

motralec

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CENTRIFUGAL PUMPS

CMA-B-C-D

SPECIFICATIONS

50Hz

| PUMP | | |
|-----------------------------|----------------------|---|
| Liquid | Type of liquid | Clean water |
| Handled | Max temperature [°C] | 40 (CMA up to 1.00) 90 (the other) |
| Maximum working pressure | [MPa] | 0.6 (CMA up to 1.00 ; CMB up to 3.00; CMC 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 1.00) UNI ISO 228 G 1"¼ (CMA 1.50 and over) UNI ISO 228 G 2" (CMB - CMC) 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" (CMC) UNI ISO 228 G 2"½ (CMD) UNI ISO 228 |
| Material | Casing | Cast iron |
| | Impeller | PPO mod. glass fibre reinforced - Brass - Cast iron see application page 300 |
| | Shaft seal | Ceramic/Carbon/NBR |
| | Shaft | AISI 416 - AISI 303 - AISI 304 see application page 300 |
| | Bracket | Cast iron - Aluminium see application page 300 |
| | Casing cover | AISI 304 see application page 300 |
| Applicable standard of test | | ISO 9906 – Annex A |

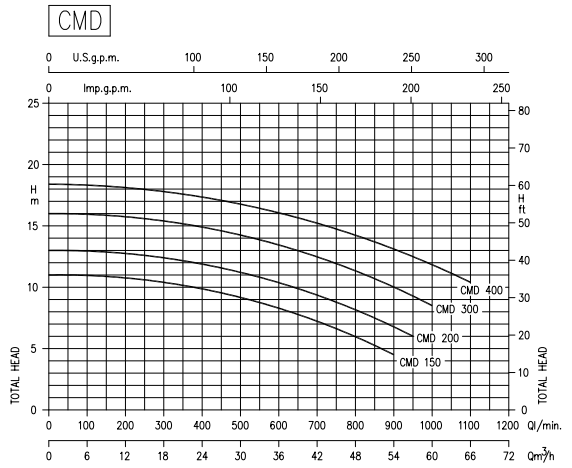
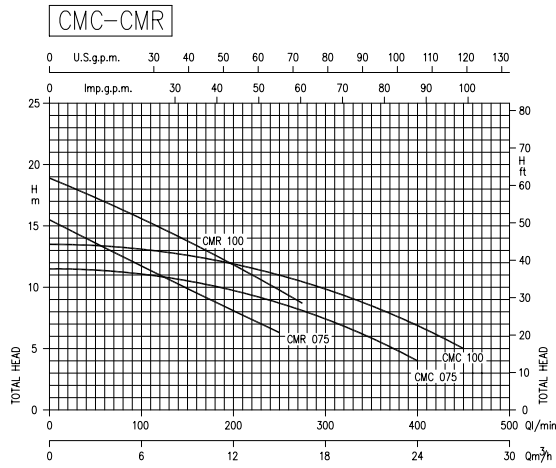
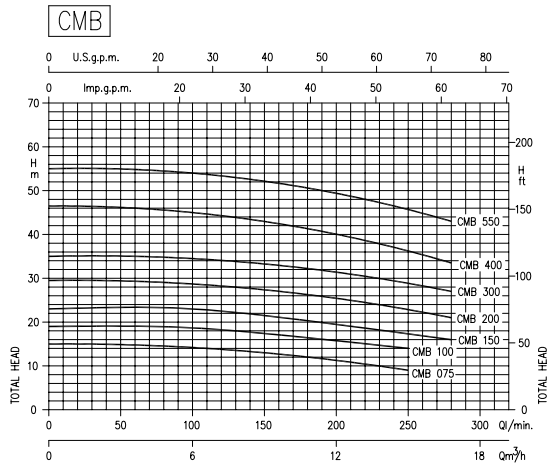
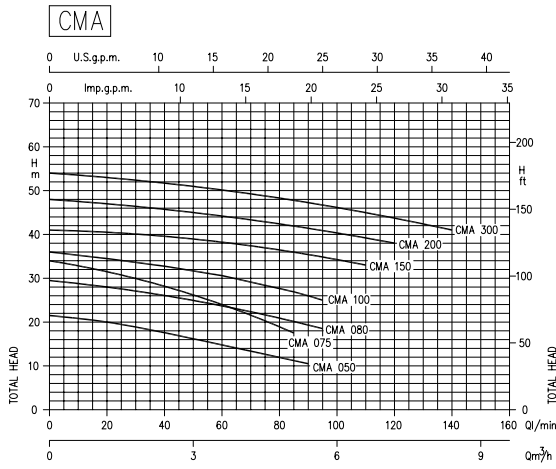
| MOTOR | | |
|--|--|----------------------|
| Type | Electric - TEFC | |
| | Single Phase | Three Phase |
| No. Of Poles | 2 | |
| Synchronous speed [min ⁻¹] | 3000 | |
| Insulation Class | F | |
| Protection degree | IP 44 | |
| Power rating | [kW] | 0.37 ÷ 1.5 |
| | [HP] | 0.5 ÷ 2 |
| Frequency | [Hz] | 50 Hz |
| Voltage | [V] | 230V ±10% |
| 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 (see dimensions page 401) | |

CENTRIFUGAL PUMPS

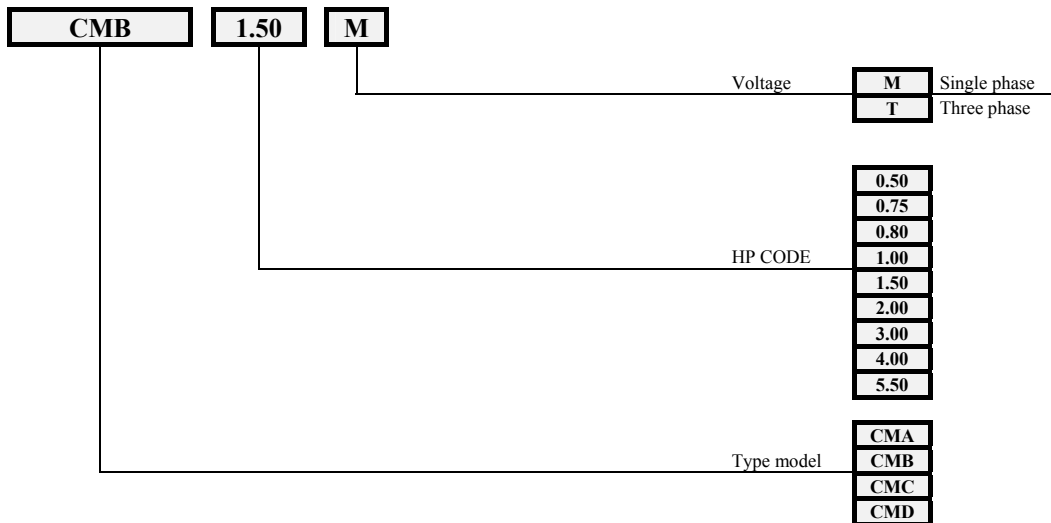
CMA-B-C-D

SELECTION CHART

50 Hz



TYPE KEY:



CENTRIFUGAL PUMPS

CMA-B-C-D

SELECTION CHART

50Hz

| Type pumps | | kW | HP | Q=Capacity | | | | | | | | | | | |
|--------------|-------------|-------|-----------------------------------|-------------------|------|------|------|------|------|------|------|------|------|-----|-----|
| Single phase | Three phase | | | l/min | 20 | 40 | 60 | 80 | 85 | 90 | 95 | 100 | 110 | 120 | 140 |
| 230 V | 230/400 V | | | m ³ /h | 1.2 | 2.4 | 3.6 | 4.8 | 5.1 | 5.4 | 5.7 | 6 | 6.6 | 7.2 | 8.4 |
| 50 Hz | | 50 Hz | H=Total manometric head in meters | | | | | | | | | | | | |
| CMA 0.50 M | CMA 0.50 T | 0.37 | 0.5 | 20 | 17.8 | 15 | 12.1 | 11.2 | 10.5 | - | - | - | - | - | |
| CMA 0.75 M | CMA 0.75 T | 0.55 | 0.75 | 31.5 | 28.2 | 24 | 18.9 | 17.5 | - | - | - | - | - | - | |
| CMA 0.80 M | CMA 0.80 T | 0.6 | 0.8 | 28 | 26.1 | 23.8 | 20.9 | 20.1 | 19.3 | 18.5 | - | - | - | - | |
| CMA 1.00 M | CMA 1.00 T | 0.75 | 1 | 34.5 | 32.8 | 30.6 | 27.7 | 26.9 | 26 | 25 | - | - | - | - | |
| CMA 1.50 M | CMA 1.50 T | 1.1 | 1.5 | 40.5 | 39.6 | 38.2 | 36.5 | 36 | 35.6 | 34.9 | 34.3 | 33 | - | - | |
| CMA 2.00 M | CMA 2.00 T | 1.5 | 2 | 47 | 45.8 | 44.2 | 42.4 | 41.9 | 41.4 | 40.9 | 40.3 | 39.2 | 38 | - | |
| - | CMA 3.00 T | 2.2 | 3 | 53 | 51.8 | 50.2 | 48.3 | 47.8 | 47.3 | 46.7 | 46.2 | 45 | 43.7 | 41 | |

| Type pumps | | kW | HP | Q=Capacity | | | | | | |
|--------------|-------------|-------|-----------------------------------|-------------------|------|------|------|------|------|------|
| Single phase | Three phase | | | l/min | 100 | 140 | 180 | 220 | 250 | 280 |
| 230 V | 230/400 V | | | m ³ /h | 6 | 8.4 | 10.8 | 13.2 | 15 | 16.9 |
| 50 Hz | | 50 Hz | H=Total manometric head in meters | | | | | | | |
| CMB 0.75 M | CMB 0.75 T | 0.55 | 0.75 | 14.2 | 13.3 | 12 | 10.4 | 9 | - | |
| CMB 1.00 M | CMB 1.00 T | 0.75 | 1 | 18.4 | 17.4 | 16.1 | 15.2 | 14 | - | |
| CMB 1.50 M | CMB 1.50 T | 1.1 | 1.5 | 22.4 | 21.1 | 19.8 | 18.0 | 17.1 | 16 | |
| CMB 2.00 M | CMB 2.00 T | 1.5 | 2 | 28.7 | 27.7 | 26.3 | 24.5 | 22.8 | 21 | |
| - | CMB 3.00 T | 2.2 | 3 | 34.5 | 33.7 | 32.1 | 30.3 | 28.8 | 27 | |
| - | CMB 4.00 T | 3 | 4 | 45 | 43.4 | 41.5 | 38.4 | 36.2 | 33.5 | |
| - | CMB 5.50 T | 4 | 5.5 | 54 | 52.3 | 50.4 | 48.1 | 45.7 | 43 | |

| Type pumps | | kW | HP | Q=Capacity | | | | | | |
|--------------|-------------|-------|-----------------------------------|-------------------|------|-----|-----|-----|-----|-----|
| Single phase | Three phase | | | l/min | 50 | 150 | 250 | 350 | 400 | 450 |
| 230 V | 230/400 V | | | m ³ /h | 3 | 9 | 15 | 21 | 24 | 27 |
| 50 Hz | | 50 Hz | H=Total manometric head in meters | | | | | | | |
| CMC 0.75 M | CMC 0.75 T | 0.55 | 0.75 | 11.4 | 10.6 | 8.8 | 5.9 | 4 | - | |
| CMC 1.00 M | CMC 1.00 T | 0.75 | 1 | 13.4 | 12.6 | 11 | 8.6 | 6.8 | 5 | |

| Type pumps | | kW | HP | Q=Capacity | | | | | | | | |
|--------------|-------------|-------|-----------------------------------|-------------------|------|------|------|------|------|------|------|------|
| Single phase | Three phase | | | l/min | 300 | 400 | 600 | 800 | 900 | 950 | 1000 | 1100 |
| 230 V | 230/400 V | | | m ³ /h | 18 | 24 | 36 | 48 | 54 | 57 | 60 | 66 |
| 50 Hz | | 50 Hz | H=Total manometric head in meters | | | | | | | | | |
| CMD 1.50 M | CMD 1.50 T | 1.1 | 1.5 | 10.4 | 9.9 | 8.4 | 6 | 4.5 | - | - | - | |
| CMD 2.00 M | CMD 2.00 T | 1.5 | 2 | 12.4 | 11.9 | 10.5 | 8.3 | 6.8 | 6 | - | - | |
| - | CMD 3.00 T | 2.2 | 3 | 15.4 | 14.9 | 13.5 | 11.4 | 10 | 9.3 | 8.5 | - | |
| - | CMD 4.00 T | 3 | 4 | 17.8 | 17.3 | 16.1 | 14.2 | 13.1 | 12.5 | 11.8 | 10.4 | |

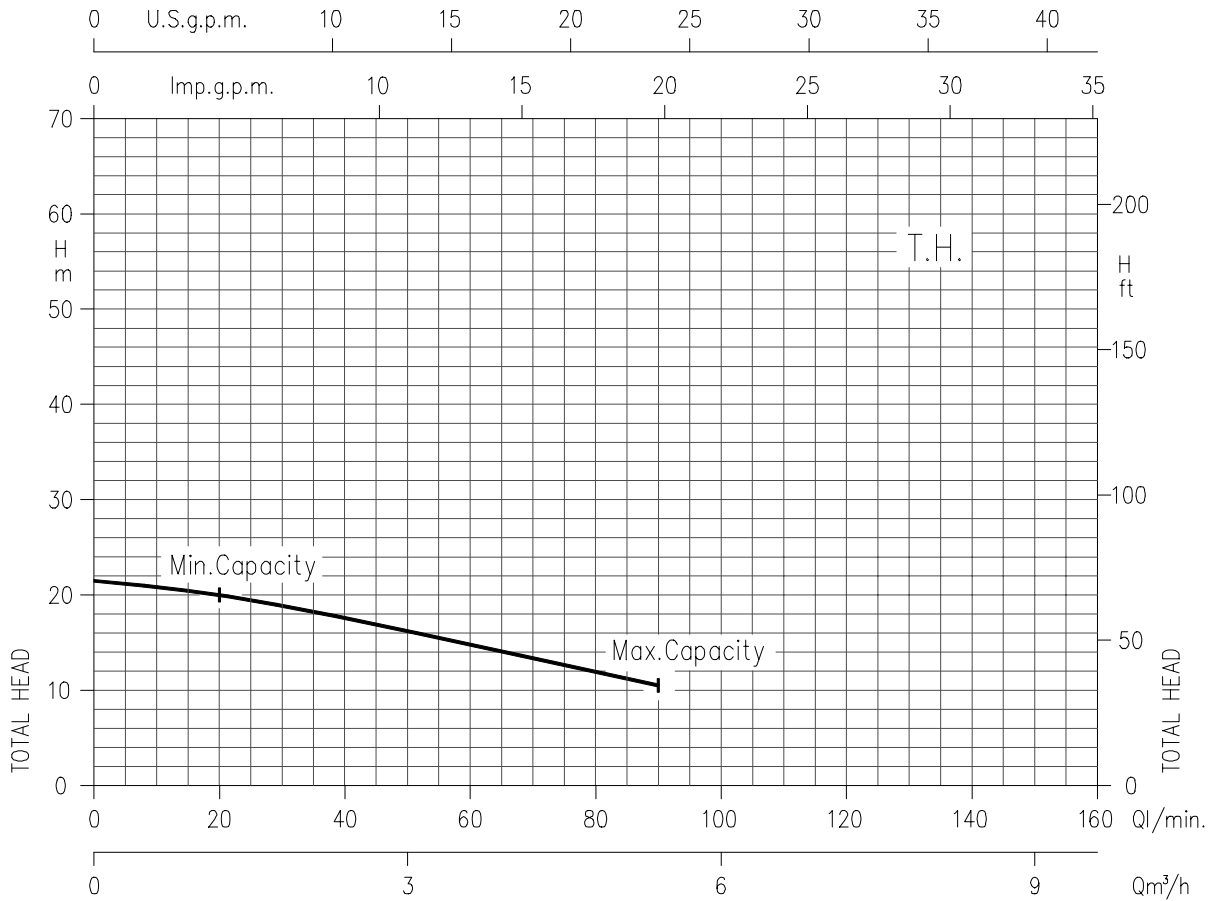
CENTRIFUGAL PUMPS

CMA-B-C-D

PERFORMANCE CURVE

50Hz

**CMA 0.50 (0.37 kW)
SYNCHRONOUS SPEED: 3000 min⁻¹**



Temperature of water: 20°C
 Impeller diameter = 130 mm
 Applicable standard of test: ISO 9906-Annex A

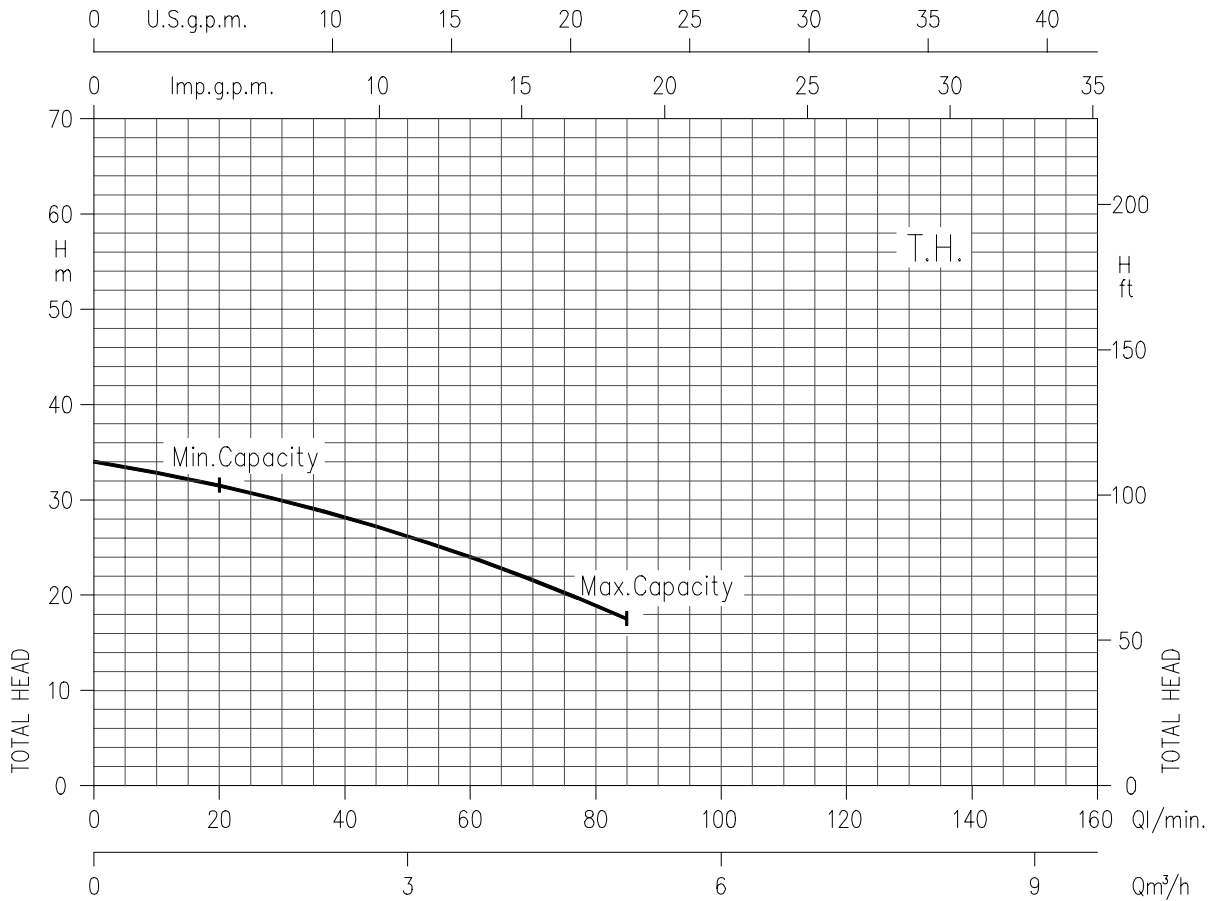
CENTRIFUGAL PUMPS

CMA-B-C-D

PERFORMANCE CURVE

50Hz

CMA 0.75 (0.55 kW)
SYNCHRONOUS SPEED: 3000 min⁻¹



Temperature of water: 20°C
Impeller diameter = 161 mm
Applicable standard of test: ISO 9906-Annex A

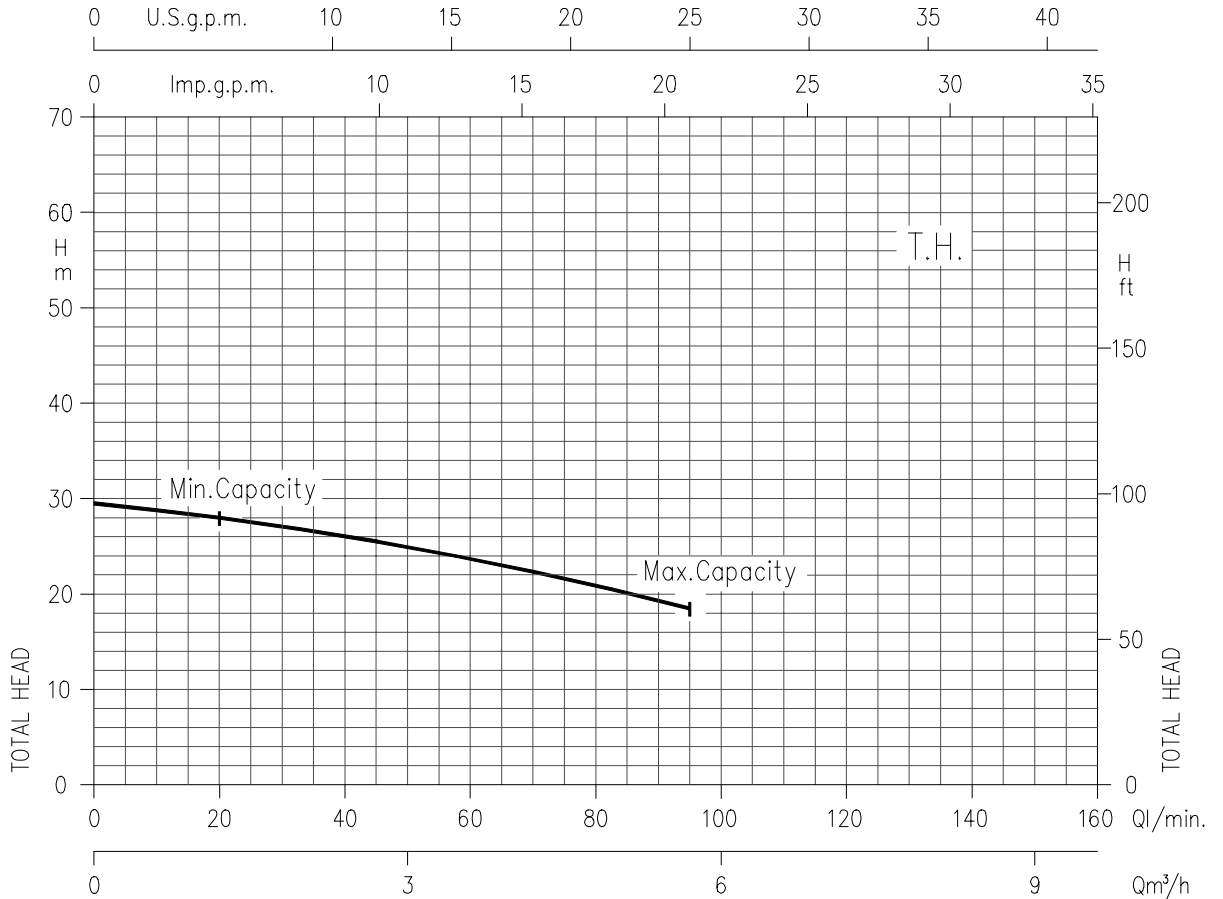
CENTRIFUGAL PUMPS

CMA-B-C-D

PERFORMANCE CURVE

50Hz

CMA 0.80 (0.6 kW)
SYNCHRONOUS SPEED: 3000 min⁻¹



Temperature of water: 20°C
Impeller diameter = 147 mm
Applicable standard of test: ISO 9906-Annex A

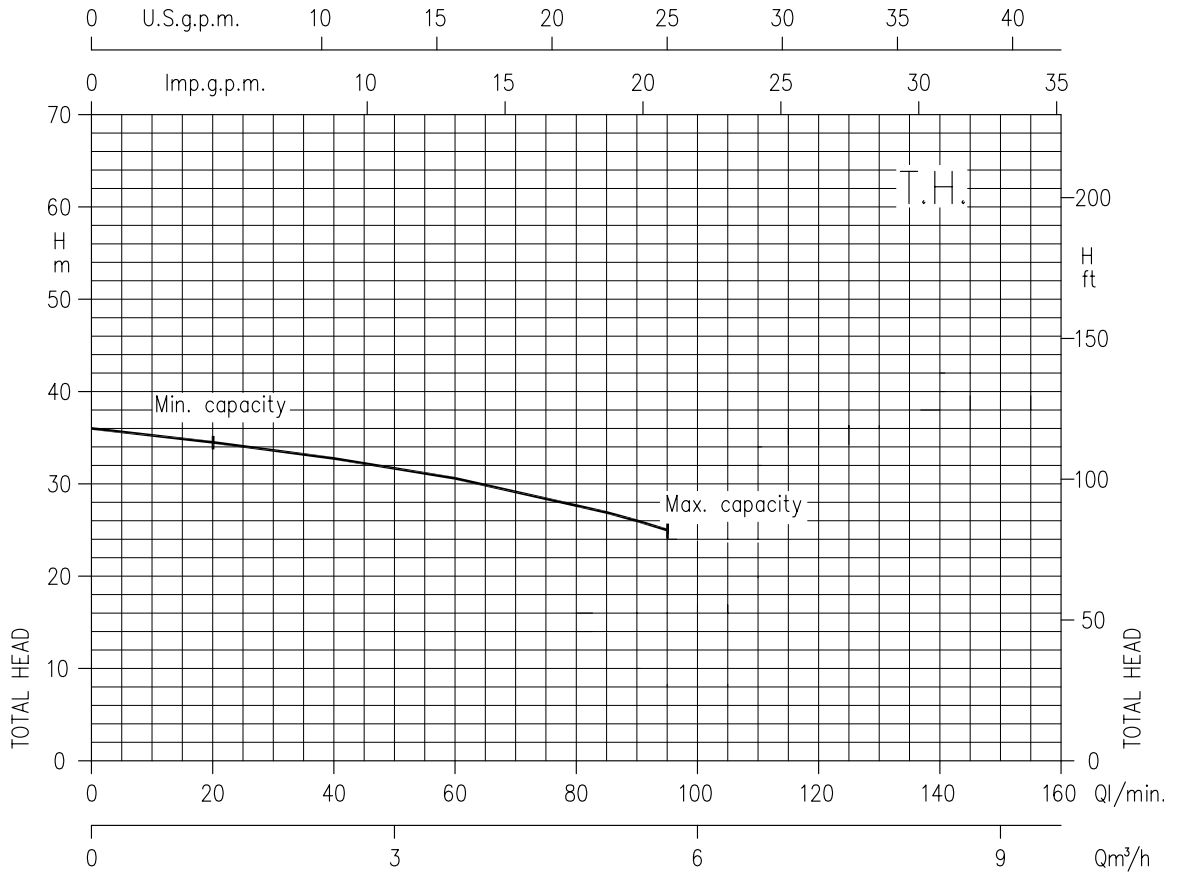
CENTRIFUGAL PUMPS

CMA-B-C-D

PERFORMANCE CURVE

50Hz

CMA 1.00 (0.75 kW)
SYNCHRONOUS SPEED: 3000 min⁻¹



Temperature of water: 20°C
Impeller diameter = 160 mm
Applicable standard of test: ISO 9906-Annex A

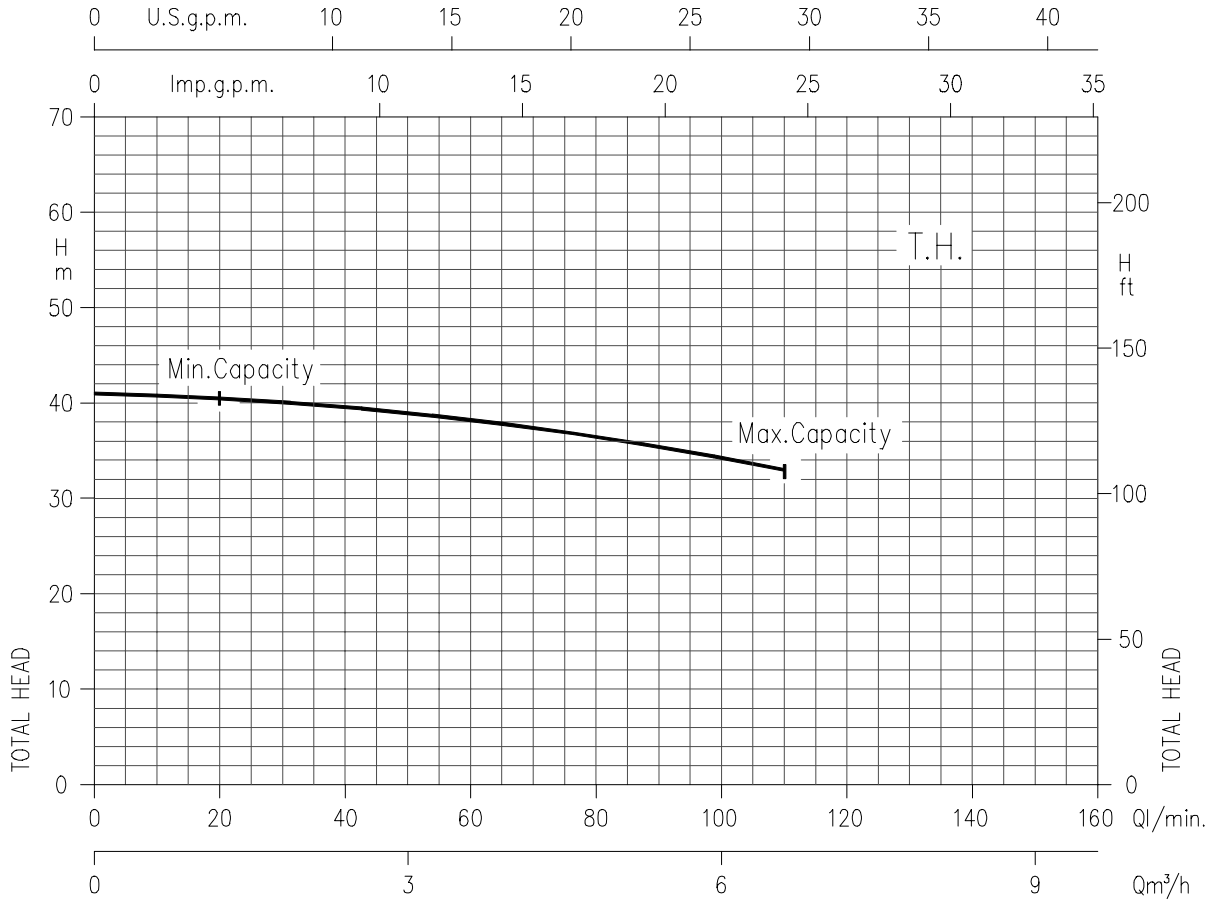
CENTRIFUGAL PUMPS

CMA-B-C-D

PERFORMANCE CURVE

50Hz

CMA 1.50 (1.1 kW)
SYNCHRONOUS SPEED: 3000 min⁻¹



Temperature of water: 20°C
Impeller diameter = 173 mm
Applicable standard of test: ISO 9906-Annex A

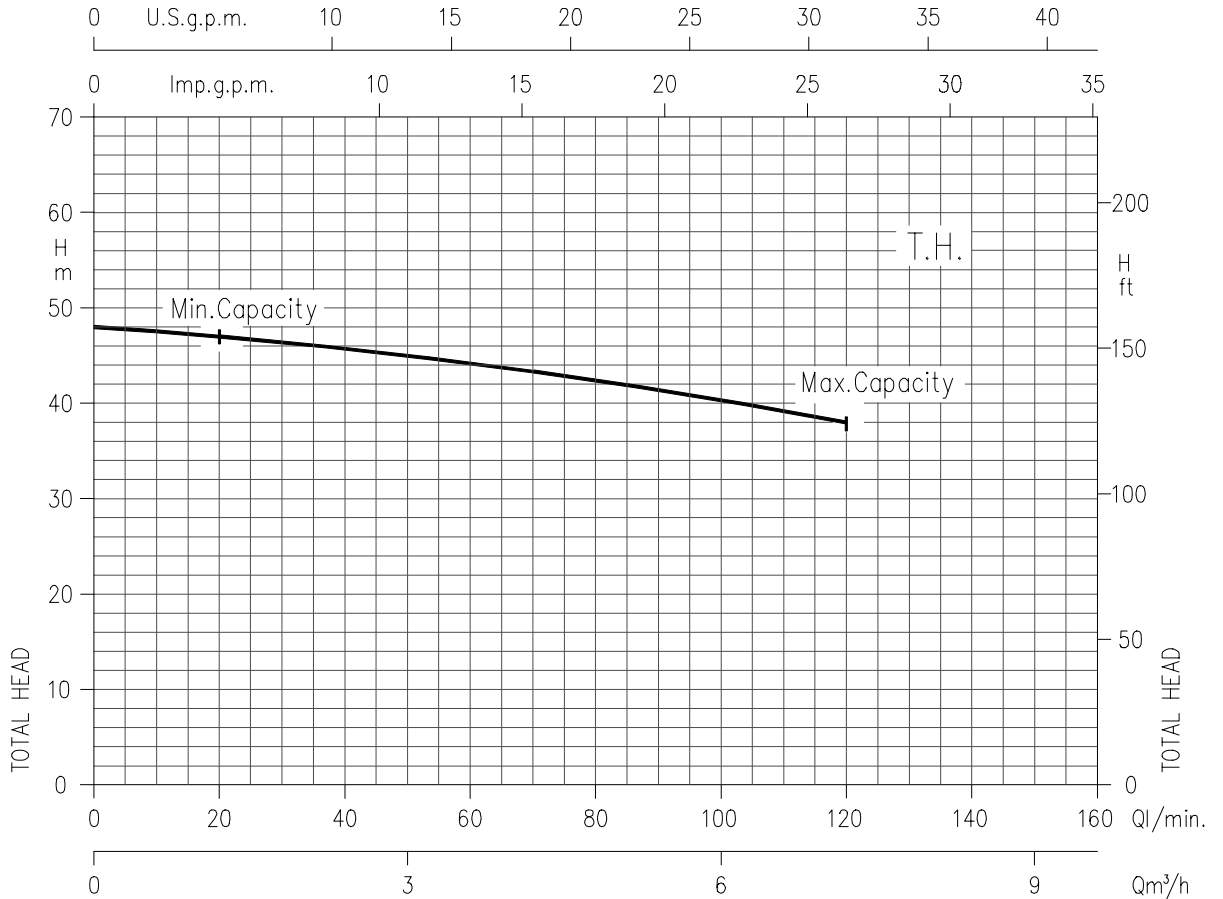
CENTRIFUGAL PUMPS

CMA-B-C-D

PERFORMANCE CURVE

50Hz

CMA 2.00 (1.5 kW)
SYNCHRONOUS SPEED: 3000 min⁻¹



Temperature of water: 20°C
Impeller diameter = 191 mm
Applicable standard of test: ISO 9906-Annex A

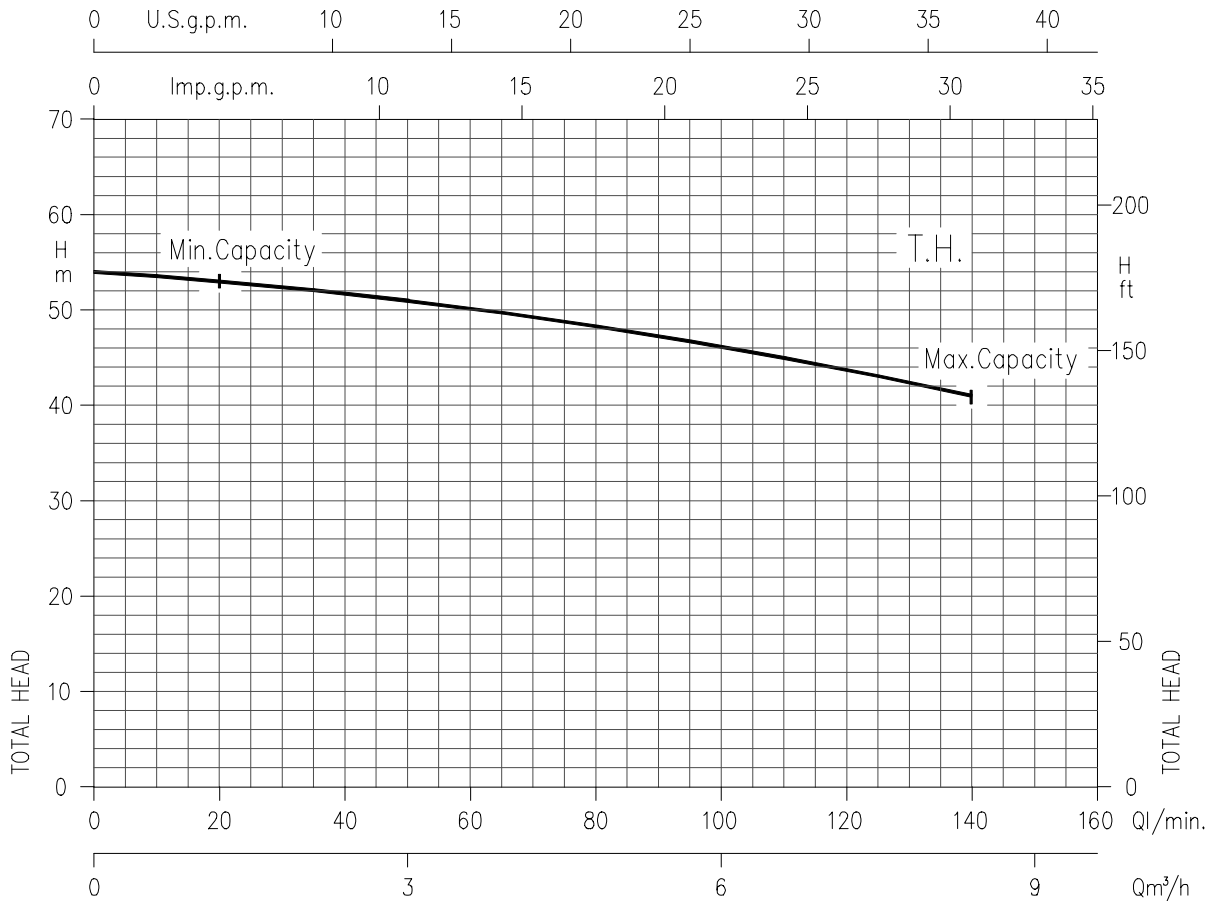
CENTRIFUGAL PUMPS

CMA-B-C-D

PERFORMANCE CURVE

50Hz

CMA 3.00 (2.2 kW)
SYNCHRONOUS SPEED: 3000 min⁻¹



Temperature of water: 20°C
Impeller diameter = 201 mm
Applicable standard of test: ISO 9906-Annex A

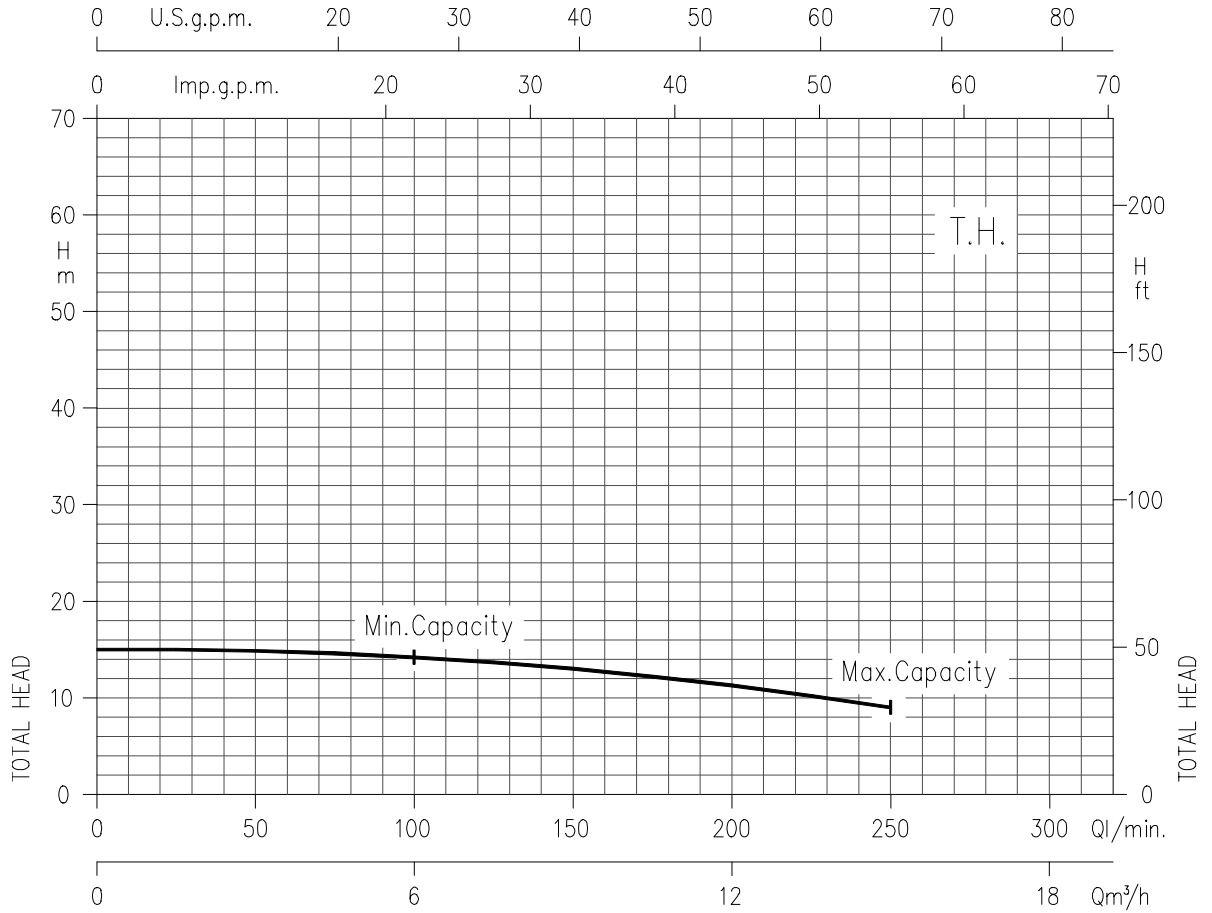
CENTRIFUGAL PUMPS

CMA-B-C-D

PERFORMANCE CURVE

50Hz

CMB 0.75 (0.55 kW)
SYNCHRONOUS SPEED: 3000 min⁻¹



Temperature of water: 20°C
Impeller diameter = 112 mm
Applicable standard of test: ISO 9906-Annex A

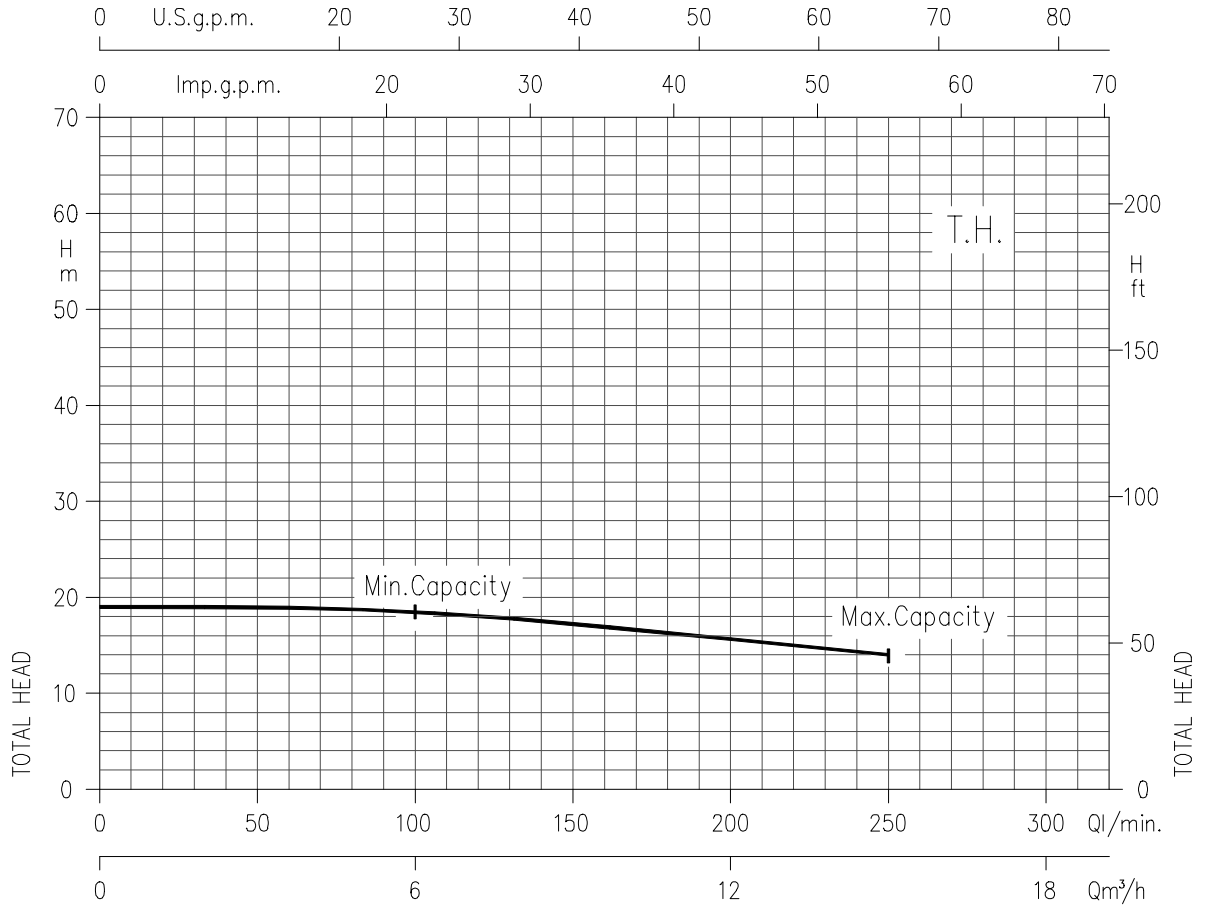
CENTRIFUGAL PUMPS

CMA-B-C-D

PERFORMANCE CURVE

50Hz

CMB 1.00 (0.75 kW)
SYNCHRONOUS SPEED: 3000 min⁻¹



Temperature of water: 20°C
Impeller diameter = 123 mm
Applicable standard of test: ISO 9906-Annex A

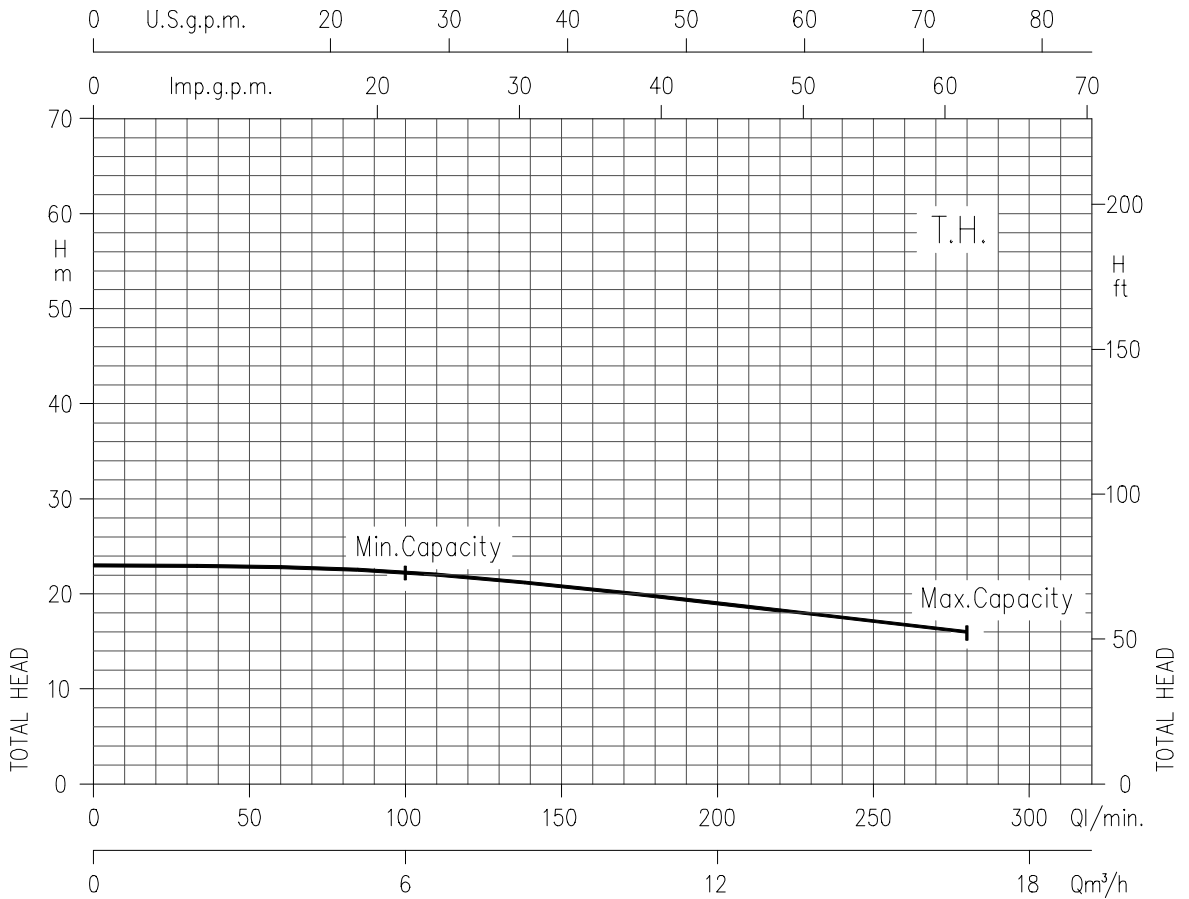
CENTRIFUGAL PUMPS

CMA-B-C-D

PERFORMANCE CURVE

50Hz

CMB 1.50 (1.1 kW)
SYNCHRONOUS SPEED: 3000 min⁻¹



Temperature of water: 20°C
Impeller diameter = 132 mm
Applicable standard of test: ISO 9906-Annex A

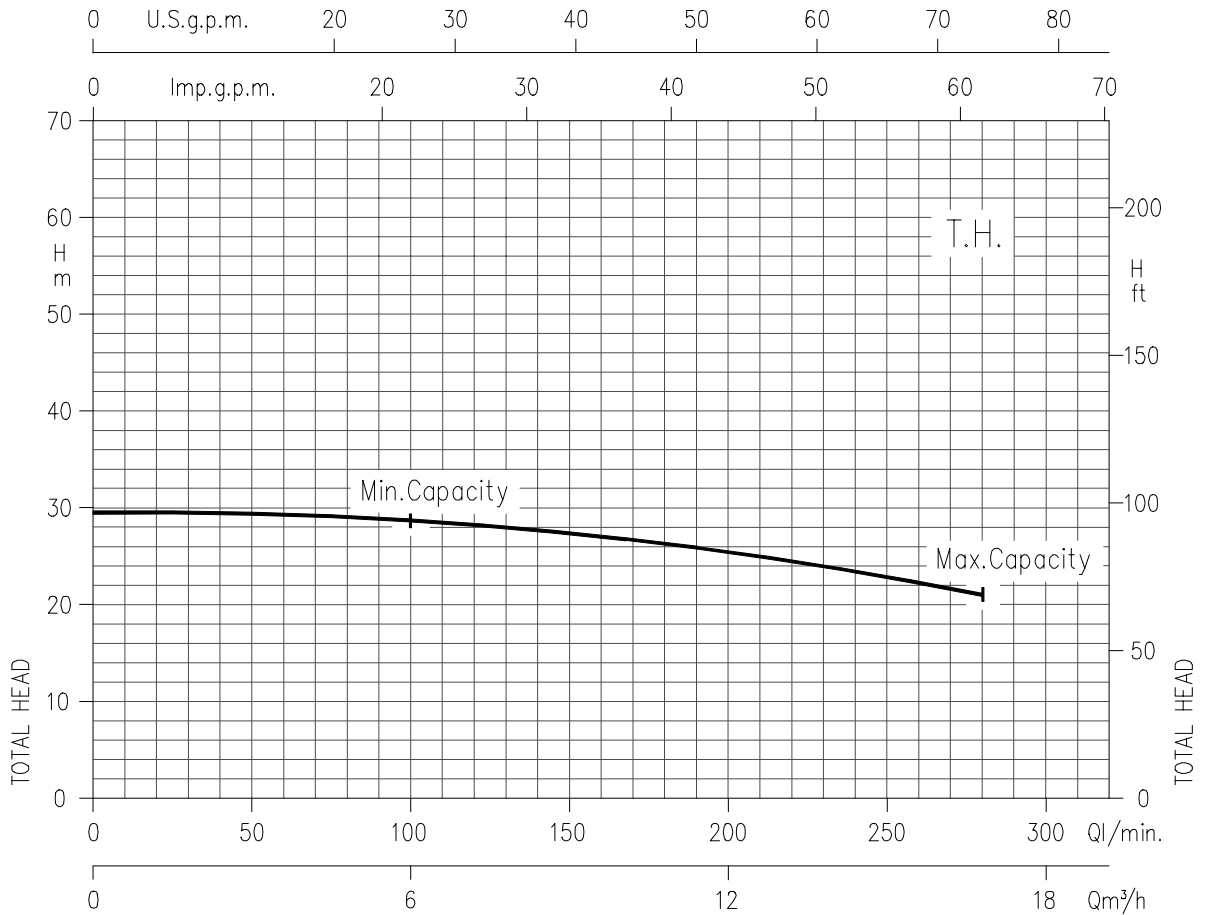
CENTRIFUGAL PUMPS

CMA-B-C-D

PERFORMANCE CURVE

50Hz

CMB 2.00 (1.5 kW)
SYNCHRONOUS SPEED: 3000 min⁻¹



Temperature of water: 20°C
Impeller diameter = 155 mm
Applicable standard of test: ISO 9906-Annex A

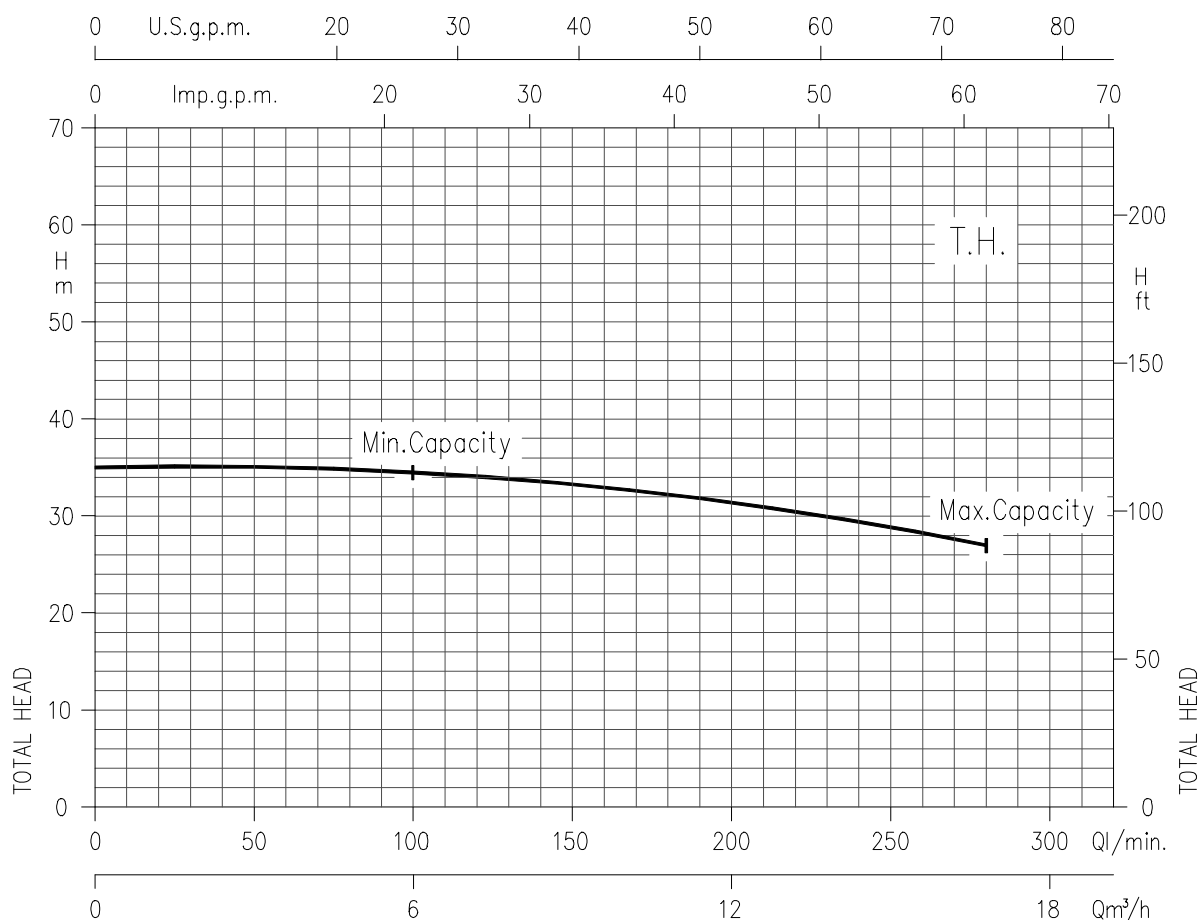
CENTRIFUGAL PUMPS

CMA-B-C-D

PERFORMANCE CURVE

50Hz

**CMB 3.00 (2.2 kW)
SYNCHRONOUS SPEED: 3000 min⁻¹**



Temperature of water: 20°C
 Impeller diameter = 164.5 mm
 Applicable standard of test: ISO 9906-Annex A

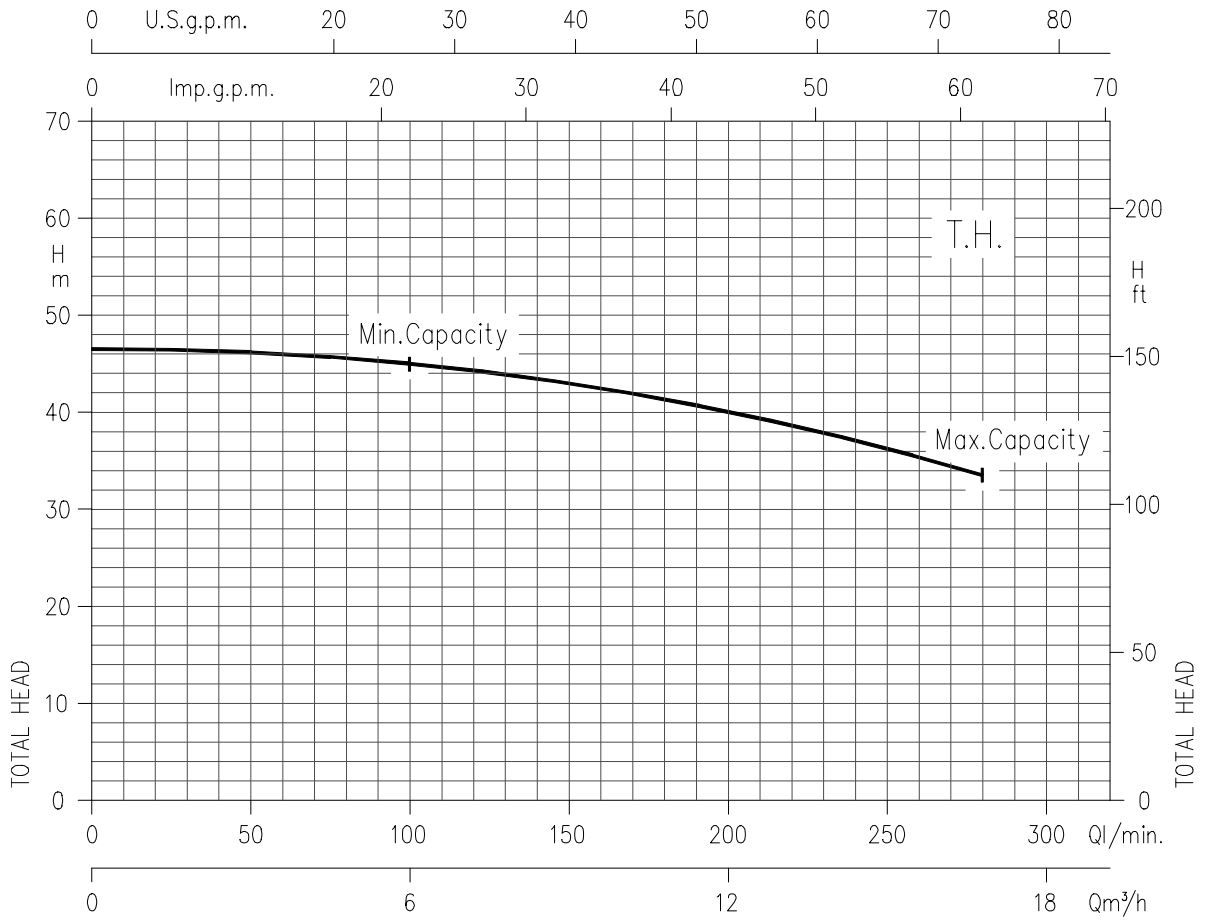
CENTRIFUGAL PUMPS

CMA-B-C-D

PERFORMANCE CURVE

50Hz

**CMB 4.00 (3 kW)
SYNCHRONOUS SPEED: 3000 min⁻¹**



Temperature of water: 20°C
Impeller diameter = 189 mm
Applicable standard of test: ISO 9906-Annex A

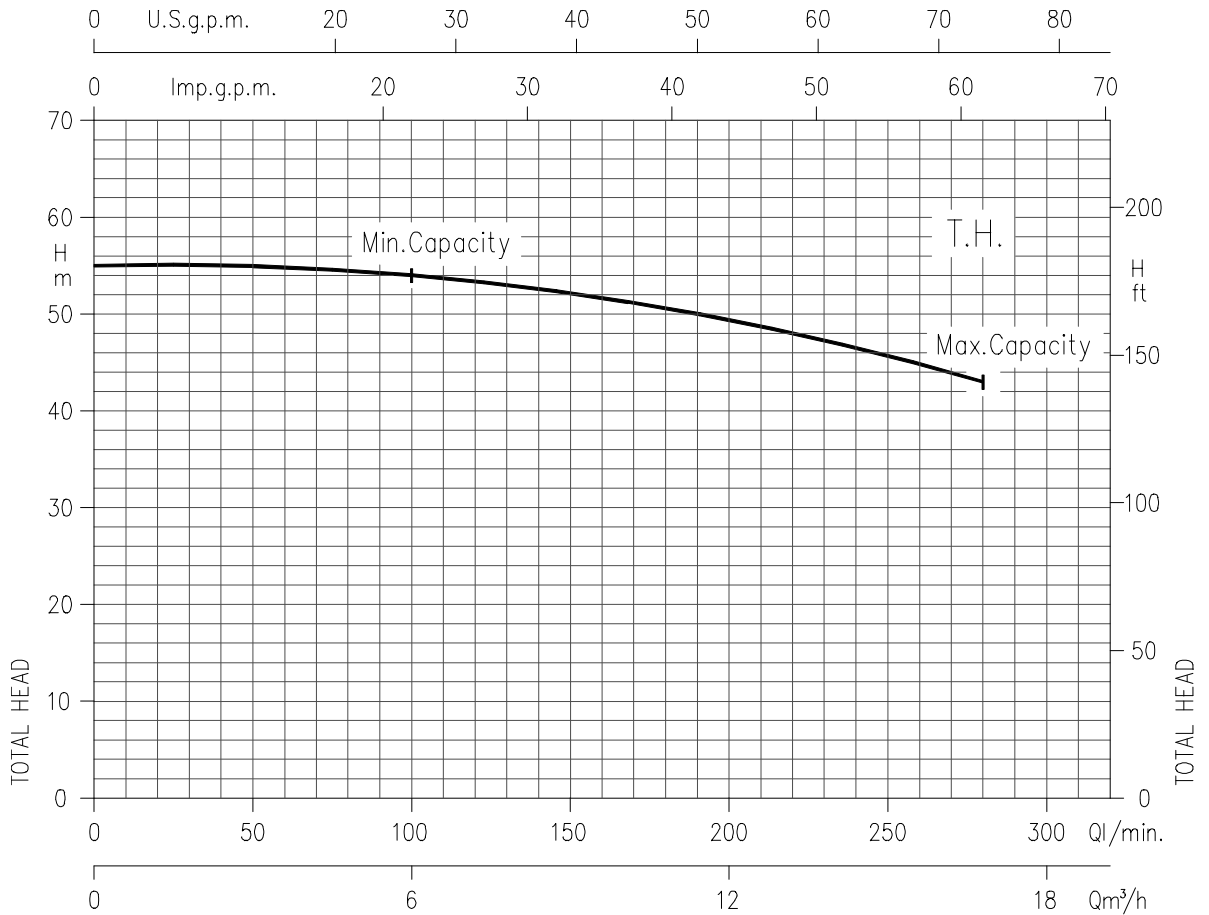
CENTRIFUGAL PUMPS

CMA-B-C-D

PERFORMANCE CURVE

50Hz

**CMB 5.50 (4 kW)
SYNCHRONOUS SPEED : 3000 min⁻¹**



Temperature of water: 20°C
Impeller diameter = 204 mm
Applicable standard of test: ISO 9906-Annex A

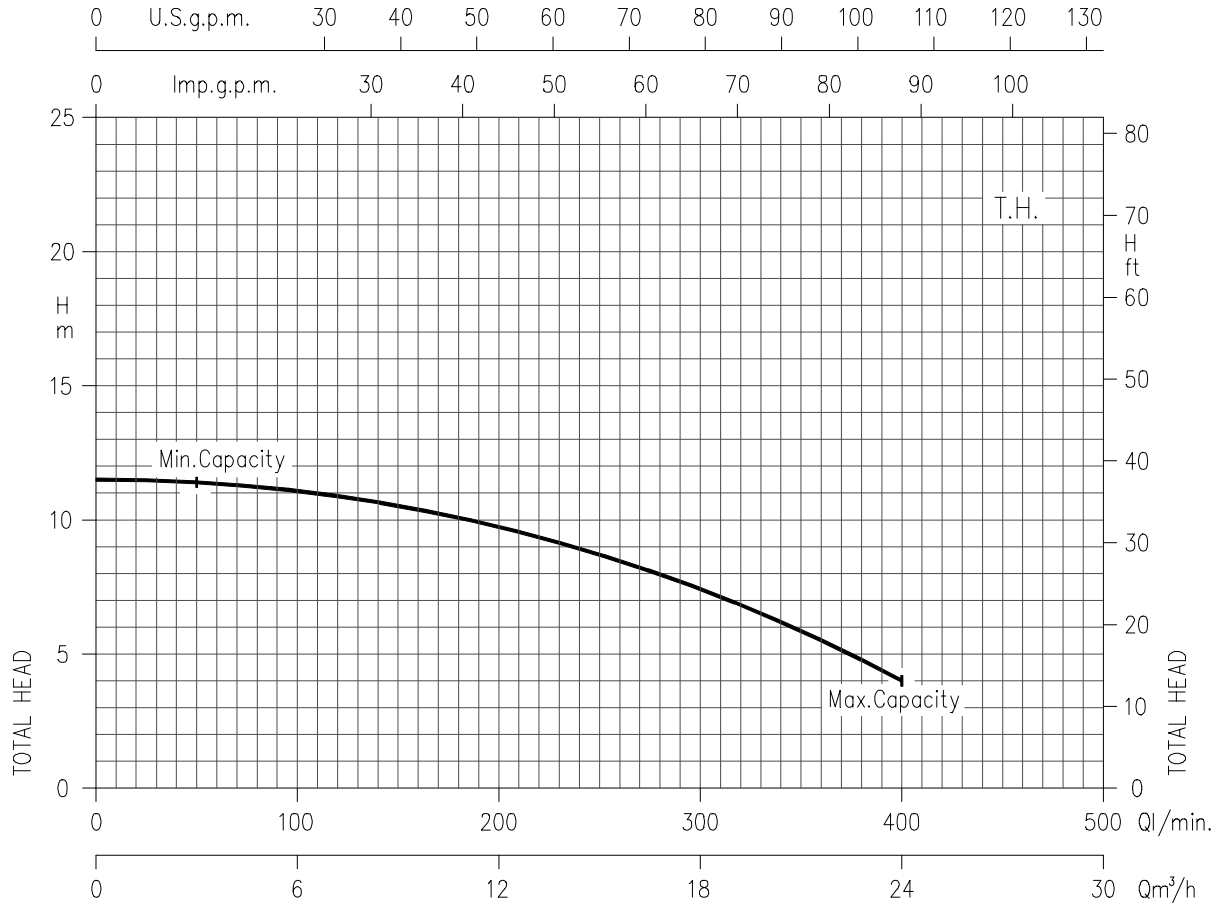
CENTRIFUGAL PUMPS

CMA-B-C-D

PERFORMANCE CURVE

50Hz

CMC 0.75 (0.55 kW)
SYNCHRONOUS SPEED: 3000 min⁻¹



Temperature of water: 20°C
Impeller diameter = 100 mm
Applicable standard of test: ISO 9906-Annex A

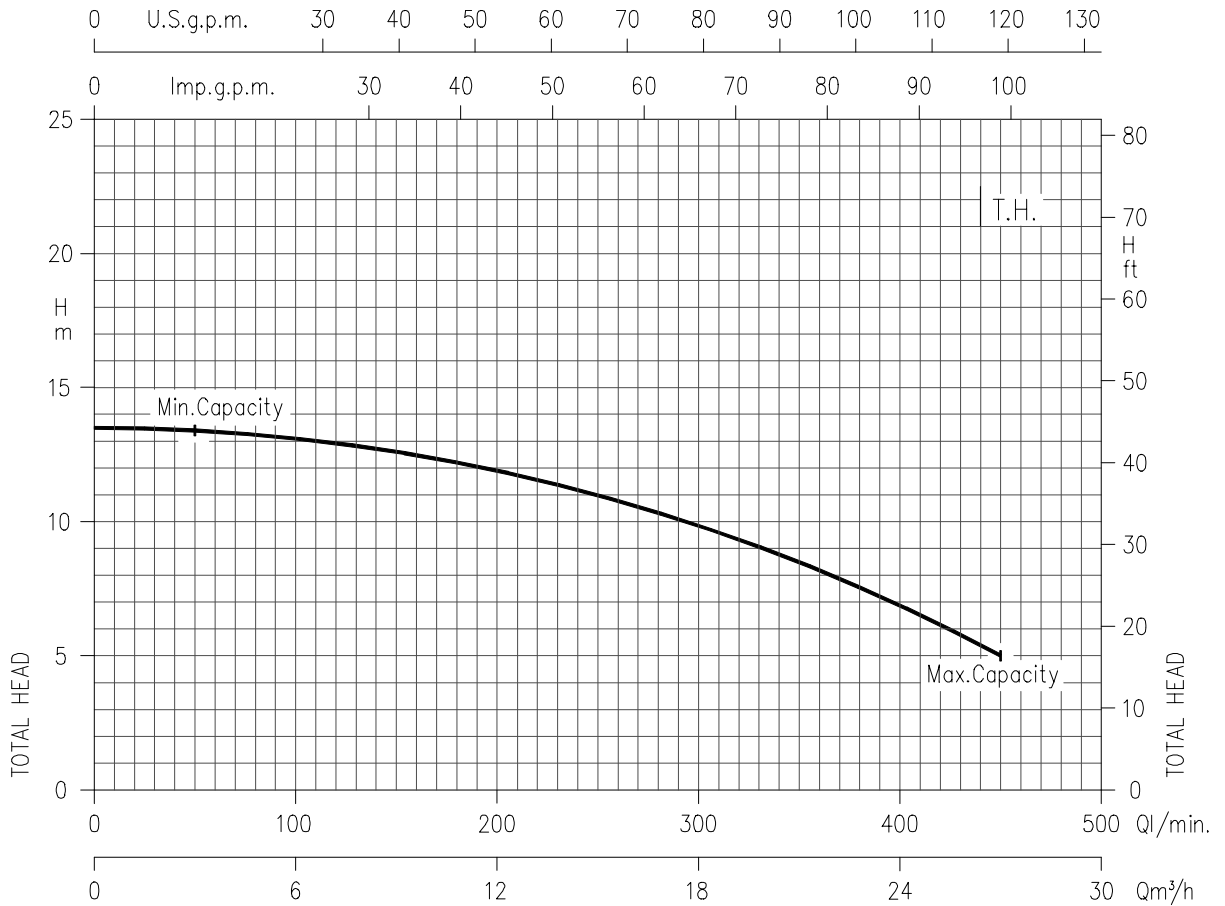
CENTRIFUGAL PUMPS

CMA-B-C-D

PERFORMANCE CURVE

50Hz

CMC 1.00 (0.75 kW)
SYNCHRONOUS SPEED: 3000 min⁻¹



Temperature of water: 20°C
Impeller diameter = 112 mm
Applicable standard of test: ISO 9906-Annex A

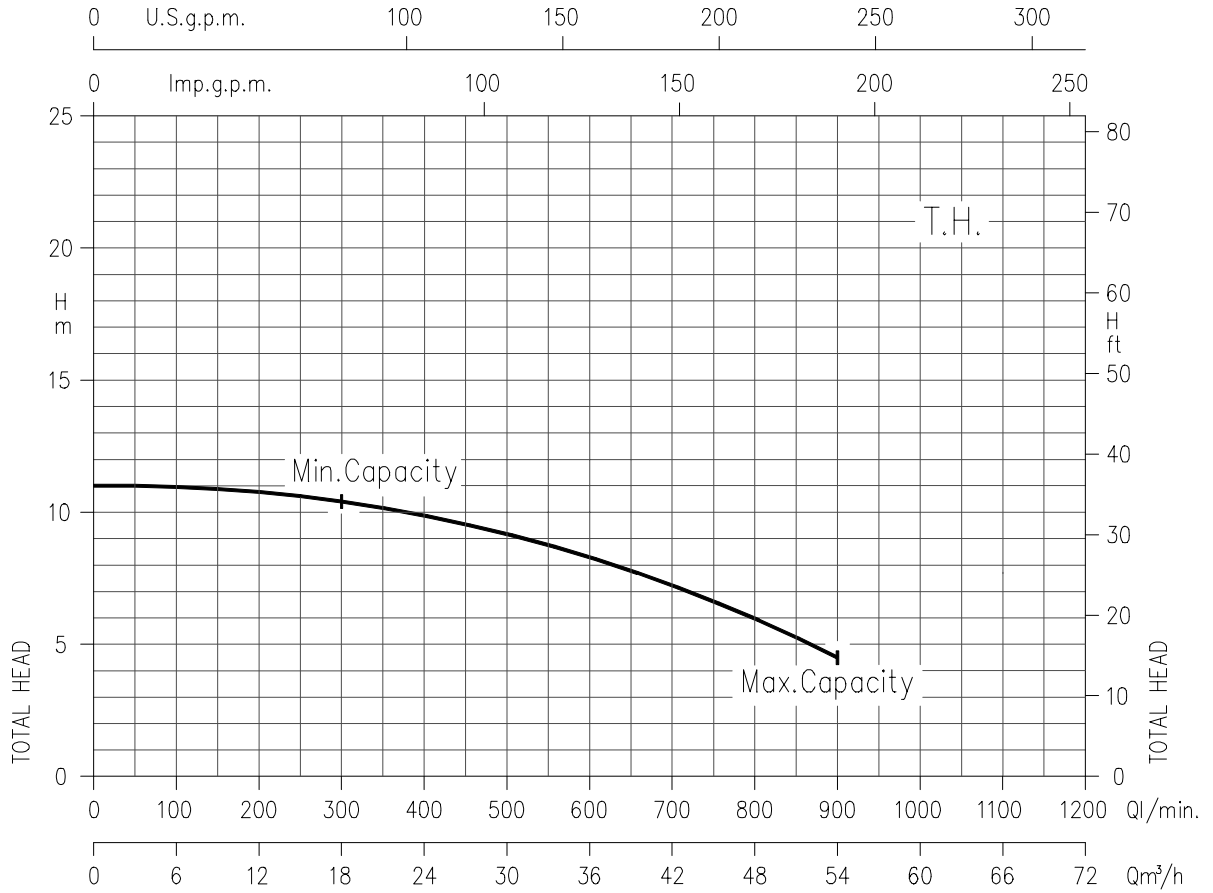
CENTRIFUGAL PUMPS

CMA-B-C-D

PERFORMANCE CURVE

50Hz

CMD 1.50 (1.1 kW)
SYNCHRONOUS SPEED: 3000 min⁻¹



Temperature of water: 20°C
Impeller diameter = 105 mm
Applicable standard of test: ISO 9906-Annex A

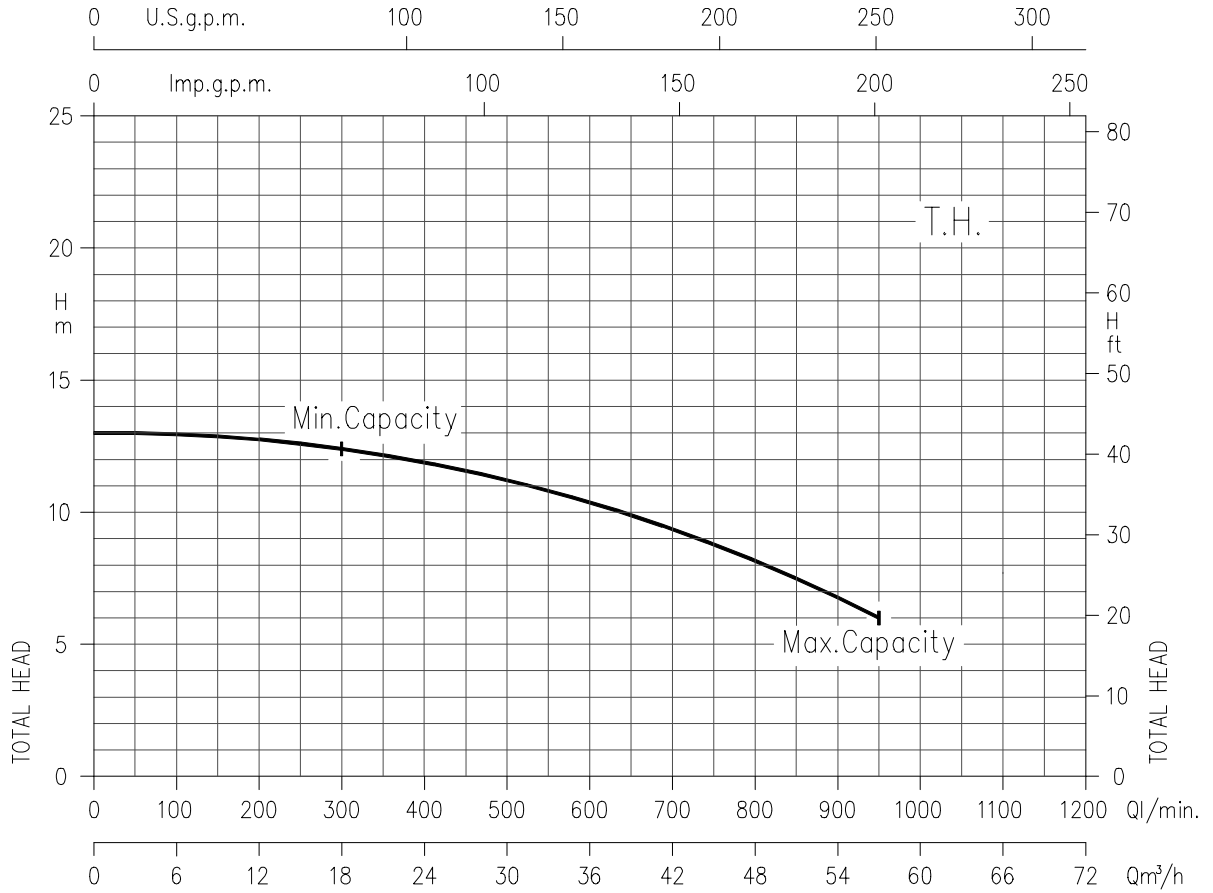
CENTRIFUGAL PUMPS

CMA-B-C-D

PERFORMANCE CURVE

50Hz

CMD 2.00 (1.5 kW)
SYNCHRONOUS SPEED: 3000 min⁻¹



Temperature of water: 20°C
Impeller diameter = 110 mm
Applicable standard of test: ISO 9906-Annex A

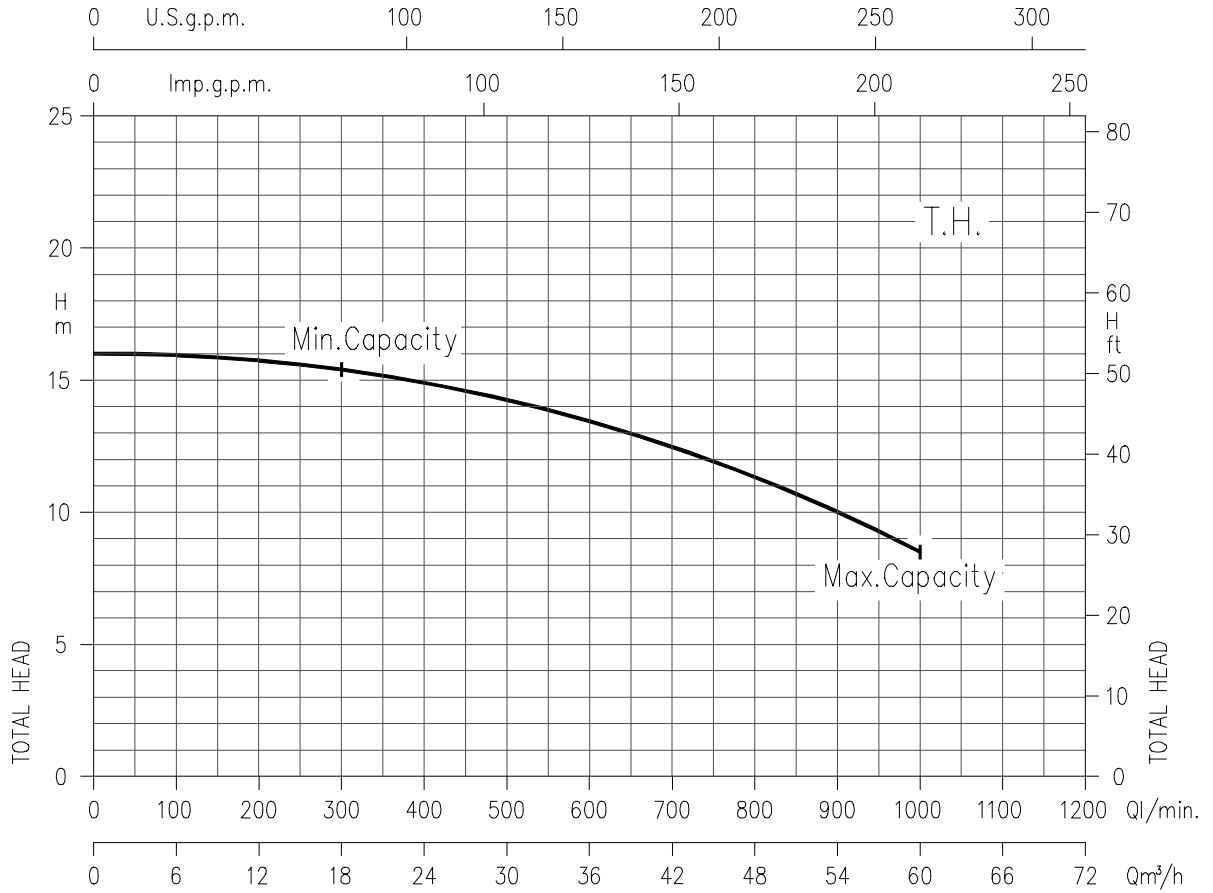
CENTRIFUGAL PUMPS

CMA-B-C-D

PERFORMANCE CURVE

50Hz

CMD 3.00 (2.2 kW)
SYNCHRONOUS SPEED: 3000 min⁻¹



Temperature of water: 20°C
Impeller diameter = 120 mm
Applicable standard of test: ISO 9906-Annex A

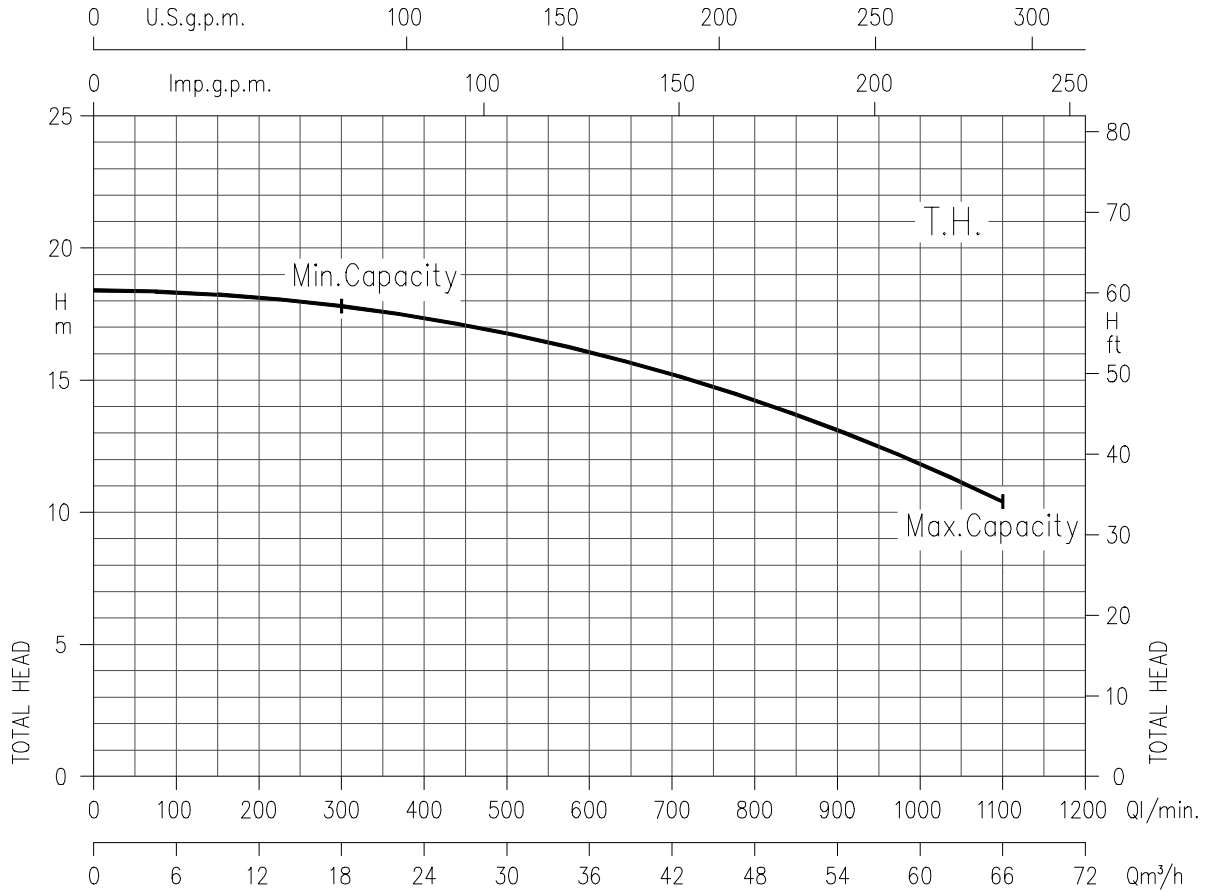
CENTRIFUGAL PUMPS

CMA-B-C-D

PERFORMANCE CURVE

50Hz

CMD 4.00 (3 kW)
SYNCHRONOUS SPEED : 3000 min⁻¹



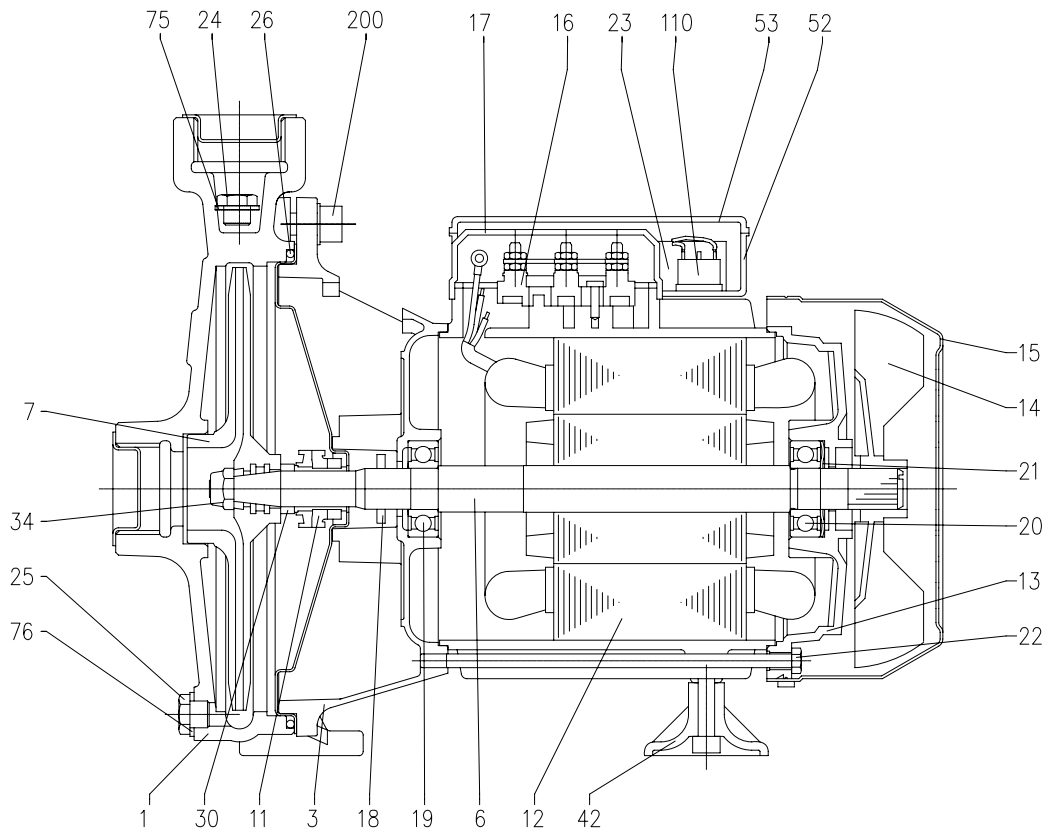
Temperature of water: 20°C
Impeller diameter = 123 mm
Applicable standard of test: ISO 9906-Annex A

CENTRIFUGAL PUMPS

CMA-B-C-D

CONSTRUCTIONS

50Hz

SECTIONAL VIEW
CM series up to 1.00

| 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 Zinked | 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 [4] | Aluminium | 1 | 34 | Impeller nut [7] | AISI 304 | 1 |
| 14 | Fan | PA6 | 1 | 42 | Foot | PVC | 1 |
| 15 | Fan cover | Fe P04 Zinked | 1 | 52 | Capacitor box [5] | ABS | 1 |
| 16 | Terminal box | - | 1 | 53 | Capacitor box cover [5] | ABS | 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 | 200 | Screw | Stainless steel A2 UNI7323 | 4 |
| 20 | Fan side ball bearing | - | 1 | - | - | - | - |

[1] Material: AISI 416 (integral) for CMA 0.50
AISI 420 for other model;

[7] Except for CMA 0.50

[2] Material: PPO mod. glass fibre reinforced for version CMA
Cast iron for version CMB, CMC;

[3] See constructions mechanical seal page 302-303

[4] Only for three phase

[5] Only for single phase

[6] Only for version: CMA 0.50, CMB 0.75-1.00, CMC 0.75-1.00

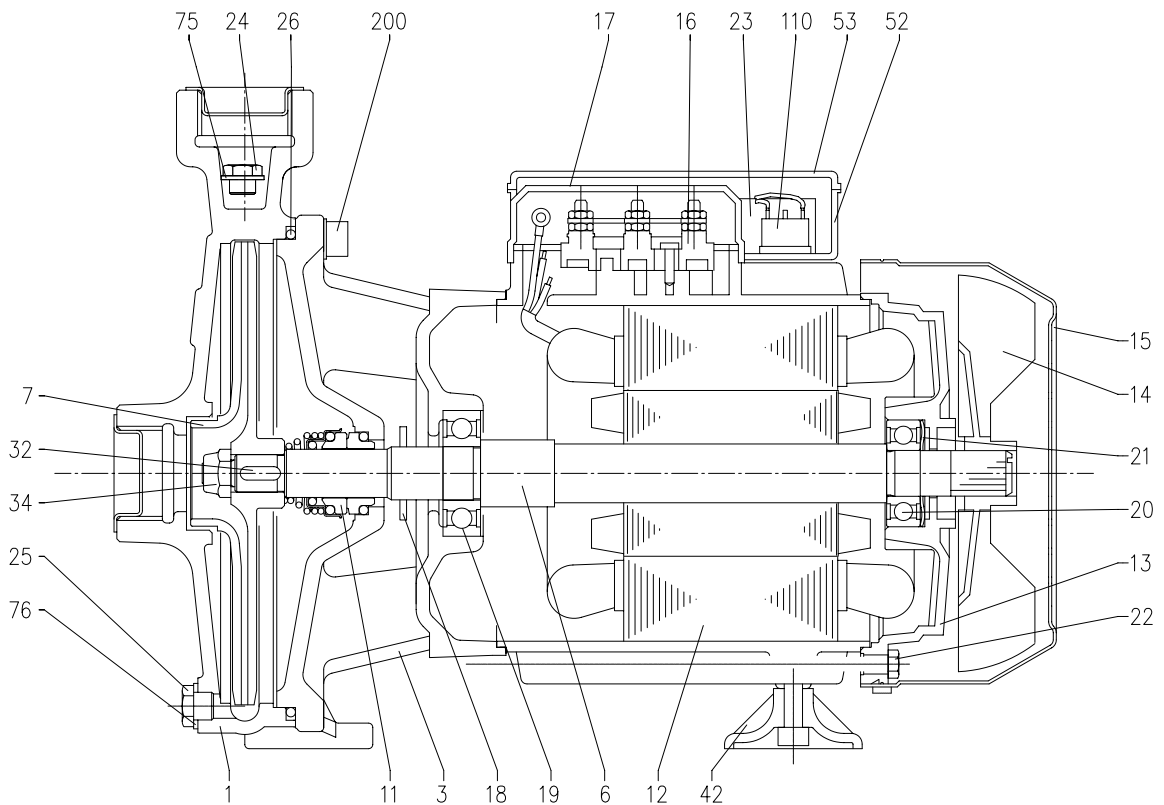
300

CENTRIFUGAL PUMPS

CMA-B-C-D

CONSTRUCTIONS

50Hz

SECTIONAL VIEW
CM series 1.50 and over

| N° | PART NAME | MATERIAL | Q.TY | N° | PART NAME | MATERIAL | Q.TY |
|----|-------------------------|--------------------|------|-----|-------------------------|----------------------------|------|
| 1 | Casing | Cast iron | 1 | 22 | Tie rod | Fe 42 Zinked | 4 |
| 3 | Motor bracket | Cast iron | 1 | 23 | Capacitor [4] | - | 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 304 | 1 |
| 13 | Motor cover [4] | Aluminium | 1 | 34 | Impeller nut | AISI 304 | 1 |
| 14 | Fan | PA6 | 1 | 42 | Foot | PVC | 1 |
| 15 | Fan cover | Fe P04 Zinked | 1 | 52 | Capacitor box [5] | ABS | 1 |
| 16 | Terminal board | - | 1 | 53 | Capacitor box cover [5] | ABS | |
| 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 | - | 1 |
| 21 | Adjusting ring | Steel C70 | 1 | 200 | Screw | Stainless steel A2 UNI7323 | 4 |

[1] Wet extension: AISI303 for version CMA, CMB 1.50-2.00-3.00, CMD 1.50-2.00-3.00
AISI304 for version CMB 4.00-5.50, CMD 4.00

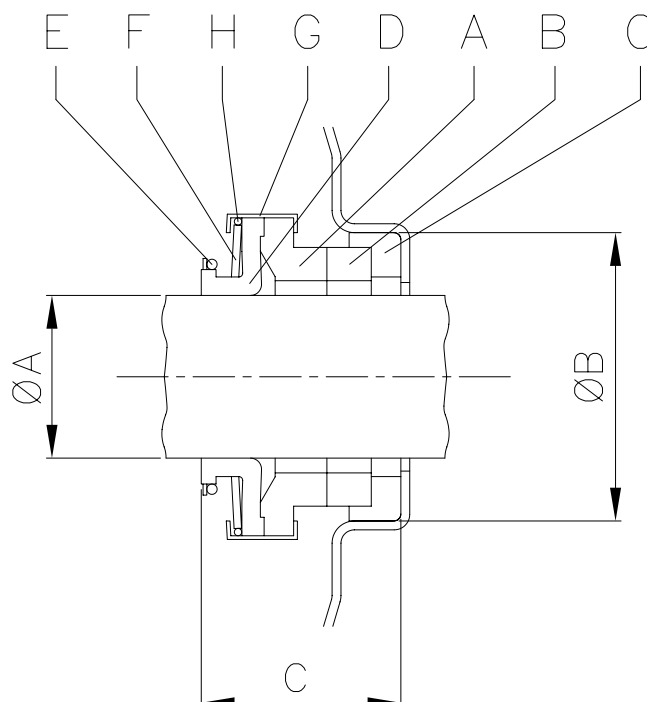
[2] Brass for version: CMA, CMB 2.00-3.00-4.00-5.50
Cast iron for version: CMB 1.50, CMD

[3] See constructions mechanical seal page 302-303

[4] Only for three phase

[5] Only for single phase

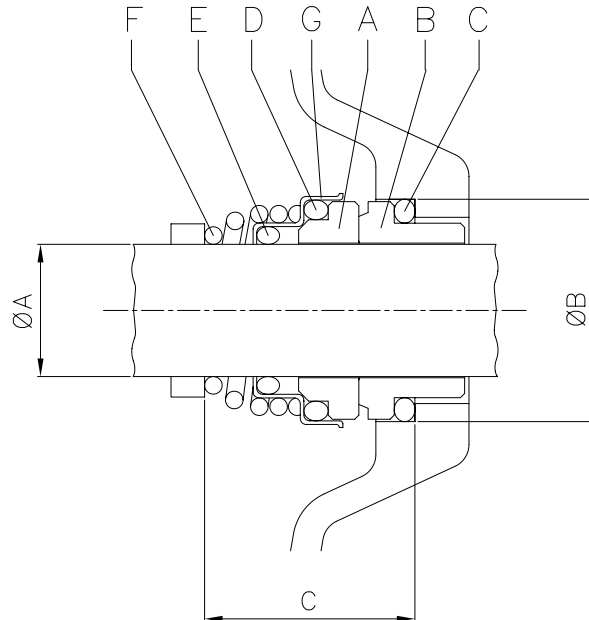
MECHANICAL SEAL
CM series up to 1.00



| Pump type | | Dimensions mm | | |
|--------------|-------------|---------------|-----|------|
| Single phase | Three phase | Ø A | Ø B | C |
| CMA 0.50 M | CMA 0.50 T | 12 | 26 | 18.3 |
| CMA 0.75 M | CMA 0.75 T | 13 | 26 | 18.3 |
| CMA 0.80 M | CMA 0.80 T | 13 | 26 | 18.3 |
| CMA 1.00 M | CMA 1.00 T | 13 | 26 | 18.3 |
| CMB 0.75 M | CMB 0.75 T | 13 | 26 | 18.3 |
| CMB 1.00 M | CMB 1.00 T | 13 | 26 | 18.3 |
| CMC 0.75 M | CMC 0.75 T | 13 | 26 | 18.3 |
| CMC 1.00 M | CMC 1.00 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
CM series 1.50 and over



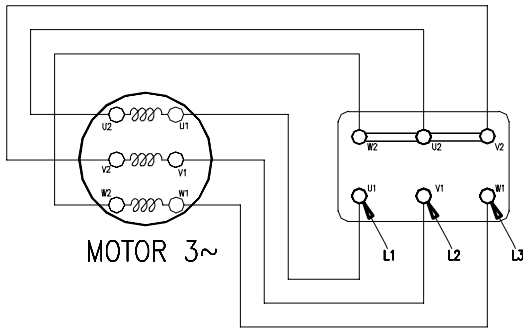
| Pump type | | Dimensions mm | | |
|--------------|-------------|---------------|------|----|
| Single phase | Three phase | Ø A | Ø B | C |
| CMA 1.50 M | CMA 1.50 T | 18 | 30.9 | 32 |
| CMA 2.00 M | CMA 2.00 T | 18 | 30.9 | 32 |
| - | CMA 3.00 T | 18 | 30.9 | 32 |
| CMB 1.50 M | CMB 1.50 T | 18 | 30.9 | 32 |
| CMB 2.00 M | CMB 2.00 T | 18 | 30.9 | 32 |
| - | CMB 3.00 T | 18 | 30.9 | 32 |
| - | CMB 4.00 T | 20 | 30.9 | 33 |
| - | CMB 5.50 T | 20 | 30.9 | 33 |
| CMD 1.50 M | CMD 1.50 T | 18 | 30.9 | 32 |
| CMD 2.00 M | CMD 2.00 T | 18 | 30.9 | 32 |
| - | CMD 3.00 T | 18 | 30.9 | 32 |
| - | CMD 4.00 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 |

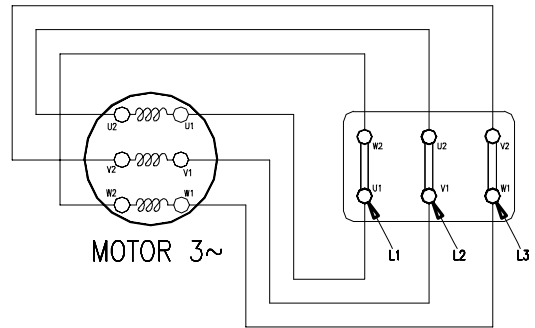
DIAGRAM AND ELECTRIC CONNECTIONS

THREE PHASE MOTOR

STAR CONNECTION

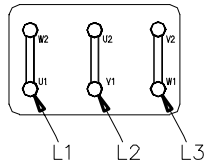


DELTA CONNECTION



FOR MOTOR 4 kW AND BELOW

DELTA CONNECTION 230 V



STAR CONNECTION 400 V

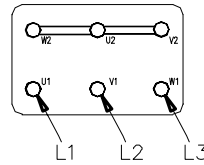
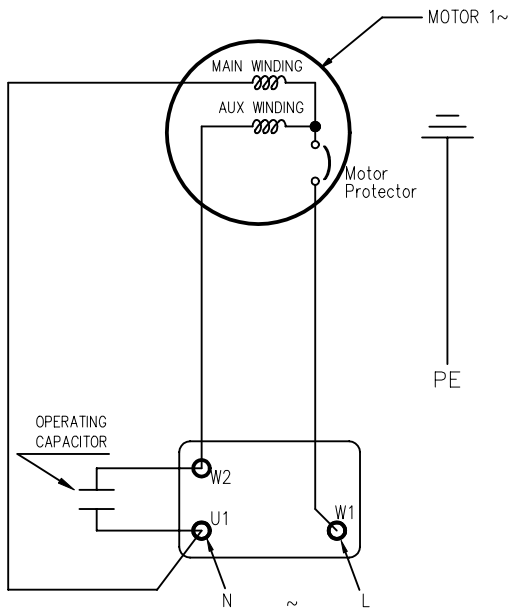


DIAGRAM AND ELECTRIC CONNECTIONS

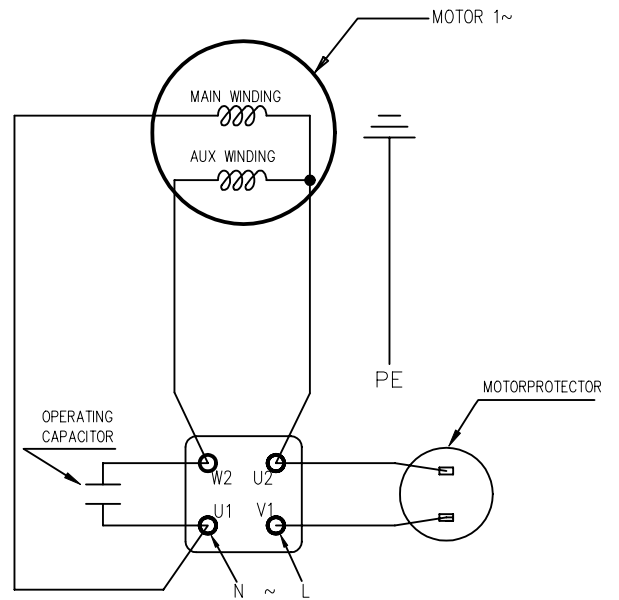
SINGLE PHASE MOTOR

FOR MOTORS WITH LOCKED ROTOR CURRENT
UP TO 25 [A]
INTERNAL MOTORPROTECTOR

FOR MOTORS WITH LOCKED ROTOR CURRENT
OVER 25 [A]
EXTERNAL MOTORPROTECTOR



Models up to 1.00



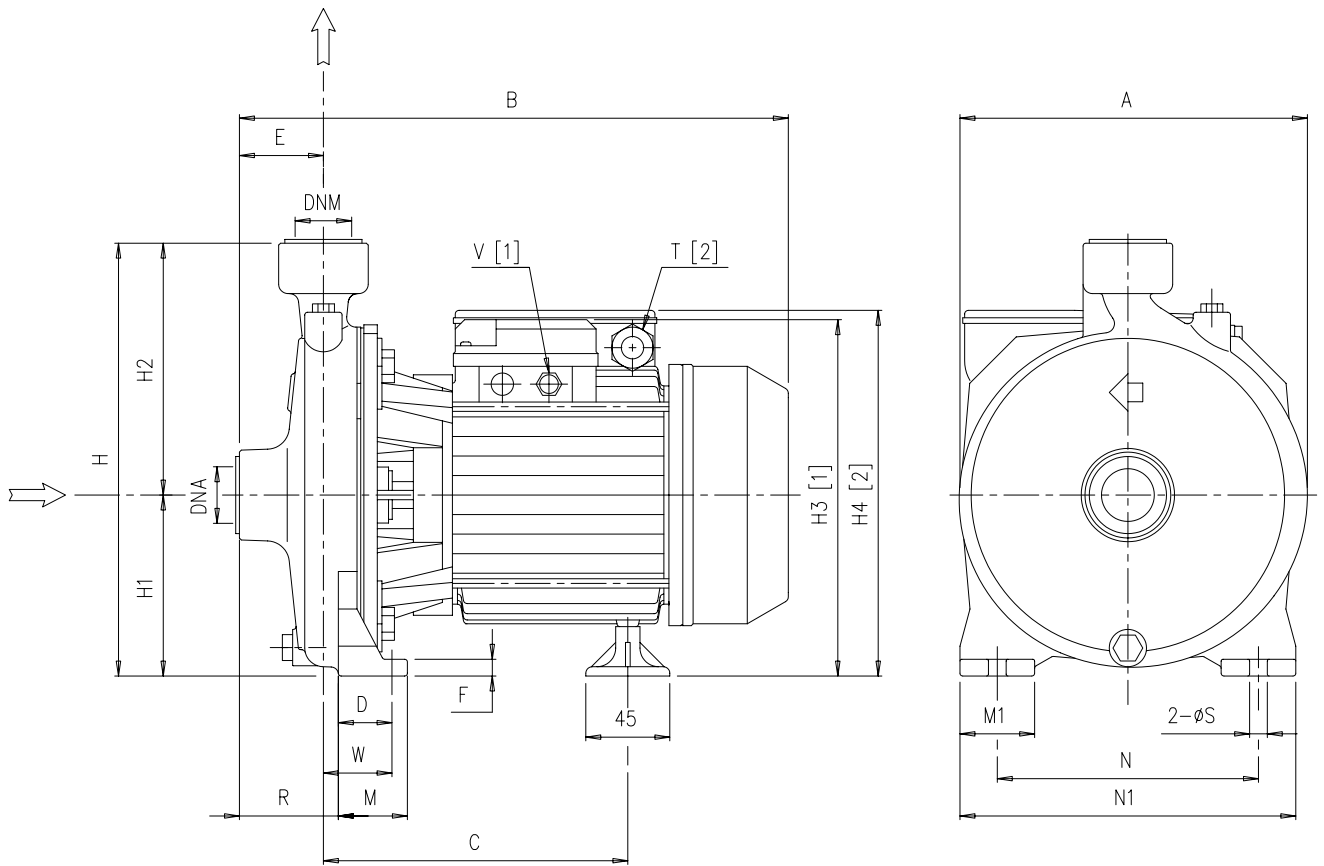
Model 1.50 and over

CENTRIFUGAL PUMPS

CMA-B-C-D

DIMENSIONS

50Hz



[1] Only for three phase
[2] Only for single phase

CENTRIFUGAL PUMPS

CMA-B-C-D

DIMENSIONS

50 Hz

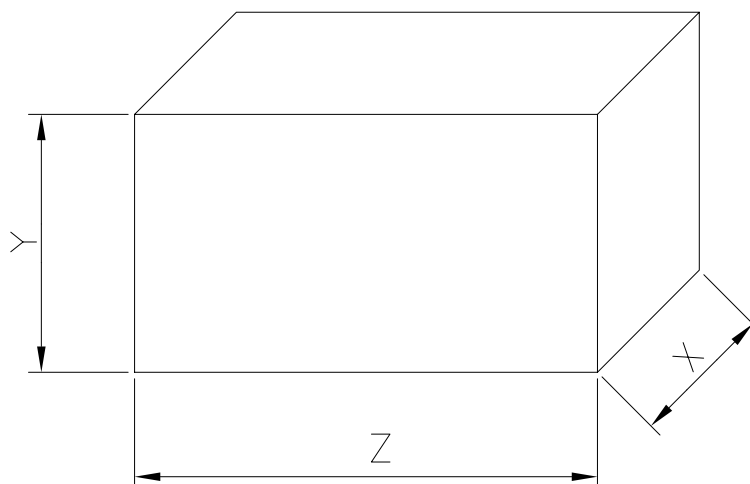
| Pump type | Dimensions [mm] | | | | | | | | | | | | | | | | | | | | | |
|-----------|-----------------|-------|-------|------|------|----|-------|-------|-----|-------|-------|----|----|-----|-----|-------|--------|------|------|-----|-------|-------|
| | A | B | C | D | E | F | H | H1 | H2 | H3 | H4 | M | M1 | N | N1 | R | T | V | W | S | DNA | DNM |
| CMA 0.50M | 160 | 261.8 | 158.8 | 30 | 44 | 8 | 202 | 82 | 120 | - | 173 | 40 | 40 | 110 | 150 | 44 | PG11 | - | 30 | 9.5 | G 1 | G 1 |
| CMA 0.50T | 160 | 261.8 | 158.8 | 30 | 44 | 8 | 202 | 82 | 120 | 172.5 | - | 40 | 40 | 110 | 150 | 44 | - | PG11 | 30 | 9.5 | G 1 | G 1 |
| CMA 0.75M | 185 | 300.3 | 171.8 | 36.8 | 45 | 9 | 232 | 97 | 135 | - | 198 | 45 | 40 | 140 | 180 | 45 | PG11 | - | 36.8 | 9.5 | G 1 | G 1 |
| CMA 0.75T | 185 | 300.3 | 171.8 | 36.8 | 45 | 9 | 232 | 97 | 135 | 197.5 | - | 45 | 40 | 140 | 180 | 45 | - | PG11 | 36.8 | 9.5 | G 1 | G 1 |
| CMA 0.80M | 185 | 300.3 | 171.8 | 36.8 | 45 | 9 | 232 | 97 | 135 | - | 198 | 45 | 40 | 140 | 180 | 45 | PG11 | - | 36.8 | 9.5 | G 1 | G 1 |
| CMA 0.80T | 185 | 300.3 | 171.8 | 36.8 | 45 | 9 | 232 | 97 | 135 | 197.5 | - | 45 | 40 | 140 | 180 | 45 | - | PG11 | 36.8 | 9.5 | G 1 | G 1 |
| CMA 1.00M | 185 | 300.3 | 171.8 | 36.8 | 45 | 9 | 232 | 97 | 135 | - | 198 | 45 | 40 | 140 | 180 | 45 | PG11 | - | 36.8 | 9.5 | G 1 | G 1 |
| CMA 1.00T | 185 | 300.3 | 171.8 | 36.8 | 45 | 9 | 232 | 97 | 135 | 197.5 | - | 45 | 40 | 140 | 180 | 45 | - | PG11 | 36.8 | 9.5 | G 1 | G 1 |
| CMA 1.50M | 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 | G 1 ¼ | G 1 |
| CMA 1.50T | 200 | 347.3 | 208.3 | 41.8 | 45.5 | 9 | 252 | 100 | 152 | 214 | - | 50 | 40 | 155 | 194 | 45.5 | - | PG11 | 41.8 | 9.5 | G 1 ¼ | G 1 |
| CMA 2.00M | 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 | G 1 ¼ | G 1 |
| CMA 2.00T | 225 | 347.3 | 208.3 | 41.8 | 45.5 | 9 | 285 | 115 | 170 | 229 | - | 50 | 40 | 180 | 220 | 45.5 | - | PG11 | 41.8 | 9.5 | G 1 ¼ | G 1 |
| CMA 3.00T | 225 | 360.3 | 208.3 | 41.8 | 45.5 | 9 | 285 | 115 | 170 | 229 | - | 50 | 40 | 180 | 220 | 45.5 | - | PG11 | 41.8 | 9.5 | G 1 ¼ | G 1 |
| CMB 0.75M | 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 | G 2 | G 1 ¼ |
| CMB 0.75T | 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 | G 2 | G 1 ¼ |
| CMB 1.00M | 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 | G 2 | G 1 ¼ |
| CMB 1.00T | 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 | G 2 | G 1 ¼ |
| CMB 1.50M | 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 | G 2 | G 1 ¼ |
| CMB 1.50T | 188 | 349.3 | 206.3 | 36.8 | 49.5 | 9 | 251.5 | 101.5 | 150 | 215.5 | - | 45 | 40 | 140 | 180 | 65.5 | - | PG11 | 52.8 | 9.5 | G 2 | G 1 ¼ |
| CMB 2.00M | 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 | G 2 | G 1 ¼ |
| CMB 2.00T | 200 | 360.3 | 209.3 | 36.8 | 57.5 | 9 | 271.5 | 111.5 | 160 | 225.5 | - | 45 | 40 | 160 | 200 | 76.5 | - | PG11 | 55.8 | 9.5 | G 2 | G 1 ¼ |
| CMB 3.00T | 200 | 373.3 | 209.3 | 36.8 | 57.5 | 9 | 271.5 | 111.5 | 160 | 225.5 | - | 45 | 40 | 160 | 200 | 76.5 | - | PG11 | 55.8 | 9.5 | G 2 | G 1 ¼ |
| CMB 4.00T | 247 | 428.8 | 222.3 | 48 | 60 | 12 | 323.5 | 133.5 | 190 | 264.5 | - | 60 | 50 | 190 | 240 | 77.5 | - | PG16 | 65.5 | 12 | G 2 | G 1 ¼ |
| CMB 5.50T | 247 | 428.8 | 222.3 | 48 | 60 | 12 | 323.5 | 133.5 | 190 | 264.5 | - | 60 | 50 | 190 | 240 | 77.5 | - | PG16 | 65.5 | 12 | G 2 | G 1 ¼ |
| CMC 0.75M | 186 | 313.3 | 186.8 | 36.8 | 43 | 9 | 247 | 97 | 150 | - | 198 | 45 | 40 | 140 | 180 | 63.5 | PG11 | - | 57.3 | 9.5 | G 2 | G 2 |
| CMC 0.75T | 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 | G 2 | G 2 |
| CMC 1.00M | 186 | 313.3 | 186.8 | 36.8 | 43 | 9 | 247 | 97 | 150 | - | 198 | 45 | 40 | 140 | 180 | 63.5 | PG11 | - | 57.3 | 9.5 | G 2 | G 2 |
| CMC 1.00T | 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 | G 2 | G 2 |
| CMD 1.50M | 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 | G 2 ½ | G 2 ½ |
| CMD 1.50T | 213 | 384.3 | 222.8 | 36.8 | 68 | 12 | 271.5 | 111.5 | 160 | 225.5 | - | 45 | 40 | 160 | 200 | 100.5 | - | PG11 | 69.3 | 9.5 | G 2 ½ | G 2 ½ |
| CMD 2.00M | 213 | 397.3 | 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 | G 2 ½ | G 2 ½ |
| CMD 2.00T | 213 | 384.3 | 222.8 | 36.8 | 68 | 12 | 271.5 | 111.5 | 160 | 225.5 | - | 45 | 40 | 160 | 200 | 100.5 | - | PG11 | 69.3 | 9.5 | G 2 ½ | G 2 ½ |
| CMD 3.00T | 213 | 397.3 | 222.8 | 36.8 | 68 | 12 | 271.5 | 111.5 | 160 | 225.5 | - | 45 | 40 | 160 | 200 | 100.5 | - | PG11 | 69.3 | 9.5 | G 2 ½ | G 2 ½ |
| CMD 4.00T | 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 | G 2 ½ | G 2 ½ |

CENTRIFUGAL PUMPS

CMA-B-C-D

PACKING AND WEIGHT

50Hz



| Type pumps | | PACKING [mm] | | | WEIGHT [kg] |
|------------|-----------|--------------|-----|-----|-------------|
| | | X | Y | Z | |
| CMA 0.50M | CMA 0.50T | 205 | 235 | 277 | 7.3 |
| CMA 0.75M | CMA 0.75T | 210 | 265 | 320 | 11.7 |
| CMA 0.80M | CMA 0.80T | 210 | 265 | 320 | 10.7 |
| CMA 1.00M | CMA 1.00T | 210 | 265 | 320 | 12 |
| CMA 1.50M | CMA 1.50T | 225 | 285 | 360 | 19.4 |
| CMA 2.00M | CMA 2.00T | 250 | 320 | 360 | 21.3 |
| - | CMA 3.00T | 250 | 320 | 360 | 22 |
| CMB 0.75M | CMB 0.75T | 215 | 280 | 335 | 12.5 |
| CMB 1.00M | CMB 1.00T | 215 | 280 | 335 | 13.8 |
| CMB 1.50M | CMB 1.50T | 215 | 280 | 365 | 20.5 |
| CMB 2.00M | CMB 2.00T | 235 | 300 | 375 | 21.5 |
| - | CMB 3.00T | 235 | 300 | 375 | 21.5 |
| - | CMB 4.00T | 272 | 352 | 440 | 39 |
| - | CMB 5.50T | 272 | 352 | 440 | 41 |
| CMC 0.75M | CMC 0.75T | 210 | 280 | 335 | 12 |
| CMC 1.00M | CMC 1.00T | 210 | 280 | 335 | 13 |
| CMD 1.50M | CMD 1.50T | 238 | 300 | 400 | 22 |
| CMD 2.00M | CMD 2.00T | 238 | 300 | 400 | 24 |
| - | CMD 3.00T | 238 | 300 | 400 | 24 |
| - | CMD 4.00T | 238 | 300 | 460 | 31.5 |

CENTRIFUGAL PUMPS

CMA-B-C-D

TECHNICAL DATA

50Hz

| Type pumps | | kW | HP | Locked rotor current | | | Capacitor | | Input in [kW] | | Full load current in [A] | | |
|--------------------------------|-----------------------------------|------|------|--------------------------|----------------|-------|--------------------|-----|-----------------|----------------|--------------------------|-----------------|-------------------------|
| Single phase 230 V 50 Hz | Three Phase 230/400 V 50 Hz | | | Single phase 230 V | Three Phase | | Single phase µF | VI | Single Phase | Three Phase | in [A] | | |
| | | | | | 230 V | 230 V | | | | | 400 V | Single Phase | Three Phase 230 V |
| CMA 0.50M | CMA 0.50T | 0.37 | 0.5 | 10.6 | 9.9 | 5.7 | 10 | 450 | 0.66 | 0.63 | 3.2 | 2.4 | 1.4 |
| CMA 0.75M | CMA 0.75T | 0.55 | 0.75 | 16.1 | 17 | 9.8 | 16 | 450 | 1.02 | 0.97 | 4.7 | 3.2 | 1.8 |
| CMA 0.80M | CMA 0.80T | 0.59 | 0.8 | 16.1 | 17 | 9.8 | 16 | 450 | 1.05 | 1 | 4.8 | 3.3 | 1.9 |
| CMA 1.00M | CMA 1.00T | 0.75 | 1 | 24 | 24.4 | 14.1 | 20 | 450 | 1.35 | 1.29 | 6.2 | 4.3 | 2.5 |
| CMA 1.50M | CMA 1.50T | 1.1 | 1.5 | 38 | 34.6 | 20 | 35 | 450 | 1.9 | 1.85 | 9.2 | 5.7 | 3.3 |
| CMA 2.00M | CMA 2.00T | 1.5 | 2 | 43 | 41.2 | 23.8 | 40 | 450 | 2.4 | 2.3 | 10.8 | 7.8 | 4.5 |
| - | CMA 3.00T | 2.2 | 3 | - | 49.5 | 28.6 | - | - | - | 3 | - | 9.9 | 5.7 |
| CMB 0.75M | CMB 0.75T | 0.55 | 0.75 | 13.3 | 11.2 | 6.5 | 14 | 450 | 0.98 | 0.95 | 4.5 | 3.0 | 1.7 |
| CMB 1.00M | CMB 1.00T | 0.75 | 1 | 24 | 24.4 | 14.1 | 20 | 450 | 1.33 | 1.28 | 6 | 4 | 2.3 |
| CMB 1.50M | CMB 1.50T | 1.1 | 1.5 | 38 | 34.6 | 20 | 31.5 | 450 | 1.77 | 1.73 | 8.5 | 5.5 | 3.2 |
| CMB 2.00M | CMB 2.00T | 1.5 | 2 | 43 | 41.2 | 23.8 | 40 | 450 | 2.3 | 2.2 | 10.8 | 7.5 | 4.3 |
| - | CMB 3.00T | 2.2 | 3 | - | 49.5 | 28.6 | - | - | - | 2.65 | - | 8.3 | 4.8 |
| - | CMB 4.00T | 3 | 4 | - | 84.1 | 48.6 | - | - | - | 3.7 | - | 12.5 | 7.2 |
| - | CMB 5.50T | 4 | 5.5 | - | 129.8 | 75 | - | - | - | 4.9 | - | 16.3 | 9.4 |
| CMC 0.75M | CMC 0.75T | 0.55 | 0.75 | 13.3 | 11.2 | 6.5 | 14 | 450 | 0.92 | 0.9 | 4.2 | 2.8 | 1.6 |
| CMC 1.00M | CMC 1.00T | 0.75 | 1 | 24 | 24.4 | 14.1 | 20 | 450 | 1.15 | 1.1 | 5.3 | 3.5 | 2 |
| CMD 1.50M | CMD 1.50T | 1.1 | 1.5 | 38 | 34.6 | 20 | 31.5 | 450 | 1.86 | 1.8 | 8.9 | 5.9 | 3.4 |
| CMD 2.00M | CMD 2.00T | 1.5 | 2 | 43 | 41.2 | 23.8 | 40 | 450 | 2.3 | 2.2 | 10.8 | 7.5 | 4.3 |
| - | CMD 3.00T | 2.2 | 3 | - | 49.5 | 28.6 | - | - | - | 2.9 | - | 9 | 5.2 |
| - | CMD 4.00T | 3 | 4 | - | 84.1 | 48.6 | - | - | - | 3.85 | - | 12.3 | 7.1 |

| Type pumps | | Ball Bearing | |
|-----------------------|--------------------------|--------------|----------|
| Single phase 230 V | Three Phase 230/400 V | Pump side | Fan side |
| CMA 0.50M | CMA 0.50T | 6201 ZZ | 6202 ZZ |
| CMA 0.75M | CMA 0.75T | 6202 ZZ | 6202 ZZ |
| CMA 0.80M | CMA 0.80T | 6202 ZZ | 6202 ZZ |
| CMA 1.00M | CMA 1.00T | 6202 ZZ | 6202 ZZ |
| CMA 1.50M | CMA 1.50T | 6204 ZZ | 6203 ZZ |
| CMA 2.00M | CMA 2.00T | 6204 ZZ | 6203 ZZ |
| - | CMA 3.00T | 6204 ZZ | 6203 ZZ |
| CMB 0.75M | CMB 0.75T | 6202 ZZ | 6202 ZZ |
| CMB 1.00M | CMB 1.00T | 6202 ZZ | 6202 ZZ |
| CMB 1.50M | CMB 1.50T | 6204 ZZ | 6203 ZZ |
| CMB 2.00M | CMB 2.00T | 6204 ZZ | 6203 ZZ |
| - | CMB 3.00T | 6204 ZZ | 6203 ZZ |
| - | CMB 4.00T | 6306 ZZ | 6205 ZZ |
| - | CMB 5.50T | 6306 ZZ | 6205 ZZ |
| CMC 0.75M | CMC 0.75T | 6202 ZZ | 6202 ZZ |
| CMC 1.00M | CMC 1.00T | 6202 ZZ | 6202 ZZ |
| CMD 1.50M | CMD 1.50T | 6204 ZZ | 6203 ZZ |
| CMD 2.00M | CMD 2.00T | 6204 ZZ | 6203 ZZ |
| - | CMD 3.00T | 6204 ZZ | 6203 ZZ |
| - | CMD 4.00T | 6206 ZZ | 6205 ZZ |



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