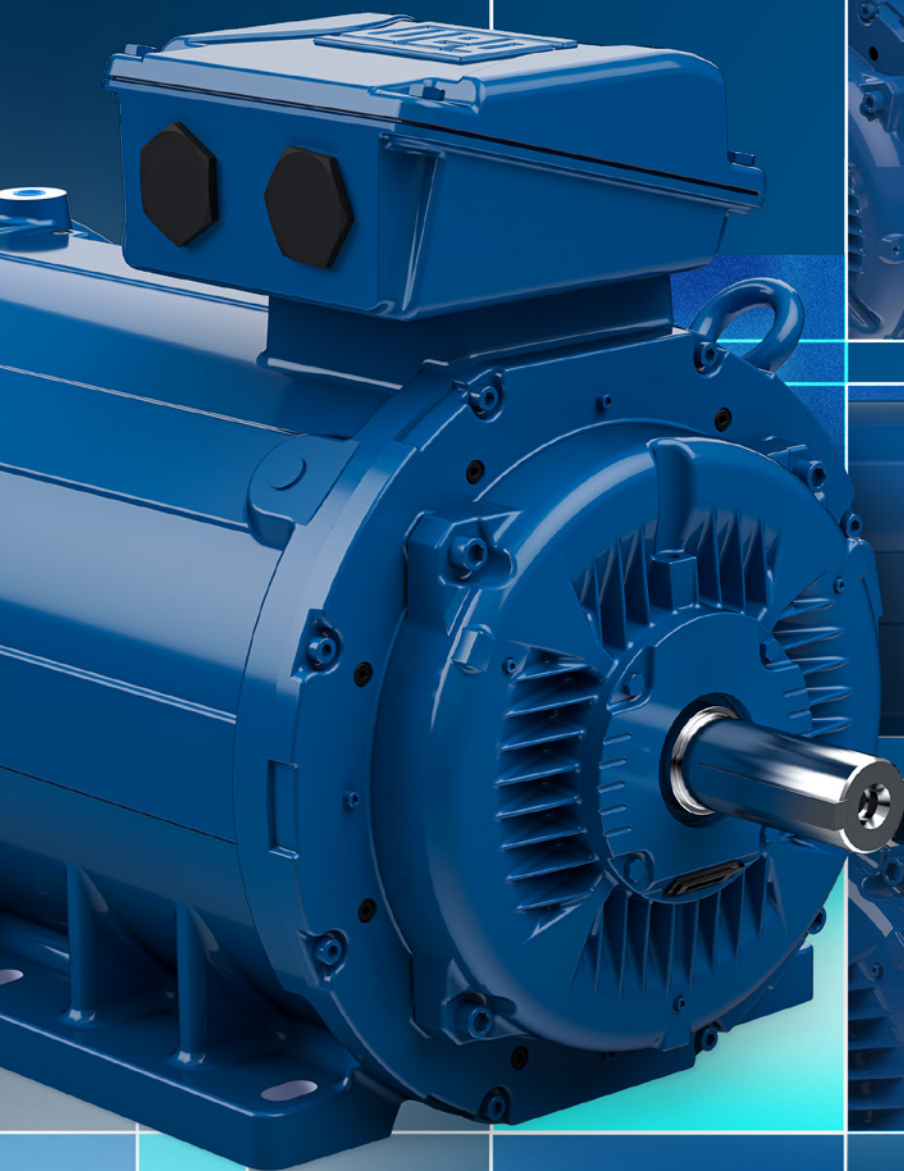
FRAMES	BA	AJ	AK	BD	BF		BB	C	BC	HH	AH
					N° Holes	TAP SIZE					
324TS	The flange will be developed on demand										
324T											
404/5TS											
404/5T											
506/7TS	8.254	14.500	16.500	17.913	8.000	UNC 5/8"x13	0.250	51.851	0.000	10.886	10.375
506/7T								52.855			4.500



Flange - D

FRAMES	BA	AJ	AK	BD	BF		HH	C	BB
					N° Holes	TAP SIZE			
324TS	5.250	15.984	14.000	18.000	4.000	0.828	7.934	31.851	0.205
324T									
404/5TS	6.625	20.000	22.000	8.000	8.682		41.457		
404/5T									
506/7TS	8.5	21.968	24.803		11.133		51.851	0.250	
506/7T									





Water flow for maximum cooling and increased power density.



Standard paint with C4 protection level. Against high corrosivity.



Water jacket protected against external contamination.

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Maximum **cooling.**
Maximum **performance.**

The **WATER COOLED** is the ideal solution for demanding environments. With water cooling technology, it guarantees maximum performance and high power density, even in small spaces and with limited air circulation.

Its robust construction prevents contamination of the water jacket by external agents, while the optimized design prevents the accumulation of particles, making it suitable for operating in places with high concentration of dust.

A reliable and efficient solution that does not transfer heat to the environment and operates without fans or ventilation ducts. The perfect choice for tunnel boring machines, plastic injection molding machines and other sectors, including the marine industry and data centers.

Tested and certified
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The values shown are subject to change without prior notice.
The information contained is reference values.