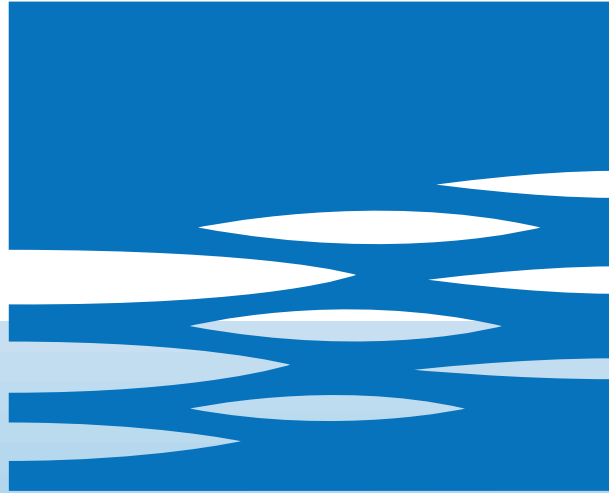




EBARA

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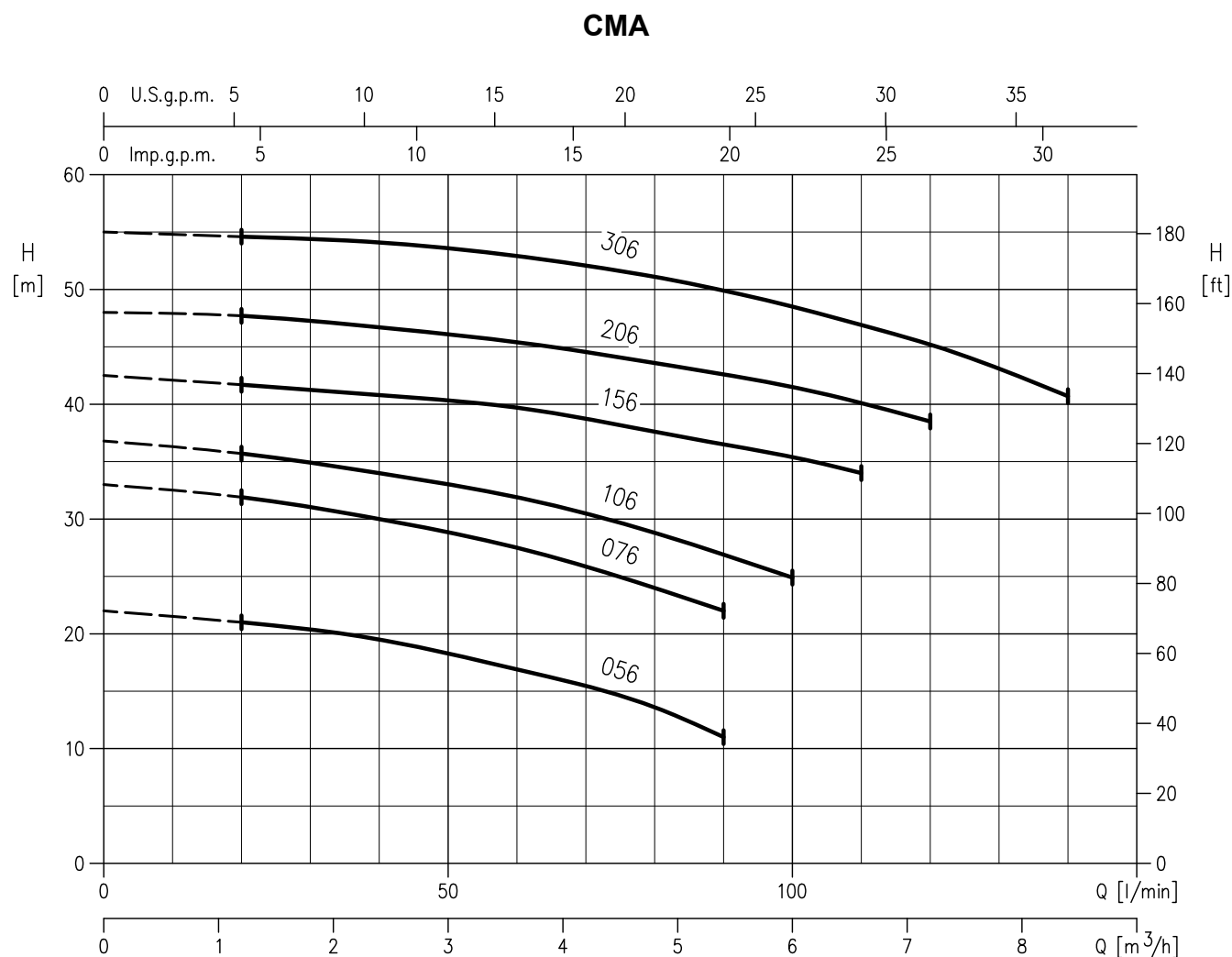
SPECIFICATION

60Hz

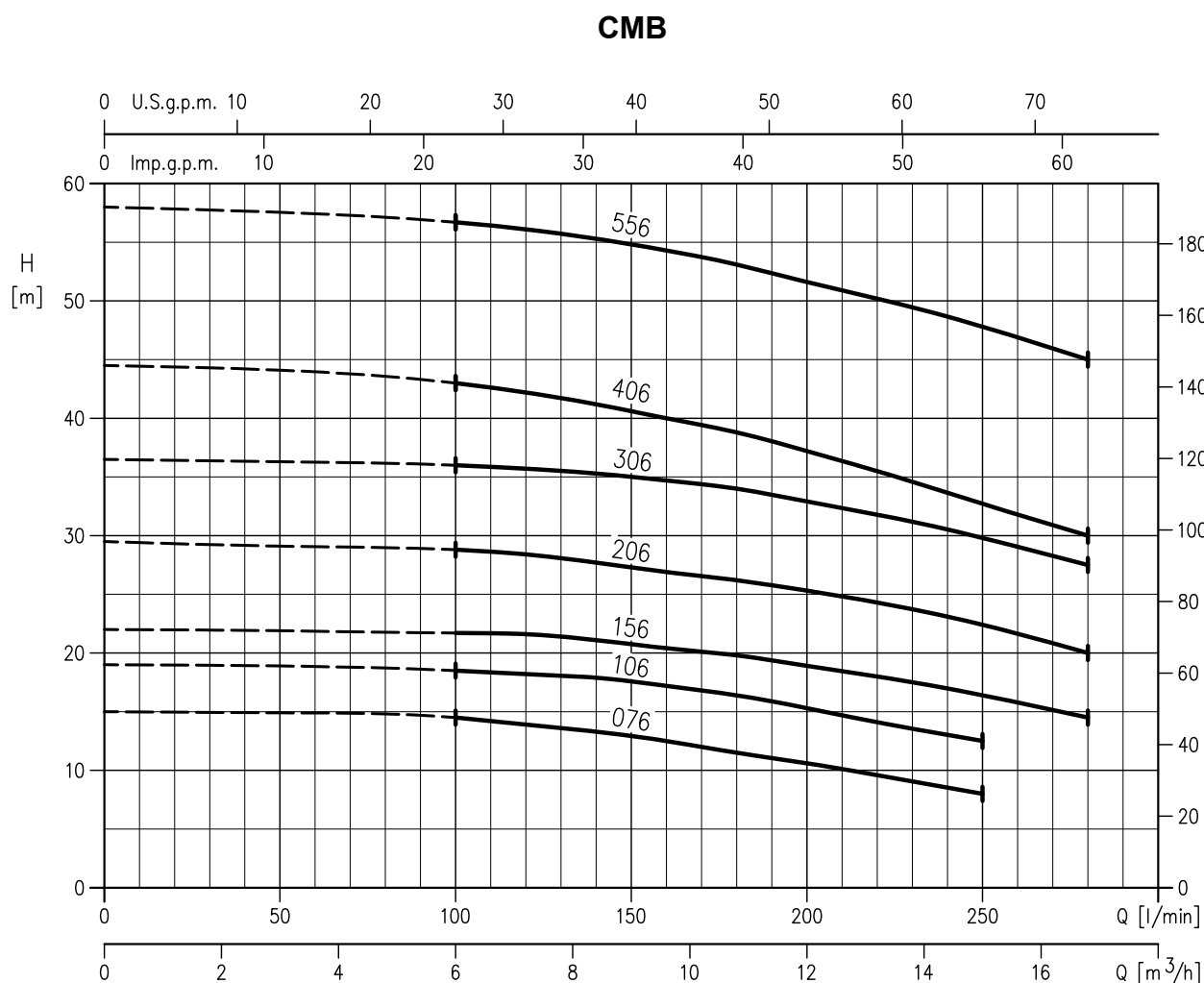
Rev. B

PUMP			
Liquid Handled	Type of liquid	Clean water	
	Temperature [°C]	min. +5 max. +40 (CMA up to 106) max. +90 (the other)	
Maximum working pressure [MPa]		0.6 (CMA up to 106; CMB up to 306; CMD) 0.8 (the other)	
Construction	Impeller	Closed centrifugal	
	Shaft seal type	Mechanical seal	
	Bearing	Sealed ball bearing	
Pipe Connection	Suction	G 1" (CMA up to 106)	UNI ISO 228
		G 1"¼ (CMA 156 and above)	UNI ISO 228
		G 2" (CMB)	UNI ISO 228
		G 2"½ (CMD)	UNI ISO 228
	Discharge	G 1" (CMA)	UNI ISO 228
		G 1"¼ (CMB)	UNI ISO 228
		G 2" (CMB)	UNI ISO 228
		G 2"½ (CMD)	UNI ISO 228
Material	Casing	Cast iron	
	Impeller	PPE + PS glass fibre reinforced - Brass - Cast iron see application page 300	
	Shaft seal	Ceramic/Carbon/NBR	
	Shaft	AISI 416 (integral)	
		AISI 303 (wet extension)	
		AISI 304 (wet extension) see application page 301	
Bracket	Cast iron - Aluminium see application page 300		
Casing cover	AISI 304 see application page 300		
Applicable standard of test		ISO 9906 – Annex A	
MOTOR			
Type	Electric - TEFC		
	Single Phase	Three Phase	
Efficiency	-	- from 0.4 kW up to 0.6 kW - from 0.75 kW up to 4 kW IE3* from 0.75 kW up to 4 kW (*only for 460 V) (CMD 406T not available IE3*)	
No. Of Poles		2	
Rotation speed [min ⁻¹]		≈ 3400	
Insulation Class		F	
Protection degree		IP 44	
Power rating [kW]	0.37 ÷ 1.5	0.37 ÷ 4	
	[HP]	0.5 ÷ 2	0.5 ÷ 5.5
Frequency [Hz]		60	
Voltage [V]	220-230 ±6%	220/380 –6% +10% (from 0.4 kW up to 0.6 kW) 220/380 ±10% (from 0.75 kW up to 4 kW) 220/380-460 ±10% (IE3* 0.75 kW up to 4 kW)	
Capacitor	Built in	-	
Over load protection	Built in	Provided by the user	
Casing material		Aluminium	
Base material / motor support		Aluminium / Cast iron / Plastic foot	
Dimensions of cable entry		PG11 - PG13.5 - PG16 - M16x1.5 - M20x1.5 (see dimensions page 401)	

* only for 460 V

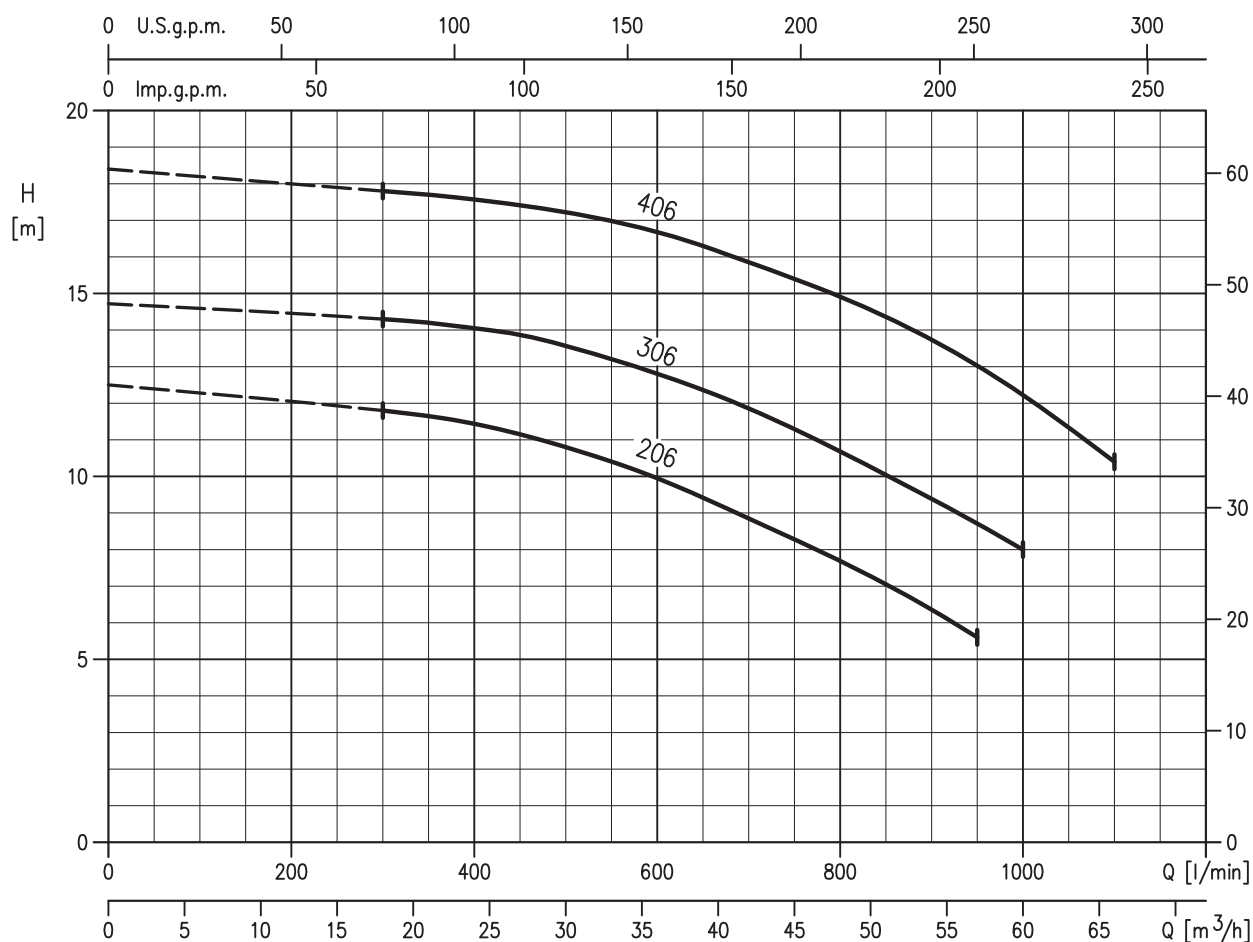


Pump type		Power		Q =Capacity														
				l/min	0	20	30	40	50	60	70	80	90	100	110	120	130	140
Single-phase	Three-phase	[kW]	[HP]	m³/h	0	1.2	1.8	2.4	3	3.6	4	4.8	5.4	6	6.6	7.2	7.8	8.4
H=Total manometric head in meters																		
CMA 056 M	CMA 056 T	0.37	0.5	22	21	20.5	19.5	18	16.9	15.5	13.6	11	-	-	-	-	-	-
CMA 076 M	CMA 076 T	0.55	0.75	33	31.9	31	30	28.5	27.5	26	24	22	-	-	-	-	-	-
CMA 106 M	CMA 106 T	0.75	1	36.8	35.7	35	34	33	32	30.5	29	27	24.9	-	-	-	-	-
CMA 156 M	CMA 156 T	1.1	1.5	42.5	41.5	41	40.5	40	39.5	38.5	37.5	36.5	35.5	34	-	-	-	-
CMA 206 M	CMA 206 T	1.5	2	48	47,5	47	46.5	46	45.5	44.5	43.5	42.5	41.5	40	38.5	-	-	-
-	CMA 306 T	2.2	3	55	54.5	54.3	54	53.5	53	52	51	50	48.5	47	45	43	40.5	40.5



Pump type		Power		Q =Capacity											
				l/min	0	100	120	140	160	180	200	220	250	280	
Single-phase	Three-phase	[kW]	[HP]	m³/h	0	6	7,2	8,4	9,6	10,8	12	13,2	15	16,8	
H=Total manometric head in meters															
CMB 076 M	CMB 076 T	0,55	0,75	15	14.5	13.9	13.3	12.5	11.5	10.6	9.6	8	-	-	
CMB 106 M	CMB 106 T	0,75	1	19	18.5	18.2	17.9	17.2	16.4	15.3	14.1	12.5	-	-	
CMB 156 M	CMB 156 T	1,1	1,5	22	21.7	21.6	21.1	20.4	19.8	18.9	18	16.4	14.5	-	
CMB 206 M	CMB 206 T	1,5	2	29.5	28.8	28.4	27.7	26.9	26.2	25.3	24.3	22.4	20	-	
-	CMB 306 T	2,2	3	36.5	36	35.7	35.3	34.7	34	32.9	31.8	29.8	27.5	-	
-	CMB 406 T	3	4	44.5	43	42	41	40	38.8	37.2	35.5	32.7	30	-	
-	CMB 556 T	4	5,5	58	56.5	56	55	54	53	51.5	50	48	45	-	

CMD



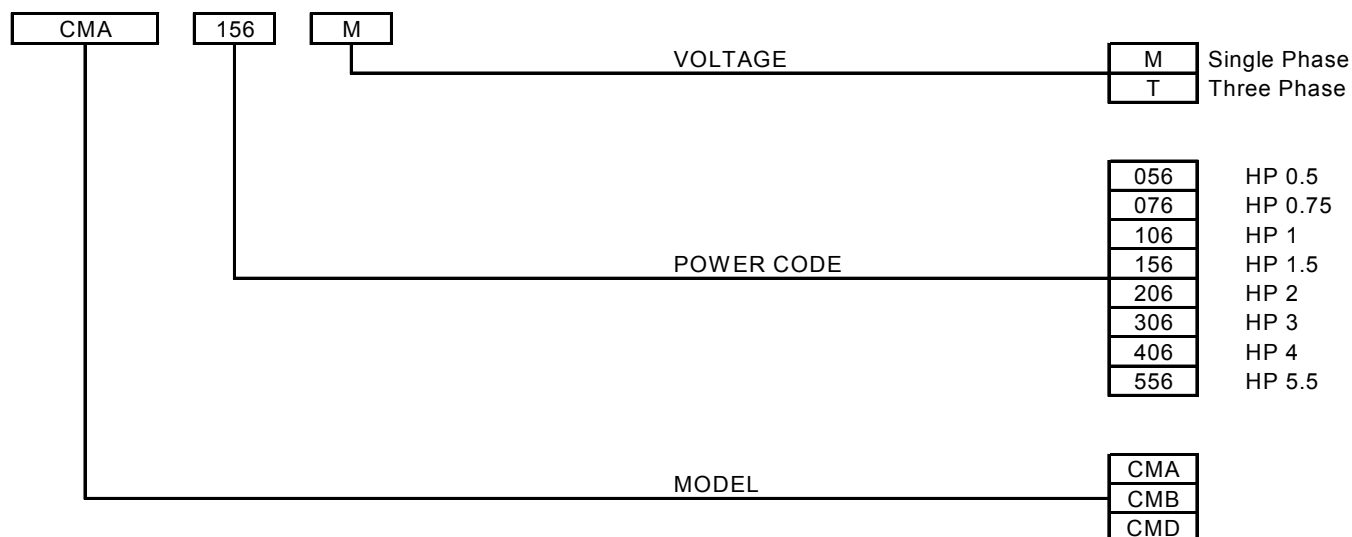
Pump type		Power		Q =Capacity													
				l/min	0	300	350	400	450	500	600	700	800	900	950	1000	1100
Single-phase	Three-phase	[kW]	[HP]	m³/h	0	18	21	24	27	30	36	42	48	54	57	60	66
				H=Total manometric head in meters													
CMD 206 M	CMD 206 T	1.5	2	12.5	11.8	11.6	11.4	11.1	10.8	9.9	8.8	7.7	6.3	5.6	-	-	-
-	CMD 306 T	2.2	3	14.6	14.3	14.2	14	13.9	13.6	12.8	11.8	10.7	9.4	8.7	8	-	-
-	CMD 406 T	3	4	18.4	17.8	17.7	17.6	17.4	17.2	16.7	15.9	14.9	13.7	13	12.2	10.4	-

TYPE KEY AND CURVE SPECIFICATIONS

60Hz

Rev. B

TYPE KEY



PERFORMANCE CURVE SPECIFICATIONS

The specifications below qualify the curves shown on the following pages.

Tolerances according to ISO 9906 Annex A

The curves refer to effective speed of asynchronous motors at 60Hz

Measurements were carried out with clean water at 20°C of temperature and with a kinematic viscosity of $\nu = 1 \text{ mm}^2/\text{s}$ (1 cSt)

The continuous curves indicate the recommended working range. The dotted curve is only a guide.

In order to avoid the risk of over-heating, the pumps should not be used at a flow rate below 10% of best efficiency point.

Symbols explanation:

Q = volume flow rate
H = total head

CMA 056 - Impeller diameter = 113 mm

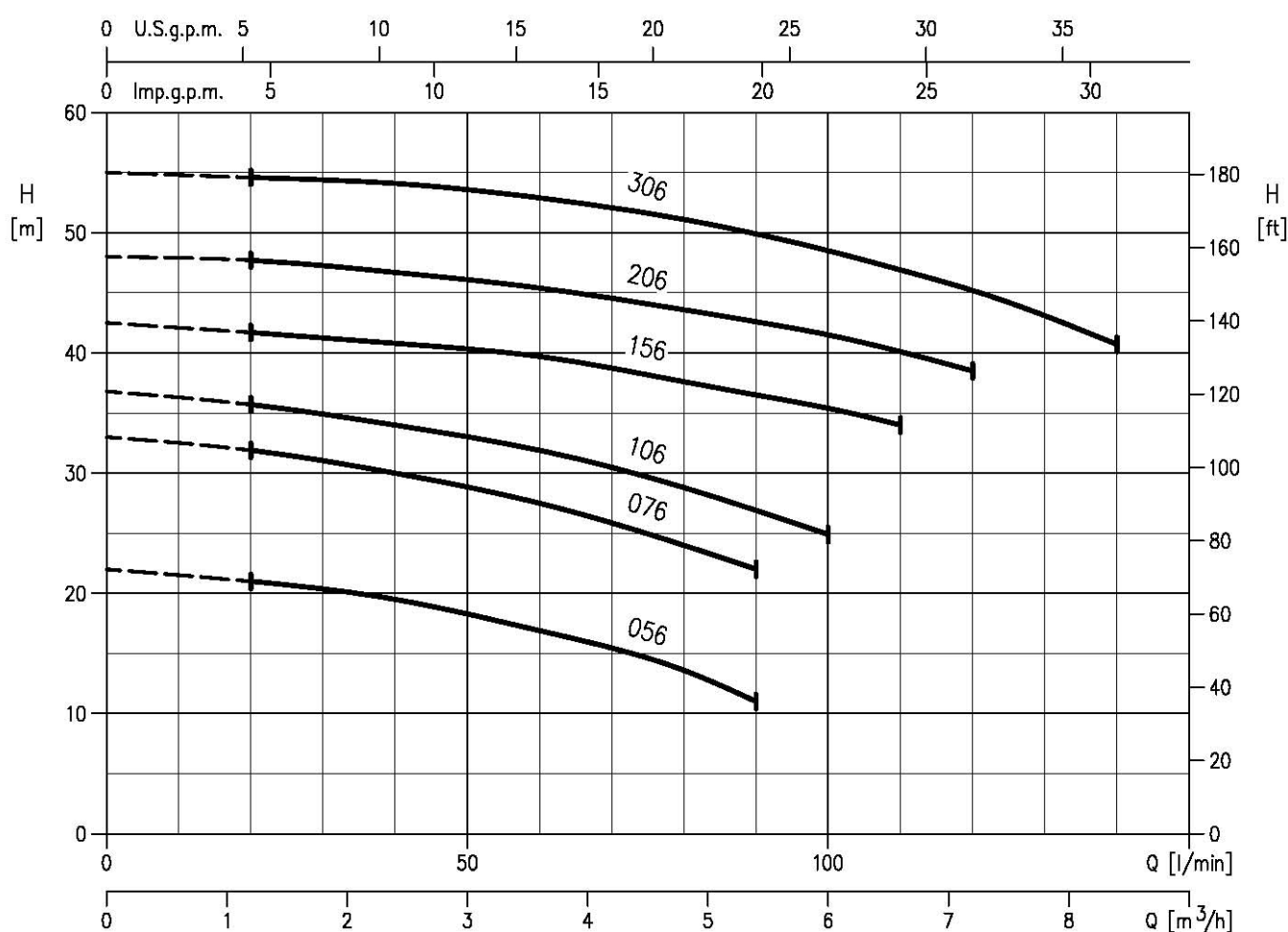
CMA 076 - Impeller diameter = 140 mm

CMA 106 - Impeller diameter = 151 mm

CMA 156 - Impeller diameter = 139 mm

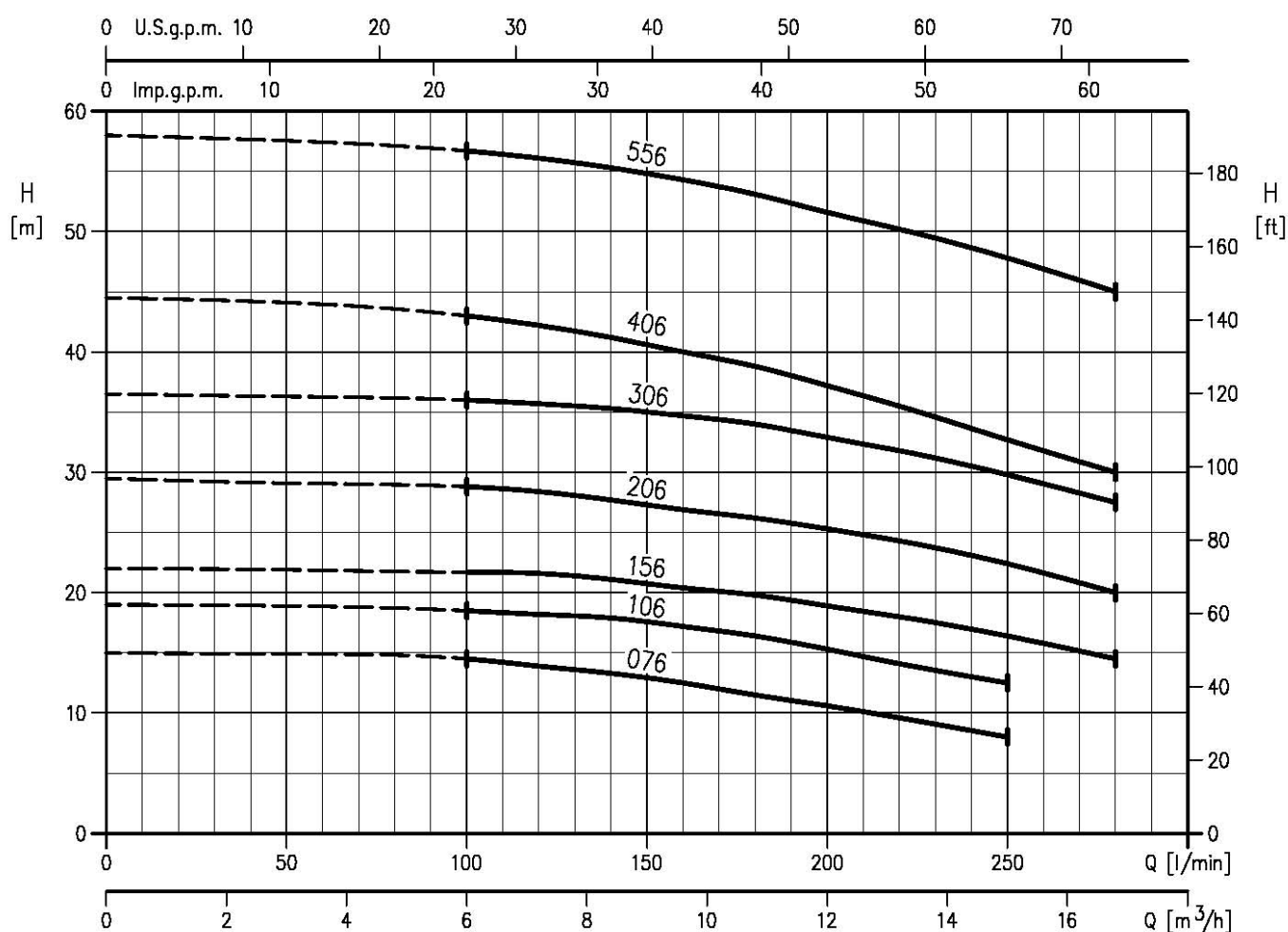
CMA 206 - Impeller diameter = 159 mm

CMA 306 - Impeller diameter = 173 mm



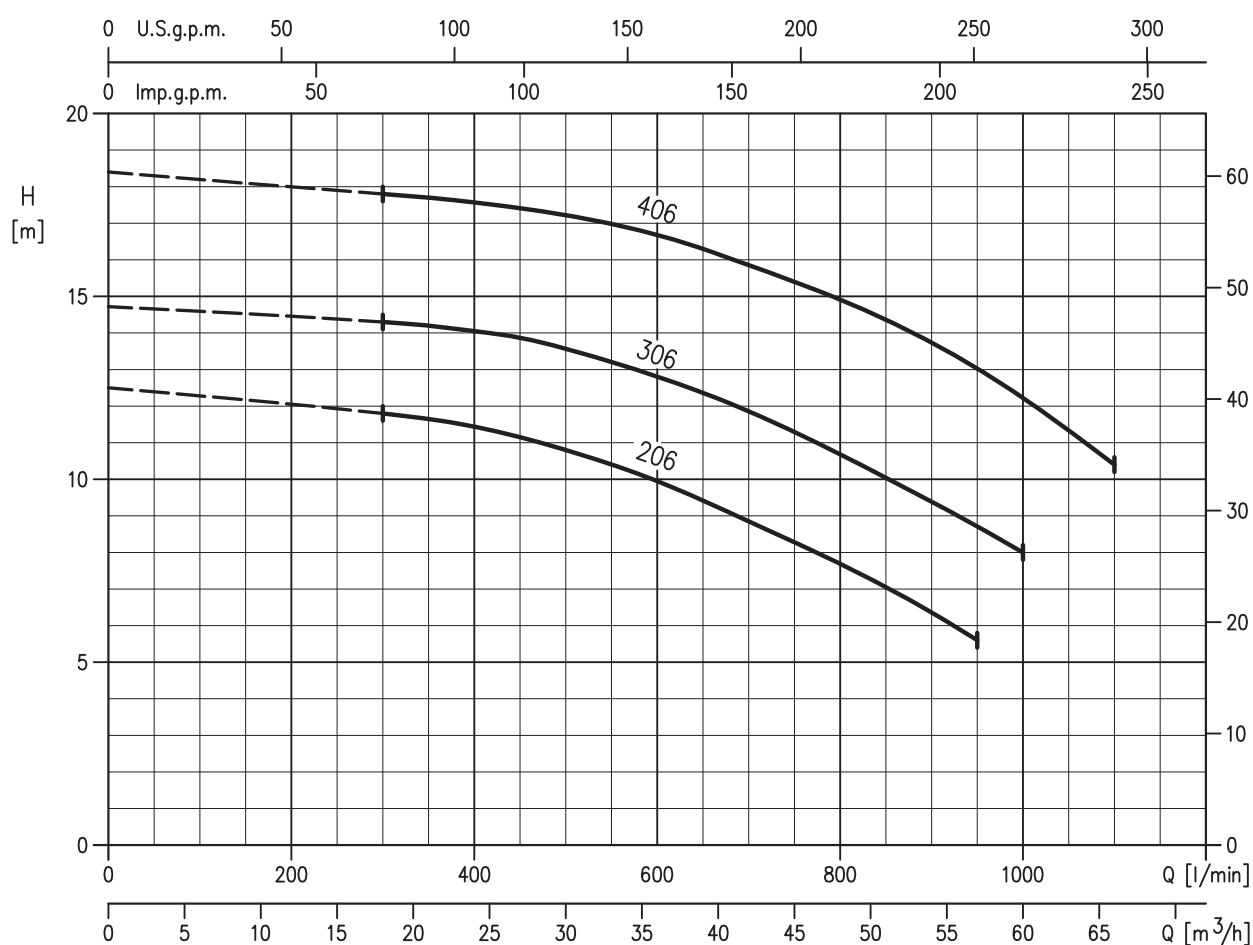
Rotation speed $\approx 3400 \text{ min}^{-1}$
 Test standard: ISO 9906 – Annex A

CMB 076 - Impeller diameter = 96 mm
 CMB 106 - Impeller diameter = 105 mm
 CMB 156 - Impeller diameter = 111 mm
 CMB 206 - Impeller diameter = 128 mm
 CMB 306 - Impeller diameter = 142 mm
 CMB 406 - Impeller diameter = 160 mm
 CMB 556 - Impeller diameter = 176 mm

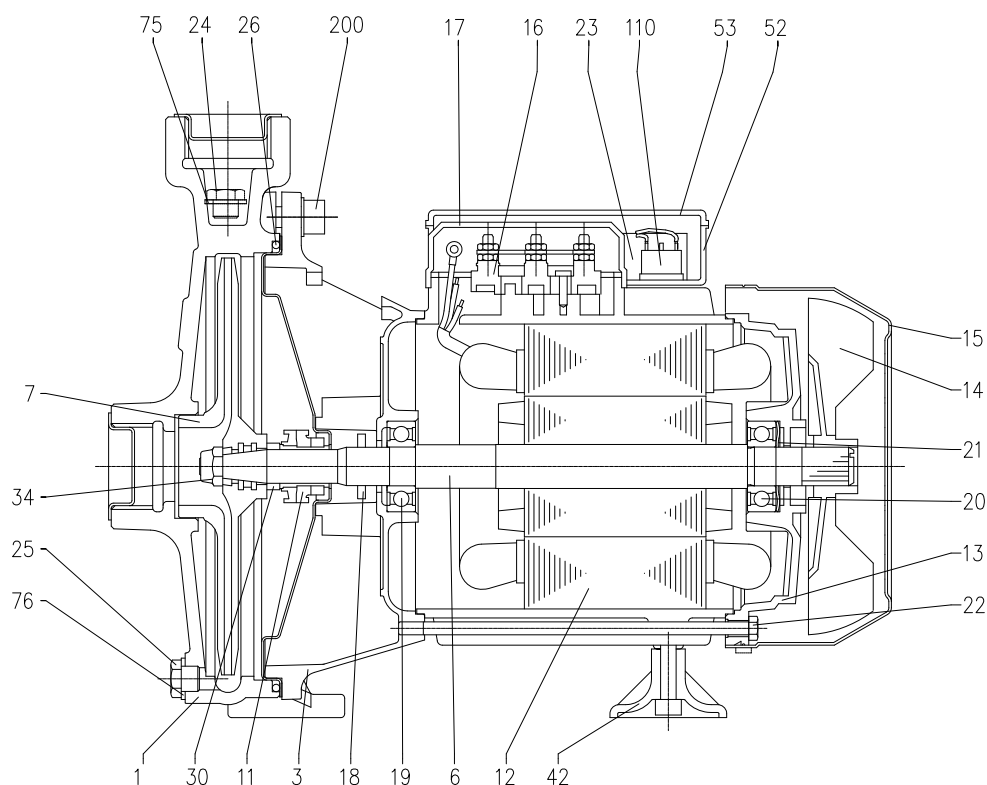


Rotation speed $\approx 3400 \text{ min}^{-1}$
 Test standard: ISO 9906 – Annex A

CMD 206 - Impeller diameter = 96 mm
CMD 306 - Impeller diameter = 101 mm
CMD 406 - Impeller diameter = 108 mm



Rotation speed $\approx 3400 \text{ min}^{-1}$
Test standard: ISO 9906 – Annex A

SECTIONAL VIEW
(UP TO 106)

N°	PART NAME	MATERIAL	Q. TY	N°	PART NAME	MATERIAL	Q. TY
1	Casing	Cast iron	1	21	Adjusting ring	Steel C70	1
3	Motor bracket	Aluminium	1	22	Tie rod	Fe 42 Zincate	4
4	Casing cover	AISI 304	1	23	Capacitor [5]	-	1
6	Shaft with rotor	[1]	1	24	Priming plug	Brass	1
7	Impeller	[2]	1	25	Drain plug	Brass	1
11	Mechanical seal [3]	Carbon/Ceramic/NBR	1	26	O-ring	NBR	1
12	Motor frame with stator	-	1	30	Mechanical seal spacer [6]	Brass	1
13	Motor cover	Aluminium	1	34	Impeller nut [7]	AISI 304	1
14	Fan	PA6	1	42	Foot	PP	1
15	Fan cover	Fe P04 Zincate	1	52	Capacitor box [5]	ABS class V-0	1
16	Terminal box	-	1	53	Capacitor box cover [5] [8]	ABS class V-0 [8]	1
17	Terminal box cover [4]	Aluminium	1	75	Washer	Aluminium	1
18	Splash ring	NBR	1	76	Washer	Aluminium	1
19	Pump side ball bearing	-	1	110	Protector [5]	-	-
20	Fan side ball bearing	-	1	200	Screw	Zn Steel Cl. 8.8 ISO 898-1	4

[1] Material: AISI 416 (integral) for CMA 056

AISI 303 (wet extension) for other model;

[2] Material: PPE+PS mod. glass fibre reinforced for version CMA
Cast iron for version CMB

[3] See constructions mechanical seal page 302-303

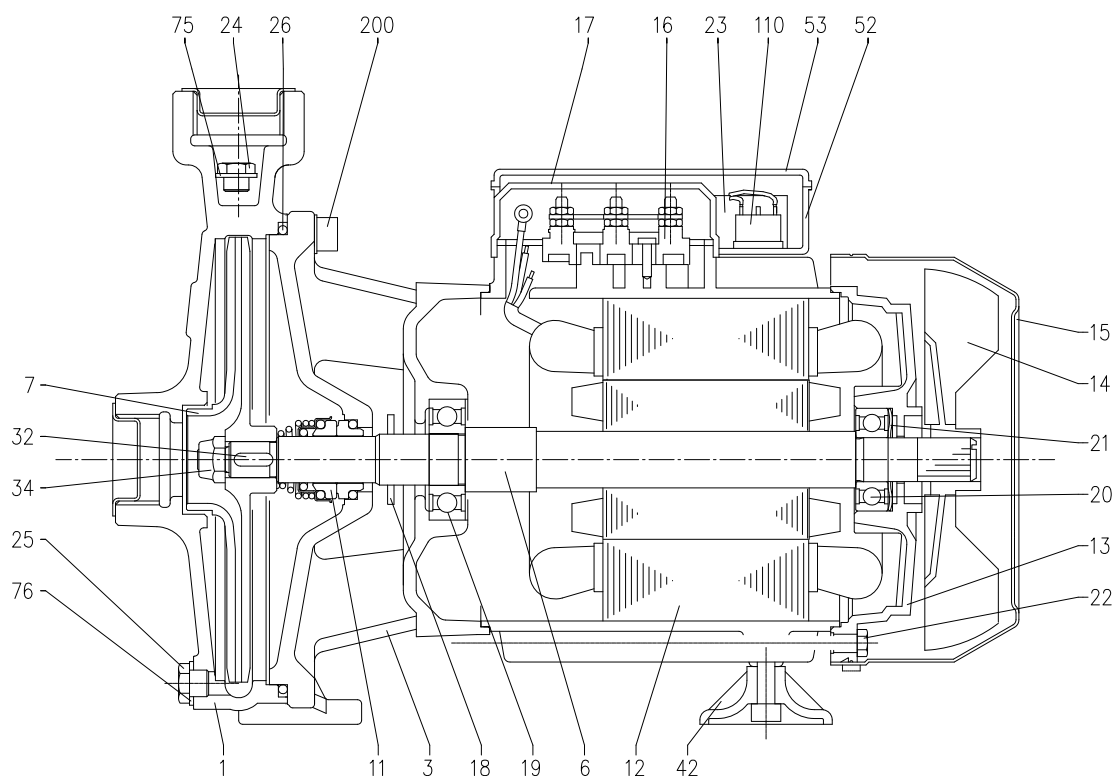
[4] Only for three phase

[5] Only for single phase

[6] Only for version: CMA 056, CMB 076-106

[7] Except for CMA 056

[8] With gasket in NBR only for version single phase CMA 056-076-106, CMB 076-106

SECTIONAL VIEW
(156 AND ABOVE)

N°	PART NAME	MATERIAL	Q.TY	N°	PART NAME	MATERIAL	Q.TY
1	Casing	Cast iron	1	22	Tie rod	Fe 42 Zincate	4
3	Motor bracket	Cast iron	1	23	Capacitor [5]	-	1
6	Shaft with rotor	[1]	1	24	Priming plug	Brass	1
7	Impeller	[2]	1	25	Drain plug	Brass	1
11	Mechanical seal [3]	Carbon/Ceramic/NBR	1	26	O-ring	NBR	1
12	Motor frame with stator	-	1	32	Key	AISI 316	1
13	Motor cover	Aluminium	1	34	Impeller nut	AISI 304	1
14	Fan	PA6	1	42	Foot	PP	1
15	Fan cover	Fe P04 Zincate	1	52	Capacitor box [5]	ABS class V-0	1
16	Terminal board	-	1	53	Capacitor box cover [5]	ABS class V-0	1
17	Terminal box cover [4]	Aluminium	1	75	Washer	Aluminium	1
18	Splash ring	NBR	1	76	Washer	Aluminium	1
19	Pump side ball bearing	-	1	101	Seeger ring	AISI 420	1
20	Fan side ball bearing	-	1	110	Protector [5]	-	1
21	Adjusting ring	Steel C70	1	200	Screw	Zn Steel Cl. 8.8 ISO 898-1	4

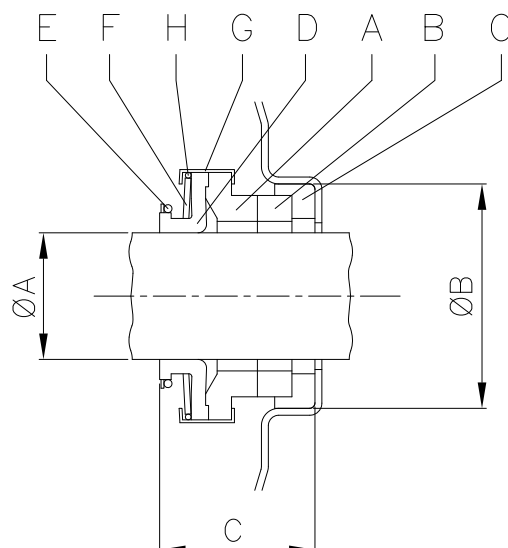
[1] Material: AISI 303 (wet extension) for version CMA, CMB 156-206-306, CMD 206-306
 AISI 304 (wet extension) for version CMB 406-556, CMD 406

[2] Material: Brass for version: CMA, CMB 206-306-406-556
 Cast iron for version: CMB 156, CMD

[3] See constructions mechanical seal page 302-303

[4] Only for three phase

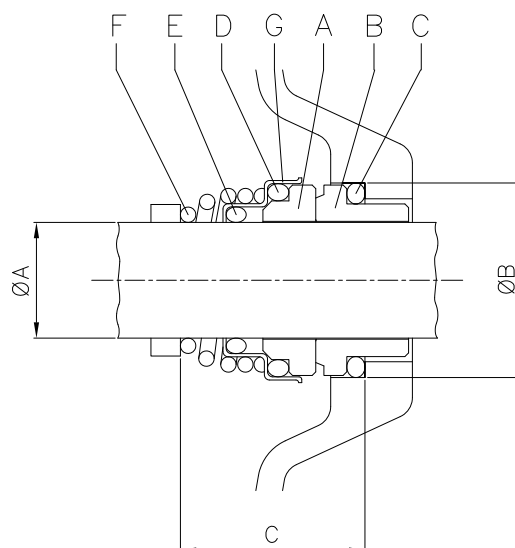
[5] Only for single phase

**MECHANICAL SEAL
(UP TO 106)**

Pump type		Dimensions mm		
Single phase	Three phase	Ø A	Ø B	C
CMA 056 M	CMA 056 T	12	26	18.5
CMA 076 M	CMA 076 T	13	26	18.3
CMA 106 M	CMA 106 T	13	26	18.3
CMB 076 M	CMB 076 T	13	26	18.3
CMB 106 M	CMB 106 T	13	26	18.3

REF	PART NAME	MATERIAL product standard
A	Rotary seal ring	carbon graphite
B	Stationary seal ring	ceramic
C	Gasket	NBR
D	Bellows	NBR
E	Ring	AISI 304
F	Self driving spring	AISI 304
G	Frame	AISI 304
H	Retainer ring	AISI 304

MECHANICAL SEAL (156 AND ABOVE)



Pump type		Dimensions mm		
Single phase	Three phase	Ø A	Ø B	C
CMA 156 M	CMA 156 T	18	30.9	32
CMA 206 M	CMA 206 T	18	30.9	32
-	CMA 306 T	18	30.9	32
CMB 156 M	CMB 156 T	18	30.9	32
CMB 206 M	CMB 206 T	18	30.9	32
-	CMB 306 T	18	30.9	32
-	CMB 406 T	20	30.9	33
-	CMB 556 T	20	30.9	33
CMD 206 M	CMD 206 T	18	30.9	32
-	CMD 306 T	18	30.9	32
-	CMD 406 T	18	30.9	32

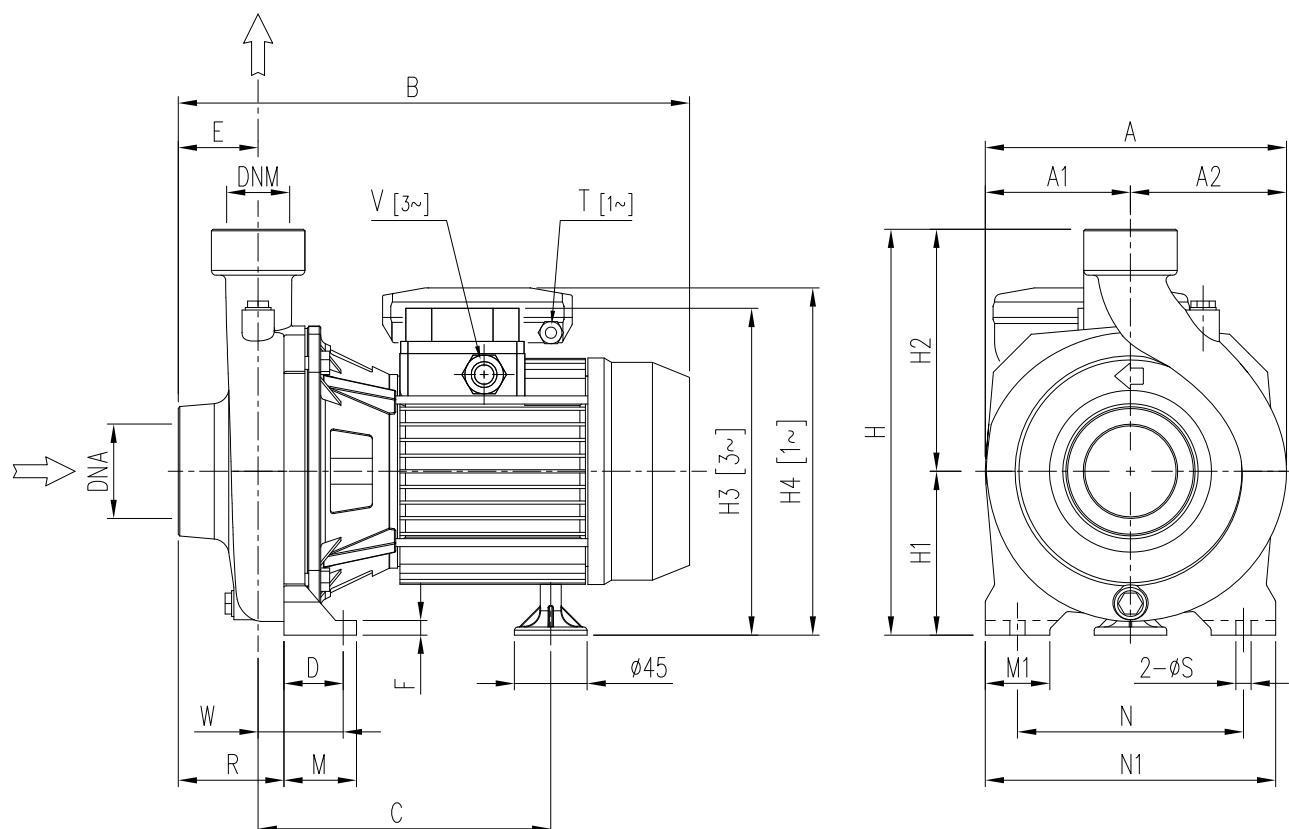
REF	PART NAME	MATERIAL product standard
A	Rotary seal ring	ceramic
B	Stationary seal ring	carbon graphite
C	O Ring	NBR
D	O Ring	NBR
E	O Ring	NBR
F	Self driving spring	AISI 316
G	Frame	AISI 304

BEARINGS

Pump type		Ball Bearing			
Single phase	Three Phase	Pump side	(*) Pump side	Fan side	(*) Fan side
CMA 056M	CMA 056T	6201 2RSH	-	6201 2RSH	-
CMA 076M	CMA 076T	6202 2RSH	-	6202 2RSH	-
CMA 106M	CMA 106T	6202 2RSH	6202-ZZ C3	6202 2RSH	6202-ZZ C3
CMA 156M	CMA 156T	6204 2RSH	6204-ZZ C3	6203 2RSH	6203-ZZ C3
CMA 206M	CMA 206T	6204 2RSH	6204-ZZ C3	6203 2RSH	6203-ZZ C3
-	CMA 306T	6204 2RSH	6204-ZZ C3	6203 2RSH	6203-ZZ C3
CMB 076M	CMB 076T	6202 2RSH	6202-ZZ C3	6202 2RSH	6202-ZZ C3
CMB 106M	CMB 106T	6202 2RSH	6202-ZZ C3	6202 2RSH	6202-ZZ C3
CMB 156M	CMB 156T	6204 2RSH	6204-ZZ C3	6203 2RSH	6203-ZZ C3
CMB 206M	CMB 206T	6204 2RSH	6204-ZZ C3	6203 2RSH	6203-ZZ C3
-	CMB 306T	6204 2RSH	6204-ZZ C3	6203 2RSH	6203-ZZ C3
-	CMB 406T	6306 2RS1	6306-ZZ C3	6205 2RSH	6205-ZZ C3
-	CMB 556T	6306 2RS1	6306-ZZ C3	6205 2RSH	6205-ZZ C3
CMD 206M	CMD 206T	6204 2RSH	6204-ZZ C3	6203 2RSH	6203-ZZ C3
-	CMD 306T	6204 2RSH	6204-ZZ C3	6203 2RSH	6203-ZZ C3
-	CMD 406T	6206 2RS1	6306-ZZ C3	6205 2RSH	6205-ZZ C3

(*) only for IE3 Motors

PUMP DRAWING



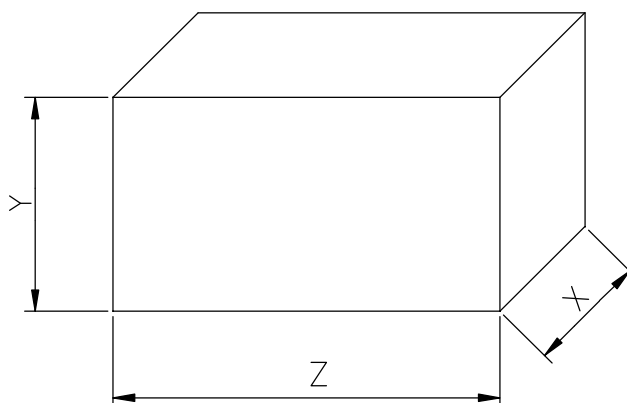
[1~] Single phase
[3~] Three phase

DIMENSION TABLE

Pump type	Dimensions [mm]																											Weight [kgf]			
																					H3										
	A	A1	A2	B		C		D	E	F	H	H1	H2	(*)		H4	M	M1	N	N1	R	T	V		W	S	DNA		DNM		
CMA 056M	158.5	76.5	82	264	(*)	156	(*)	30	44	8	202	82	120	-	(*)	174.5	40	40	110	150	44	PG11	-	(*)	30	9.5	G 1	G 1	7	-	
CMA 056T	158.5	76.5	82	262	-	159	-	30	44	8	202	82	120	172.5	-	-	40	40	110	150	44	-	PG11	-	-	30	9.5	G 1	G 1	7	-
CMA 076M	187	91	96	302	-	171	-	37	45	9	232	97	135	-	-	199	45	40	140	180	45	PG11	-	-	37	9.5	G 1	G 1	10	-	
CMA 076T	187	91	96	301	-	172	-	37	45	9	232	97	135	197.5	-	-	45	40	140	180	45	-	PG11	-	-	37	9.5	G 1	G 1	10	-
CMA 106M	187	91	96	301	-	172	-	37	45	9	232	97	135	-	-	198	45	40	140	180	45	PG11	-	-	37	9.5	G 1	G 1	12	-	
CMA 106T	187	91	96	302	302	171	171	37	45	9	232	97	135	198	198	-	45	40	140	180	45	-	PG11	M16x1.5	37	9.5	G 1	G 1	12	12	
CMA 156M	196	97	99	348	-	209	-	42	45.5	9	252	100	152	-	-	232	50	40	155	194	45.5	PG13,5	-	-	42	9.5	G 1 ¼	G 1	20	-	
CMA 156T	196	97	99	346	371	207	207	42	45.5	9	252	100	152	219	219	-	50	40	155	194	45.5	-	PG11	M20x1.5	42	9.5	G 1 ¼	G 1	18	19	
CMA 206M	223	110.5	112.5	361	-	209	-	42	45.5	9	285	115	170	-	-	247	50	40	180	220	45.5	PG13,5	-	-	42	9.5	G 1 ¼	G 1	23	-	
CMA 206T	223	110.5	112.5	346	359	207	207	42	45.5	9	285	115	170	234	234	-	50	40	180	220	45.5	-	PG11	M20x1.5	42	9.5	G 1 ¼	G 1	22	22	
CMA 306T	223	110.5	112.5	359	372	207	207	42	45.5	9	285	115	170	234	234	-	50	40	180	220	45.5	-	PG11	M20x1.5	42	9.5	G 1 ¼	G 1	23	24	
CMB 076M	188	90	98	316	-	183	-	37	49.5	9	251.5	101.5	150	-	-	127.5	45	40	140	180	65.5	PG11	-	-	53	9.5	G 2	G 1 ¼	12	-	
CMB 076T	188	90	98	317	-	182	-	37	49.5	9	251.5	101.5	150	203.5	203.5	-	45	40	140	180	65.5	-	PG11	-	-	53	9.5	G 2	G 1 ¼	12	-
CMB 106M	188	90	98	316	-	183	-	37	49.5	9	251.5	101.5	150	-	-	127.5	45	40	140	180	65.5	PG11	-	-	53	9.5	G 2	G 1 ¼	14	-	
CMB 106T	188	90	98	317	317	182	182	37	49.5	9	251.5	101.5	150	202.5	202.5	-	45	40	140	180	65.5	-	PG11	M16x1.5	53	9.5	G 2	G 1 ¼	14	14	
CMB 156M	188	90	98	350	-	207	-	37	49.5	9	251.5	101.5	150	-	-	233.5	45	40	140	180	65.5	PG13,5	-	-	53	9.5	G 2	G 1 ¼	19	-	
CMB 156T	188	90	98	348	373	205	205	37	49.5	9	251.5	101.5	150	220.5	220.5	-	45	40	140	180	65.5	-	PG11	M20x1.5	53	9.5	G 2	G 1 ¼	18	19	
CMB 206M	212.5	102	110.5	374	-	210	-	37	57.5	9	271.5	111.5	160	-	-	243.5	45	40	160	200	76.5	PG13,5	-	-	56	9.5	G 2	G 1 ¼	21	-	
CMB 206T	212.5	102	110.5	372	385	208	208	37	57.5	9	271.5	111.5	160	230.5	230.5	-	45	40	160	200	76.5	-	PG11	M20x1.5	56	9.5	G 2	G 1 ¼	20	21	
CMB 306T	212.5	102	110.5	372	385	208	208	37	57.5	9	271.5	111.5	160	230.5	230.5	-	45	40	160	200	76.5	-	PG11	M20x1.5	56	9.5	G 2	G 1 ¼	21	22	
CMB 406T	248.5	121	127.5	427	460	246	286	48	60	12	323.5	133.5	190	274.5	273.5	-	60	50	190	240	77.5	-	PG16	M20x1.5	66	12	G 2	G 1 ¼	39	39	
CMB 556T	248.5	121	127.5	467	467	246	246	48	60	12	323.5	133.5	190	274.5	274.5	-	60	50	190	240	77.5	-	PG16	M20x1.5	66	12	G 2	G 1 ¼	41	41	
CMD 206M	211	97	114	398	-	223	-	37	68	12	271.5	111.5	160	-	-	243.5	45	40	160	200	100.5	PG13,5	-	-	70	9.5	G 2 ½	G 2 ½	23	-	
CMD 206T	211	97	114	396	409	221	221	37	68	12	271.5	111.5	160	230.5	230.5	-	45	40	160	200	100.5	-	PG11	M20x1.5	70	9.5	G 2 ½	G 2 ½	21	22	
CMD 306T	211	97	114	396	409	221	221	37	68	12	271.5	111.5	160	230.5	230.5	-	45	40	160	200	100.5	-	PG11	M20x1.5	70	9.5	G 2 ½	G 2 ½	23	24	
CMD 406T	211	97	114	444	-	255	-	37	68	12	271.5	111.5	160	252.5	-	-	45	40	160	200	100.5	-	PG16	-	70	9.5	G 2 ½	G 2 ½	30	-	

(*) only for IE3 Motors

PACKING



Pump type		Packing [mm]				Weight [kgf]		
Single Phase	Three Phase	X	Y	Z	(*)	[1~]	[3~]	(*)
CMA 056M	CMA 056T	180	240	300	-	8	8	-
CMA 076M	CMA 076T	210	270	330	-	11	11	-
CMA 106M	CMA 106T	210	270	330	330	12	12	12
CMA 156M	CMA 156T	225	290	380	400	21	21	21
CMA 206M	CMA 206T	250	325	400	400	24	25	25
-	CMA 306T	250	325	400	400	-	24	25
CMB 076M	CMB 076T	210	290	370	-	13	13	-
CMB 106M	CMB 106T	210	290	370	370	15	15	15
CMB 156M	CMB 156T	225	290	380	380	20	21	21
CMB 206M	CMB 206T	250	325	400	400	22	23	24
-	CMB 306T	250	325	400	400	-	22	23
-	CMB 406T	280	340	490	490	-	44	44
-	CMB 556T	280	340	490	490	-	48	48
CMD 206M	CMD 206T	237	320	427	427	24	25	25
-	CMD 306T	237	320	427	427	-	24	25
-	CMD 406T	280	340	490	-	-	36	-

[1~] Single phase

[3~] Three phase

(*) only for IE3 Motors

TECHNICAL DATA

60Hz

Rev. B

MOTOR DATA

Pump type		Power		Efficiency		Capacitor		Efficiency (% load)			Efficiency (% load)			Input		Full load current				Locked rotor current			
		Single Phase	Three Phase	[kW]	[HP]	Single Phase	Three Phase	Single Phase	Three Phase	Single Phase	Three Phase	Single Phase	Three Phase	Single Phase	Three Phase	Single Phase	Three Phase	Single Phase	Three Phase	Single Phase	Three Phase		
50%	75%																					100%	50%
CMA 056M	CMA 056T	0.37	0.5	-	-	10	450	-	-	-	-	-	-	0.7	-	3.5	-	-	-	10.8	-	-	
CMA 076M	CMA 076T	0.55	0.75	-	-	16	450	-	-	-	-	-	-	1.2	-	5.6	-	-	-	23.2	-	-	
CMA 106M	CMA 106T	0.75	1.0	-	-	20	450	77.2	79.5	79.3	76.6	80.9	82.3	1.3	1.0	6.3	2.9	1.7	-	33.7	20.6	11.9	
-	CMA 106T	0.75	1.0	-	IE3*	-	-	80.7	81.9	81.3	78.4	81.6	83.1	-	0.9	-	2.8	1.6	1.5	-	16.9	9.7	11.8
CMA 156M	CMA 156T	1.1	1.5	-	-	35	450	78.3	80.4	81.0	76.5	81.3	83.4	1.9	2.00	9.2	5.7	3.3	-	55.0	38.8	22.4	
-	CMA 156T	1.1	1.5	-	IE3*	-	-	85.4	86.5	85.7	83.0	85.8	86.6	-	1.75	-	5.3	3.1	2.9	-	40.2	23.2	28.1
CMA 206M	CMA 206T	1.5	2.0	-	-	35	450	82.4	83.0	82.2	79.5	82.9	83.8	2.33	2.90	10.9	8.1	4.7	-	69.0	54.4	31.4	
-	CMA 206T	1.5	2.0	-	IE3*	-	-	88.9	88.8	87.2	86.3	88.5	88.4	-	2.48	-	7.5	4.3	4.1	-	55.7	32.2	38.9
-	CMA 306T	2.2	3.0	-	-	-	-	82.4	83.0	82.2	79.5	82.9	83.8	-	2.90	-	8.1	4.7	-	-	54.4	31.4	-
-	CMA 306T	2.2	3.0	-	IE3*	-	-	88.9	88.8	87.2	86.3	88.5	88.4	-	2.48	-	7.5	4.3	4.1	-	55.7	32.2	38.9
CMB 076M	CMB 076T	0.55	0.75	-	-	14	450	-	-	-	-	-	-	0.93	0.84	4.5	2.6	1.5	-	20	13.0	7.5	
CMB 106M	CMB 106T	0.75	1.0	-	-	20	450	77.2	79.5	79.3	76.6	80.9	82.3	1.3	1.0	6.4	2.9	1.7	-	33.7	20.6	11.9	
-	CMB 106T	0.75	1.0	-	IE3*	-	-	80.7	81.9	81.3	78.4	81.6	83.1	-	0.9	-	2.8	1.6	1.5	-	16.9	9.7	11.8
CMB 156M	CMB 156T	1.1	1.5	-	-	35	450	78.3	80.4	81.0	76.5	81.3	83.4	1.6	2.00	7.8	5.7	3.3	-	55.0	38.8	22.4	
-	CMB 156T	1.1	1.5	-	IE3*	-	-	85.4	86.5	85.7	83.0	85.8	86.6	-	1.75	-	5.3	3.1	2.9	-	40.2	23.2	28.1
CMB 206M	CMB 206T	1.5	2.0	-	-	35	450	82.4	83.0	82.2	79.5	82.9	83.8	2.0	2.90	9.8	8.1	4.7	-	69.0	54.4	31.4	
-	CMB 206T	1.5	2.0	-	IE3*	-	-	88.9	88.8	87.2	86.3	88.5	88.4	-	2.48	-	7.5	4.3	4.1	-	55.7	32.2	38.9
-	CMB 306T	2.2	3.0	-	-	-	-	82.4	83.0	82.2	79.5	82.9	83.8	-	2.90	-	8.1	4.7	-	-	54.4	31.4	-
-	CMB 306T	2.2	3.0	-	IE3*	-	-	88.9	88.8	87.2	86.3	88.5	88.4	-	2.48	-	7.5	4.3	4.1	-	55.7	32.2	38.9
-	CMB 406T	3	4.0	-	-	-	-	83.1	85.2	85.9	79.9	84.0	85.7	-	3.80	-	11.1	6.4	-	-	81.6	47.1	-
-	CMB 406T	3	4.0	-	IE3*	-	-	-	-	87.5	-	-	88.5	-	3.42	-	10.2	5.9	5.6	-	75.7	43.7	52.8
-	CMB 556T	4	5.5	-	-	-	-	83.2	85.8	86.1	81.0	85.1	86.7	-	5.10	-	14.7	8.5	-	-	108.8	62.8	-
-	CMB 556T	4	5.5	-	IE3*	-	-	89.7	89.6	88.6	86.1	88.4	88.5	-	4.52	-	13.5	7.8	7.6	-	107.1	61.8	74.9
CMD 206M	CMD 206T	1.5	2.0	-	-	31.5	450	82.4	83.0	82.2	79.5	82.9	83.8	2.3	2.90	10.5	8.1	4.7	-	-	54.4	31.4	-
-	CMD 206T	1.5	2.0	-	IE3*	-	-	88.9	88.8	87.2	86.3	88.5	88.4	-	2.48	-	7.5	4.3	4.1	-	55.7	32.2	38.9
-	CMD 306T	2.2	3.0	-	-	-	-	82.4	83.0	82.2	79.5	82.9	83.8	-	2.90	-	8.1	4.7	-	-	54.4	31.4	-
-	CMD 306T	2.2	3.0	-	IE3*	-	-	88.9	88.8	87.2	86.3	88.5	88.4	-	2.48	-	7.5	4.3	4.1	-	55.7	32.2	38.9
-	CMD 406T	3	4.0	-	-	-	-	83.1	85.2	85.9	79.9	84.0	85.7	-	3.80	-	11.1	6.4	-	-	81.6	47.1	-

* only for 460 V