

C Centrifugal Pumps with open impeller



Construction

Close-coupled centrifugal pumps with open impeller. Free-flow impeller (vortex or recessed impeller) for type C 16/1E.

C: version with pump casing and lantern bracket in cast iron.
B-C: version with pump casing and lantern bracket in bronze (the pumps are supplied fully painted).

Applications

For moderately dirty liquids or emulsions. For industry and agriculture.

Operating conditions

Liquid temperature from -10 °C to +90 °C.
Ambient temperature up to 40 °C.
Total suction lift up to 8 m.
Maximum permissible working pressure: 6 bar.
Maximum size of solids: 4 mm.
Continuous duty.

Motor

2-pole induction motor, 50 Hz (n ≈ 2900 rpm).
C: three-phase 230/400 V ± 10%.
CM: single-phase 230 V ± 10%, with thermal protector. Capacitor inside the terminal box.

Insulation class F.
Protection IP 54.

Motor suitable for operation with frequency converter from 1,1 kW.

Classification scheme IE3 for three-phase motors from 0,75 kW.

Constructed in accordance with: EN 60034-1; EN 60034-30-1. EN 60335-1, EN 60335-2-41.

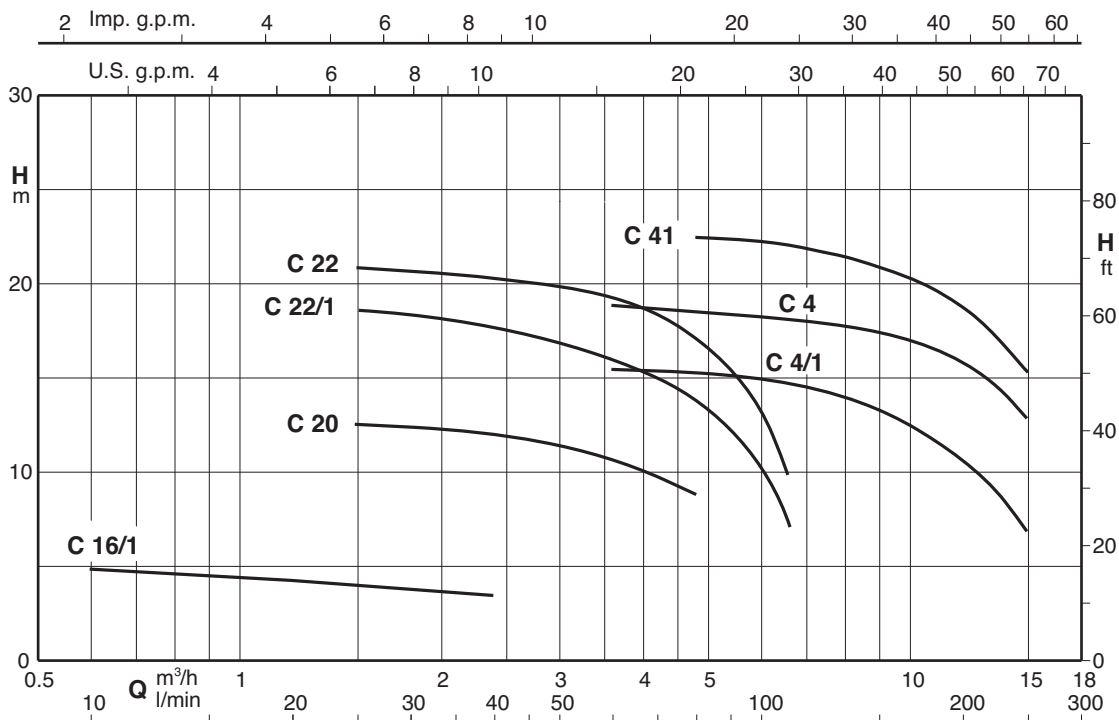
Materials

| Component | C | B-C |
|-----------------|---|--|
| Pump casing | Cast iron GJL 200 EN 1561 | Bronze G-Cu Sn 10 EN 1982 |
| Lantern bracket | Cast iron GJL 200 EN 1561 | Bronze G-Cu Sn 10 EN 1982 |
| Impeller | Brass P- Cu Zn 40 Pb 2 UNI 5705 | |
| Shaft | Chrome steel 1.4104 EN 10088 (AISI 430) | Cr-Ni-Mo steel 1.4401 EN 10088 (AISI 316) |
| | Chrome-nickel steel 1.4305 EN 10088 (AISI 303) for C 41 | |
| Mechanical seal | Carbon - Ceramic - NBR | |

Special features on request

- Other voltages.
- Frequency 60 Hz (as per 60 Hz data sheet).
- Protection IP 55.
- Special mechanical seal
- Higher or lower liquid or ambient temperatures.
- Motor suitable for operation with frequency converter up to 0,75 kW.
- Construction with bearing bracket.

Coverage chart n ≈ 2900 rpm



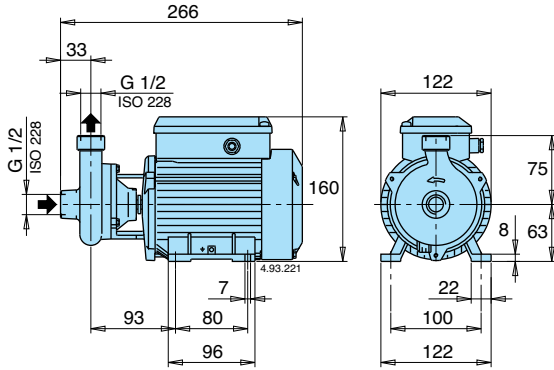


Performance $n \approx 2900$ rpm

| 3 ~ | 230V 400V | | 1 ~ | 230V | | P ₁ | | P ₂ | | Q m ³ /h l/min | 0,6 | 0,9 | 1,2 | 1,5 | 1,8 | 2,4 | 3 | 3,6 | 4,8 | 6 | 6,6 | 8,4 | 9,6 | 10,8 | 12 | 13,2 | 15 | | |
|------------------------------|------------|------------|--------------------------------|------------|------|----------------|------|----------------|----|---------------------------------|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--|--|
| | A | A | | A | kW | kW | HP | l/min | 10 | | 15 | 20 | 25 | 30 | 40 | 50 | 60 | 80 | 100 | 110 | 140 | 160 | 180 | 200 | 220 | 250 | | | |
| C 16/1E B-C 16/1E | 1,7 | 1 | CM 16/1E B-CM 16/1E | 1,2 | 0,16 | 0,15 | 0,2 | H m | 5 | 4,7 | 4,4 | 4,2 | 4 | 3,6 | | | | | | | | | | | | | | | |
| C 20E B-C 20/A | 1,9 2,3 | 1,1 1,3 | CM 20E B-CM 20/A | 2,5 2,8 | 0,4 | 0,37 | 0,5 | | | | | 12,3 | 12,2 | 12 | 11,5 | 10,8 | 9 | | | | | | | | | | | | |
| C 22/1E B-C 22/1/A | 2,4 2,3 | 1,4 1,3 | CM 22/1E B-CM 22/1/A | 3 3,6 | 0,8 | 0,45 | 0,6 | | | | | 18 | 18 | 17,5 | 17 | 16 | 14 | 10 | 7,5 | | | | | | | | | | |
| C 22E B-C 22/A | 3 | 1,7 | CM 22E B-CM 22/A | 3,5 4,5 | 0,9 | 0,55 | 0,75 | | | | | 20,5 | 20 | 20 | 19 | 18,5 | 16,5 | 14 | 12 | | | | | | | | | | |
| C 4/1/A | 3 | 1,7 | CM 4/1/A | 4,5 | 0,91 | 0,55 | 0,75 | | | | | | | | | | 15,6 | 15,4 | 15,2 | 15 | 14 | 13,1 | 12 | 10,8 | 9,5 | 7 | | | |
| C 4/B B-C 41/1E | 3,7 3,3 | 2,2 1,9 | CM 4/A B-CM 41/1E | 5,7 5,8 | 1,2 | 0,75 | 1 | | | | | | | | | | 19 | 18,8 | 18,5 | 18,3 | 17,7 | 17,4 | 16,8 | 16 | 15 | 13 | | | |
| C 41/A B-C 41/A | 4,7 | 2,7 | CM 41E B-CM 41E | 7,4 | 1,6 | 1,1 | 1,5 | | | | | | | | | | | | 22,4 | 22,3 | 22,2 | 21,5 | 21 | 20,5 | 19,5 | 18 | 15,5 | | |

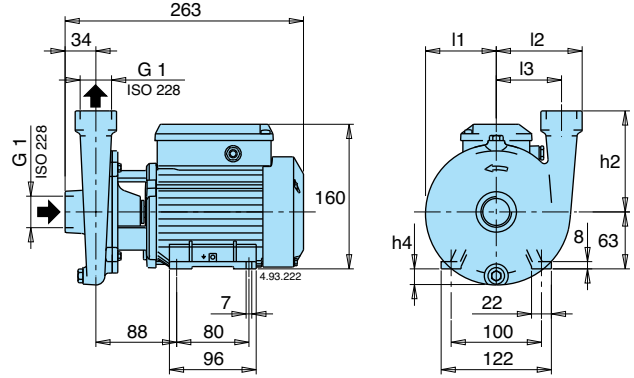
P₁ Maximum power input. B-C, B-CM = Bronze construction. ρ = Density 1000 kg/m³. Tolerances according to UNI EN ISO 9906:2012
P₂ Rated motor power output. H Total head in m. υ = Kinematic viscosity max 20 mm²/sec.

Dimensions and weights

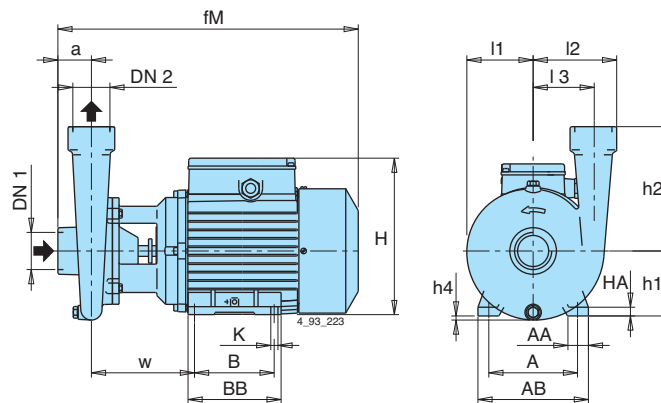


| TYPE | kg |
|-----------------|-----|
| C 16/1E | 5,2 |
| CM 16/1E | 5,2 |

| TYPE | kg |
|-------------------|-----|
| B-C 16/1E | 5,6 |
| B-CM 16/1E | 5,6 |

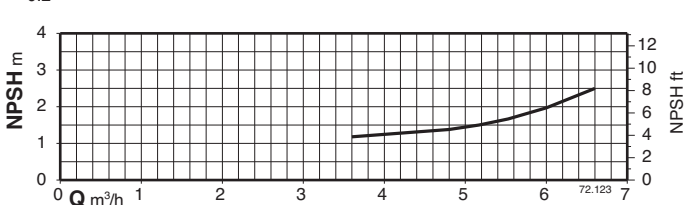
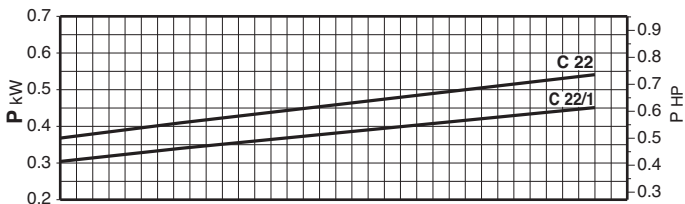
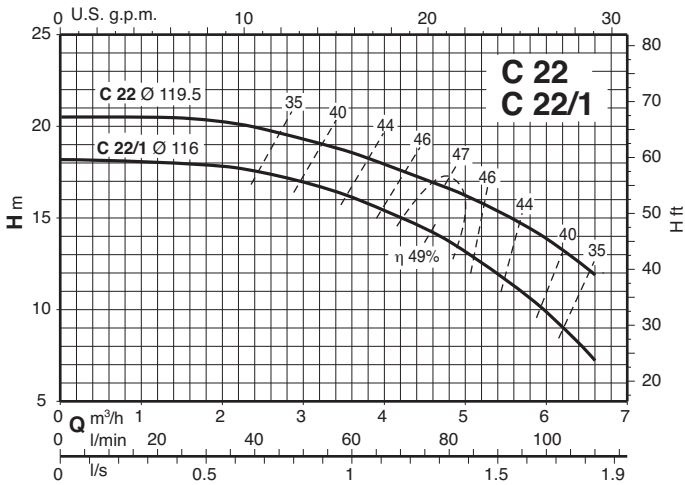
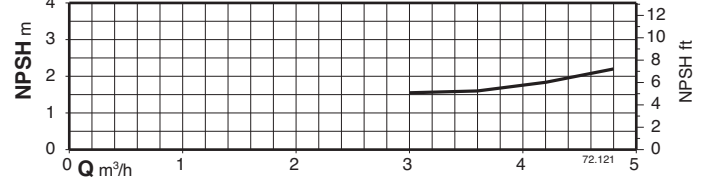
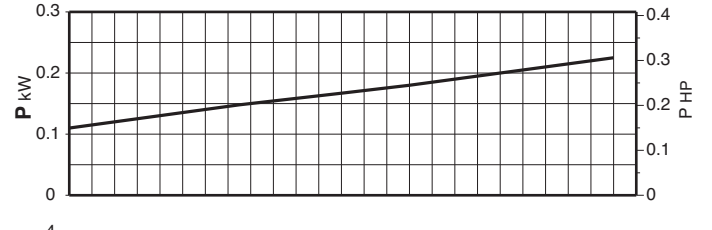
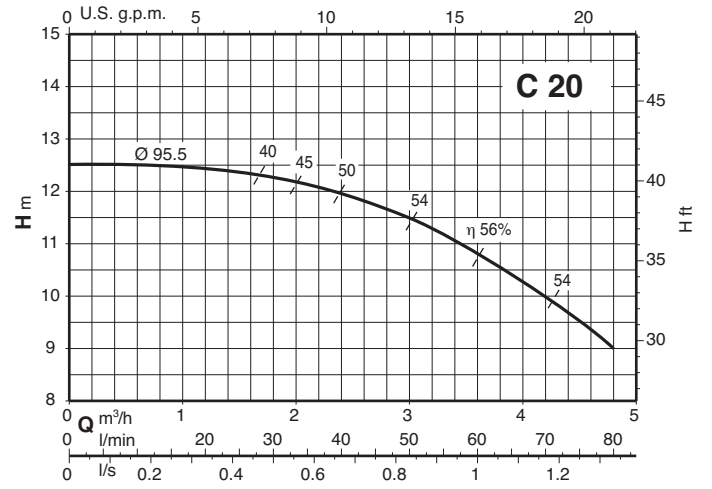
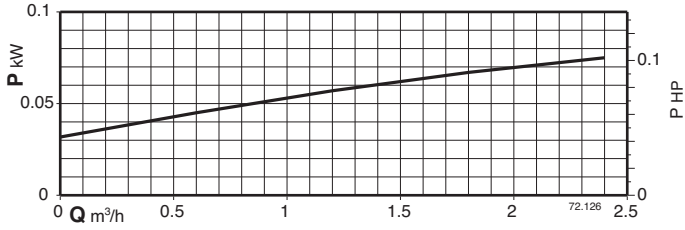
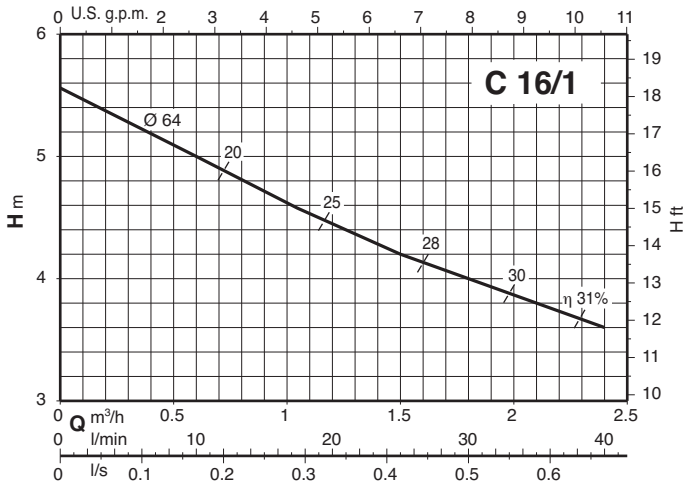


| TYPE | mm | | | | | kg | |
|------------------------|-----|----|----|----|----|---------|---------|
| | h2 | h4 | l1 | l2 | l3 | C | CM |
| C 20E | 90 | 5 | 67 | 82 | 60 | 6,8 | 6,8 |
| C 22/1E - C 22E | 110 | 17 | 77 | 94 | 71 | 8 - 8,3 | 8 - 8,3 |

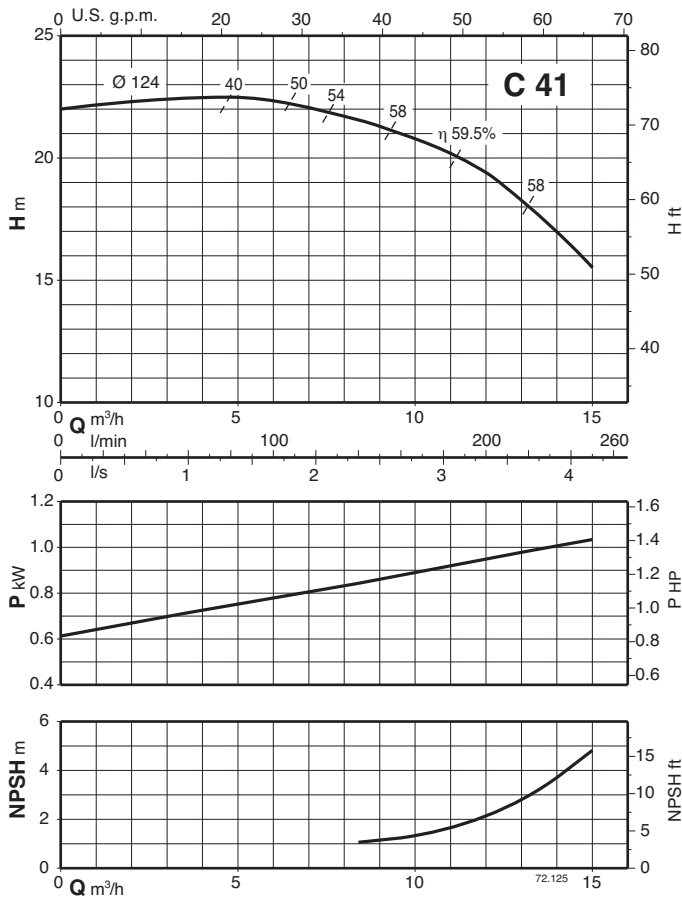
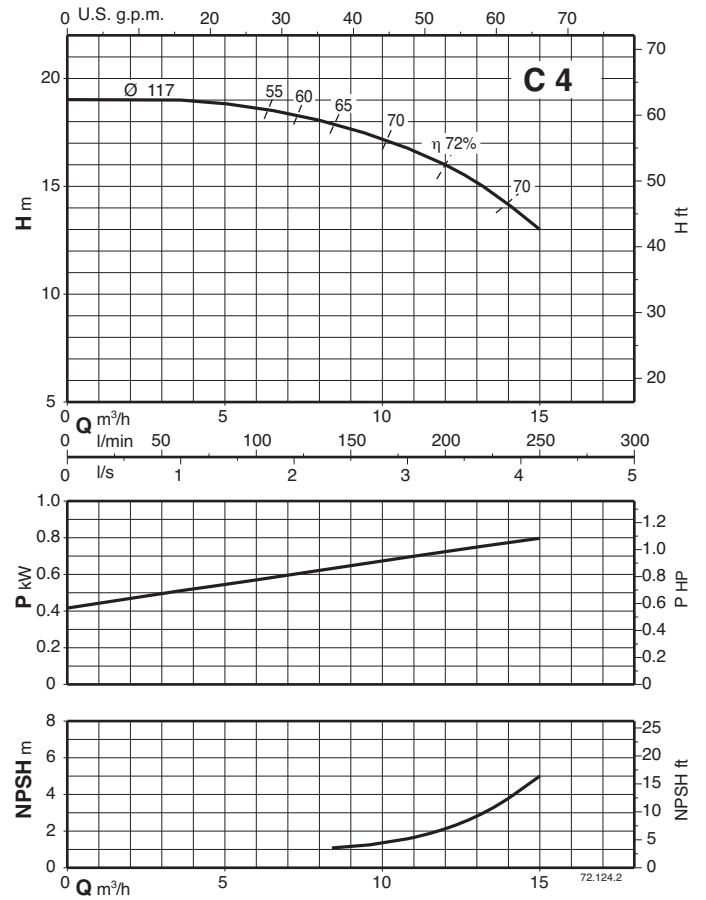
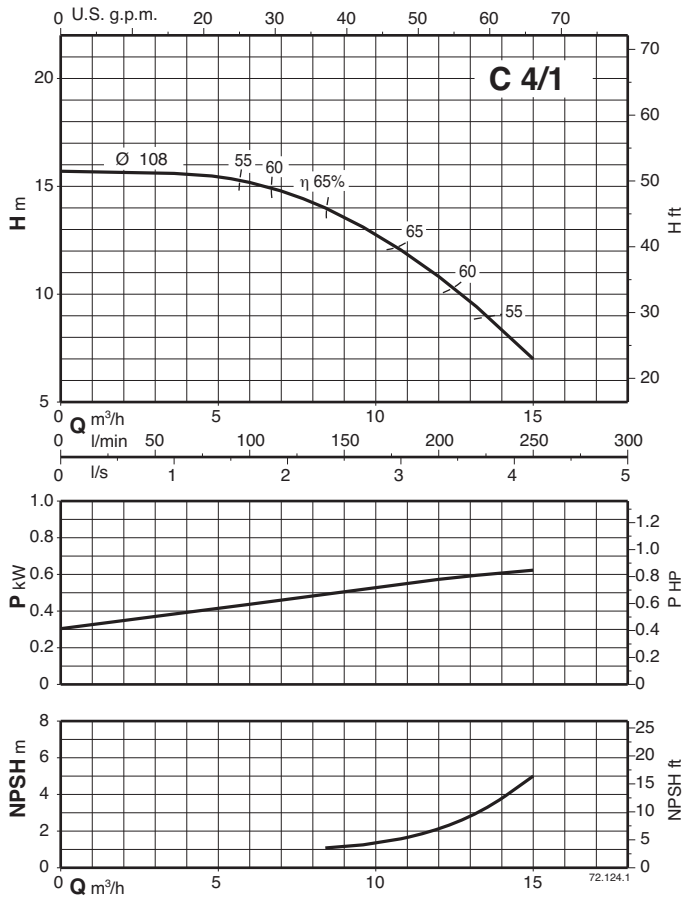


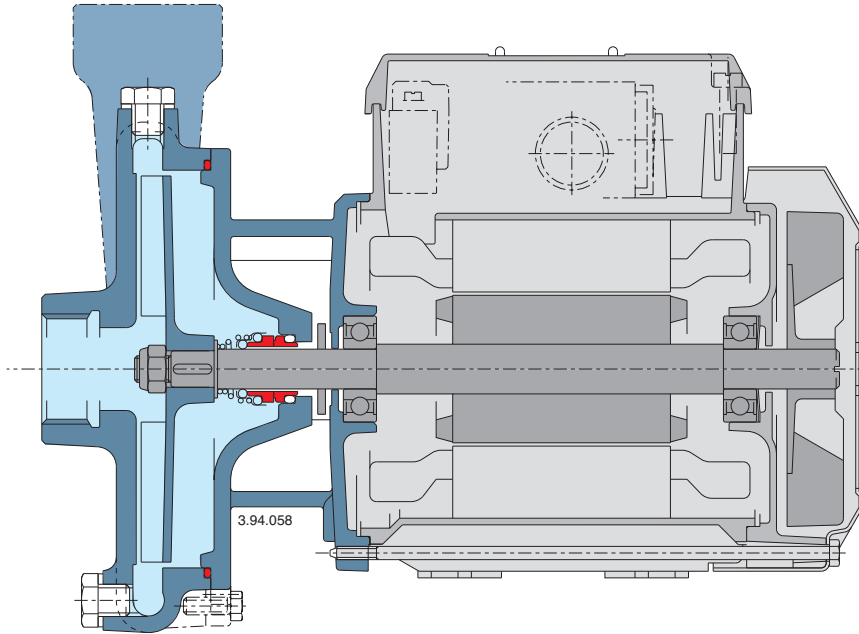
| TYPE | DN1 ISO 228 | DN2 ISO 228 | mm | | | | | | | | | | | | | | | | kg | | | | |
|---|----------------|----------------|----|-----|----|-----|-----|----|-----|-----|-----|-----|----|-----|----|-----|----|-----|----|--------------|--------------|--------------|--------------|
| | | | a | fM | h1 | h2 | H | h4 | BB | B | AB | A | AA | K | l1 | l2 | l3 | w | HA | C | CM | B-C | B-CM |
| - B-C 20/A | G 1 | G 1 | 35 | 303 | 71 | 90 | 182 | - | 106 | 90 | 134 | 112 | 22 | 7 | 70 | 84 | 60 | 105 | 10 | - | - | 9,1 | 9,1 |
| - B-C 22/1/A - B-C 22/A | G 1 | G 1 | 35 | 303 | 71 | 110 | 182 | 9 | 106 | 90 | 134 | 112 | 22 | 7 | 81 | 93 | 71 | 106 | 10 | - | - | 9,3 9,6 | 10,3 10,6 |
| C 4/1/A - C 4/B - | G 1 1/2 | G 1 1/2 | 43 | 304 | 71 | 160 | 182 | 18 | 106 | 90 | 134 | 112 | 22 | 7 | 85 | 108 | 78 | 100 | 10 | 10,8 12,6 | 11,8 12,8 | - | - |
| - B-C 41/1E C 41/A B-C 41/A | G 1 1/2 | G 1 1/2 | 43 | 380 | 80 | 160 | 208 | 9 | 125 | 100 | 155 | 125 | 30 | 9,5 | 85 | 108 | 78 | 132 | 10 | - | - | 16,3 18,5 | 17,9 20,1 |

Characteristic curves $n \approx 2900$ rpm



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Features**Flexible**

The option to choose between cast iron and bronze materials for the hydraulic parts in contact with the pumped liquid allows C series pumps to be selected for use with different types of liquids.

Solid parts

The open impeller allows for the passage of suspended solids in pumped liquid.

Reliable

The bearing and shaft are designed to ensure the reduction of the stress, providing high reliability under all operating conditions.