



# LEGENDARY SUBMERSIBLE DP

*Heavy duty submersible slurry pump design for the world's toughest applications*



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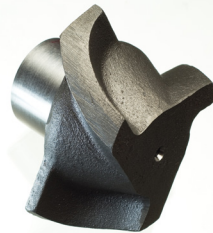
# DP and TO

The Toyo submersible DP series and its hydraulically driven cousin the TO series were specifically designed to pick up and transport abrasive materials with the least amount of water. The DP/TO is a pump and excavator in one. The design incorporates the patented Toyo agitator, attached directly to the pump shaft, which together with the closed impeller, large open passages for the easy passage of solids, heavy duty shaft/bearing configuration and custom built motor with 1.35 service factor, result in the most rugged submersible slurry pump on the market today.



## DP Quick facts

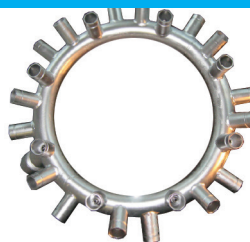
- Capacities up to 3200 Usgpm @BEP
- Heads to 130 ft @ BEP
- Pumps up to 70% solids
- Handles solids up to 4.72" in diameter
- Sizes up to 10" in diameter
- Patented high chrome agitator as standard – attached directly to the pump's shaft
- Front (adjustable) and Back high chrome wear plates
- Unique 1.35 S.F. motor
- Heavy duty motor housing
- Low RPM for reduced wear
- Additional bearing support between primary and secondary seal elements



The Toyo patented agitator eliminates solids accumulating on the sump floor and can significantly reduce maintenance costs resulting from digging out sumps and downtime due to solids building up and choking off the suction of conventional pumps. It is because of the Toyo Agitator's patented blade that the highest efficiency in material mixing can be achieved.

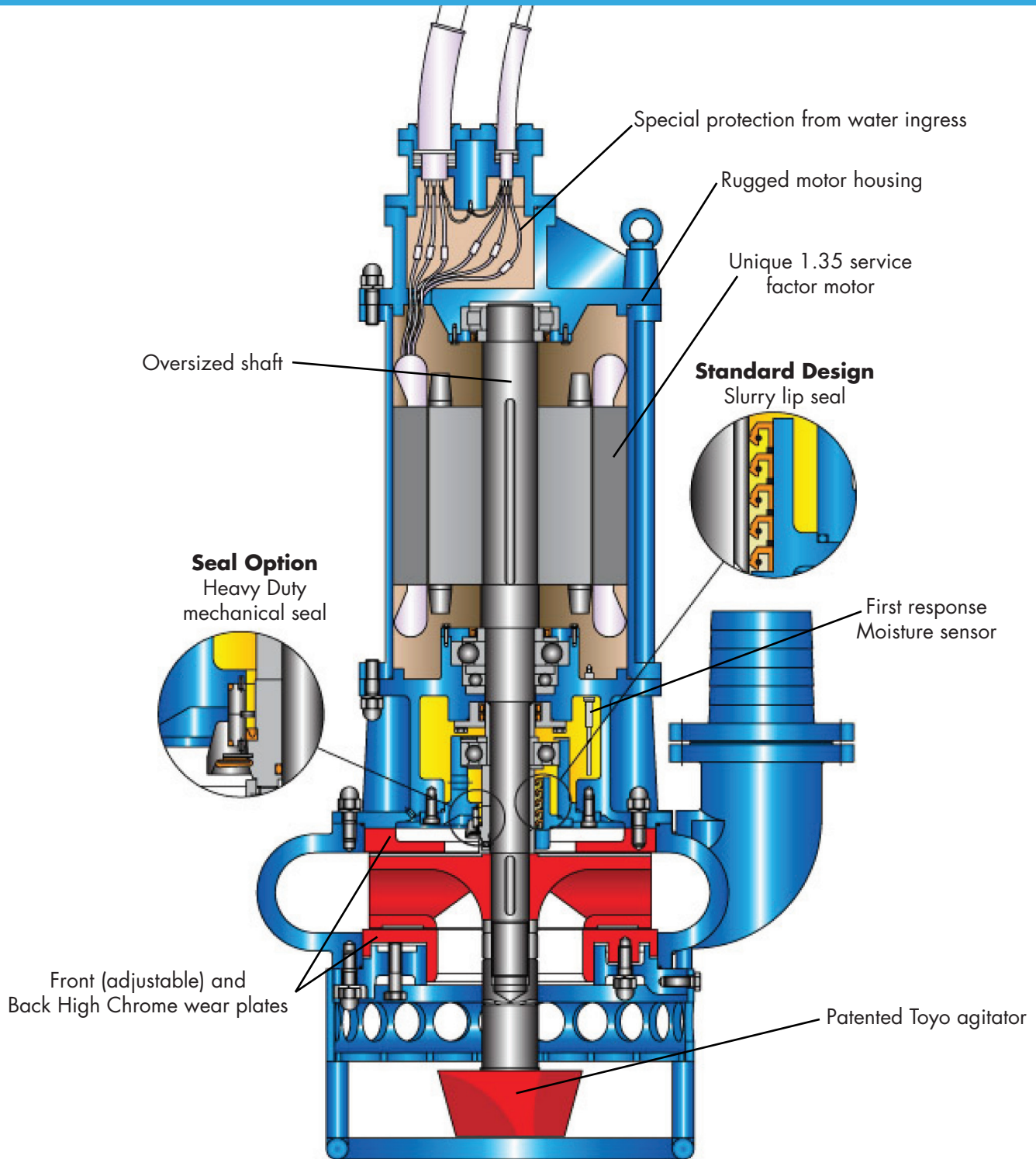
## Available adders

- Hydraulic drive available (TO)
- Optional jet ring attachment to dislodge tough solids
- High temperature package
- Mechanical seals
- Further designs up to 600HP (non standard)



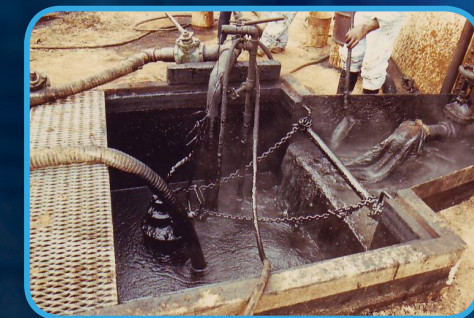
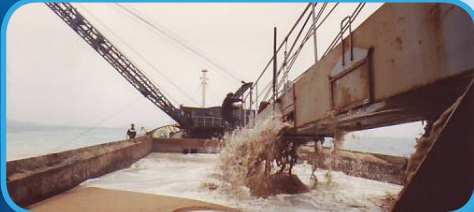
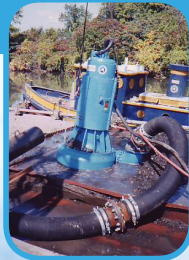
In applications where solids are especially difficult to pump, or simply where more agitation is required, Toyo offers a special high pressure jet ring. This combination of jet ring and agitator have proven to be a truly effective 'agitation team'.

# TOYO DP Series





The Legendary Toyo DP has been working in the world's toughest and most abrasive applications for 6 decades.



Visit [www.toyopumps.com](http://www.toyopumps.com) to see full pictorial case studies and download videos showing this heavy duty pump at work.

You'll find the Toyo DP pumps working in the applications below as well as many others:

- Dredging
- Ocean Sand mining
- Tailings ponds
- Fly ash/ bottom ash
- Sand and Gravel excavation
- Hazardous waste clean-up
- Tank clean up (replacing vacuum trucks)
- Cleaning out numerous sumps including at:
- Cement plants
- Agricultural wash down pits (carrots, beats etc)
- Pipeline burial
- Coke pits
- Mill scale/ slag pits
- Barge unloading
- Silt removal
- Removal of filter media at waste treatment plants
- Island building



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The DP's heavy duty construction makes it the toughest submersible slurry pump on the market today.



# Legendary DP Specifications

MODEL NUMBER	DP-3	DP-5	DP-7,5	DP-7,5B	DP-10	DP-10H
Discharge diameter - inch (mm)	3 (80)	3 (80)	3 (80)	4 (100)	4 (100)	4 (100)
Flow at rated point - USgpm (m3/min)	130 (0,5)	130 (0,5)	130 (0,5)	260 (1,0)	260 (1,0)	208 (0,8)
Head at rated point - ft (m)	22 (7)	38 (12)	48 (15)	38 (12)	48 (15)	64 (20)
Impeller diameter - inch (mm)	7.28 (185)	8.23 (209)	9.13 (232)	9.13 (232)	9.53 (242)	10.5 (266)
Impeller - number of vanes	3	3	3	3	4	7
Max. solid size - inch (mm)	0,8 (20)	0,8 (20)	1,0 (25)	1,0 (25)	1,0 (25)	0,55 (14)
Weight without cable - lb (kg)	342 (155)	363 (165)	430 (195)	430 (195)	495 (225)	495 (225)
Standard motor hp	3	5	7,5	7,5	10	10
Optional motor hp	5	N/A	10	10	N/A	N/A
Standard seal	Dbl, Mech, Seal	Dbl, Mech, Seal	Dbl, Mech, Seal	Dbl, Mech, Seal	Dbl, Mech, Seal	Dbl, Mech, Seal
Oil capacity - USgal (l)	0,58 (2,2)	0,58 (2,2)	0,69 (2,6)	0,69 (2,6)	0,69 (2,6)	0,69 (2,6)
Number of bearings	3	3	3	3	3	3
Speed (rpm)	1740	1740	1750	1750	1750	1750
Voltage	220 / 460 / 575	220 / 460 / 575	220 / 460 / 575	220 / 460 / 575	220 / 460 / 575	220 / 460 / 575
F.L. current	8,7 / 4,2 / 3,4	13,6 / 6,6 / 5,3	21 / 10,1 / 8,0	21 / 10,1 / 8,0	27 / 13 / 10,3	27 / 13 / 10,3
Breaker settings	10,9 / 5,3 / 4,3	17,0 / 8,3 / 6,6	26,3 / 12,6 / 10,0	26,3 / 12,6 / 10,0	33,8 / 16,3 / 12,9	33,8 / 16,3 / 12,9
Motor protector - Klixon	Standard	Standard	Standard	Standard	Standard	Standard
Moisture sensor + relay	Optional	Optional	Optional	Optional	Optional	Optional
Starting method	D,O,L.	D,O,L.	D,O,L.	D,O,L.	D,O,L.	D,O,L.
Motor service factor	1,35	1,35	1,35	1,35	1,35	1,35
Sensor cable (replacement type)	Optional	Optional	Optional	Optional	Optional	Optional
Power cable (replacement type)	SOOW 4c - 10	SOOW 4c - 10	SOOW 4c - 8	SOOW 4c - 8	SOOW 4c - 8	SOOW 4c - 8
Electric cable length - ft (m)	65 (20)	65 (20)	65 (20)	65 (20)	65 (20)	65 (20)
Insulation Class	F	F	F	F	F	F
Max. pumpage temp. STD INS.	105°F	105°F	105°F	105°F	105°F	105°F
Max. pumpage temp. OPT INS.	175°F	175°F	175°F	175°F	175°F	175°F
Max. run time motor in air	15 min	15 min	15 min	15 min	15 min	15 min
Water jacket	Optional	Optional	Optional	Optional	Optional	Optional
Water jacket flow rate	1-3 gpm	1-3 gpm	1-3 gpm	1-3 gpm	1-3 gpm	1-3 gpm
Shaft	Alloy Steel	Alloy Steel	Alloy Steel	Alloy Steel	Alloy Steel	Alloy Steel
Pump casing STD	Ductile Iron	Ductile Iron	Ductile Iron	Ductile Iron	Ductile Iron	Ductile Iron
Pump casing OPT	25% Chrome	25% Chrome	25% Chrome	25% Chrome	25% Chrome	25% Chrome
Impeller	25% Chrome	25% Chrome	25% Chrome	25% Chrome	25% Chrome	25% Chrome
Wear plate - top	Ductile Iron	Ductile Iron	Ductile Iron	Ductile Iron	Ductile Iron	Ductile Iron
Wear plate - bottom	N/A	N/A	N/A	N/A	N/A	N/A
Suction cover	25% Chrome	25% Chrome	25% Chrome	25% Chrome	25% Chrome	25% Chrome
Agitator	25% Chrome	25% Chrome	25% Chrome	25% Chrome	25% Chrome	25% Chrome
Sacrificial stub shaft	N/A	N/A	N/A	N/A	N/A	N/A
Inverter Duty (Hz)	40 - 57,5					

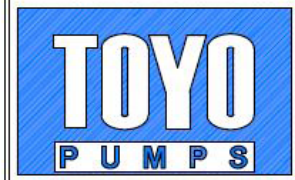
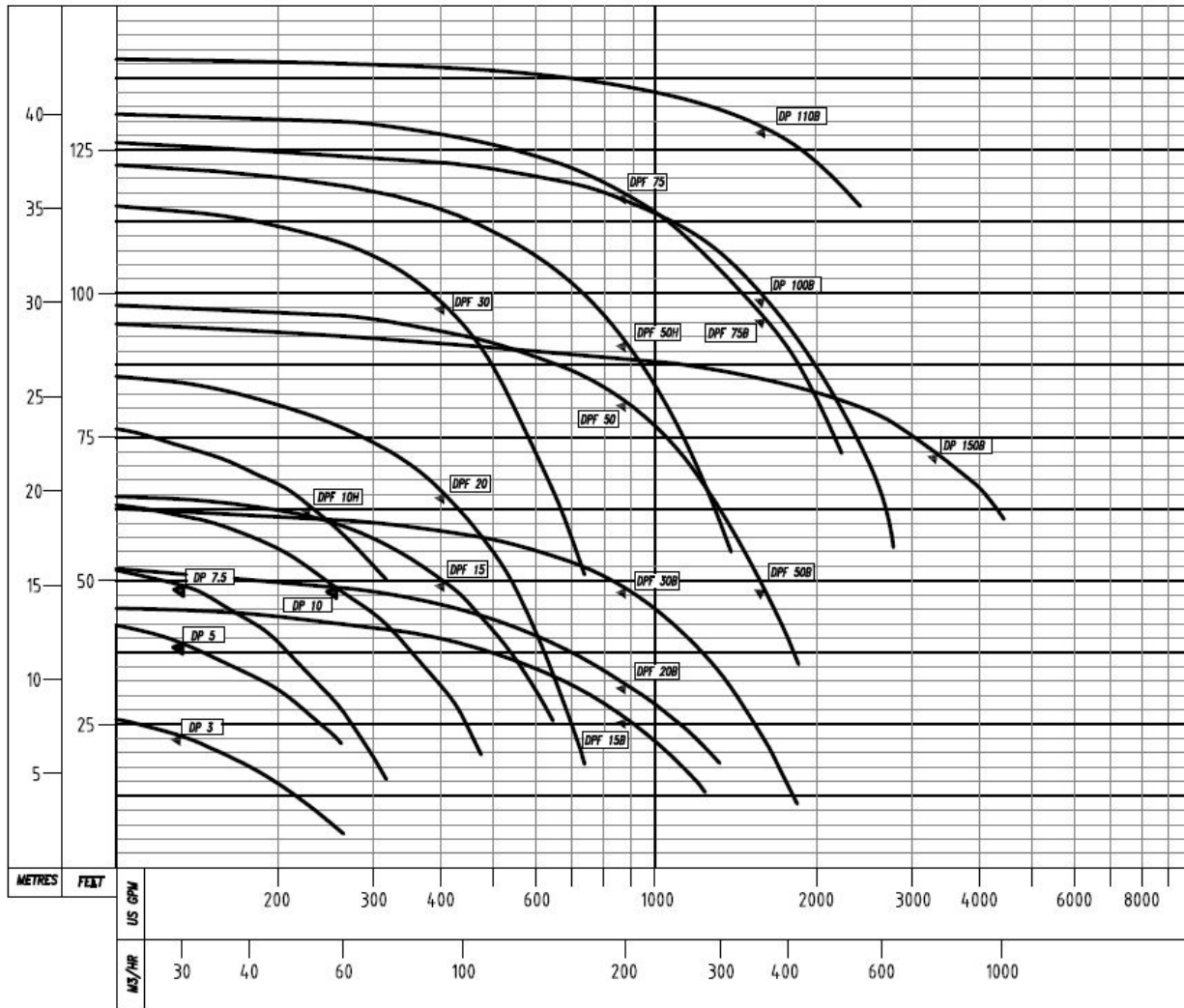
MODEL NUMBER	DPF-15	DPF-15B	DPF-20	DPF-20B	DPF-30	DPF-30B	DPF-50	DPF-50B	DPF-75	DPF-75B	DP-100B	DP-110B	DP-150B
Discharge diameter - in (mm)	4 (100)	6 (150)	4 (100)	6 (150)	4 (100)	6 (150)	6 (150)	8 (200)	6 (150)	8 (200)	8 (200)	8 (200)	10 (250)
Flow at rated point USgpm(m3/min)	400 (1,5)	850 (3,2)	400 (1,5)	850 (3,2)	400 (1,5)	850 (3,2)	850 (3,2)	1600 (6,0)	850 (3,2)	1600 (6,0)	1600 (6,0)	1400 (5,3)	3200 (12)
Head at rated point - ft (m)	48 (15)	25 (8)	64 (20)	32 (10)	95 (30)	48 (15)	80 (25)	48 (15)	95 (30)	92 (28)	95 (30)	128 (39)	70 (22)
Impeller diameter - inch (mm)	12,6 (320)	11,5 (290)	13,9 (353)	11,8 (300)	16,54 (420)	14,0 (358)	14,94 (380)	14,94 (380)	16,54 (420)	16,54 (420)	21,65 (550)	21,65 (550)	25 (635)
Impeller - number of vanes	3	3	2	3	2	2	3	3	3	3	3	3	2
Max. solid size - inch (mm)	1,4 (35)	2,4 (60)	1,4 (35)	2,4 (60)	1,4 (35)	2,4 (60)	2,4 (60)	2,4 (60)	2,4 (60)	2,4 (60)	2,4 (60)	2,0 (50)	4,7 (120)
Weight without cable - lb (kg)	1078 (490)	1166 (530)	1210(550)	1190(540)	1650 (750)	1610 (730)	2100 (950)	2140 (970)	2200 (1000)	2250 (1020)	5060 (2300)	5060 (2300)	7700 (3500)
Standard motor hp	15	15	20	20	30	30	50	50	75	75	100	110	150
Optional motor hp	20	20	30	30	40	40	60 or 75	60 or 75	N/A	N/A	N/A	N/A	N/A
Standard seal	Toyo lip	Toyo lip	Toyo lip	Toyo lip	Toyo lip	Toyo lip	Toyo lip	Toyo lip	Toyo lip	Toyo lip	Toyo lip	Toyo lip	Toyo lip
Oil capacity - Lip seal - USgal(l)	1,1 (4,1)	1,1 (4,1)	1,1 (4,1)	1,1 (4,1)	1,56 (5,9)	1,56 (5,9)	1,64 (6,2)	1,64 (6,2)	1,64 (6,2)	1,64 (6,2)	6,6 (25)	6,6 (25)	7,9 (30)
Oil capacity - Mech seal - USgal(l)	0,87 (3,3)	0,87 (3,3)	0,87 (3,3)	0,87 (3,3)	1,24 (4,7)	1,24 (4,7)	1,3 (5,0)	1,3 (5,0)	1,3 (5,0)	1,3 (5,0)	N/A	N/A	N/A
Number of bearings	4	4	4	4	4	4	4	4	4	4	5	5	6
Speed (rpm)	1160	1160	1170	1170	1175	1175	1180	1180	1175	1175	890	885	710
Voltage	220/460/575	220/460/575	220/460/575	220/460/575	220/460/575	220/460/575	220/460/575	220/460/575	220/460/575	220/460/575	460/575	460/575	460/575
F.L. current	43/21/16	43/21/16	56/27/21	56/27/21	87/44/33	87/44/33	135/65/52	135/65/52	202/97/78	202/97/78	130/103	139/111	182/145
Breaker settings	54/26/20	54/26/20	70/34/26	70/34/26	109/55/41	109/55/41	169/81/65	169/81/65	253/121/98	253/121/98	163/129	174/139	228/181
Thermostat in windings	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard	N/A
Moisture sensor + relay	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
Starting method	D,O,L.	D,O,L.	D,O,L.	D,O,L.	D,O,L.	D,O,L.	D,O,L.	D,O,L.	D,O,L.	D,O,L.	D,O,L.	D,O,L.	D,O,L.
Motor service factor	1,35	1,35	1,35	1,35	1,35	1,35	1,35	1,35	1,35	1,35	1,35	1,2	1,35
Replacement Sensor cable	SOOW 4c - 10	SOOW 4c - 10	SOOW 4c - 10	SOOW 4c - 10	SOOW 4c - 10	SOOW 4c - 10	SOOW 4c - 10	SOOW 4c - 10	SOOW 4c - 10	SOOW 4c - 10	SOOW 4c - 10	SOOW 4c - 10	N/A
Replacement Power cable	SOOW 4c - 8	SOOW 4c - 8	SOOW 4c - 8	SOOW 4c - 8	66C 3c - 4	66C 3c - 4	66C 3c - 1	66C 3c - 1	66C 3c - 1	66C 3c - 1	66C 3c - 2/0	66C 3c - 2/0	66C 3c - 250
Electric cable length - ft (m)	65 (20)	65 (20)	65 (20)	65 (20)	65 (20)	65 (20)	65 (20)	65 (20)	65 (20)	65 (20)	65 (20)	65 (20)	65 (20)
Insulation Class	F	F	F	F	F	F	F	F	F	F	B	B	B
Max pumpage temp Std	105°F	105°F	105°F	105°F	105°F	105°F	105°F	105°F	105°F	105°F	105°F	105°F	105°F
Max pumpage temp Optional	175°F	175°F	175°F	175°F	175°F	175°F	175°F	175°F	175°F	175°F	175°F	175°F	175°F
Max run time in air - lip seal only	15 min	15 min	15 min	15 min	15 min	15 min	15 min	15 min	15 min	15 min	15 min	15 min	15 min
Water jacket flow rate	3-5 gpm	3-5 gpm	3-5 gpm	3-5 gpm	3-5 gpm	3-5 gpm	3-5 gpm	3-5 gpm	3-5 gpm	3-5 gpm	3-5 gpm	3-5 gpm	3-5 gpm
Shaft	Alloy Steel	Alloy Steel	Alloy Steel	Alloy Steel	Alloy Steel	Alloy Steel	Alloy Steel	Alloy Steel	Alloy Steel	Alloy Steel	Alloy Steel	Alloy Steel	Alloy Steel
Pump casing STD	Ductile Iron	Ductile Iron	Ductile Iron	Ductile Iron	Ductile Iron	Ductile Iron	Ductile Iron	Ductile Iron	Ductile Iron	Ductile Iron	Ductile Iron	Ductile Iron	Ductile Iron
Pump casing OPT	25% Cr	25% Cr	25% Cr	25% Cr	25% Cr	25% Cr	25% Cr	25% Cr	25% Cr	25% Cr	25% Cr	25% Cr	25% Cr
Impeller	25% Cr	25% Cr	25% Cr	25% Cr	25% Cr	25% Cr	25% Cr	25% Cr	25% Cr	25% Cr	25% Cr	25% Cr	25% Cr
Wear plate - top	25% Cr	25% Cr	25% Cr	25% Cr	25% Cr	25% Cr	25% Cr	25% Cr	25% Cr	25% Cr	25% Cr	25% Cr	25% Cr
Wear plate - bottom	25% Cr	25% Cr	25% Cr	25% Cr	25% Cr	25% Cr	25% Cr	25% Cr	25% Cr	25% Cr	25% Cr	25% Cr	25% Cr
Suction cover	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron
Agitator	25% Cr	25% Cr	25% Cr	25% Cr	25% Cr	25% Cr	25% Cr	25% Cr	25% Cr	25% Cr	25% Cr	25% Cr	25% Cr
Sacrificial stub shaft	N/A	N/A	N/A	N/A	N/A	N/A	Included	Included	Included	Included	Included	Included	Included
Inverter Duty - Hz	40 - 57,5											Rated Speed Only	



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# Legendary DP Curves



WWW.TOYOPUMPS.COM

TOYO PUMPS NORTH AMERICA CORPORATION  
 BURNABY, BRITISH COLUMBIA  
 CANADA V5C 6R2  
 TEL : (604)298-1213 FAX : (604)298-7773

PUMP MODEL DP 3 TO 150B  
 CURVE NUMBER A7195 REV. 1

CAPACITIES TO: M3/HR 727 @ BEP  
 U.S. GPM 3200 @ BEP

HEAD TO: METRES 39.6 @ BEP  
 FEET 130 @ BEP

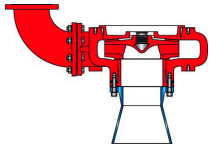
TOYO MODEL	DISCHARGE		MAX SOLIDS #		IMPELLER #	
	MM	IN	MM	IN	MM	IN
DP 3	80	3	20	0.8	180	7.1
DP 5	80	3	20	0.8	200	7.9
DP 7.5	80	3	25	1	225	8.9
DP 10	100	4	25	1	250	9.8
DP 10H	100	4	14	0.6	267	10.5
DPF 15	100	4	35	1.4	320	12.6
DPF 15B	150	6	60	2.4	290	11.5
DPF 20	100	4	35	1.4	353	13.9
DPF 20B	150	6	60	2.4	300	11.8
DPF 30	100	4	35	1.4	420	16.6
DPF 30B	150	6	60	2.4	358	14.0
DPF 50	150	6	35	1.4	380	15.0
DPF 50B	200	8	60	2.4	380	15.0
DPF 50H	150	6	60	2.4	447	17.6
DPF 75	150	6	40	1.6	430	16.9
DPF 75B	200	8	60	2.4	430	16.9
DP 100B	200	8	60	2.4	550	21.7
DP 110B	200	8	50	2.0	-	-
DP 150B	250	10	120	4.7	635	25

PERFORMANCE FOR WATER @ 68°F/20°C  
 AND 1.0 S.G. CORRECT FOR OTHER  
 CONDITIONS AND/OR SOLIDS EFFECT

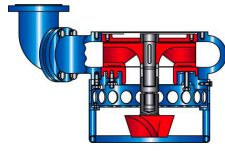


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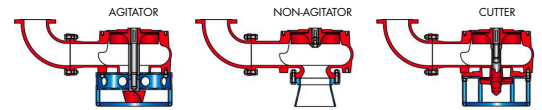
**The Toyo Modular Program** allows you the flexibility of using the wet ends below on various drive configurations. This advantage of the Toyo Product Line can significantly reduce spare parts inventory to an absolute minimum.



- Heavy solid handling capability
- Closed impeller
- Heavy metal sections for longer wear life
- Increased efficiencies in state of the art slurry pump design



- Heavy solid handling capability
- Closed and semi-open impellers available
- Patented Agitator Option
- Heavy metal sections for longer wear life



- Spiral casing design for increased efficiency and reduced wear
- Fully recessed impeller allows for large solids passage
- Only approx 15% of pumped liquid is in contact with impeller
- Wet end standard in High Chrome and CD4
- Patented Agitator and Chopper options available



HORIZONTAL



SUBMERSIBLE



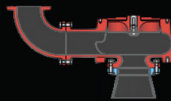
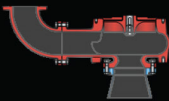
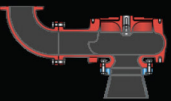
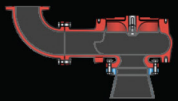
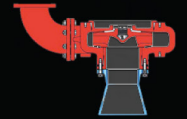
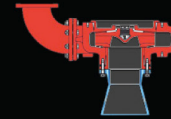
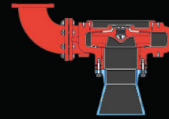
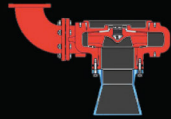
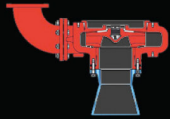
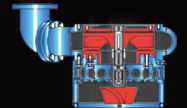
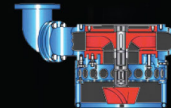
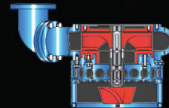
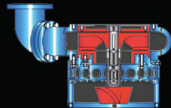
VERTICAL  
CANTILEVER



LINE-SHAFT  
STANDARD



LINE-SHAFT  
'O' SERIES



Hevy/Toyo Pumps  
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V3K 7C1, Canada



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For more information, please visit:  
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