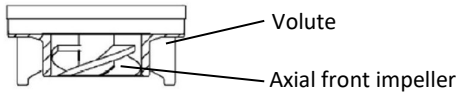
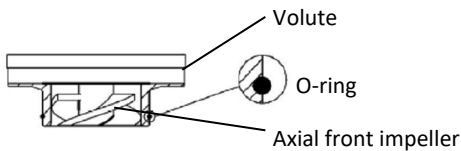


## IPA/IPF PUMP

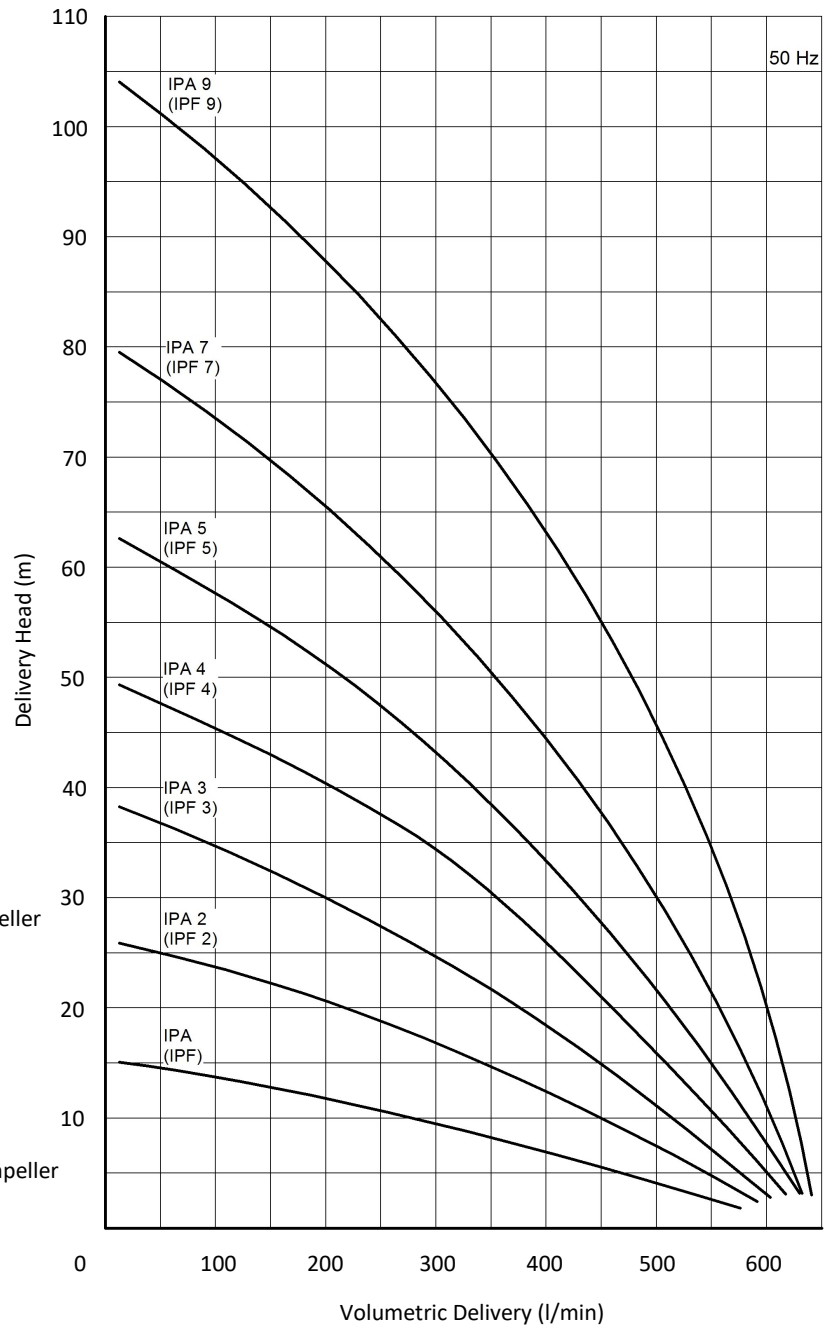


IPA - Axial front impeller pump



IPF - Axial front impeller pump with o-ring

Performance Curve



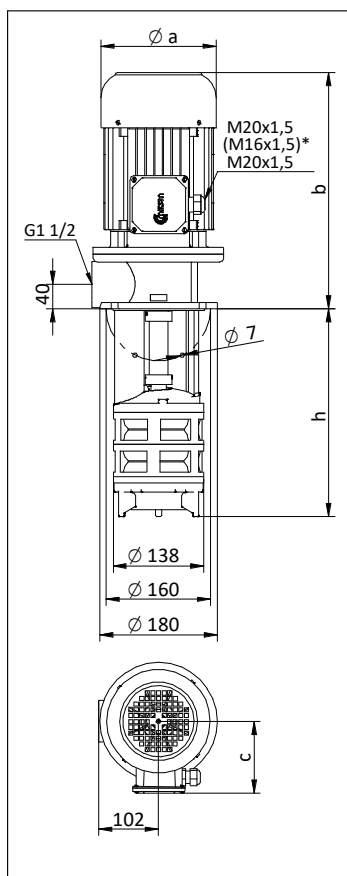
### IPA PUMP

#### Applications:

- IPA pump has an additional axial impeller,
- It is used for pumping the liquid foam resulting from high-speed machining operations,
- Pumping metal chips together with the fluid by mixing,
- Filtration systems,
- Hot liquid applications,
- IPA Pumps are used for pumping of cutting / cooling fluids in circulation systems.

#### Fluid Specifications:

- Coolants,
- Cutting oils,
- Grinding oils,
- Water,
- Fluid temperature 0...80 °C
- Kinematic viscosity 1...90 mm<sup>2</sup>/s



## DIMENSIONS & NOMINAL VALUES

| TYPE          | Depth of immersion<br>h (mm) |     |     |     | Weight | Power | Voltage | Frequency | Rated current | Speed |
|---------------|------------------------------|-----|-----|-----|--------|-------|---------|-----------|---------------|-------|
|               |                              | a   | b   | c   |        |       |         |           |               |       |
|               |                              | mm  |     |     | kg     | kW    | V(Δ/Y)  | Hz        | A             | rpm   |
| IPA(F) /210   | 210                          | 157 | 319 | 118 | 24.5   | 1.1   | 230/400 | 50        | 4.16/2.4      | 2890  |
| IPA(F) /280   | 280                          |     |     |     | 26.0   |       |         |           |               |       |
| IPA(F) /360   | 360                          |     |     |     | 27.0   |       |         |           |               |       |
| IPA(F) /450   | 450                          |     |     |     | 28.5   |       |         |           |               |       |
| IPA(F) /560   | 560                          |     |     |     | 30.5   |       |         |           |               |       |
| IPA(F) -2/210 | 210                          | 176 | 363 | 139 | 34.5   | 2.2   | 230/400 | 50        | 7.79/4.5      | 2905  |
| IPA(F) -2/270 | 270                          |     |     |     | 35.0   |       |         |           |               |       |
| IPA(F) -2/340 | 340                          |     |     |     | 36.0   |       |         |           |               |       |
| IPA(F) -2/420 | 420                          |     |     |     | 37.0   |       |         |           |               |       |
| IPA(F) -2/510 | 510                          |     |     |     | 38.5   |       |         |           |               |       |
| IPA(F) 2/620  | 620                          |     |     |     | 40.5   |       |         |           |               |       |
| IPA(F) -3/270 | 270                          | 194 | 398 | 150 | 47.0   | 4.0   | 230/400 | 50        | 13.68/7.9     | 2900  |
| IPA(F) -3/330 | 330                          |     |     |     | 47.5   |       |         |           |               |       |
| IPA(F) -3/400 | 400                          |     |     |     | 48.5   |       |         |           |               |       |
| IPA(F) -3/480 | 480                          |     |     |     | 50.0   |       |         |           |               |       |
| IPA(F) -3/570 | 570                          |     |     |     | 51.5   |       |         |           |               |       |
| IPA(F) -3/680 | 680                          |     |     |     | 53.5   |       |         |           |               |       |
| IPA(F) -4/330 | 330                          | 218 | 412 | 163 | 54.5   | 5.5   | 230/400 | 50        | 17.15/9.9     | 2900  |
| IPA(F) -4/390 | 390                          |     |     |     | 55.0   |       |         |           |               |       |
| IPA(F) -4/460 | 460                          |     |     |     | 56.0   |       |         |           |               |       |
| IPA(F) -4/540 | 540                          |     |     |     | 57.5   |       |         |           |               |       |
| IPA(F) -4/630 | 630                          |     |     |     | 59.0   |       |         |           |               |       |
| IPA(F) -4/740 | 740                          |     |     |     | 61.0   |       |         |           |               |       |
| IPA(F) -5/390 | 390                          | 218 | 412 | 163 | 58.0   | 5.5   | 230/400 | 50        | 17.15/9.9     | 2900  |
| IPA(F) -5/450 | 450                          |     |     |     | 58.5   |       |         |           |               |       |
| IPA(F) -5/520 | 520                          |     |     |     | 59.5   |       |         |           |               |       |
| IPA(F) -5/600 | 600                          |     |     |     | 61.0   |       |         |           |               |       |
| IPA(F) -5/690 | 690                          |     |     |     | 62.5   |       |         |           |               |       |
| IPA(F) -7/510 | 510                          | 258 | 495 | 177 | 89.0   | 7.5   | 400Δ    | 50        | 14.0          | 2930  |
| IPA(F) -7/570 | 570                          |     |     |     | 89.5   |       |         |           |               |       |
| IPA(F) -7/640 | 640                          |     |     |     | 90.5   |       |         |           |               |       |
| IPA(F) -7/720 | 720                          |     |     |     | 92.0   |       |         |           |               |       |
| IPA(F) -7/810 | 810                          |     |     |     | 93.5   |       |         |           |               |       |
| IPA(F) -9/630 | 630                          | 258 | 495 | 177 | 105.5  | 11.0  | 400Δ    | 50        | 19.7          | 2930  |
| IPA(F) -9/690 | 690                          |     |     |     | 106.0  |       |         |           |               |       |
| IPA(F) -9/760 | 760                          |     |     |     | 107.0  |       |         |           |               |       |

\* M16x1,5 cable gland is used on IPA(F) 1 pump.

\*\* The performance curves are based on 1 mm<sup>2</sup>/s (cSt) kinematic viscosity values and 1000 kg/m<sup>3</sup> density

\*\*\* Curve tolerance according to EN ISO 9906.

## IPF PUMP

### Applications:

- IPF pumps are used for pumping of liquid from vacuum zone on filtration systems. The pump works at vacuum zone, therefore it has an o-ring at the pump inlet. It also has an additional axial front impeller.

### Fluid Specifications:

- Coolants,
- Cutting oils,
- Grinding oils,
- Water,
- Fluid temperature 0...80 °C
- Kinematic viscosity 1...90 mm<sup>2</sup>/s

### Materials:

|                        |                                                                          |
|------------------------|--------------------------------------------------------------------------|
| Pump body              | : Cast iron - DIN GG 25                                                  |
| Volute                 | : Cast iron - DIN GG 25                                                  |
| Impeller               | : Investment casting steel - AISI 4140 (DIN 42CrMo4)                     |
| Axial (front) impeller | : Investment casting steel - AISI 4140 (DIN 42CrMo4)                     |
| O-ring                 | : Viton                                                                  |
| Pump shaft             | : Engineering steel - AISI 1040 (DIN C35)                                |
| Electric motor         | : 3 phase induction motor<br>2 pole, 3000 rpm<br>Protection degree IP 54 |