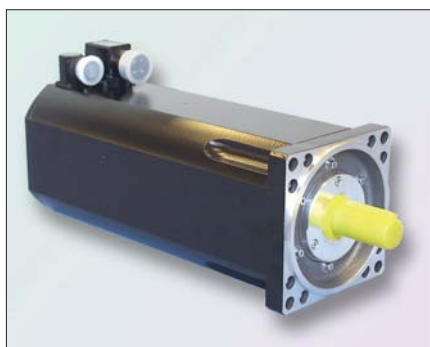
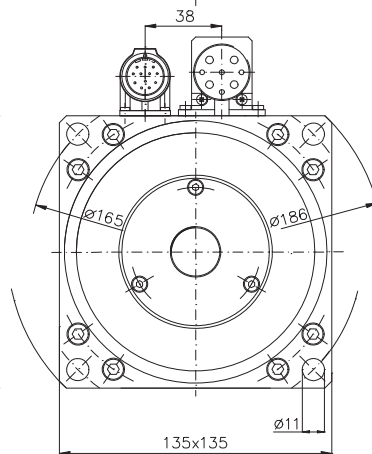
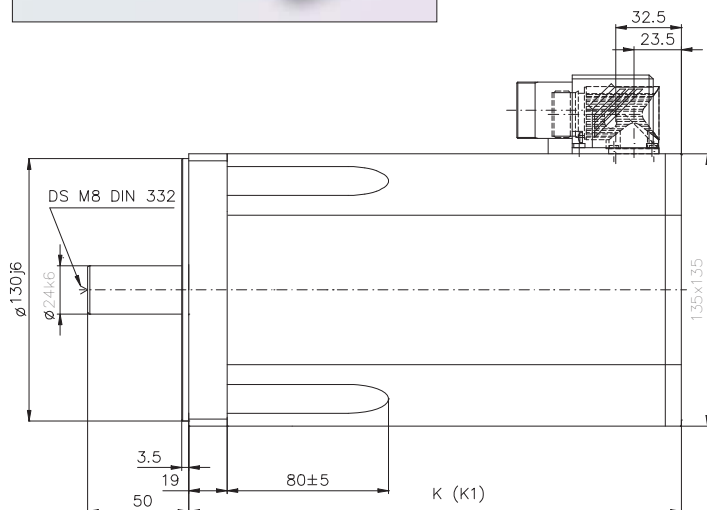
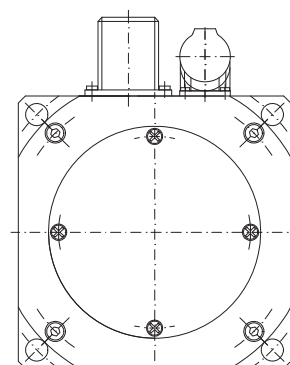


- Typ
- Type
- Typ
- M 25
- M 40
- M 50
- M 71**
- M 90
- F 50
- F 63
- F 80
- F 100
- W 25
- W 40
- W 50
- W 71
- W 90
- ML 40
- ML 50
- ML 71
- ML 90
- MA 40
- MA 50
- ME
- FE



M 713
M 714
M 716
M 718



TYP SERVO MOTORU	MOTOR TYPE	MOTORTYP	M 713	M 714	M716	M 718
K (bez brzdy)	K (without brake)	K (ohne Bremse)	244	294	344	394
K1 (s brzdou)	K1 (with brake)	K1 (mit Bremse)	293	343	393	-

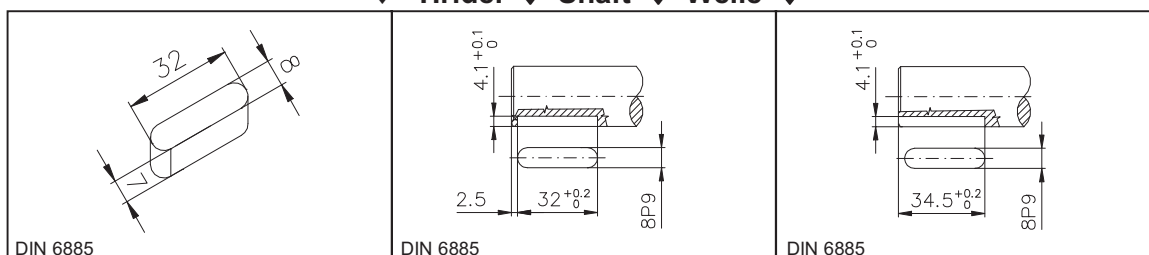
◆ Brzda ◆ Brake ◆ Bremse ◆

SERVOMOTOR	M ₀ [Nm]	MAYR	M _B [Nm]	t _{1max} [ms]	t _{2max} [ms]	U _{1DC} [V]	n _{max} [min ⁻¹]	J [kg.m ² .10 ⁻³]	m [kg]
M 713 - B	10		20	80	80	24	6000	0,4838	2,74
M 714 - B	16								
M 716 - B	21								
M 718 - B	27								

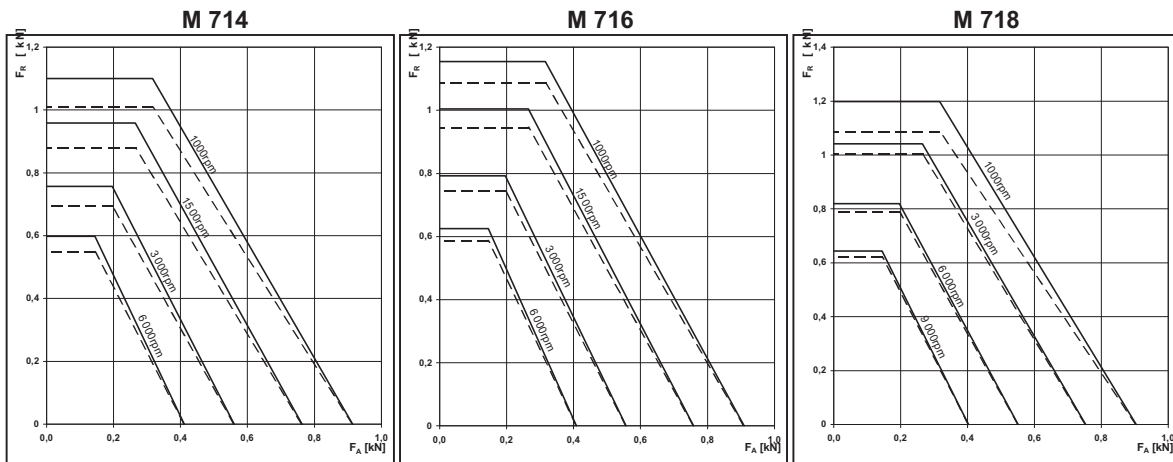
M_B - brzdný moment / holding torque / Haltemoment;
J - moment setrvačnosti / moment of inertia / Trägheitsmoment;
m - hmotnost / weight / Gewicht;

t_{1MAX} - max. čas sepnutí (odbrždění) / max. time of switching-on (brake release) / max. Einschaltzeit (Lösung der Bremse);
t_{2MAX} - max. čas rozeznutí / max. time of switching-off / max. Ausschaltzeit;
U_{1DC} - jmenovité napětí / rated voltage / Eingangsspannung;

◆ Hřídel ◆ Shaft ◆ Welle ◆

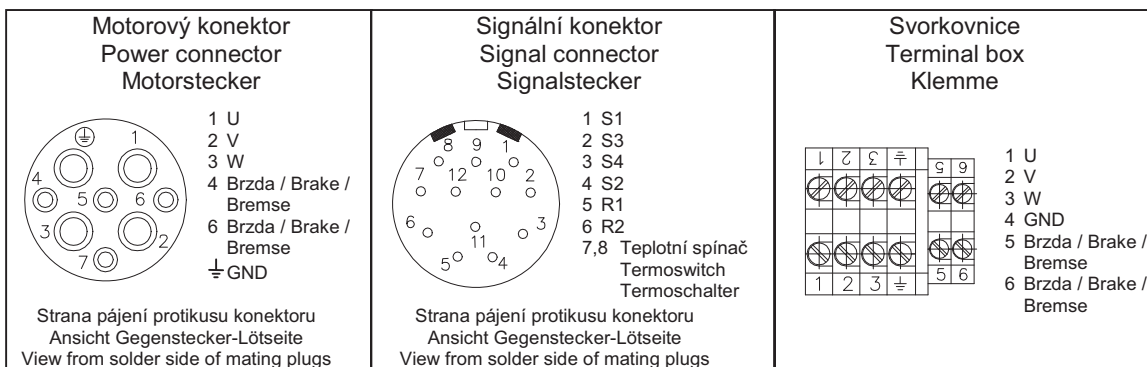
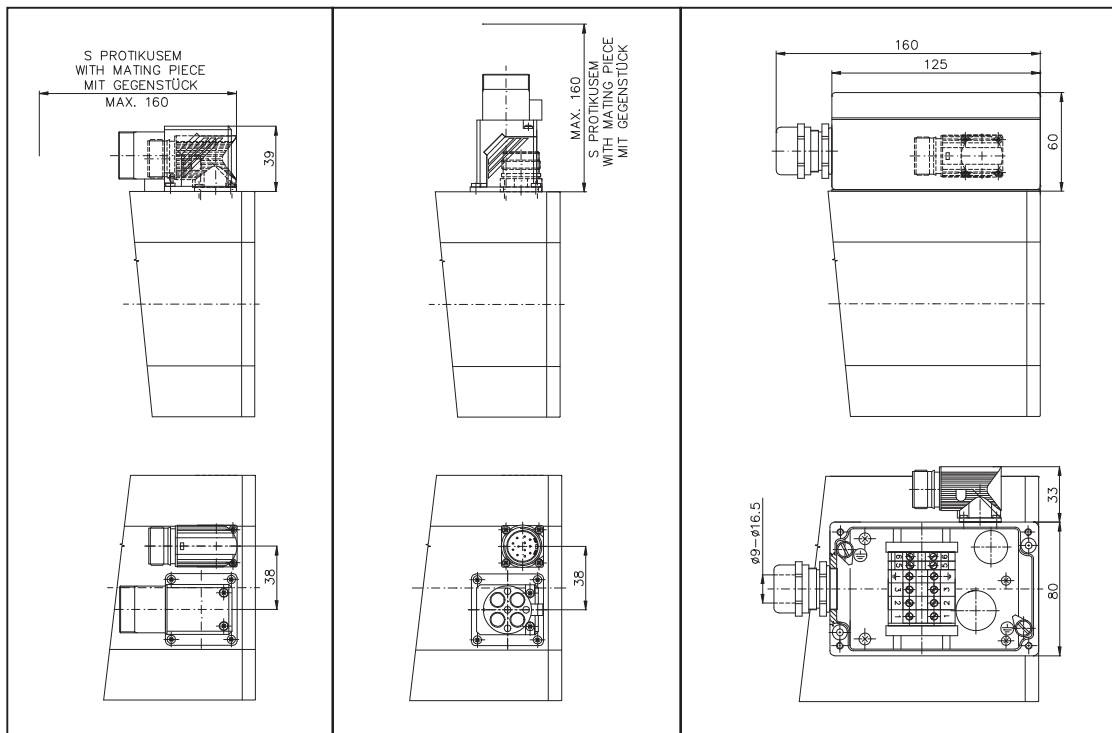


◆ Radiální a axiální zatížení volného konce ◆ Radial and axial shaft load capacity ◆
 ◆ Zulässige Radial- und Axialbelastungen der Wellenenden ◆



— na konci hřídele / on the end of the shaft / auf welle ende
 - - - uprostřed hřídele / in the middle of the shaft / in mitte der welle

◆ Konektory ◆ Connectors ◆ Stecker ◆



Typ Type Typ
M 25
M 40
M 50
M 71
M 90
F 50
F 63
F 80
F 100
W 25
W 40
W 50
W 71
W 90
ML 40
ML 50
ML 71
ML 90
MA 40
MA 50
ME
FE

Typ Type Typ	M 25	M 40	M 50	M 71	M 90	F 50	F 63	F 80	F 100	W 25	W 40
	W 50	W 71	W 90	ML 40	ML 50	ML 71	ML 90	MA 40	MA 50	ME	FE

Technical data of servomotors

TYPE OF THE MOTOR			M7 13 F	M7 13 I	M7 13 J	M7 13 K	M7 13 K	M7 13 L	M7 13 R	M7 14 F	M7 14 F	M7 14 I	M7 14 K	M7 14 K	M7 14 N	M7 14 R
Voltage of intermediate circuit of converter	U_{DC}	V	330	560	560	330	560	560	560	330	560	560	330	560	560	560
S STANDSTILL VALUES																
Standstill torque	M_0	Nm	10	10	10	10	10	10	10	16	16	16	16	16	16	16
Standstill current	I_0	A	13,7	6,7	6,05	8,64	8,64	5,04	2,42	22	22	10,75	13,8	13,8	6,45	3,87
Torque constant	k_M	Nm/A	0,73	1,489	1,654	1,158	1,158	1,98	4,135	0,728	0,728	1,489	1,158	1,158	2,48	4,135
N RATED VALUES OF THE MOTOR																
Rated voltage	$U_{N\ MOT}$	V	143	294	227	157	228	270	239	142	210	292	157	231	254	239
Rated torque	M_N	Nm	7,59	7,59	8,40	8,40	8	8,40	9,40	14,27	13,4	14	14,8	14,3	15	15,6
Rated current	I_N	A	11	5,33	5,2	7,46	6,85	4,35	2,3	20,48	20	10,0	13,20	12,87	6,2	3,81
Rated speed	n_N	min ⁻¹	3000	3000	2000	2000	3000	2000	750	3000	4500	3000	2000	3000	1500	750
Rated power output	P_N	W	2385	2385	1758	1758	2385	1758	738	4482	6314	4482	3109	4482	2377	1223
Voltage constant	K_E	Vmin/1000	44	90	100	70	70	120	250	44	44	90	70	70	150	250
Voltage constant	k_e	Vs/rad	0,420	0,860	0,955	0,668	0,668	1,150	2,387	0,420	0,420	0,860	0,67	0,668	1,432	2,387
Ü OVERLOADING CAPACITY AT RATED SPEED																
Overloading capacity at rated speed	$M_Ü$	Nm	22,82	13,42	24,68	18,54	25,89	18,09	23,19	44	56,6	26,2	31,4	43,6	37,7	37,4
Max. overloading capacity at rated speed	$M_Ü/M_N$	-	3	1,77	2,94	2,21	3,41	2,16	2,47	3,06	4,22	1,83	2,12	3,05	2,5	2,4
VALUES OF THE MOTOR AT MAX. SUPPLY VOLTAGE U_i																
Max MAX. VALUES OF THE MOTOR																
Max. torque	M_{max}	Nm	38,5	38,5	38,5	38,5	38,5	38,5	38,5	62	62	62	62	62	62	62
Max. current	I_{max}	A	60	33	29,7	38	38	25	10,7	90	90	47	60	60	28	18
Max. speed	n_{mech}	min ⁻¹	6000	6000	6000	6000	6000	6000	6000	6000	6000	6000	6000	6000	6000	6000
C LIMIT POINT																
Current	I_C	A	60	33	29,7	38	38	25	10,7	90	90	47	60	60	28	18
Breakdown torque	M_C	Nm	37,86	38,0	38,1	38,13	37,82	38,17	38	61,25	60,66	61,42	61,6	61,31	61,69	61,88
Speed	n_C	min ⁻¹	2005	1439	1213	1138	2114	1030	379	2391	4260	1844	1207	2210	998	369
Nutz MAX. UTILIZABLE PARAMETERS FOR S1																
Max. utilizable speed	n_{nutz}	min ⁻¹	4065	3390	3002	2462	4446	2487	1094	4051	7152	3401	2441	4341	1977	1092
Max. utilizable torque	M_{nutz}	Nm	6,74	7,28	7,6	8,02	6,43	8	9,12	13,7	11,9	14,0	14,6	13,5	14,9	15,4
Max. utilizable power output	P_{nutz}	W	2868	2584	2387	2069	2995	2085	1045	5794	8887	4998	3729	6133	3076	1757
O NO-LOAD RUNNING (I and M = 0)																
No-load speed	n_0	min ⁻¹	4318	3667	3300	2714	4714	2750	1320	4318	7500	3667	2714	4714	2200	1320
TECHNICAL FEATURES																
Number of poles	p	-	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Resistance of winding	R_{U-V}	Ω	0,37	1,62	2,15	0,95	0,95	3,30	14	0,157	0,157	0,70	0,49	0,489	2,09	8,84
Inductance of winding	L_{U-V}	mH	4	17,89	23,30	10,6	10,60	30,00	142	2,15	2,15	11	6,47	6,474	27,94	79,85
Moment of inertia	J	kgm ² /1000	0,86	0,86	0,86	0,86	0,86	0,86	0,86	1,4	1,4	1,4	1,4	1,4	1,4	1,4
Mass	m	kg	13	13	13	13	13	13	13	17,5	17,5	17,5	17,5	17,5	17,5	17,5
Axial load	F_A	N	268	268	320	320	320	320	433	268	268	268	320	320	433	433
Radial load	F_R	N	908	908	1042	1042	1042	1042	1319	965	965	965	1108	1108	1403	1403
Average speed	n_{mitt}	min ⁻¹	1500	1500	1000	1000	1000	1000	500	1500	1500	1500	1000	1000	500	500
MECHANICAL VALUES OF THE MOTOR																
Static friction torque	M_f	Nm	0,11	0,11	0,11	0,11	0,11	0,11	0,11	0,20	0,20	0,20	0,20	0,20	0,20	0,20
Damping constant	k_D	Nm.min.10 ⁻⁵	3,7	3,7	3,7	3,7	3,7	3,7	3,7	9	9	9	9	9	9	9
Mechanical time constant	T_m	ms	0,9	0,94	1,01	0,92	0,92	1,08	1,06	0,64	0,64	0,66	0,77	0,77	0,72	1,1
THERMAL VALUES OF THE MOTOR																
Thermal resistance (winding–ambient atm.)	$R_{th(RU)}$	K/W	0,59	0,57	0,59	0,63	0,58	0,56	0,57	0,33	0,24	0,32	0,37	0,30	0,42	0,33
Thermal resistance (frame–ambient atm.)	$R_{th(GU)}$	K/W	0,47	0,46	0,48	0,51	0,47	0,45	0,46	0,27	0,19	0,26	0,30	0,25	0,34	0,27
Thermal time constant	T_{th}	min	68,9	67,3	69,0	74,0	68,4	66,0	67,5	52,2	37,2	50,8	57,3	47,5	65,2	51,7
COOLER																
Quantity of water	Q_W	dm ³ .min ⁻¹	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rated pressure of water	p_N	kPa	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Quantity of air	Q_L	dm ³ .s ⁻¹	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Typ Type Typ	M 25	M 40	M 50	M 71	M 90	F 50	F 63	F 80	F 100	W 25	W 40
	W 50	W 71	W 90	ML 40	ML 50	ML 71	ML 90	MA 40	MA 50	ME	FE

Technical data of servomotors

M716H	M716H	M716I	M716I	M716K	M716N	M718F	M718H	M718H	M718I	M718L	M718N	M718T	TYPE OF THE MOTOR
330	560	330	560	560	560	330	330	560	560	560	560	560	
													S STANDSTILL VALUES
21	21	21	21	21	21	27	27	27	27	27	27	27	Standstill torque M ₀ Nm
21,16	21,16	14,11	14,11	18,1	8,5	37,1	27,21	27,21	18,15	13,6	10,9	3,3	Standstill current I ₀ A
0,992	0,992	1,489	1,489	1,158	2,48	0,728	0,992	0,992	1,488	1,985	2,48	8,27	Torque constant k _M Nm/A
													N RATED VALUES OF THE MOTOR
130	281	146	284	228	246	137	127	275	280	253	242	291	Rated voltage U _{N MOT} V
18	14,2	18,7	16	16	18,7	16,5	20,0	11,2	16,5	20	22	25	Rated torque M _N Nm
18,64	15,28	12,86	11,55	14,85	7,72	23,65	20,73	12,07	11,56	10,36	8,95	3,07	Rated current I _N A
2000	4500	1500	3000	3000	1500	3000	2000	4500	3000	2000	1500	500	Rated speed n _N min ⁻¹
3765	6688	2942	5172	5172	2942	5174	4185	5281	5174	4185	3414	1322	Rated power output P _N W
60	60	90	90	70	150	44	60	60	90	120	150	500	Voltage constant K _E Vmin/1000
0,573	0,573	0,859	0,86	0,668	1,432	0,42	0,573	0,573	0,859	1,146	1,432	4,775	Voltage constant k _v Vs/rad
													Ü OVERLOADING CAPACITY AT RATED SPEED
63,6	36	52,0	37,3	53,8	54,3	61,9	79,6	41,4	41,8	52,4	68,4	44,1	Overloading capacity at rated speed M ₀ /M _N Nm
3,53	2,55	2,78	2,26	3,26	2,9	3,75	3,98	3,7	2,53	2,62	3,15	1,75	Max. overloading capacity at rated speed M ₀ /M _N -
VALUES OF THE MOTOR AT MAX. SUPPLY VOLTAGE U₁													
													Max MAX. VALUES OF THE MOTOR
81	81	81	81	81	81	104	104	104	104	104	104	104	Max. torque M _{max} Nm
93	93	62	62	80	37	180	120	120	88	60	48	14,4	Max. current I _{max} A
6000	6000	6000	6000	6000	6000	6000	6000	6000	6000	6000	6000	6000	Max. speed n _{mech} min ⁻¹
													C LIMIT POINT
93	93	62	62	80	37	180	120	120	88	88	48	14,4	Current I _C A
78,7	76,9	79,5	78,3	78,2	79,5	96,3	98,0	93,2	97,4	100,0	100,0	103,1	Breakdown torque M _C Nm
1685	3072	1118	2043	2111	1123	2153	1695	3042	1847	1116	1122	263	Speed n _C min ⁻¹
													Nutz MAX. UTILIZABLE PARAMETERS FOR S1
2982	5314	1972	3504	4439	2045	4226	3053	5446	3565	2642	2083	577	Max. utilizable speed n _{nutz} min ⁻¹
16,5	13,0	18,0	15,7	14,3	17,9	12,2	16,3	7,9	14,5	17,7	19,7	25,0	Max. utilizable torque M _{nutz} Nm
5149	7212	3721	5761	6640	3835	5385	5207	4497	5409	4905	4294	1509	Max. utilizable power output P _{nutz} W
													Q NO-LOAD RUNNING (I and M = 0)
3167	5500	2111	3667	4714	2200	4318	3167	5500	3667	2750	2200	660	No-load speed n ₀ min ⁻¹
TECHNICAL FEATURES													
6	6	6	6	6	6	6	6	6	6	6	6	6	Number of poles p -
0,2	0,2	0,41	0,41	0,31	1,23	0,08	0,15	0,15	0,30	0,54	0,81	8,693	Resistance of winding R _{U-V} Ω
2,8	2,8	6,3	6,30	5,24	18,6	1,26	2,26	2,26	5,16	8,71	14,77	142,9	Inductance of winding L _{U-V} mH
1,86	1,86	1,86	1,86	1,86	1,86	2,36	2,36	2,36	2,36	2,36	2,36	2,36	Moment of inertia J kgm ² /1000
21	21	21	21	21	21	27	27	27	27	27	27	27	Mass m kg
320	320	433	433	268	433	260	310	310	260	310	420	420	Axial load F _A N
1187	1187	1506	1506	1033	1506	1020	1180	1180	1020	1180	1500	1500	Radial load F _R N
1000	1000	500	500	1500	500	1500	1000	1000	1500	1000	500	500	Average speed n _{mitt} min ⁻¹
MECHANICAL VALUES OF THE MOTOR													
0,31	0,31	0,31	0,31	0,31	0,31	0,37	0,37	0,37	0,37	0,37	0,37	0,37	Static friction torque M _f Nm
13	13	13	13	13	13	17	17	17	17	17	17	17	Damping constant k _D Nm.min.10 ⁻⁵
0,57	0,57	0,52	0,52	0,65	0,56	0,56	0,57	0,57	0,5	0,47	0,49	0,47	Mechanical time constant T _m ms
THERMAL VALUES OF THE MOTOR													
0,35	0,19	0,41	0,28	0,26	0,39	0,26	0,33	0,17	0,26	0,34	0,38	0,45	Thermal resistance (winding-ambient atm.) R _{th(RU)} K/W
0,28	0,15	0,33	0,23	0,21	0,32	0,21	0,26	0,14	0,21	0,27	0,31	0,36	Thermal resistance (frame-ambient atm.) R _{th(GU)} K/W
68,6	37,1	80,4	55,7	51,7	77,0	60,6	76,9	40,0	61,9	80,2	90,8	105,6	Thermal time constant T _{th} min
COOLER													
-	-	-	-	-	-	-	-	-	-	-	-	-	Quantity of water Q _w dm ³ .min ⁻¹
-	-	-	-	-	-	-	-	-	-	-	-	-	Rated pressure of water p _N kPa
-	-	-	-	-	-	-	-	-	-	-	-	-	Quantity of air Q _L dm ³ .s ⁻¹