**TECHNICAL DATA** 

# • CONCEPT:

The Toyo DP15 to DP75 submersible pumps with agitator has been specially designed to handle extra heavy and abrasive slurries.

These centrifugal pumps, with closed impeller, feature a unique agitator design. The agitator lifts sediments into suspension and creates a homogeneous 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 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 lip seals operating in an oil bath ensure tightness in the hardest of conditions.

DP15 to DP75 are also available with double mechanical seals.

Servicing and maintaining the pumps to keep them in good working order is easy. On the pumps DP15 to DP75, you have 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.

DP15 to DP75 can be equipped with thermal protection and moister sensor. These pumps are also available in different metallurgies and notably in stainless steel for acid slurries pumping.

DP15 to DP75 can be provided with detachable bend and base.

# • OPERATING CONDITIONS:

- with solid content of up to 60% by weight
- particle sizes up to 60 mm
- liquid temperatures up to 60°C
- pH levels between 4 and 14

Special versions are available for liquid temperatures up to 80°C. Maximal standard operating depth is 30 m and 120 m for high depth vesions.



# • ELECTRIC POWER REQUIREMENTS\*:

Power kVA	Amp. 400 V		
30	24		
40	32		
50	46		
65	58		
80	69		
100	90		
120	116		
120	116		
	8VA 30 40 50 65 80 100 120		

<sup>\*</sup>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:

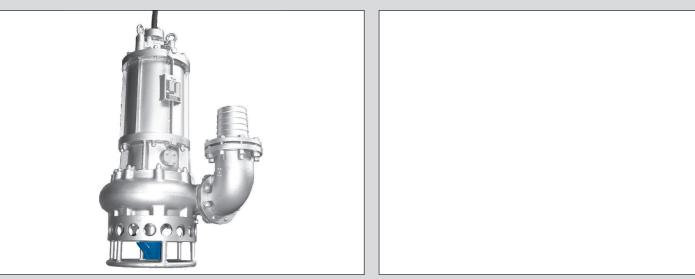
Model	Section	Outer diam. mm	Max. length m / 400V
DP 15/B DP 20/B DP 30/B DP 40B DP 50/B/BL/H DP 60B DP 75 DP 75B	4 x 10 mm <sup>2</sup> 4 x 10 mm <sup>2</sup> 4 x 16 mm <sup>2</sup> 4 x 35 mm <sup>2</sup> 4 x 35 mm <sup>2</sup> 4 x 35 mm <sup>2</sup> 4 x 50 mm <sup>2</sup> 4 x 50 mm <sup>2</sup>	23 23 27 37 37 37 43 43	170 120 140 260 200 170 180

# CONTROL PANEL:

We recommend the use of a Toyo statoric starter to start DP15~ DP75 pumps.

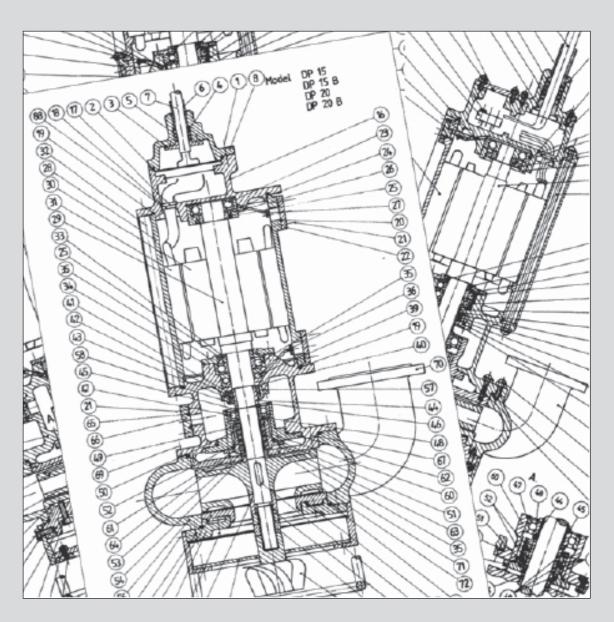
# **TOYO PUMPS EUROPE**

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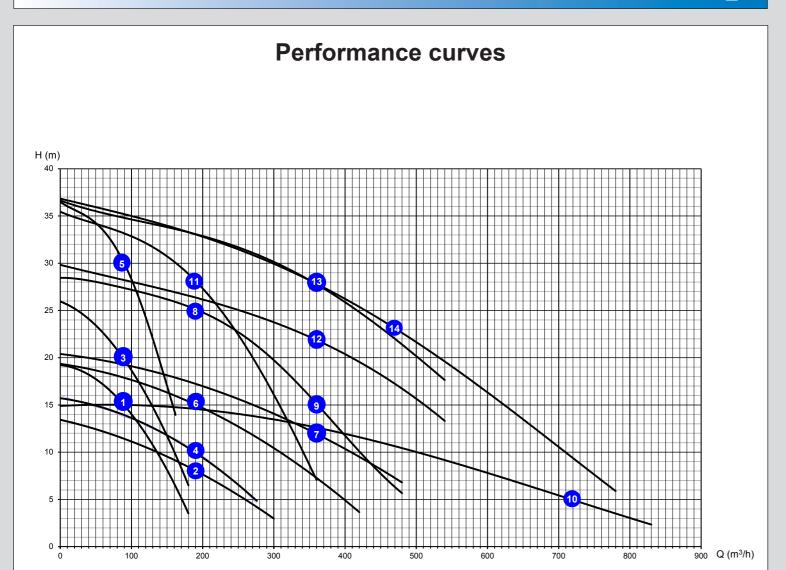
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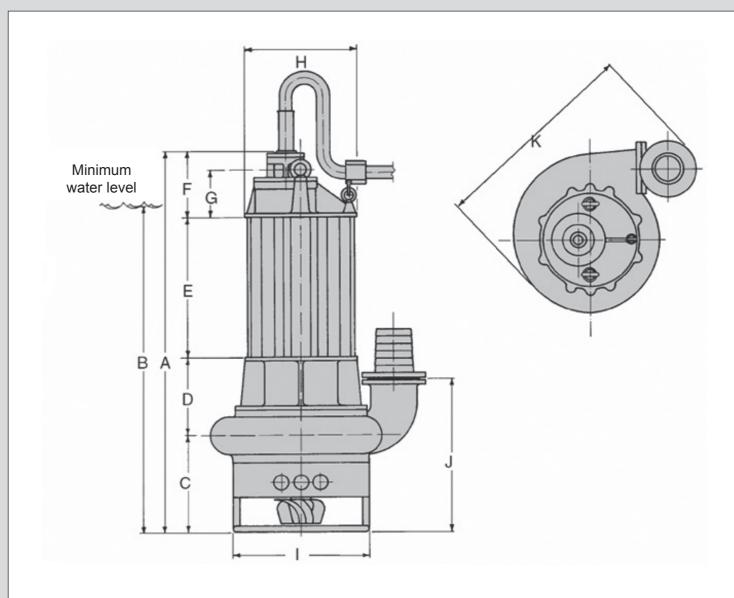


**Heavy slurry pumps** 

**TECHNICAL SPECIFICATIONS DP15 TO DP75 PUMPS** 



Nr	Туре	(in	itlet ch) im)	Capacity (m³/h)	Manom. head (m)	Particle size (mm)	Power (kW)	Poles (P)	Revolu- tion (1/min) 50Hz	Current (A) 400V	Electr. cable	Weight (kg)
1	DP 15	4	100	90	15	35	11	6	960	24	4x10mm <sup>2</sup>	490
2	DP 15B	6	150	192	8	60	11	6	960	24	4x10mm <sup>2</sup>	530
3	DP 20	4	100	90	20	35	15	6	970	32	4x10mm <sup>2</sup>	550
4	DP 20B	6	150	192	10	60	15	6	970	32	4x10mm <sup>2</sup>	540
5	DP 30	4	100	90	30	35	22	6	975	46	4x16mm²	750
6	DP 30B	6	150	192	15	60	22	6	975	46	4x16mm²	730
7	DP 40B	8	200	360	12	40	30	6	970	58	4x35mm²	750
8	DP 50	6	150	192	25	60	37	6	980	75	4x35mm²	950
9	DP 50B	8	200	360	15	60	37	6	980	75	4x35mm²	970
10	DP 50BL	10	250	720	5	100	37	6	980	75	4x35mm²	1150
11	DP 50H	6	150	192	28	40	37	6	980	75	4x35mm²	1050
12	DP 60B	8	200	360	22	60	45	6	975	90	4x35mm²	1000
13	DP 75	8	200	360	28	60	55	6	975	116	4x50mm <sup>2</sup>	1185
14	DP 75B	8	200	470	22	40	55	6	975	116	4x50mm²	1200



DIMEN (mm)	SIONS	Α	В	С	D	E	F	G	Н	-1	J	K
1	DP 15	1275	1100	350	260	425	240	155	380	445	500	750
2	DP 15B	1275	1100	330	280	425	240	155	380	445	560	841
3	DP 20	1310	1100	345	265	460	240	155	380	515	495	825
4	DP 20B	1310	1100	330	280	460	240	155	380	445	560	841
5	DP 30	1390	1200	365	280	480	265	195	415	635	515	910
6	DP 30B	1390	1200	350	295	480	265	195	415	510	580	955
7	DP 40B	1390	1200	350	295	480	265	195	415	510	600	1010
8	DP 50	1575	1350	405	325	570	275	195	460	560	635	1020
9	DP 50B	1575	1350	405	325	570	275	195	460	560	655	1065
10	DP 50BL	1650	1450	462.5	342.5	570	275	195	460	560	762.5	1350
11	DP 50H	1580	1350	420	315	570	275	195	460	660	650	1094
12	DP 60B	1665	1400	405	325	610	325	245	460	560	655	1065
13	DP 75	1710	1450	412,5	332,5	640	325	245	460	660	712,5	1185
14	DP 75B	1705	1450	408	332	640	325	245	460	660	708	1195

**TECHNICAL DATA** 

# • CONCEPT:

The Toyo DP100 to DP150 submersible pumps with agitator has been specially designed to handle very heavy and abrasive

These centrifugal pumps with 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 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 lip seals operating in an oil bath ensure tightness in the hardest of conditions.

The DP100 to DP150 pumps are available with lip seals and mechanical seal (option).

Servicing and maintaining the pumps to keep them in good working order is easy. On DP100 to DP150 pumps you have two wear plates, one of which is adjustable allowing simple adjustments to maintain long lasting high performance.

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

The DP100 to DP150 can be equipped with thermal protection and moister sensor. These pumps are also available in different metallurgies and notably in stainless steel for acid slurries pumping. These pumps can be provided with detachable bend and base.

# • OPERATING CONDITIONS:

- with solid content of up to 60% by weight
- particle sizes up to 120 mm
- liquid temperatures up to 60°C
- pH levels between 4 and 14

Special versions are available for liquid temperatures up to 80°C. Maximal standard operating depth is 30 m and 120 m for high depth vesions.



# • ELECTRIC POWER REQUIREMENTS\*:

Pump type	Power kVA	Amp. 400 V
DP 100B/BL	150	150
DP 100B/6	150	150
DP 120B/6	180	160
DP 150/L/B	220	215

<sup>\*</sup>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
DP 100B/BL	4 x 50 mm <sup>2</sup>	43	130
DP 100B/6	4 x 50 mm <sup>2</sup>	43	130
DP 120B/6	4 x 95 mm <sup>2</sup>	58	260
DP 150/L/B	4 x 95 mm <sup>2</sup>	58	170

## CONTROL PANEL:

We recommend the use of a Toyo statoric starter to start DP100 to 150 pumps.

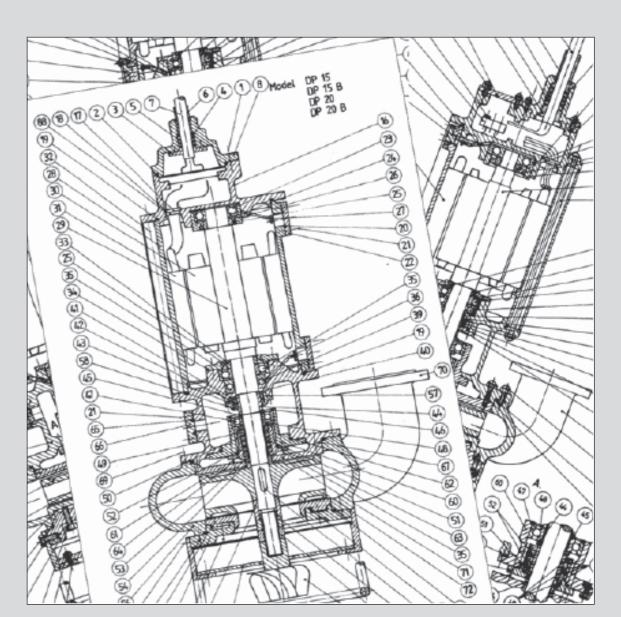
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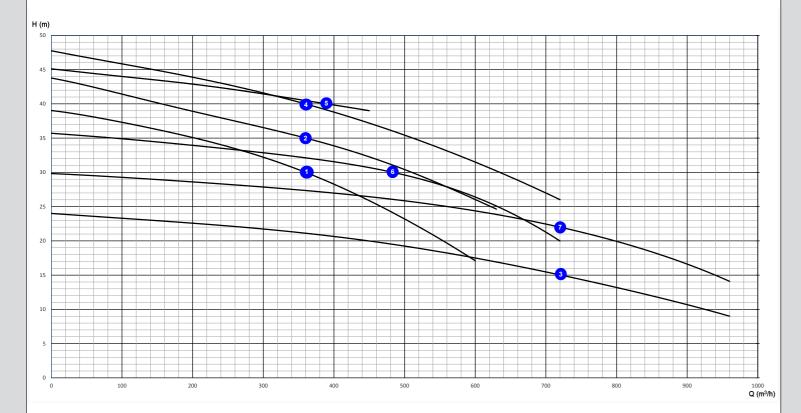




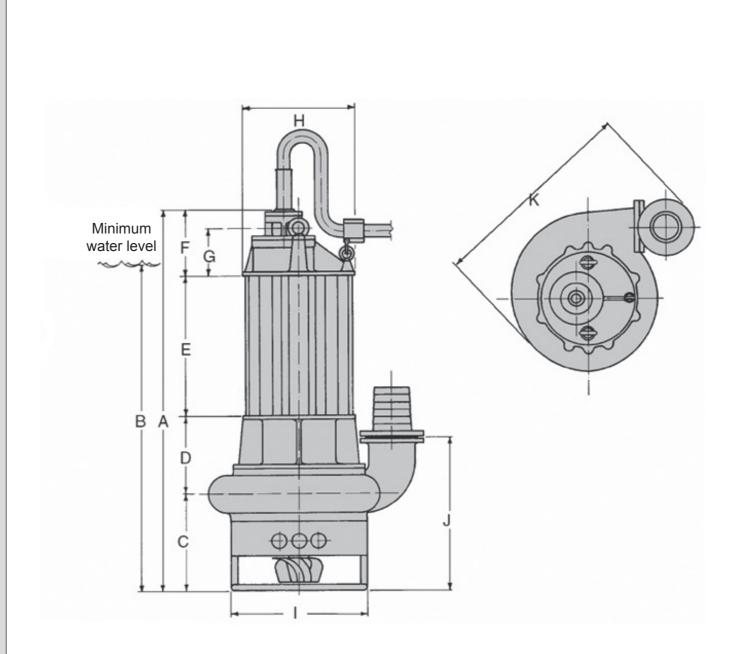
**Heavy slurry pumps** 

**TECHNICAL SPECIFICATIONS DP 100 TO 150 PUMPS** 

# **Performance curves**



Nr	Type	(in	itlet ch) nm)	Capacity (m³/h)	Manom. head (m)	Particle size (mm)	Power (kW)	Poles (P)	Revolu- tion (1/min) 50Hz	Current (A) 400V	Electr. cable	Weight (kg)
1	DP 100B	8	200	360	30	60	75	8	740	150	4x50mm²	2200
2	DP 100B/6	8	200	360	35	60	75	6	985	148	4x50mm²	1650
3	DP 100BL	10	250	720	15	100	75	8	740	150	4x50mm²	2700
4	DP 120B/6	8	200	360	40	60	90	6	985	160	4x95mm²	1700
5	DP 150	8	200	390	40	120	110	10	590	215	4x95mm²	3500
6	DP 150L	8	200	480	30	120	110	10	590	215	4x95mm²	3500
7	DP 150B	10	250	720	22	120	110	10	590	215	4x95mm²	3500



DIMEN (mm)	SIONS	A	В	С	D	E	F	G	Н	1	J	K
1	DP 100B	1875	1650	445	415	680	335	160	600	760	695	1570
2	DP 100B/6	1905	1500	413	393	650	450	-	530	690	713	1255
3	DP 100BL	2058	1850	540.5	502.5	680	335	160	600	820	840.5	1645
4	DP 120B/6	1955	1500	413	393	700	450	-	530	690	713	1255
5	DP 150	2734	2300	640	634	920	540	-	640	1010	940	1610
6	DP 150L	2734	2300	640	634	920	540	-	640	1010	940	1610
7	DP 150B	2794	2400	670	664	920	540	-	640	1010	970	1695