

CMA - B - C - D - CMR

SINGLE IMPELLER CENTRIFUGAL ELECTRIC PUMPS

in cast iron

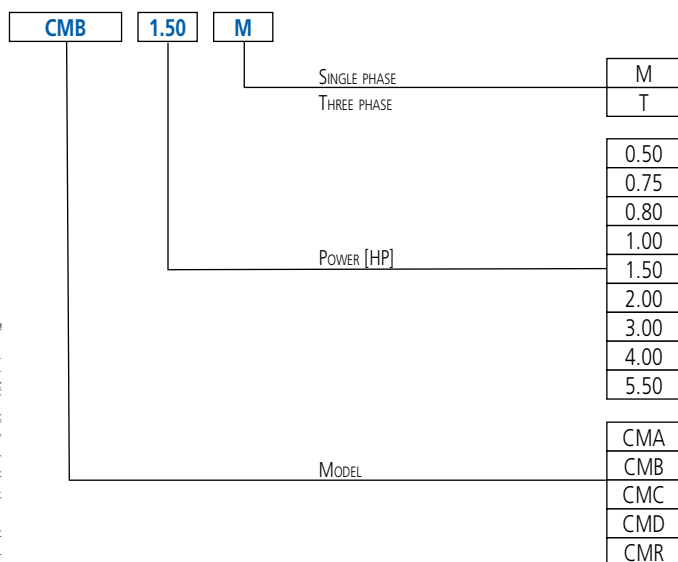


CMA-B-C-D



CMR

CMA-B-C-D - CMR IDENTIFICATION CODE



ACCESSORIES (On request)

- Electric panels
- Vessels
- Floats
- Pressure switches
- Presscomfort - Pressure regulator
- E-power - Variable speed control system
- E-drive - Frequency converter

Cast iron single impeller centrifugal electric pump.

APPLICATIONS

- Pressure boosting domestic plants
- Small-scale irrigation
- Pumping non-aggressive liquids for civil and industrial use
- Washing plants
- Washing vehicles

TECHNICAL DETAILS

- Available with brass impeller (CMA 0.50 GO, CMA 0.75 GO, CMA 1.00 GO)
- The CMR version is equipped with an open impeller
- They can be inserted into machinery for industrial use

PUMP TECHNICAL DATA

- Maximum working pressure:
 - 6 bar for CMA 0.50 - 0.75 - 1.00, CMB 0.75 - 1.00 - 1.50 - 2.00 - 3.00, CMC, CMD, CMR
 - 8 bar for CMA 1.50 - 2.00 - 3.00, CMB 4.00 - 5.50
- Maximum temperature of the liquid:
 - 40°C for CMA 0.50 - 0.75 - 1.00
 - 90°C for the rest of the range
- G1 suction connection for CMA 0.50 - 0.75 - 1.00, G1¼ for CMA 1.50 - 2.00 - 3.00, G1½ per CMR, G2 for CMB - CMC, G2½ for CMD
- G1 discharge connection for CMA, G1¼ for CMB, G1½ for CMR, G2 for CMC, G2½ for CMD
- MEI > 0.4

For further information please see our Data Book on the web site www.ebaraurope.com

MOTOR TECHNICAL DATA

- IE2 and IE3 high energy-efficiency motors starting from 0.75kW
- Self-ventilated 2 pole asynchronous motor
- Class of insulation F
- IP44 Protection degree
- 230V ±10% 50Hz single phase voltage, 230/400V ±10% 50Hz three phase voltage
- Permanent capacitor inserted and thermo-amperometric protection with automatic rearm incorporated for the single phase motor
- Protection under user's responsibility for the three phase version

MATERIALS

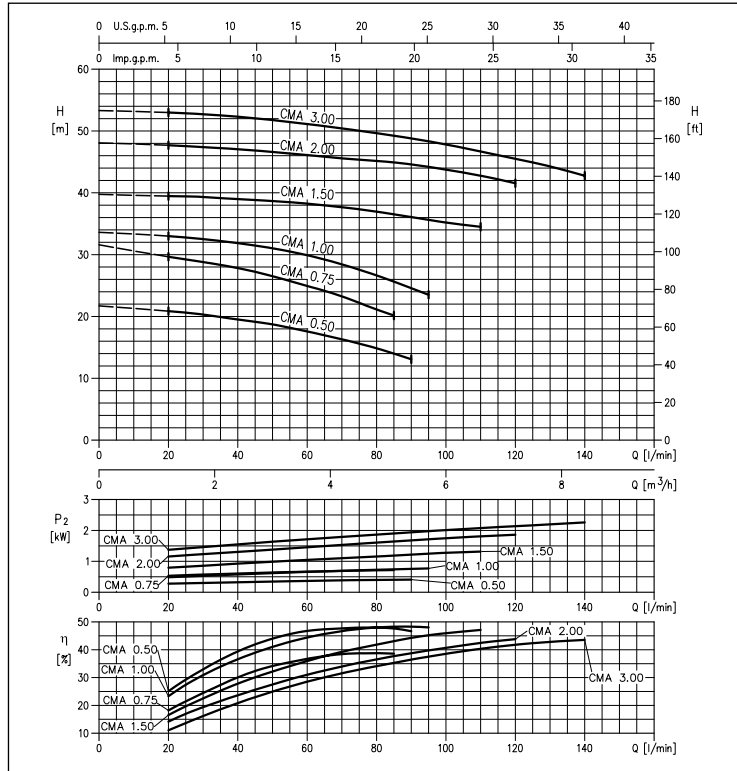
- Cast iron pump casing
- Mechanical seal in Carbon/Ceramic/NBR
- Impeller:
 - in PPE+PS reinforced with fibreglass for CMA 0.50 - 0.75 - 1.00
 - in brass for CMA 1.50 - 2.00 - 3.00, CMB 2.00 - 3.00 - 4.00 - 5.50, CMR 0.75 - 1.00
 - in cast iron for CMB 0.75 - 1.00 - 1.50, CMC, CMD
- Shaft:
 - in AISI 416 (integral) for CMA 0.50
 - in AISI 303 (part in contact with the liquid) for CMA 0.75 - 1.00 - 1.50 - 2.00 - 3.00, CMB 0.75 - 1.00 - 1.50 - 2.00 - 3.00, CMC 0.75 - 1.00, CMD 1.50 - 2.00 - 3.00, CMR 0.75 - 1.00
 - in AISI 304 (part in contact with the liquid) for CMB 4.00 - 5.50, CMD 4.00
- Bracket:
 - in aluminium for CMA 0.50 - 0.75 - 1.00, CMB 0.75 - 1.00, CMC 0.75 - 1.00, CMR 0.75 - 1.00
 - in cast iron for the rest of the range

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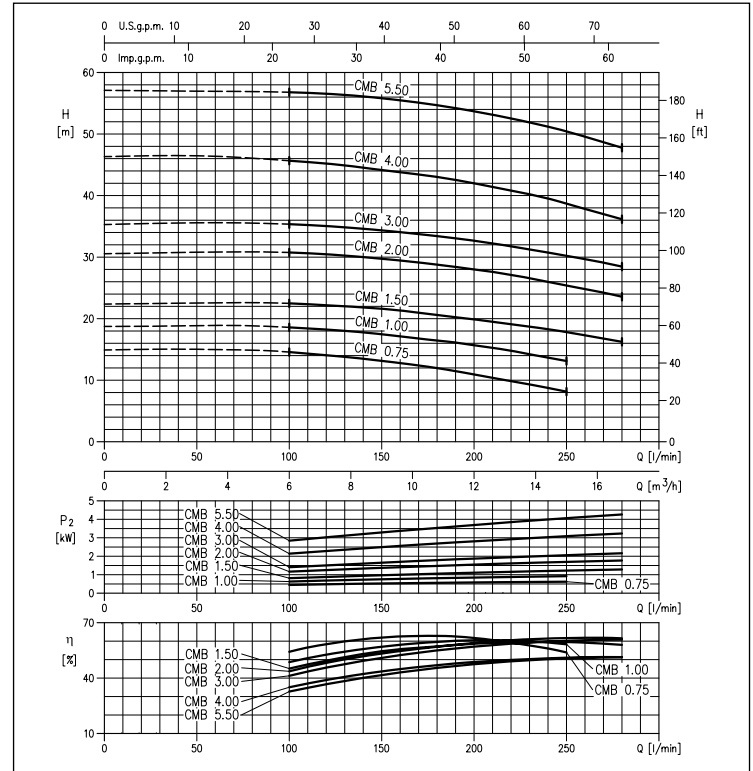
CMA range PERFORMANCE CURVES

(according to ISO 9906 Attachment A)



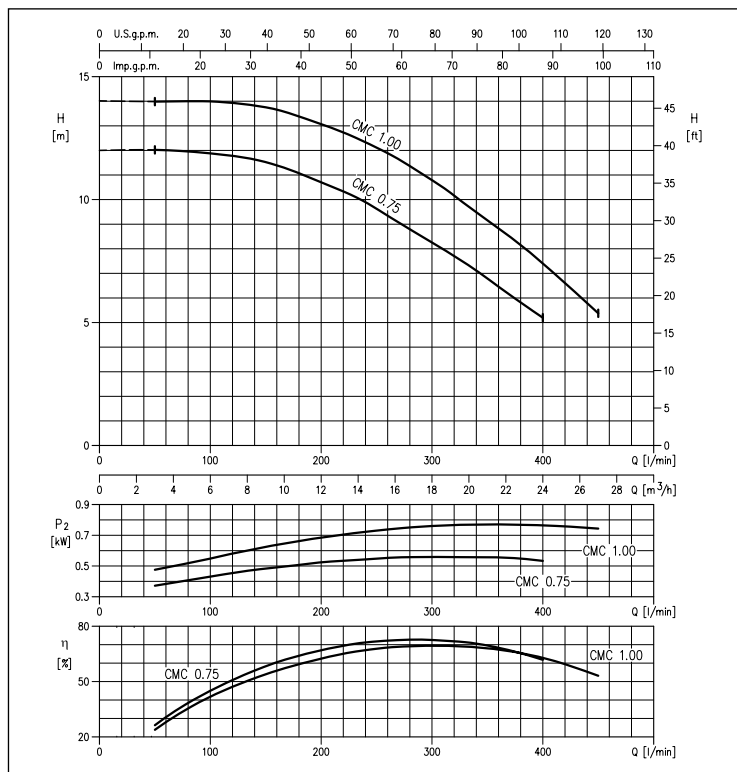
CMB range PERFORMANCE CURVES

(according to ISO 9906 Attachment A)



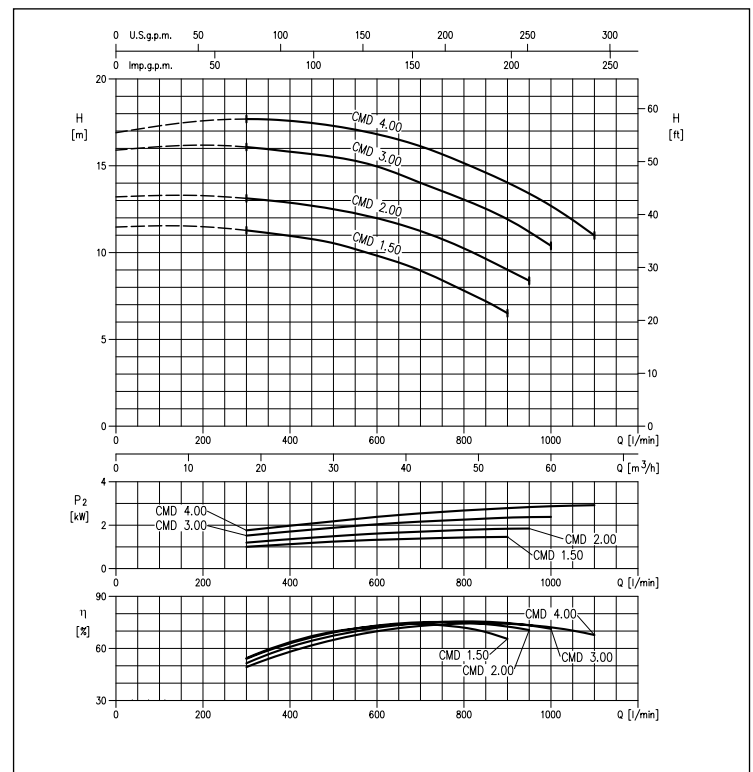
CMC range PERFORMANCE CURVES

(according to ISO 9906 Attachment A)



CMD range PERFORMANCE CURVES

(according to ISO 9906 Attachment A)



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SINGLE IMPELLER CENTRIFUGAL ELECTRIC PUMPS

in cast iron

CMA PERFORMANCE CHART

Model		P ₂		Q = Flow Rate										
Single phase 230V	Three phase 230/400V	[HP]	[kW]	l/min	20	40	60	80	85	90	95	110	120	140
				m³/h	1.2	2.4	3.6	4.8	5.1	5.4	5.7	6.6	7.2	8.4
				H=Head [m]										
CMA 0.50 M	CMA 0.50 T	0.5	0.37	20.9	19.5	17.6	14.9	14.0	13.1	-	-	-	-	-
CMA 0.75 M	CMA 0.75 T	0.75	0.55	29.7	27.8	24.9	21.1	20.2	-	-	-	-	-	-
CMA 1.00 M	CMA 1.00 T	1	0.75	33.0	31.9	29.9	26.6	25.6	24.6	23.5	-	-	-	-
CMA 1.50 M	CMA 1.50 T	1.5	1.1	39.5	39.0	38.3	37.0	36.5	36.1	35.6	34.5	-	-	-
CMA 2.00 M	CMA 2.00 T	2	1.5	47.5	47.0	46.0	45.0	45.0	44.5	44.0	43.0	42.0	-	-
-	CMA 3.00 T	3	2.2	53.0	52.5	51.0	495	49.0	49.0	48.5	46.5	45.5	42.5	-

CMB PERFORMANCE CHART

Model		P ₂		Q = Flow Rate					
Single phase 230V	Three phase 230/400V	[HP]	[kW]	l/min	100	150	200	250	280
				m³/h	6	9	12	15.1	16.9
				H=Head [m]					
CMB 0.75 M	CMB 0.75 T	0.75	0.55	14.6	13.2	10.9	81.0	-	-
CMB 1.00 M	CMB 1.00 T	1	0.75	18.6	17.5	15.7	13.1	-	-
CMB 1.50 M	CMB 1.50 T	1.5	1.1	22.5	21.6	20.0	17.8	16.2	-
CMB 2.00 M	CMB 2.00 T	2	1.5	30.8	29.7	28.0	25.4	23.6	-
-	CMB 3.00 T	3	2.2	35.4	34.4	32.7	30.2	28.5	-
-	CMB 4.00 T	4	3	45.5	44.0	42.0	37.8	36.2	-
-	CMB 5.50 T	5.5	4	57.0	56.0	53.5	50.5	48.0	-

CMC PERFORMANCE CHART

Model		P ₂		Q = Flow Rate						
Single phase 230V	Three phase 230/400V	[HP]	[kW]	l/min	50	100	200	300	400	450
				m³/h	3	6	12	18.1	24.1	27.1
				H=Head [m]						
CMC 0.75 M	CMC 0.75 T	0.75	0.55	12.0	11.9	10.7	8.3	5.2	-	
CMC 1.00 M	CMC 1.00 T	1	0.75	14.0	14.0	13.1	10.8	7.4	5.4	

CMD PERFORMANCE CHART

Model		P ₂		Q = Flow Rate							
Single phase 230V	Three phase 230/400V	[HP]	[kW]	l/min m³/h	250 18	400 24	600 36	800 48	900 54	950 57	1000 60
				H=Head [m]							
CMD 1.50 M	CMD 1.50 T	1.5	1.1	11.3	11.0	9.8	7.8	6.5	-	-	-
CMD 2.00 M	CMD 2.00 T	2	1.5	13.1	12.9	12.0	10.2	9.0	8.4	-	-
-	CMD 3.00 T	3	2.2	16.1	15.8	15.0	13.1	11.9	11.2	10.4	-
-	CMD 4.00 T	4	3	17.7	17.6	16.8	15.2	14.0	13.4	12.7	-

CMR PERFORMANCE CHART

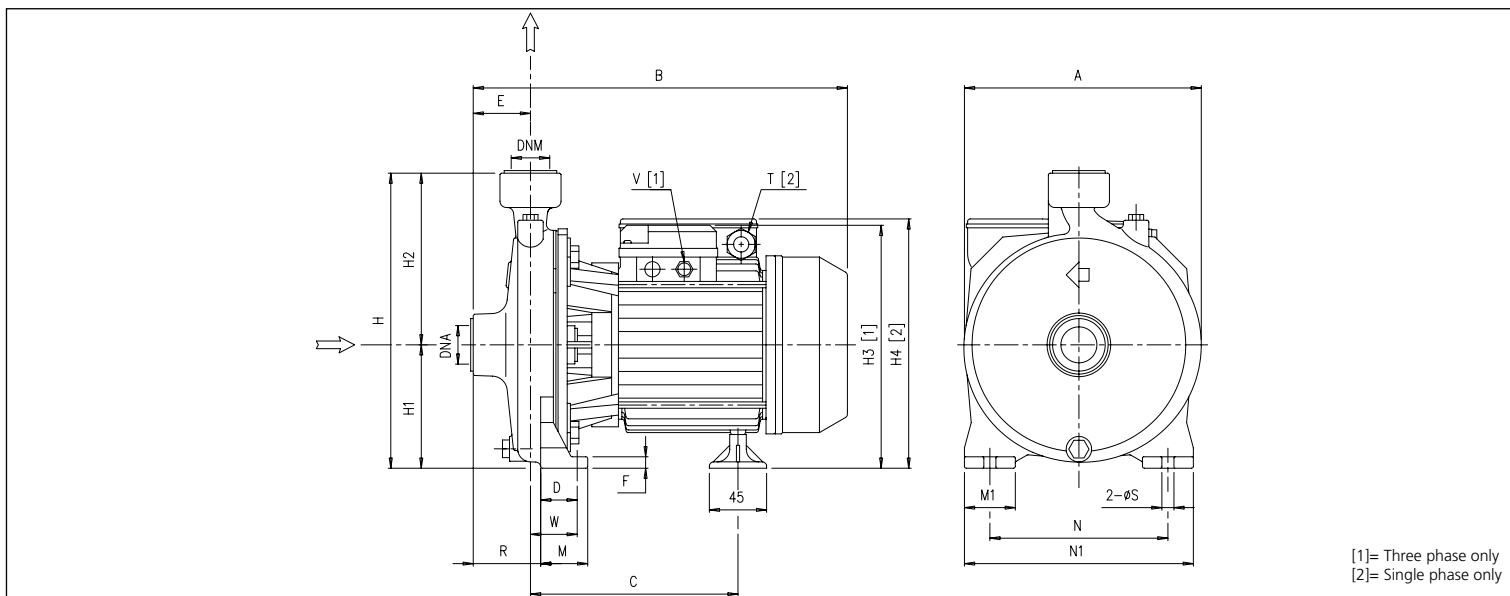
Model		P ₂		Q = Flow Rate					
Single phase 230V	Three phase 230/400V	[HP]	[kW]	l/min	50	100	200	250	275
				m³/h	3	6	12	15	17.5
				H=Head [m]					
CMR 0.75 M	CMR 0.75 T	0.75	0.55	13.6	11.4	8.1	6.3	-	
CMR 1.00 M	CMR 1.00 T	1	0.75	17.3	15.4	11.5	9.6	8.7	

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in cast iron

CMA-B-C-D - CMR DIMENSIONS



DIMENSIONS TABLE

Model	Dimensions [mm]																												Weight [kg]
	A	B	*	C	*	D	E	F	H	H1	H2	H3		H4	M	M1	N	N1	R	T	V		W	S	DN	DNM	*		
												[1]	*	[2]						[2]	[1]	*							
CMA 0.50 M	160	261.8	-	158.8	-	30	44	8	202	82	120	-	-	173	40	40	110	150	44	PG11	-	-	-	30	9.5	G1	G1	7.2	-
CMA 0.50 T	160	261.8	-	158.8	-	30	44	8	202	82	120	172.5	-	-	-	40	40	110	150	44	-	PG11	-	30	9.5	G1	G1	7.1	-
CMA 0.75 M	185	300.3	-	171.8	-	36.8	45	9	232	97	135	-	-	198	45	40	140	180	45	PG11	-	-	36.8	9.5	G1	G1	10.3	-	
CMA 0.75 T	185	300.3	-	171.8	-	36.8	45	9	232	97	135	197.5	-	-	-	45	40	140	180	45	-	PG11	-	36.8	9.5	G1	G1	10.2	-
CMA 1.00 M	185	300.3	-	171.8	-	36.8	45	9	232	97	135	-	-	198	45	40	140	180	45	PG11	-	-	36.8	9.5	G1	G1	11.5	-	
CMA 1.00 T	185	300.3	300.3	171.8	171.8	36.8	45	9	232	97	135	197.5	197.5	-	45	40	140	180	45	-	PG11	M16x1.5	36.8	9.5	G1	G1	11.6	11.6	
CMA 1.50 M	200	347.3	-	208.3	-	41.8	45.5	9	252	100	152	-	-	232	50	40	155	194	45.5	PG13.5	-	-	41.8	9.5	G1¼	G1	19.5	-	
CMA 1.50 T	200	347.3	372.3	208.3	208.3	41.8	45.5	9	252	100	152	214	214	-	50	40	155	194	45.5	-	PG11	M20x1.5	41.8	9.5	G1¼	G1	19.9	20.8	
CMA 2.00 M	225	360.3	-	208.3	-	41.8	45.5	9	285	115	170	-	-	247	50	40	180	220	45.5	PG13.5	-	-	41.8	9.5	G1¼	G1	22.8	-	
CMA 2.00 T	225	361	373.5	208.3	208.3	41.8	45.5	9	285	115	170	229	229	-	50	40	180	220	45.5	-	PG11	M20x1.5	41.8	9.5	G1¼	G1	23.4	24.3	
CMA 3.00 T	225	360.3	372.8	208.3	208.3	41.8	45.5	9	285	115	170	229	229	-	50	40	180	220	45.5	-	PG11	M20x1.5	41.8	9.5	G1¼	G1	23.4	24.3	
CMB 0.75 M	188	315.3	-	182.3	-	36.8	49.5	9	251.5	101.5	150	-	-	127.5	45	40	140	180	65.5	PG11	-	-	52.8	9.5	G2	G1¼	11.6	-	
CMB 0.75 T	188	315.3	-	182.3	-	36.8	49.5	9	251.5	101.5	150	127	-	-	-	45	40	140	180	65.5	-	PG11	-	52.8	9.5	G2	G1¼	11.6	-
CMB 1.00 M	188	315.3	-	182.3	-	36.8	49.5	9	251.5	101.5	150	-	-	127.5	45	40	140	180	65.5	PG11	-	-	52.8	9.5	G2	G1¼	13.7	-	
CMB 1.00 T	188	315.3	315.3	182.3	182.3	36.8	49.5	9	251.5	101.5	150	127	127	-	45	40	140	180	65.5	-	PG11	M16x1.5	52.8	9.5	G2	G1¼	13.7	13.7	
CMB 1.50 M	188	349.3	-	206.3	-	36.8	49.5	9	251.5	101.5	150	-	-	233.5	45	40	140	180	65.5	PG13.5	-	-	52.8	9.5	G2	G1¼	19.9	-	
CMB 1.50 T	188	349.3	374.3	206.3	206.3	36.8	49.5	9	251.5	101.5	150	215.5	215.5	-	45	40	140	180	65.5	-	PG11	M20x1.5	52.8	9.5	G2	G1¼	19.5	20.4	
CMB 2.00 M	200	373.3	-	209.3	-	36.8	57.5	9	271.5	111.5	160	-	-	243.5	45	40	160	200	76.5	PG13.5	-	-	55.8	9.5	G2	G1¼	21.0	-	
CMB 2.00 T	200	374	386.5	209.3	209.3	36.8	57.5	9	271.5	111.5	160	225.5	225.5	-	45	40	160	200	76.5	-	PG11	M20x1.5	55.8	9.5	G2	G1¼	22.0	22.9	
CMB 3.00 T	200	373.3	385.8	209.3	209.3	36.8	57.5	9	271.5	111.5	160	225.5	225.5	-	45	40	160	200	76.5	-	PG11	M20x1.5	55.8	9.5	G2	G1¼	21.3	22.2	
CMB 4.00 T	247	426	459	222.3	262.5	48	60	12	323.5	133.5	190	264.5	259.5	-	60	50	190	240	77.5	-	PG16	M20x1.5	65.5	12	G2	G1¼	37.7	37.7	
CMB 5.50 T	247	469	469	222.3	222.3	48	60	12	323.5	133.5	190	264.5	264.5	-	60	50	190	240	77.5	-	PG16	M20x1.5	65.5	12	G2	G1¼	43.4	43.4	
CMC 0.75 M	186	313.3	-	186.8	-	36.8	43	9	247	97	150	-	-	198	45	40	140	180	63.5	PG11	-	-	57.3	9.5	G2	G2	11.6	-	
CMC 0.75 T	186	313.3	-	186.8	-	36.8	43	9	247	97	150	197.5	-	-	-	45	40	140	180	63.5	-	PG11	-	57.3	9.5	G2	G2	11.6	-
CMC 1.00 M	186	313.3	-	186.8	-	36.8	43	9	247	97	150	-	-	198	45	40	140	180	63.5	PG11	-	-	57.3	9.5	G2	G2	13.0	-	
CMC 1.00 T	186	313.3	313.3	186.8	186.8	36.8	43	9	247	97	150	197.5	197.5	-	45	40	140	180	63.5	-	PG11	M16x1.5	57.3	9.5	G2	G2	13.8	13.8	
CMD 1.50 M	213	384.3	-	222.8	-	36.8	68	12	271.5	111.5	160	-	-	243.5	45	40	160	200	100.5	PG13.5	-	-	69.3	9.5	G2½	G2½	21.3	-	
CMD 1.50 T	213	384.3	409.3	222.8	222.8	36.8	68	12	271.5	111.5	160	225.5	225.5	-	45	40	160	200	100.5	-	PG11	M20x1.5	69.3	9.5	G2½	G2½	22.2	23.1	
CMD 2.00 M	213	397.3	-	222.8	-	36.8	68	12	271.5	111.5	160	-	-	243.5	45	40	160	200	100.5	PG13.5	-	-	9.5	G	G2½	G2½	23.0	-	
CMD 2.00 T	213	398	410.5	222.8	222.8	36.8	68	12	271.5	111.5	160	225.5	225.5	-	45	40	160	200	100.5	-	PG11	M20x1.5	69.3	9.5	G2½	G2½	23.3	24.2	
CMD 3.00 T	213	397.3	409.8	222.8	222.8	36.8	68	12	271.5	111.5	160	225.5	225.5	-	45	40	160	200	100.5	-	PG11	M20x1.5	69.3	9.5	G2½	G2½	23.0	23.9	
CMD 4.00 T	213	449.3	-	234.8	-	36.8	68	12	271.5	111.5	160	354	-	-	45	50	160	200	100.5	-	PG16	-	-	69.3	9.5	G2½	G2½	34.3	-
CMR 0.75 M	180	310	-	182	-	37	45	9	229	97	132	198	198	198	45	45	140	180	61	PG11	PG11	-	52	10	G1½	G1½	10.7	-	
CMR 0.75 T	180	310	-	182	-	37	45	9	229	97	132	198	198	198	45	45	140	180	61	PG11	PG11	-	52	10	G1½	G1½	10.7	-	
CMR 1.00 M	180	310	310	182	-	37	45	9	229	97	132	198	198	198	45	45	140	180	61	PG11	PG11	M16x1.5	52	10	G1½	G1½	11.9	-	
CMR 1.00 T	180	310	310	182	-	37	45	9	229	97	132	198	198	198	45	45	140	180	61	PG11	PG11	M16x1.5	52	10	G1½	G1½	12.7	12.7	

[1]= Three phase only
[2]= Single phase only