



**EBARA**



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## SPECIFICATIONS

50Hz

Rev E

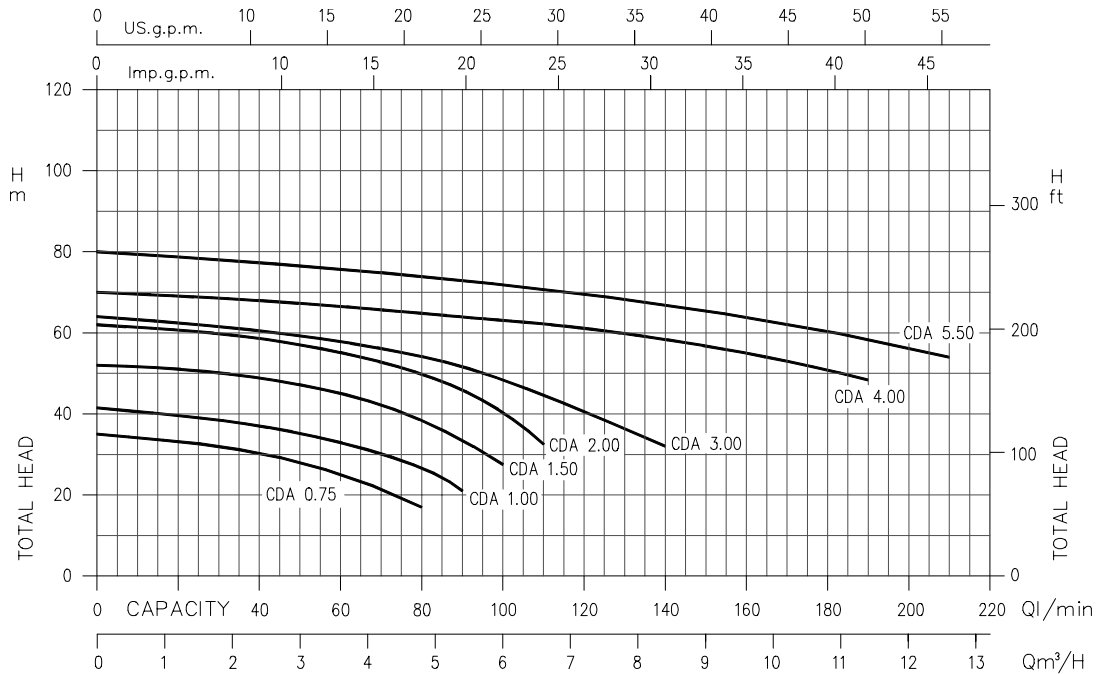
| PUMP                        |                                |   |
|-----------------------------|--------------------------------|---|
| Liquid                      | Type of liquid                 | Clean water   |
| Handled                     | Max temperature [°C]           | 40 (CDA 0.75 - 1.00)<br>90 (CDA 1.50-2.00-3.00-4.00-5.50)                             |
|                             | Maximum working pressure [MPa] | 0.6 (CDA 0.75-1.00)<br>1.0 (CDA 1.50-2.00-3.00-4.00-5.50)                             |
| Construction                | Impeller                       | Twin closed type  |
|                             | Shaft seal type                | Mechanical seal   |
|                             | Bearing                        | Sealed ball bearing   |
| Pipe Connection             | Suction                        | G1" (CDA 0.75-1.00)<br>G1"¼ (CDA 1.50-2.00-3.00)<br>G1"½ (CDA 4.00-5.50)              |
|                             | Discharge                      | G1" (CDA 0.75-1.00-1.50-2.00-3.00)<br>G1"¼ (CDA 4.00-5.50)                            |
| Material                    | Casing                         | Cast iron   |
|                             | Impeller                       | Noryl® (CDA 0.75-1.00)<br>Brass (CDA 1.50 - 2.00-3.00-4.00-5.50)                      |
|                             | Casing cover                   | AISI 304 (CDA 0.75-1.00)<br>Cast iron (CDA 2.00-3.00-4.00-5.50)                       |
|                             | Shaft seal                     | Ceramic/Carbon/NBR  |
|                             | Shaft                          | AISI 416 (CDA 0.75-1.00)<br>AISI 303 (CDA 1.50-2.00-3.00)<br>AISI 304 (CDA 4.00-5.50) |
|                             | Bracket                        | Aluminium (CDA 0.75-1.00)<br>Cast iron (CDA 1.50-2.00-3.00-4.00-5.50)                 |
| Applicable standard of test |                                | ISO 9906 – Annex A  |

| MOTOR                                  |   |                      |
|--|---|----------------------|
| Type                                   | Electric - TEFC                                 |                      |
|  | Single Phase                                    | Three Phase          |
| No. of Poles                           | 2   |                      |
| Synchronous speed [min <sup>-1</sup> ] | 3000  |                      |
| Insulation Class                       | F   |                      |
| Protection degree                      | IP 44   |                      |
| Power rating                           | [kW]  | 0.55 ÷ 1.5           |
|  | [HP]  | 0.75 ÷ 2             |
| Frequency [Hz]                         | 50 Hz   | 50 Hz                |
| Voltage [V]                            | 230V ±10%                                       | 230/400 ±10%         |
| Capacitor                              | Built in  | -                    |
| Over load protection                   | Built in  | Provided by the user |
| Casing material                        | Aluminium                                       |                      |
| Base material/motor support            | Cast iron / Plastic foot                        |                      |
| Dimensions of cable entry              | PG11 - PG13.5 - G 1/2 (see dimensions page 400) |                      |

## SELECTION CHART

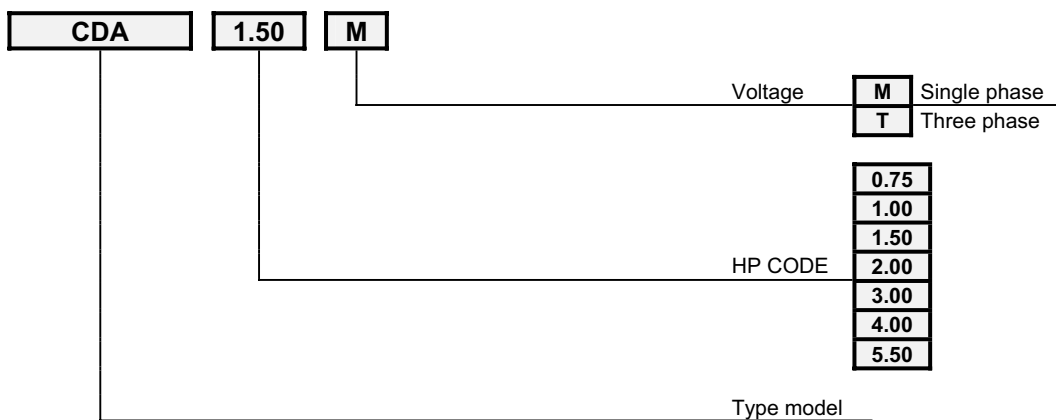
50Hz

Rev E

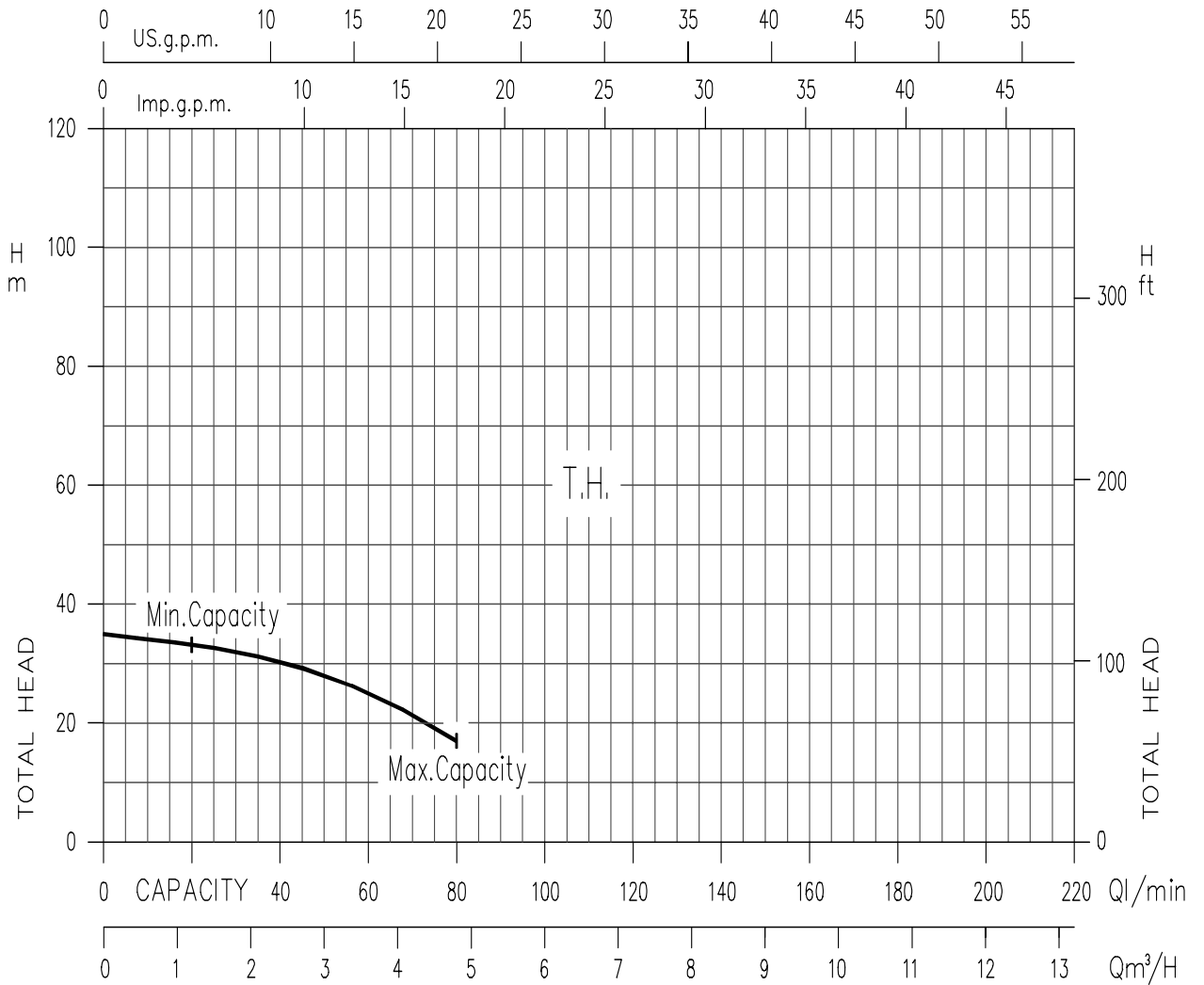


| Type pumps                     |                                   | kW  | HP   | Q=Capacity |      |      |      |      |      |      |      |      |      |     |  |
|--------------------------------|-----------------------------------|---|------|------------|------|------|------|------|------|------|------|------|------|-----|--|
| Single Phase<br>230 V<br>50 Hz | Three Phase<br>230/400 V<br>50 Hz |   |      | l/min 20   | 40   | 50   | 80   | 90   | 100  | 110  | 140  | 170  | 190  | 210 |  |
|                                |                                   | m³/h 1.2   2.4   3   4.8   5.4   6.6   6.6   8.4   10.2   11.4   12.6 |      |            |      |      |      |      |      |      |      |      |      |     |  |
|                                |                                   | H=Total manometric head in meters                                     |      |            |      |      |      |      |      |      |      |      |      |     |  |
| CDA 0.75 M                     | CDA 0.75 T                        | 0.55  | 0.75 | 33         | 30.2 | 27.9 | 17   | -    | -    | -    | -    | -    | -    |     |  |
| CDA 1.00 M                     | CDA 1.00 T                        | 0.75  | 1    | 39.5       | 37   | 35.2 | 27   | 21   | -    | -    | -    | -    | -    |     |  |
| CDA 1.50 M                     | CDA 1.50 T                        | 1.1   | 1.5  | 50.8       | 48.8 | 47.1 | 38.4 | 33.4 | 27.5 | -    | -    | -    | -    |     |  |
| CDA 2.00 M                     | CDA 2.00 T                        | 1.5   | 2    | 60.5       | 58.6 | 56.9 | 49.8 | 46.5 | 40.3 | 32.5 | -    | -    | -    |     |  |
| -                              | CDA 3.00 T                        | 2.2   | 3    | -          | 60.5 | 59.3 | 54.1 | 51.6 | 48.4 | 44.6 | 32   | -    | -    |     |  |
| -                              | CDA 4.00 T                        | 3   | 4    | -          | -    | 67   | 64.8 | 63.9 | 62.5 | 62   | 58   | 53.5 | 48   |     |  |
| -                              | CDA 5.50 T                        | 4   | 5.5  | -          | -    | 76.5 | 73.9 | 72.9 | 71.8 | 70.5 | 66.8 | 62   | 58.3 |     |  |

### TYPE KEY:

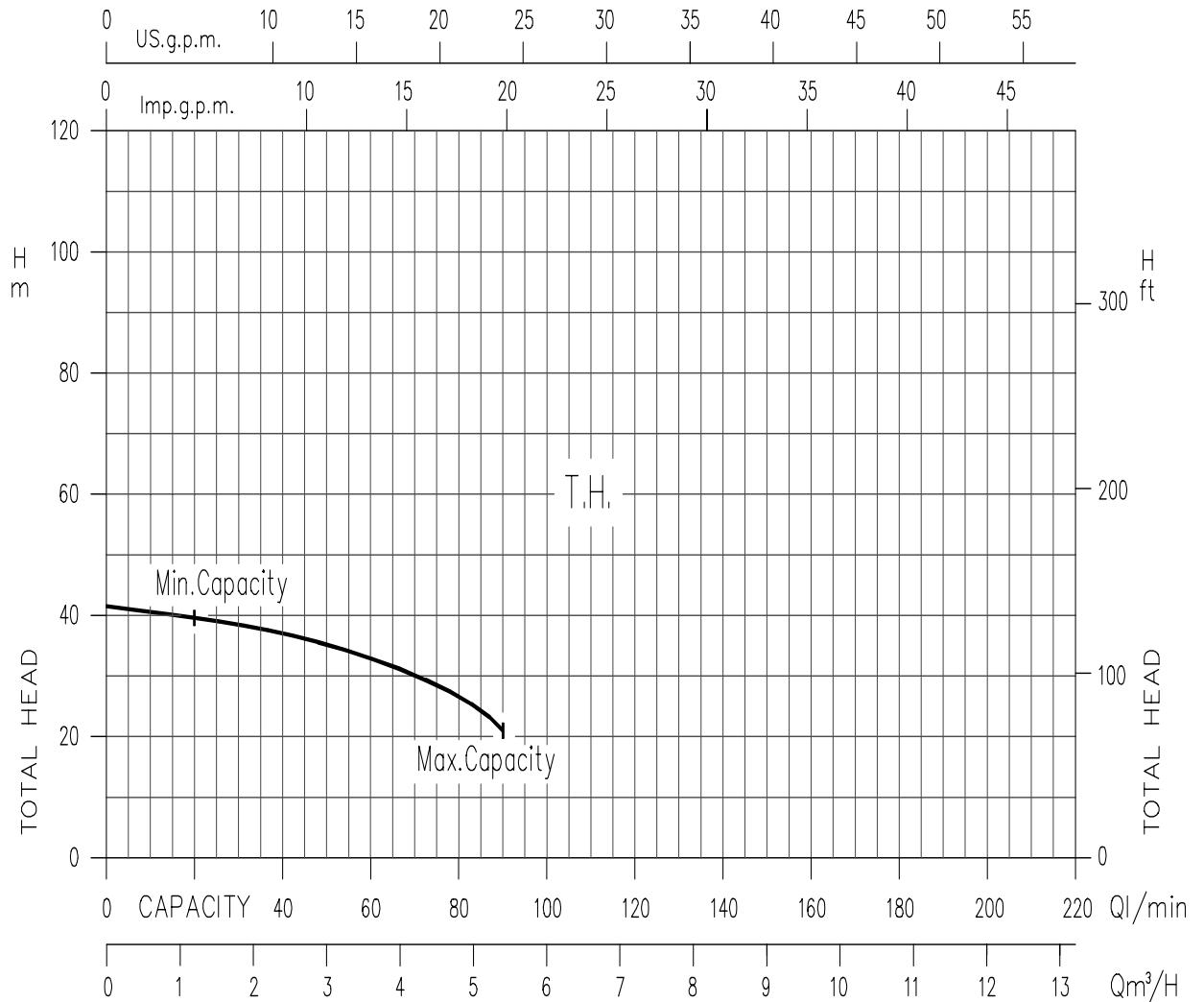


**CDA 0.75 (0.55 kW)  
SYNCHRONOUS SPEED : 3000 min<sup>-1</sup>**



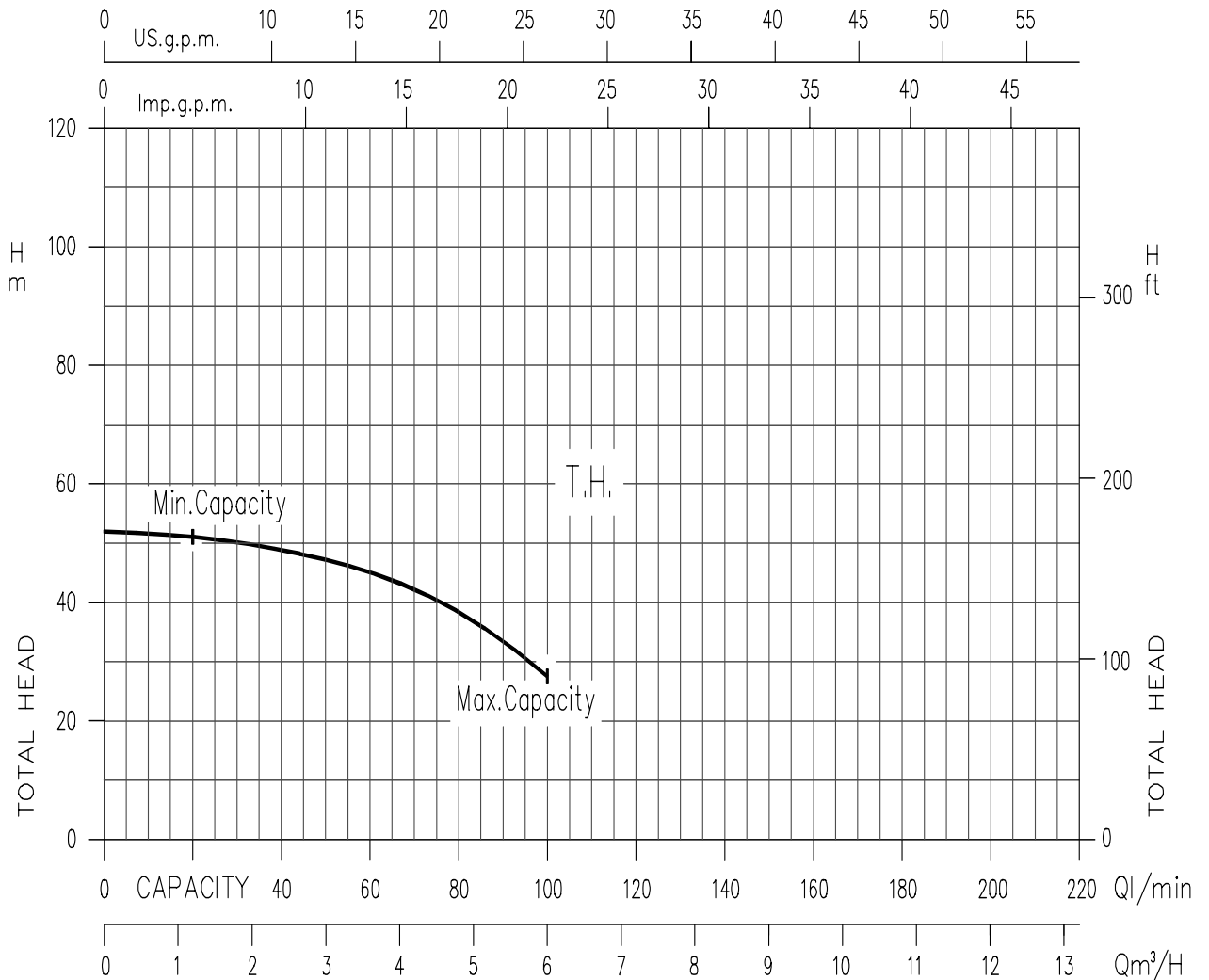
Temperature of water: 20°C  
 Impeller diameter = 122/122 mm  
 Applicable standard of test: ISO 9906 - Annex A

**CDA 1.00 (0.75 kW)  
SYNCHRONOUS SPEED : 3000 min<sup>-1</sup>**



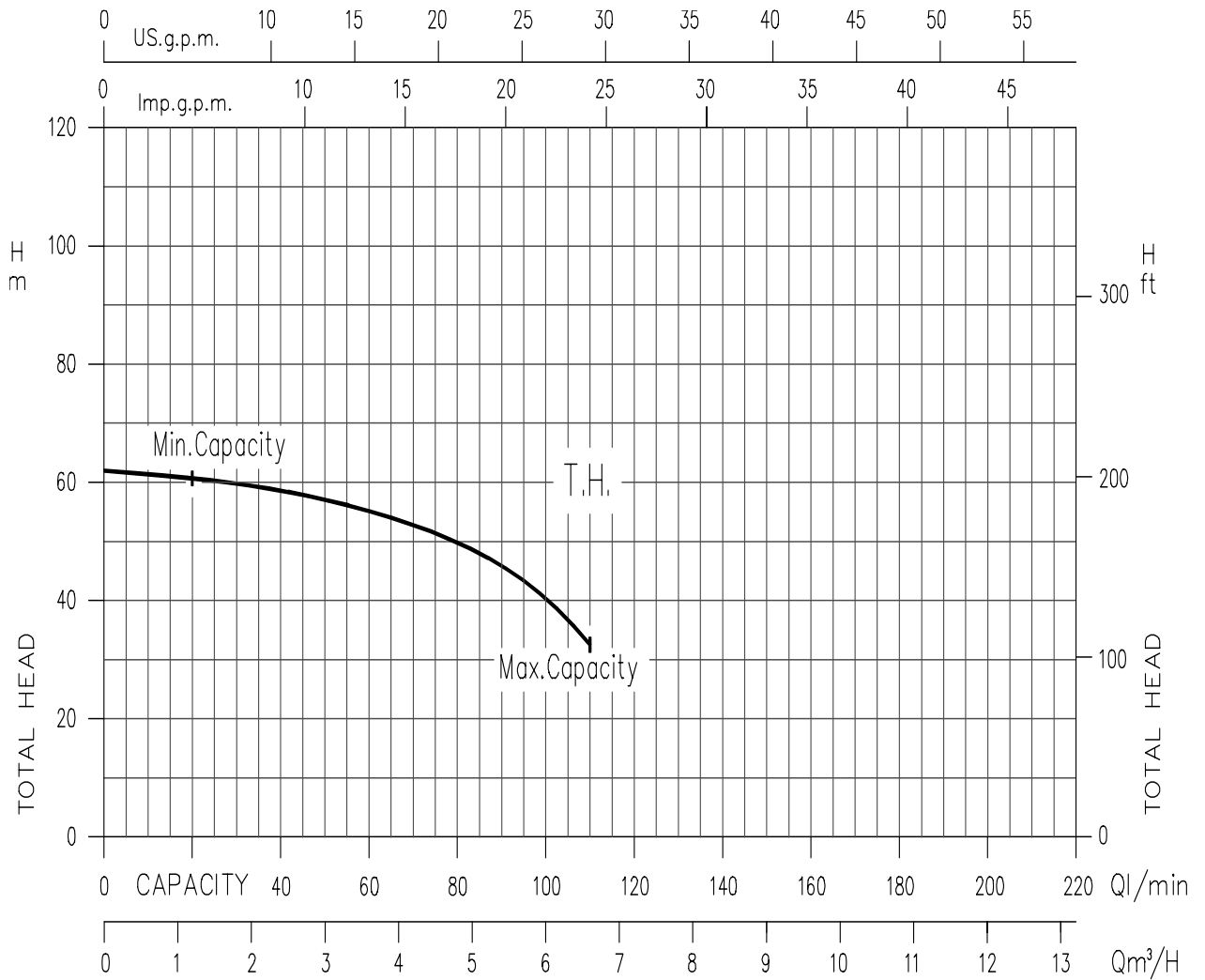
Temperature of water: 20°C  
 Impeller diameter = 130/130 mm  
 Applicable standard of test: ISO 9906 - Annex A

**CDA 1.50 (1.1 kW)**  
**SYNCHRONOUS SPEED : 3000 min<sup>-1</sup>**



Temperature of water: 20°C  
 Impeller diameter = 143/143 mm  
 Applicable standard of test: ISO 9906 - Annex A

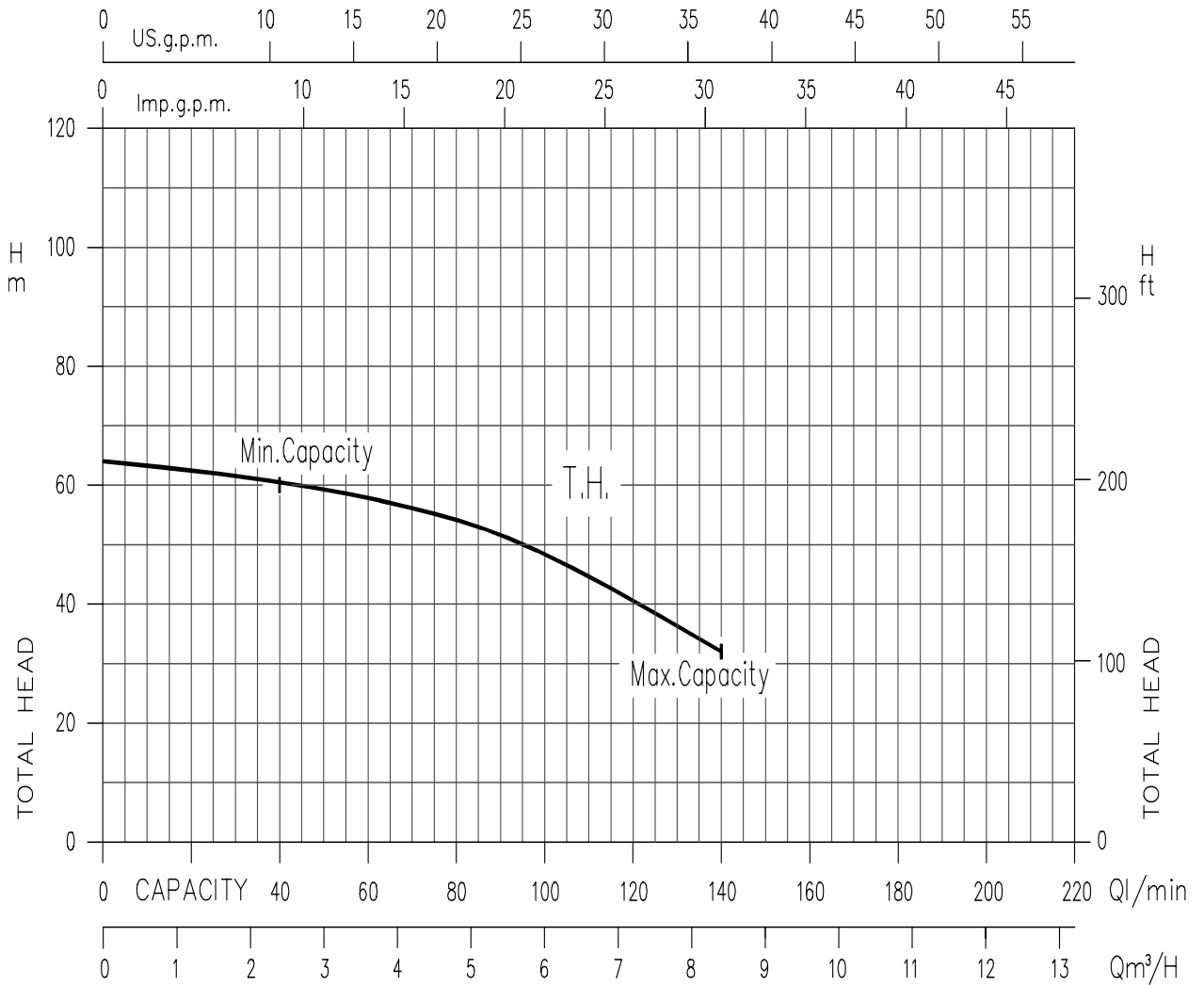
**CDA 2.00 (1.5 kW)**  
**SYNCHRONOUS SPEED : 3000 min<sup>-1</sup>**



Temperature of water: 20°C  
 Impeller diameter = 153/153 mm  
 Applicable standard of test: ISO 9906 - Annex A

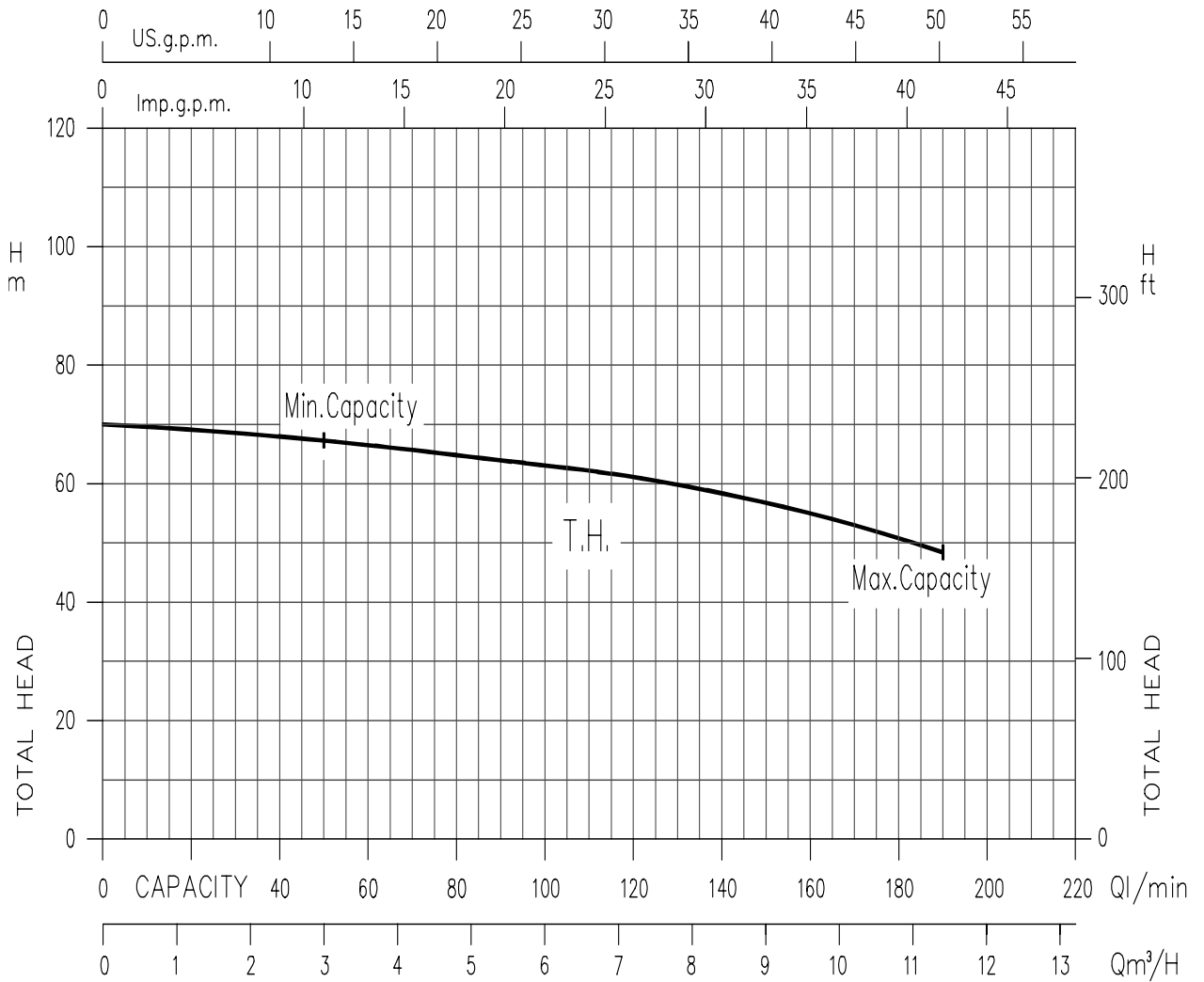


**CDA 3.00 (2.2 kW)**  
**SYNCHRONOUS SPEED : 3000 min<sup>-1</sup>**



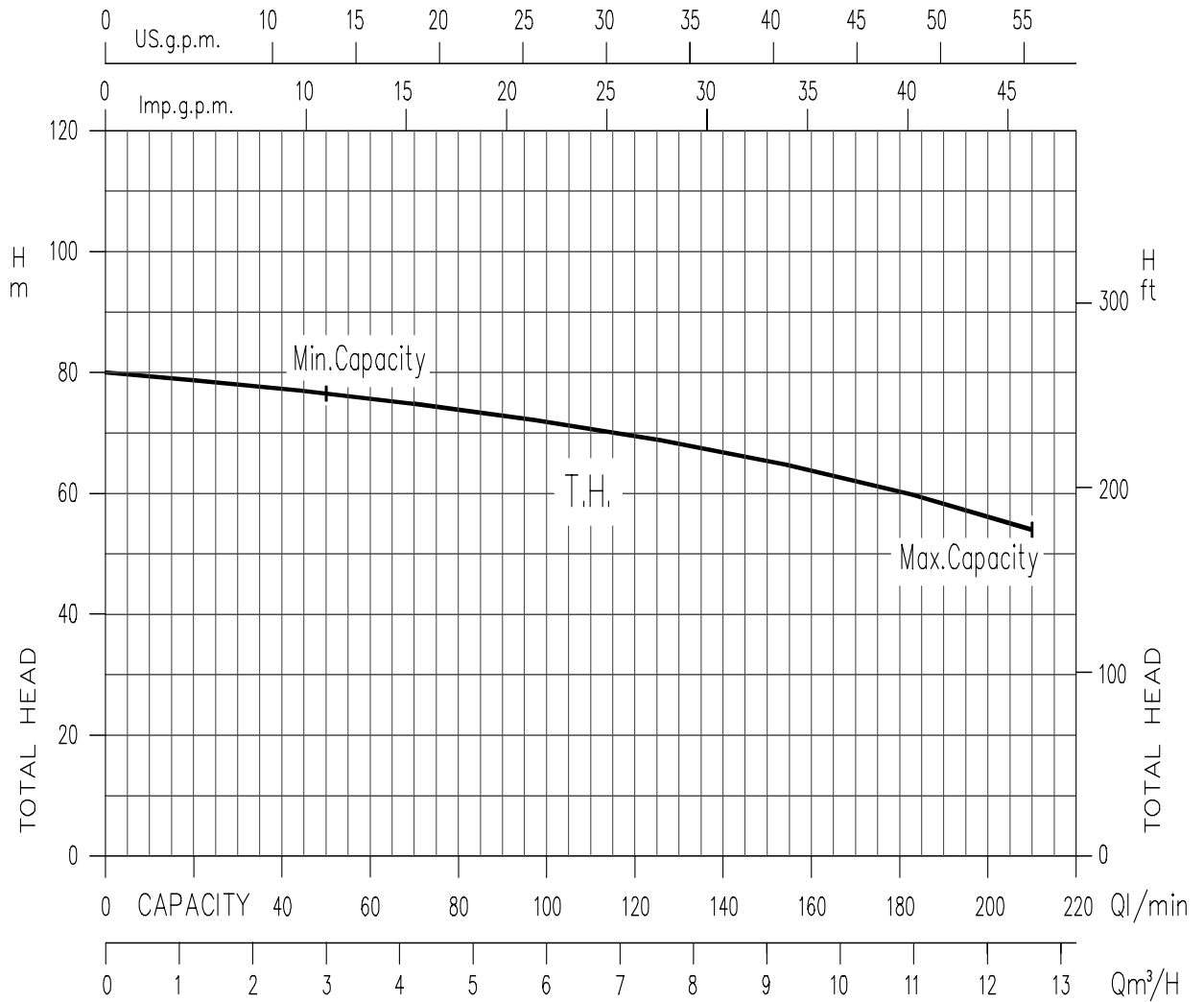
Temperature of water: 20°C  
 Impeller diameter = 156/156 mm  
 Applicable standard of test: ISO 9906 - Annex A

**CDA 4.00 (3 kW)**  
**SYNCHRONOUS SPEED : 3000 min<sup>-1</sup>**



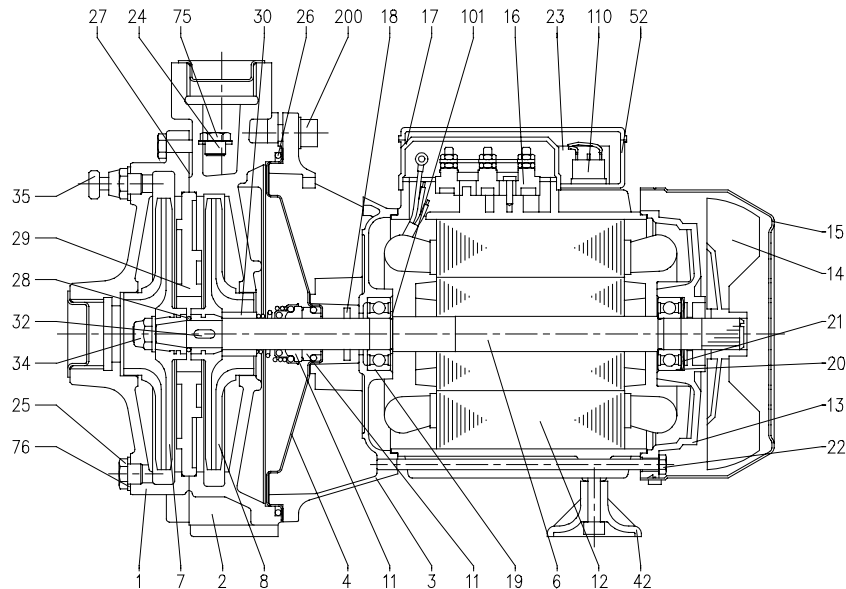
Temperature of water: 20°C  
 Impeller diameter = 167/167 mm  
 Applicable standard of test: ISO 9906 - Annex A

**CDA 5.50 (4 kW)**  
**SYNCHRONOUS SPEED : 3000 min<sup>-1</sup>**



Temperature of water: 20°C  
 Impeller diameter = 179/179 mm  
 Applicable standard of test: ISO 9906 - Annex A

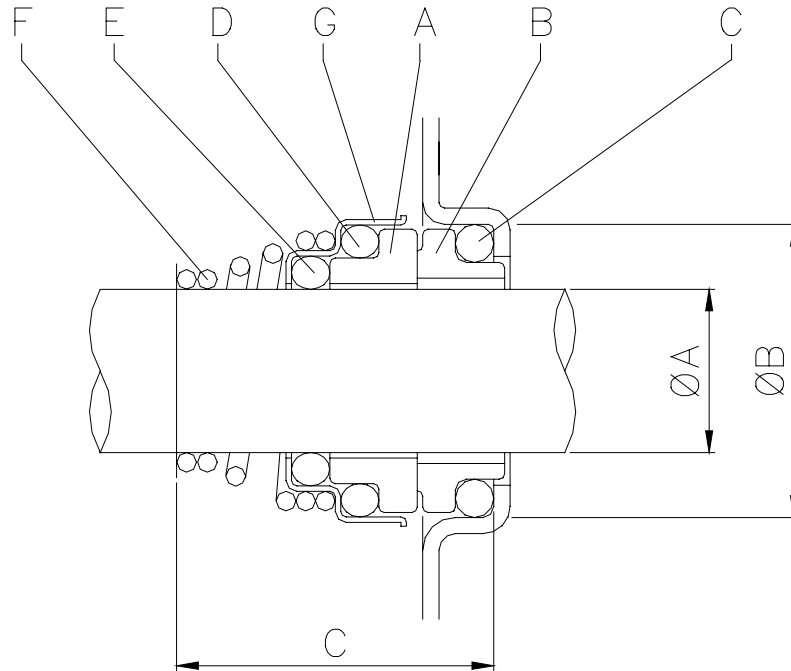
### SECTIONAL VIEW



| N° | PART NAME               | MATERIAL           | NO.FOR<br>1 UNIT | N°  | PART NAME              | MATERIAL                    | NO.FOR<br>1 UNIT |
|----|-------------------------|--------------------|------------------|-----|------------------------|-----------------------------|------------------|
| 1  | Casing                  | Cast iron          | 1                | 23  | Capacitor [1]          | -                           | 1                |
| 2  | Casing                  | Cast iron          | 1                | 24  | Priming plug           | Brass                       | 1                |
| 3  | Motor bracket           | [8]                | 1                | 25  | Drain plug             | Brass                       | 1                |
| 4  | Casing cover            | [9]                | 1                | 26  | O-ring                 | NBR                         | 1                |
| 6  | Shaft with rotor        | [6]                | 1                | 27  | Gasket                 | Compression cellulose fibre | 1                |
| 7  | Impeller                | [4]                | 1                | 28  | O-ring                 | NBR                         | 1                |
| 8  | Impeller                | [4]                | 1                | 29  | Intermediate plate     | Cast iron                   | 1                |
| 11 | Mechanical seal [7]     | Carbon/Ceramic/NBR | 1                | 30  | Mechanical seal spacer | Brass                       | 1                |
| 12 | Motor frame with stator | -                  | 1                | 32  | Key                    | AISI 304                    | 1                |
| 13 | Motor cover             | Aluminium          | 1                | 34  | Impeller nut [3]       | AISI 304                    | 1                |
| 14 | Fan                     | Polypropilene      | 1                | 35  | Air breather valve     | -                           | 1                |
| 15 | Fan cover               | Fe P04 Zinked      | 1                | 42  | Foot                   | PVC                         | 1                |
| 16 | Terminal box            | -                  | 1                | 52  | Terminal box [1]       | Polypropilene               | 1                |
| 17 | Terminal box cover [2]  | 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                  | Stainless steel A2 UNI7323  | 4                |
| 22 | Tie rod                 | Fe 42 Zinked       | 4                | -   | -                      | -                           | -                |

- [1] Only for single phase                      [2] Only for three phase                      [3] Only for version with impeller in Brass  
 [4] Material : Noryl for version CDA 0.75 - CDA 1.00  
       Brass for version CDA 1.50 - CDA 2.00 - CDA 3.00 - CDA 4.00 - CDA 5.50  
 [5] Only for version single phase CDA 1.50 - CDA 2.00  
 [6] Material : AISI 416 for version CDA 0.75 - CDA 1.00  
       AISI 303 (Part in contact with liquid) for version CDA 1.50 - CDA 2.00 - CDA 3.00  
       AISI 304 (Part in contact with liquid) for version CDA 4.00 - CDA 5.50  
 [7] See constructions mechanical seal page 301  
 [8] Material : Aluminium for version CDA 0.75 - CDA 1.00  
       Cast iron for version CDA 1.50 - CDA 2.00 - CDA 3.00 - CDA 4.00 - CDA 5.50  
 [9] Material : AISI 304 for version CDA 0.75 - CDA 1.00  
       Cast iron for version CDA 2.00 - 3.00 - CDA 4.00 - CDA 5.50

MECHANICAL SEAL



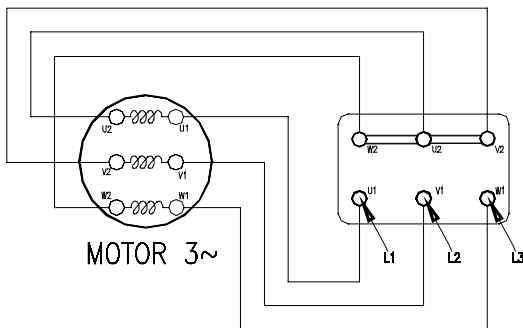
| Single Phase | Three Phase | ØA | ØB   | C  |
|--------------|-------------|----|------|----|
| CDA 0.75 M   | CDA 0.75 T  | 15 | 26   | 29 |
| CDA 1.00 M   | CDA 1.00 T  | 15 | 26   | 29 |
| CDA 1.50 M   | CDA 1.50 T  | 18 | 30.9 | 32 |
| CDA 2.00 M   | CDA 2.00 T  | 18 | 30.9 | 32 |
| -            | CDA 3.00 T  | 18 | 30.9 | 32 |
| -            | CDA 4.00 T  | 20 | 30.9 | 33 |
| -            | CDA 5.50 T  | 20 | 30.9 | 33 |

| REF | PART NAME            | MATERIAL<br>product standard |
|-----|----------------------|------------------------------|
|     |                      | CDA                          |
| 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                     |

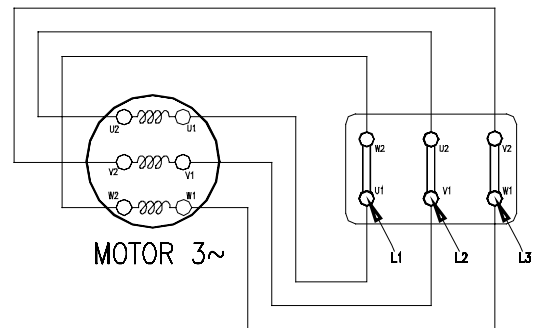
DIAGRAM AND ELECTRIC CONNECTIONS

THREE PHASE MOTOR

STAR CONNECTION

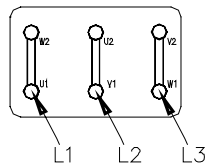


DELTA CONNECTION



FOR MOTOR 4 kW AND BELOW

DELTA CONNECTION 230 V



STAR CONNECTION 400 V

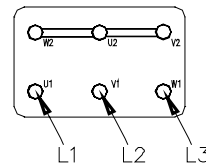
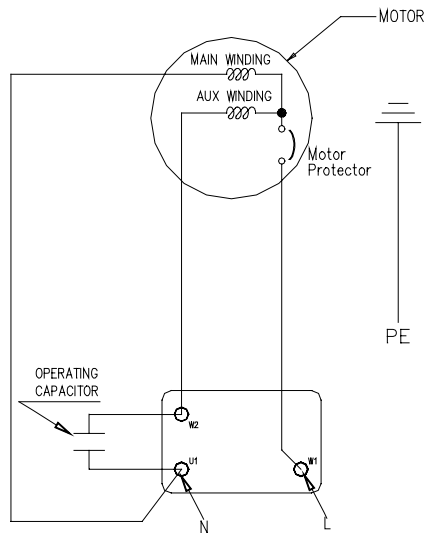


DIAGRAM AND ELECTRIC CONNECTIONS

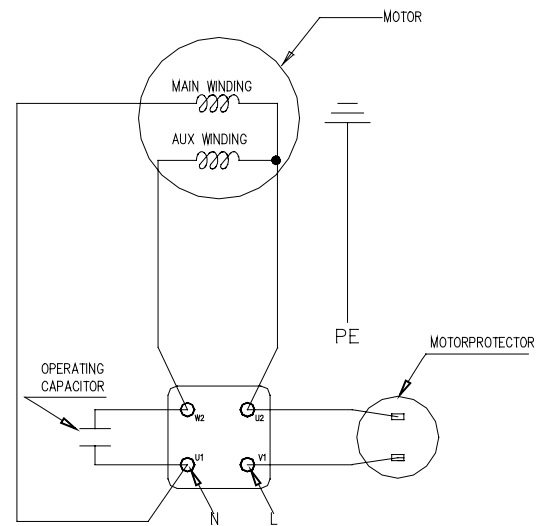
SINGLE PHASE MOTOR

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



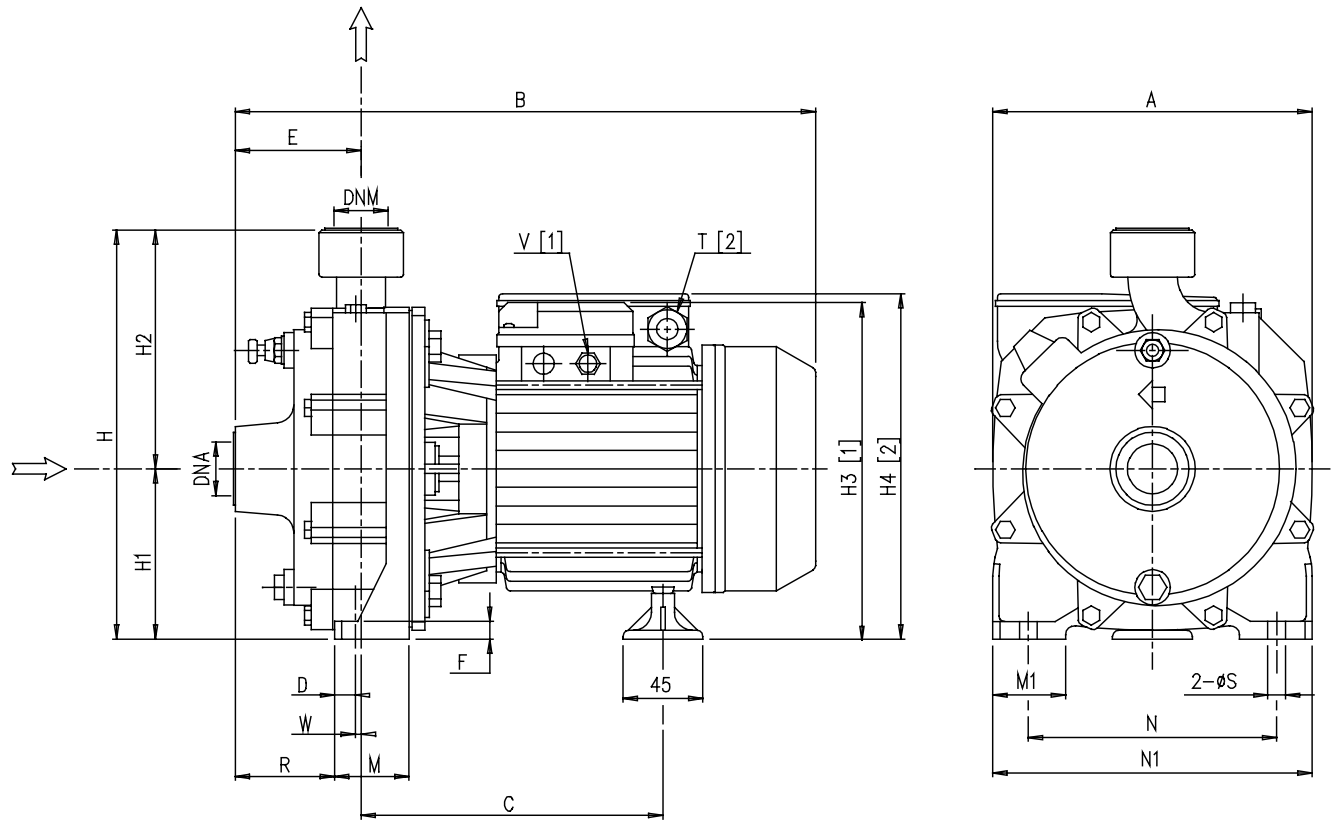
CDA 0.75 M  
CDA 1.00 M

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



CDA 1.50 M  
CDA 2.00 M

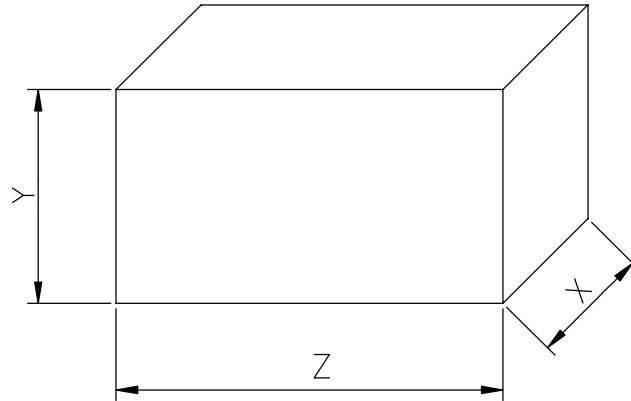
For model



| 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    |
| CDA 0.75M | 183           | 336.3 | 179.8 | 8.3 | 73   | 9  | 227   | 97    | 130 | -     | 198 | 42 | 40 | 140 | 180 | 57.5 | PG11   | -      | 6.8  | 9.5 | G 1    | G1     |
| CDA 0.75T | 183           | 336.3 | 179.8 | 8.3 | 73   | 9  | 227   | 97    | 130 | 197.5 | -   | 42 | 40 | 140 | 180 | 57.5 | -      | PG11   | 6.8  | 9.5 | G 1    | G1     |
| CDA 1.00M | 183           | 336.3 | 179.8 | 8.3 | 73   | 9  | 227   | 97    | 130 | -     | 198 | 42 | 40 | 140 | 180 | 57.5 | PG11   | -      | 6.8  | 9.5 | G 1    | G1     |
| CDA 1.00T | 183           | 336.3 | 179.8 | 8.3 | 73   | 9  | 227   | 97    | 130 | 197.5 | -   | 42 | 40 | 140 | 180 | 57.5 | -      | PG11   | 6.8  | 9.5 | G 1    | G1     |
| CDA 1.50M | 209           | 394.8 | 218.3 | 8.3 | 86   | 9  | 265   | 110   | 155 | -     | 242 | 48 | 40 | 155 | 195 | 65.5 | PG13.5 | -      | 12.3 | 9.5 | G1 1/4 | G1     |
| CDA 1.50T | 194           | 394.8 | 218.3 | 8.3 | 86   | 9  | 265   | 110   | 155 | 224   | -   | 48 | 40 | 155 | 195 | 65.5 | -      | PG11   | 12.3 | 9.5 | G1 1/4 | G1     |
| CDA 2.00M | 209           | 410.8 | 218.3 | 8.3 | 86   | 9  | 265   | 110   | 155 | -     | 242 | 48 | 40 | 155 | 195 | 65.5 | PG13.5 | -      | 12.3 | 9.5 | G1 1/4 | G1     |
| CDA 2.00T | 194           | 394.8 | 218.3 | 8.3 | 86   | 9  | 265   | 110   | 155 | 224   | -   | 48 | 40 | 155 | 195 | 65.5 | -      | PG11   | 12.3 | 9.5 | G1 1/4 | G1     |
| CDA 3.00T | 194           | 410.8 | 218.3 | 8.3 | 86   | 9  | 265   | 110   | 155 | 224   | -   | 48 | 40 | 155 | 195 | 65.5 | -      | PG11   | 12.3 | 9.5 | G1 1/4 | G1     |
| CDA 4.00T | 228           | 467.3 | 225.3 | 12  | 95.5 | 12 | 308.5 | 133.5 | 175 | 264.5 | -   | 57 | 50 | 180 | 230 | 71.5 | -      | G1 1/2 | 12.0 | 12  | G1 1/2 | G1 1/4 |
| CDA 5.50T | 228           | 467.3 | 225.3 | 12  | 95.5 | 12 | 308.5 | 133.5 | 175 | 264.5 | -   | 57 | 50 | 180 | 230 | 71.5 | -      | G1 1/2 | 12.0 | 12  | G1 1/2 | G1 1/4 |

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





| Type pumps   |             | PACKING [mm] |     |     | WEIGHT [kg] |
|--------------|-------------|--------------|-----|-----|-------------|
| Single phase | Three phase | X            | Y   | Z   |             |
| CDA 0.75 M   | CDA 0.75 T  | 210          | 265 | 355 | 13.5        |
| CDA 1.00 M   | CDA 1.00 T  | 210          | 265 | 355 | 15          |
| CDA 1.50 M   | CDA 1.50 T  | 240          | 300 | 415 | 25          |
| CDA 2.00 M   | CDA 2.00 T  | 240          | 300 | 415 | 27          |
| -            | CDA 3.00 T  | 240          | 300 | 415 | 27          |
| -            | CDA 4.00 T  | 265          | 340 | 476 | 42.5        |
| -            | CDA 5.50 T  | 265          | 340 | 476 | 46.3        |

## TECHNICAL DATA

50 Hz

Rev E

| Type pumps                     |                                   | kW   | HP   | Capacitor          |     | Input [kW]      |                | Full load current [A] |                              |     | Locked rotor current [A] |                              |      |
|--------------------------------|-----------------------------------|------|------|--------------------|-----|-----------------|----------------|-----------------------|------------------------------|-----|--------------------------|------------------------------|------|
| Single phase<br>230 V<br>50 Hz | Three phase<br>230/400 V<br>50 Hz |      |      | Single phase<br>µF | Vc  | Single<br>Phase | Three<br>Phase | Single<br>Phase       | Three Phase<br>230 V   400 V |     | Single phase<br>230 V    | Three Phase<br>230 V   400 V |      |
| CDA 0.75 M                     | CDA 0.75 T                        | 0,55 | 0,75 | 16                 | 450 | 1,1             | 1,05           | 5,0                   | 3,4                          | 2,0 | 16,1                     | 17,0                         | 9,8  |
| CDA 1.00 M                     | CDA 1.00 T                        | 0,75 | 1    | 20                 | 450 | 1,38            | 1,18           | 6,1                   | 4,0                          | 2,3 | 24                       | 24,4                         | 14,1 |
| CDA 1.50 M                     | CDA 1.50 T                        | 1,1  | 1,5  | 35                 | 450 | 1,85            | 1,8            | 8,6                   | 5,6                          | 3,3 | 38                       | 32,9                         | 19   |
| CDA 2.00 M                     | CDA 2.00 T                        | 1,5  | 2    | 40                 | 450 | 2,35            | 2,25           | 10,8                  | 7,2                          | 4,1 | 43                       | 41,5                         | 24   |
| -                              | CDA 3.00 T                        | 2,2  | 3    | -                  | -   | -               | 2,8            | -                     | 8,8                          | 5,1 | -                        | 50,2                         | 29   |
| -                              | CDA 4.00 T                        | 3    | 4    | -                  | -   | -               | 4,2            | -                     | 13,0                         | 7,5 | -                        | 84,1                         | 48,6 |
| -                              | CDA 5.50 T                        | 4    | 5,5  | -                  | -   | -               | 5,05           | -                     | 16,5                         | 9,5 | -                        | 129,8                        | 75   |

| Type pumps            |                          | Ball Bearing |          |
|-----------------------|--------------------------|--------------|----------|
| Single phase<br>230 V | Three Phase<br>230/400 V | Pump side    | Fan side |
| CDA 0.75 M            | CDA 0.75 T               | 6202 ZZ      | 6202 ZZ  |
| CDA 1.00 M            | CDA 1.00 T               | 6202 ZZ      | 6202 ZZ  |
| CDA 1.50 M            | CDA 1.50 T               | 6204 ZZ      | 6203 ZZ  |
| CDA 2.00 M            | CDA 2.00 T               | 6204 ZZ      | 6203 ZZ  |
| -                     | CDA 3.00 T               | 6204 ZZ      | 6203 ZZ  |
| -                     | CDA 4.00 T               | 6306 ZZ      | 6205 ZZ  |
| -                     | CDA 5.50 T               | 6306 ZZ      | 6205 ZZ  |