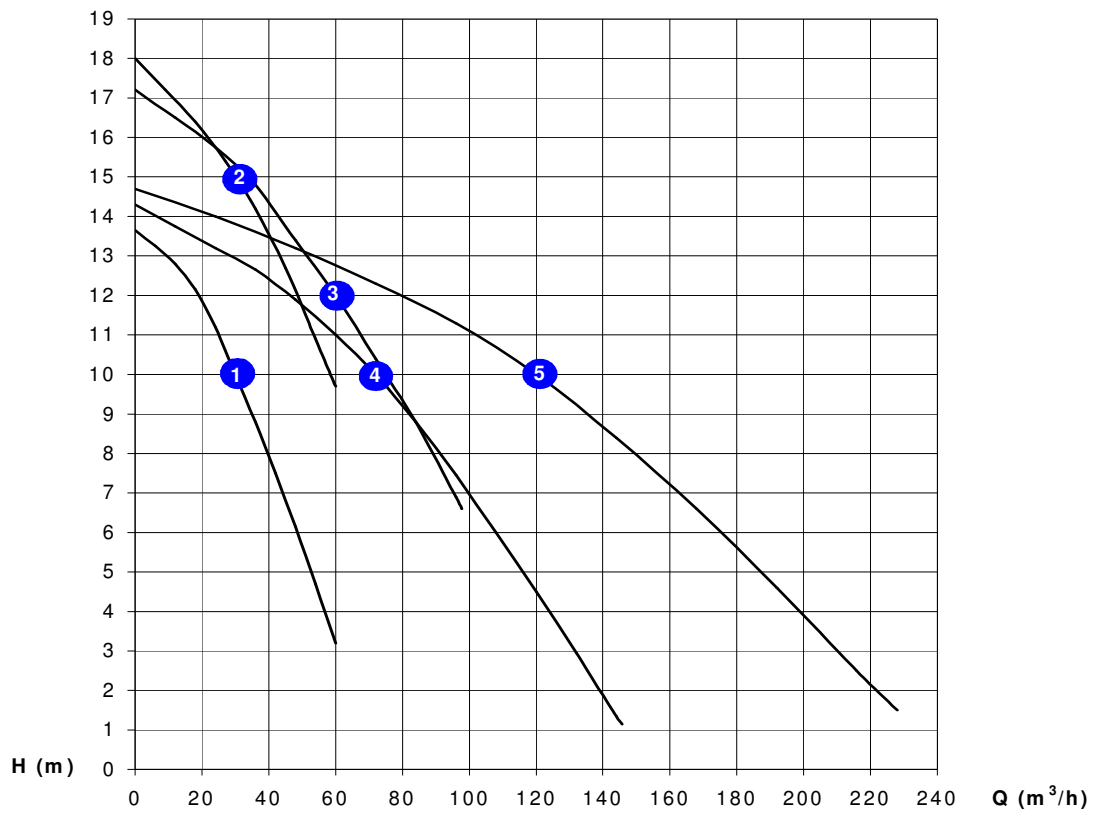


# Toyo

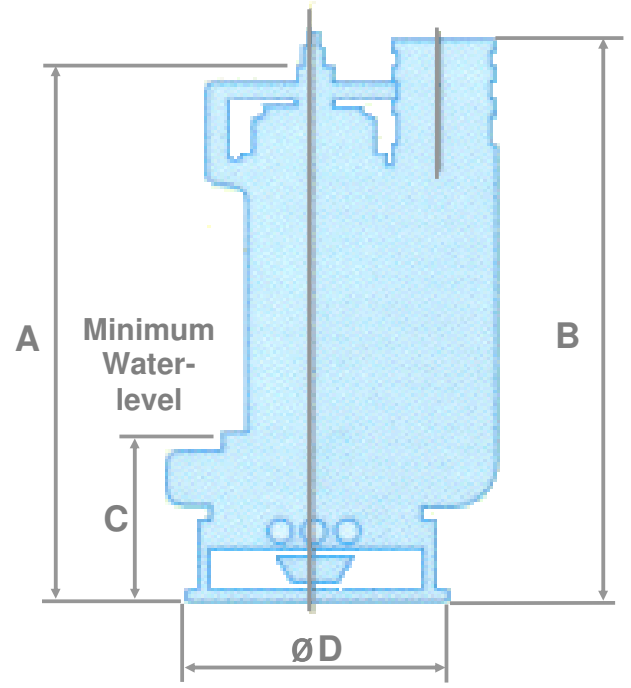
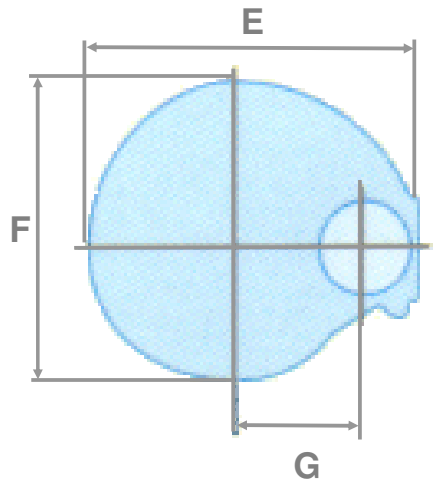
Wear resistant pumps with agitator

**TECHNICAL SPECIFICATIONS  
GR PUMPS**

Performance curves



| N° | Type        | Outlet (inch)(mm) | Capacity (m³/h) | Manom. head (m) | Particle size (mm) | Power (kW) | Revolution (1/min) 50Hz | Current (A) 400 V | Electr. Cable       | Weight (kg) |
|----|-------------|-------------------|-----------------|-----------------|--------------------|------------|-------------------------|-------------------|---------------------|-------------|
| 1  | GR 3-2      | 3 80              | 30              | 10              | 22                 | 2,2        | 1425                    | 5,5               | 4x6mm <sup>2</sup>  | 115         |
| 2  | GR 5-2      | 3 80              | 30              | 15              | 22                 | 3,7        | 1445                    | 8,5               | 4x6mm <sup>2</sup>  | 135         |
| 3  | GR 7,5-2    | 4 100             | 60              | 12              | 25                 | 5,5        | 1425                    | 11                | 4x10mm <sup>2</sup> | 145         |
| 4  | GR 10-100-2 | 4 100             | 72              | 10              | 35                 | 7,5        | 1435                    | 15                | 4x10mm <sup>2</sup> | 180         |
| 5  | GR 10-2     | 6 150             | 120             | 10              | 35                 | 7,5        | 1435                    | 15                | 4x10mm <sup>2</sup> | 180         |



| DIMENSIONS |             | A   | B   | C   | D   | E   | F   | G   |
|------------|-------------|-----|-----|-----|-----|-----|-----|-----|
| 1          | GR 3-2      | 677 | 673 | 235 | 384 | 395 | 370 | 160 |
| 2          | GR 5-2      | 742 | 738 | 235 | 384 | 395 | 370 | 160 |
| 3          | GR 7,5-2    | 775 | 758 | 250 | 396 | 425 | 401 | 170 |
| 4          | GR 10-100-2 | 800 | 843 | 250 | 396 | 500 | 450 | 195 |
| 5          | GR 10-2     | 800 | 843 | 250 | 396 | 500 | 450 | 195 |

• **Concept :**

The TOYO GR range of submersible pumps with agitator has been specially designed to handle heavy and abrasive slurries.

These centrifugal pumps, with semi-open impeller, feature a unique agitator design. This agitator lifts sediments into suspension, creating a slurry mixture. GR pumps enable continuous pumping of sludge with a density of 1,1 kg/dm<sup>3</sup>.

Robust construction, careful selection of materials and unique contour components, have produced a pump with excellent abrasion resistance. These characteristics ensure long service life and economical operation. The impeller, the wear plates and the agitator are manufactured in cast chrome iron (24 to 28 % Cr).

A strong short shaft, supported by a series of carefully selected bearings and an assembly of special seals, ensure tightness in hardest of conditions.

The axial flow of the pumped liquid allows reducing the outer diameter of pump and hoses assembly.

The cooling of the electric class F motor is assured by environment.

Servicing the pumps and maintaining good working order is easy. One adjustable wear plate allows optimizing hydraulic efficiency of the pump.

• **Operating conditions :**

GR pumps can handle slurries with solid contents of up to 30 % by weight, particle sizes up to 35 mm and liquid temperatures up to 60°C with pH levels between 4 and 9,5.

The maximum operating depth is 30 m.

• **Electric power requirements\* :**

| Pumptype    | Power kVA | Amp. 400 V |
|-------------|-----------|------------|
| GR 3-2      | 7         | 5,5        |
| GR 5-2      | 12        | 8,5        |
| GR 7,5-2    | 17        | 11         |
| GR 10-100-2 | 24        | 15         |
| GR 10-2     | 24        | 15         |

\*These figures are given as an indication.

• **Electric cable :**

The standard cable type to be used for connecting the pump is HO7RN-F and its specifications should correspond to the following :

| Pumptype    | Section                | Outer diam. mm | Max. length m/400V |
|-------------|------------------------|----------------|--------------------|
| GR 3-2      | 4 x 6 mm <sup>2</sup>  | 19             | 500                |
| GR 5-2      | 4 x 6 mm <sup>2</sup>  | 19             | 340                |
| GR 7,5-2    | 4 x 10 mm <sup>2</sup> | 23             | 400                |
| GR 10-100-2 | 4 x 10 mm <sup>2</sup> | 23             | 290                |
| GR 10-2     | 4 x 10 mm <sup>2</sup> | 23             | 290                |



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