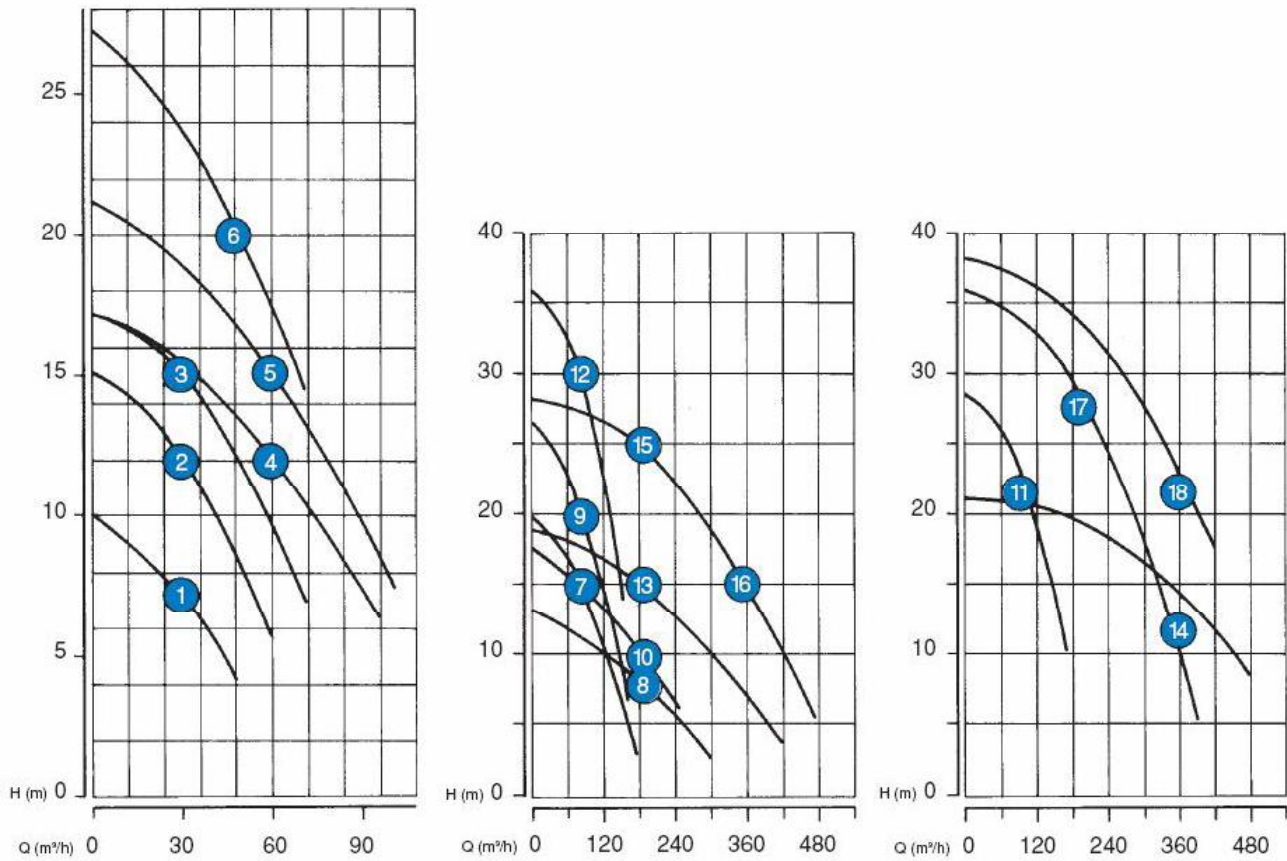


# Toyo

Wear resistant pumps with agitator

TECHNICAL SPECIFICATIONS  
 DPE PUMPS

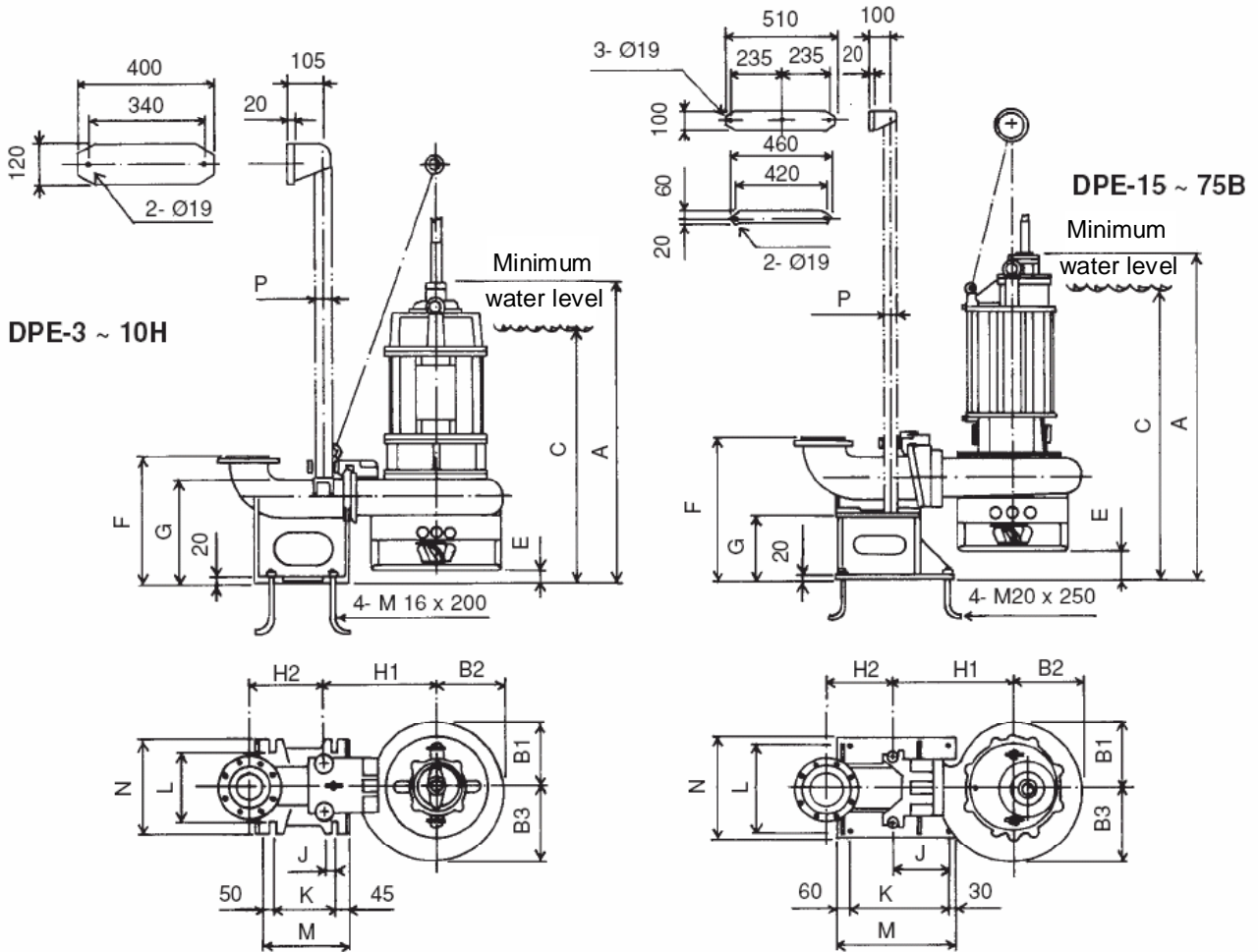
## Performance curves



| Nr | Type     | Outlet (inch)(mm) |     | Capacity (m <sup>3</sup> /h) | Manom. head (m) | Particle size (mm) | Power (kW) | Revolution (1/min) 50Hz | Current (A) 400 V | Electr. cable       | Weight (kg) |
|----|----------|-------------------|-----|------------------------------|-----------------|--------------------|------------|-------------------------|-------------------|---------------------|-------------|
| 1  | DPE 3    | 3                 | 80  | 30                           | 7               | 20                 | 2.2        | 1430                    | 5.0               | 4x6mm <sup>2</sup>  | 145         |
| 2  | DPE 5    | 3                 | 80  | 30                           | 12              | 20                 | 3.7        | 1430                    | 8.3               | 4x6mm <sup>2</sup>  | 155         |
| 3  | DPE 7.5  | 3                 | 80  | 30                           | 15              | 25                 | 5.5        | 1445                    | 11.8              | 4x10mm <sup>2</sup> | 195         |
| 4  | DPE 7.5B | 4                 | 100 | 60                           | 12              | 25                 | 5.5        | 1445                    | 11.8              | 4x10mm <sup>2</sup> | 205         |
| 5  | DPE 10   | 4                 | 100 | 60                           | 15              | 25                 | 7.5        | 1445                    | 16.3              | 4x10mm <sup>2</sup> | 215         |
| 6  | DPE 10H  | 4                 | 100 | 48                           | 20              | 14                 | 7.5        | 1445                    | 16.3              | 4x10mm <sup>2</sup> | 225         |
| 7  | DPE 15   | 4                 | 100 | 90                           | 15              | 35                 | 11         | 960                     | 24.0              | 4x10mm <sup>2</sup> | 470         |
| 8  | DPE 15B  | 6                 | 150 | 192                          | 8               | 60                 | 11         | 960                     | 24.0              | 4x10mm <sup>2</sup> | 490         |
| 9  | DPE 20   | 4                 | 100 | 90                           | 20              | 35                 | 15         | 970                     | 32.0              | 4x10mm <sup>2</sup> | 550         |
| 10 | DPE 20B  | 6                 | 150 | 192                          | 10              | 60                 | 15         | 970                     | 32.0              | 4x10mm <sup>2</sup> | 520         |
| 11 | DPE 20H  | 4                 | 100 | 90                           | 22              | 15                 | 15         | 970                     | 32.0              | 4x10mm <sup>2</sup> | 550         |
| 12 | DPE 30   | 4                 | 100 | 90                           | 30              | 35                 | 22         | 975                     | 46.0              | 4x16mm <sup>2</sup> | 750         |
| 13 | DPE 30B  | 6                 | 150 | 192                          | 15              | 60                 | 22         | 975                     | 46.0              | 4x16mm <sup>2</sup> | 710         |
| 14 | DPE 40B  | 8                 | 200 | 360                          | 12              | 40                 | 30         | 970                     | 58.0              | 4x35mm <sup>2</sup> | 750         |
| 15 | DPE 50   | 6                 | 150 | 192                          | 25              | 60                 | 37         | 980                     | 75.0              | 4x35mm <sup>2</sup> | 930         |
| 16 | DPE 50B  | 8                 | 200 | 360                          | 15              | 60                 | 37         | 980                     | 75.0              | 4x35mm <sup>2</sup> | 930         |
| 17 | DPE 50H  | 6                 | 150 | 192                          | 28              | 40                 | 37         | 980                     | 75.0              | 4x35mm <sup>2</sup> | 1030        |
| 18 | DPE 75B  | 8                 | 200 | 360                          | 22              | 60                 | 55         | 975                     | 116.0             | 4x50mm <sup>2</sup> | 1100        |

# DIMENSIONS

**Toyo**



| DIMENSIONS | A    | B1  | B2  | B3  | C    | E   | F   | G   | H1  | H2  | J   | K   | L   | M   | N   | P  |
|------------|------|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|
| 1 DPE 3    | 840  | 168 | 168 | 187 | 705  | 55  | 375 | 315 | 320 | 220 | 30  | 180 | 230 | 275 | 280 | 49 |
| 2 DPE 5    | 860  | 168 | 168 | 187 | 725  | 55  | 375 | 315 | 320 | 220 | 30  | 180 | 230 | 275 | 280 | 49 |
| 3 DPE 7.5  | 885  | 193 | 199 | 215 | 735  | 35  | 375 | 315 | 330 | 220 | 30  | 180 | 230 | 275 | 280 | 49 |
| 4 DPE 7.5B | 890  | 193 | 209 | 225 | 740  | 40  | 405 | 335 | 340 | 260 | 40  | 200 | 240 | 295 | 290 | 61 |
| 5 DPE 10   | 930  | 193 | 209 | 225 | 780  | 40  | 405 | 335 | 340 | 260 | 40  | 200 | 240 | 295 | 290 | 61 |
| 6 DPE 10H  | 930  | 230 | 240 | 260 | 780  | 40  | 405 | 335 | 370 | 260 | 40  | 200 | 240 | 295 | 290 | 61 |
| 7 DPE 15   | 1415 | 246 | 253 | 267 | 1220 | 120 | 615 | 330 | 463 | 245 | 245 | 410 | 340 | 500 | 400 | 61 |
| 8 DPE 15B  | 1415 | 275 | 296 | 321 | 1220 | 120 | 630 | 290 | 535 | 310 | 260 | 460 | 400 | 550 | 460 | 61 |
| 9 DPE 20   | 1430 | 283 | 293 | 304 | 1220 | 120 | 610 | 325 | 498 | 245 | 245 | 410 | 340 | 500 | 400 | 61 |
| 10 DPE 20B | 1430 | 275 | 296 | 321 | 1220 | 120 | 630 | 290 | 535 | 310 | 260 | 460 | 400 | 550 | 460 | 61 |
| 11 DPE 20H | 1430 | 283 | 293 | 304 | 1220 | 120 | 610 | 325 | 498 | 245 | 245 | 410 | 340 | 500 | 400 | 61 |
| 12 DPE 30  | 1510 | 325 | 333 | 344 | 1320 | 120 | 630 | 345 | 538 | 245 | 245 | 410 | 340 | 500 | 400 | 61 |
| 13 DPE 30B | 1510 | 304 | 322 | 340 | 1320 | 120 | 650 | 310 | 565 | 310 | 260 | 460 | 400 | 550 | 460 | 61 |
| 14 DPE 40B | 1510 | 304 | 322 | 340 | 1320 | 120 | 700 | 310 | 565 | 370 | 260 | 520 | 400 | 610 | 460 | 61 |
| 15 DPE 50  | 1695 | 322 | 347 | 366 | 1470 | 120 | 705 | 365 | 595 | 310 | 260 | 460 | 400 | 550 | 460 | 61 |
| 16 DPE 50B | 1695 | 322 | 347 | 366 | 1470 | 120 | 755 | 365 | 595 | 370 | 260 | 520 | 400 | 610 | 460 | 61 |
| 17 DPE 50H | 1685 | 376 | 401 | 425 | 1455 | 105 | 705 | 365 | 655 | 310 | 260 | 460 | 400 | 550 | 460 | 61 |
| 18 DPE 75B | 1755 | 376 | 401 | 425 | 1555 | 105 | 755 | 365 | 655 | 370 | 260 | 520 | 400 | 610 | 460 | 61 |

• **Concept :**

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

These centrifugal pumps with semi-open or closed impeller, feature a unique agitator design. This agitator lifts sediments into suspension, creating a slurry mixture. This enables the continuous pumping of media with a high concentration of solids.

Robust construction, careful selection of materials and unique contour components, coupled with a low speed high torque motor, have produced a pump with excellent abrasion resistance as well as a sufficient weight and an important torque. These characteristics ensure long service life and economical operation.

The impeller, the wear plate(s) 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 a double mechanical seal or an assembly of special lip seals, operating in an oil bath, ensure tightness in the hardest of conditions.

The DPE pumps are provided with detachable bend and base, braces for the guidance pipes and suspension chain. This allows the realization of fixed installations, for example in narrow pits and to work on the pump without disassembling the discharge hose.

Servicing and maintaining the pumps to keep them in good working order is easy. On the DPE pumps you have one or two wear plates, one of which is adjustable allowing simple adjustments to maintain long lasting high performance.

The electric class F motor is cooled by the liquid in which the pump is submerged.

The DPE pumps are available in different metallurgies, with thermal protection and moisture detector as well as in special versions for high temperatures.

• **Operating conditions :**

DPE pumps can handle slurries with solid content of up to 60 % by weight, particle sizes up to 60 mm and liquid temperatures up to 60°C with pH levels between 4 and 9,5. Special versions are available for liquid temperatures up to 80°C. Maximal operating depth is 30 m.



• **Electric power requirements\* :**

| Pump type  | Power kVA | Amp. 400 V |
|------------|-----------|------------|
| DPE 3      | 6         | 5.0        |
| DPE 5      | 12        | 8.3        |
| DPE 7.5/B  | 15        | 11.8       |
| DPE 10/H   | 20        | 16.3       |
| DPE 15/B   | 30        | 24.0       |
| DPE 20/B/H | 40        | 32.0       |
| DPE 30/B   | 50        | 46.0       |
| DPE 40B    | 65        | 58.0       |
| DPE 50/B/H | 80        | 75.0       |
| DPE 75B    | 120       | 116.0      |

\*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 :

| Pump type  | Section                | Outer diam. mm | Max. length m / 400V |
|------------|------------------------|----------------|----------------------|
| DPE 3      | 4 x 6 mm <sup>2</sup>  | 19             | 500                  |
| DPE 5      | 4 x 6 mm <sup>2</sup>  | 19             | 350                  |
| DPE 7.5/B  | 4 x 10 mm <sup>2</sup> | 23             | 350                  |
| DPE 10/H   | 4 x 10 mm <sup>2</sup> | 23             | 250                  |
| DPE 15/B   | 4 x 10 mm <sup>2</sup> | 23             | 170                  |
| DPE 20/B/H | 4 x 10 mm <sup>2</sup> | 23             | 120                  |
| DPE 30/B   | 4 x 16 mm <sup>2</sup> | 27             | 140                  |
| DPE 40B    | 4 x 35 mm <sup>2</sup> | 37             | 260                  |
| DPE 50/B/H | 4 x 35 mm <sup>2</sup> | 37             | 200                  |
| DPE 75B    | 4 x 50 mm <sup>2</sup> | 43             | 180                  |

• **Starter :**

A reactor starter must be used to start DPE15/B pumps.

## TOYO PUMPS EUROPE

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