



HASSLE FREE SUBMERSIBLE DI

Run dry capable, standard cooling jacket and high chrome wear parts means this rugged submersible slurry pump is the last thing you'll need to worry about in your busy day



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Hassle free Submersible DL

The Toyo DL series submersible is a true slurry pump design, developed in the mining and dredging industries for pumping rocks and gravel. It features high chrome wear components which provide excellent wear life and boast large internal clearances for the easy passage of high concentrations of solids. The DL 4 and DL 7.5 models can be equipped with chopper packages. All models up to DL 30 come equipped with the Toyo patented agitator. DLs are designed with a built in cooling jacket to allow for full cooling while the pump is primed, even if the motor is fully exposed to air. The DL series also has the ability to operate completely dry continuously without overheating and is equipped with built in thermal protections. The larger model DLs are equipped with moisture sensors for added protection. DL pumps are capable of pumping up to 20% solids by weight.



Contractor special DL1



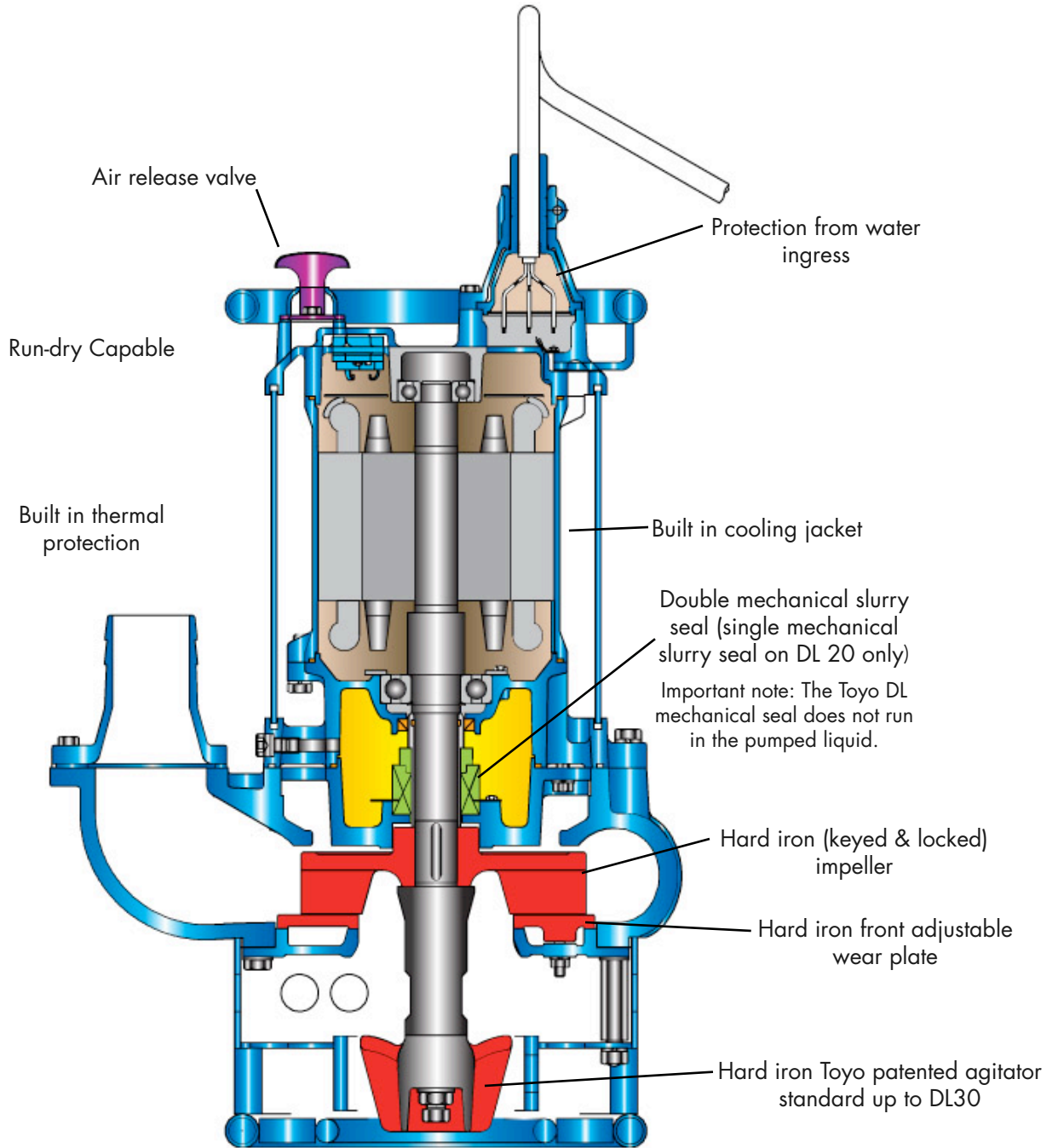
* For all your portable pumping needs, from plant drainage to contractor dewatering, the DL-1 is a workhorse in a small package. The Toyo patented agitator assists in suspending solids so they can be pumped and eliminates pump clogging. The DL-1 also features oil lubricated Silicon Carbide mechanical seals, cast iron housing, high chrome cast impeller, high chrome cast agitator, and a steel strainer.



DL Quick facts

- Capacities to 2100 Usgpm @ BEP
- Heads to 112 ft @ Usgpm BEP
- Solids to 20% by weight
- Sizes up to 10" discharge
- Agitators as standard up to DL 30
- High chrome wear components
- DL 4 and DL 7.5 available with chopper packages
- Run dry capability
- Built in thermal protection
- Built in cooling jacket
- Large internal clearances

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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.



Heavy duty blades, situated in front of the pump's suction, agitates, chops, cuts, shreds incoming solids such as metal banding, plastic, wood, rags and bags, prior to them entering the impeller. The 'chopper' eliminates pump and system downtime by preventing the plugging of pump suction and pipelines.

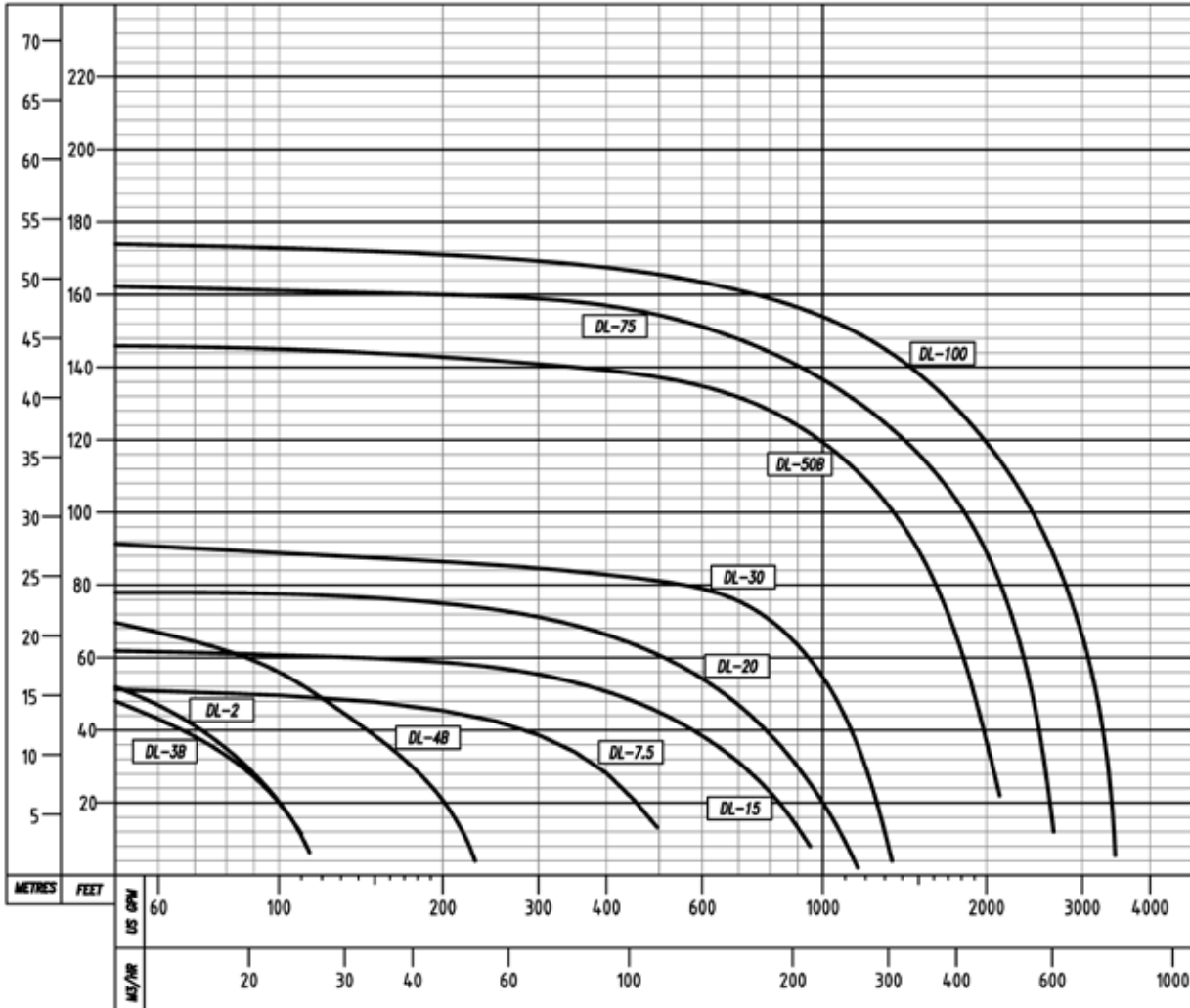


TOYO DL Specifications

Model Number	DL-1	DL-2	DL-3	DL-4	DL-7.5	DL-15	DL-20	DL-30	DL-50B	DL-75	DL-100
Discharge Diameter in (mm)	2 (50)	2 (50)	2 (50)	3 (80)	3 (80)	4 (100)	4 (100)	6 (150)	8 (200)	10 (250)	10 (250)
Rated Flow - USGPM (m ³ /min)	30 (0.11)	65 (0.25)	65 (0.25)	130 (0.5)	300 (1.1)	400 (1.6)	400 (1.6)	850 (3.2)	1300 (4.9)	1525 (5.8)	2100 (7.9)
Head - ft (m) (rated point)	27 (8.3)	44 (13)	40 (12)	40 (12)	40 (12)	50 (15)	69 (21)	64 (19)	102 (31)	119 (36)	112 (34)
Imp. Dia inch (mm)	3.4 (85)	4.4 (111)	4.9 (124)	5.1 (130)	8.6 (218)	9.3 (235)	9.6 (244)	11.2 (285)	12.8 (325)	13.5 (344)	14.2 (360)
Chopper Option	No	No	No	Yes	Yes	No	No	No	No	No	No
Max Solid Size - inch (mm)	0.4 (10)	0.3 (8)	0.4 (10)	0.4 (10)	1.2 (30)	1.2 (30)	1.2 (30)	1.2 (30)	1 (25)	1 (25)	1 (25)
Max Sand Content - % by wt	15	15	15	15	20	20	20	20	20	20	20
Weight - lb (kg)	33 (15)	70.5 (32)	88 (39)	131 (59.5)	334 (151)	491 (222)	590 (267)	835 (378)	1874 (852)	2535 (1152)	2646 (1203)
Single or Double Mech Seal	Double	Double	Double	Double	Double	Double	Single	Double	Double	Double	Double
Motor Size - hp (kw)	0.75 (0.55)	2 (1.5)	2.7 (2.0)	4 (3.0)	7.5 (5.6)	15 (11)	20 (15)	30 (22)	50 (37)	75 (56)	100 (75)
Run Dry Motor	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Speed (rpm)	3600	3600	3600	3600	1800	1800	1800	1800	1800	1800	1800
Voltage - V (at 60 Hz)	110	110/220	208/460/575	208/460/575	208/460/575	208/460/575	208/460/575	208/460/575	230/460/575	460/575	460/575
Voltage - V (at 50 Hz)	N/A	N/A	380	380	380	380	N/A	380			
Rated Current - A (at 60 Hz)	7.6	23/11.5	8.8/4.1/3.3	12.0/5.4/4.4	21.4/9.9/8.0	41.5/19.4/15	55/25/20	84/40/34	122/61/48	92/74	128/103
Rated Current - A (at 50 Hz)	N/A	N/A	5.8	7	12.5	23	N/A	48			
Motor Protector - Clixon	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No
Motor Protector - MTP	No	No	No	No	No	No	No	Yes	Yes	Yes	Yes
Starting Method	Capacitor	Capacitor	D.O.L.	D.O.L.	D.O.L.	D.O.L.	D.O.L.	D.O.L.	Star-Delta	Star-Delta	Star-Delta
Insulation Class	E	B	F	F	E	B	B	F	F	E	E
Service Factor	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15
Cable Length (ft) (m)	32 (10)	32 (10)	50 (15)	50 (15)	50 (15)	50 (15)	82 (25)	82 (25)	50 (15)	50 (15)	50 (15)
Water Jacket	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Shaft	420 SS	420 SS	420 SS	420 SS	4135	4135	4135	420 SS	420 SS	420 SS	420 SS
Pump Casing	Ductile Iron	EPR	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron
Impeller	HiCr	Ductile Iron	HiCr	HiCr	HiCr	HiCr	HiCr	HiCr	HiCr	HiCr	HiCr
Suction Cover	N/A	Ductile Iron	Ductile Iron	Ductile Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron
Suction Wear Plate	N/A	N/A	N/A	N/A	HiCr	HiCr	HiCr	HiCr	N/A	N/A	N/A
Agitator	HiCr	Ductile Iron	Ductile Iron	Ductile Iron	HiCr	HiCr	HiCr	HiCr	N/A	N/A	N/A
Aluminum Content	Yes	Yes	No	No	No	No	No	No	No	No	No



Hassle free Submersible DL Curve



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TOYO PUMPS NORTH AMERICA CORPORATION
 BURNABY, BRITISH COLUMBIA
 CANADA V5C 6H2
 TEL : (604)298-1213 FAX : (604)298-7773

SIZE RANGE	DL-2 THRU DL-100	
CURVE NUMBER	A7783	REV 1
CAPACITIES TO:	M ³ /HR	477 @ BEP
	U.S. GPM	2100 @ BEP
HEAD TO:	METRES	34 @ BEP
	FEET	112 @ BEP
MAXIMUM PUMPAGE TEMPERATURE	°C	46
	°F	115

AGITATOR						
TPMA MODEL	DISCHARGE MM	DISCHARGE IN.	MAX #SOLIDS MM	MAX #SOLIDS IN.	IMPELLER MM	IMPELLER IN.
DL-2	50	2	8.5	0.33	111	4.4
DL-3	50	2	10	0.4	124	4.9
DL-4	80	3	10	0.4	130	5.1
DL-7.5	80	3	18	0.7	217	8.6
DL-15	100	4	30	1.2	236	9.3
DL-20	100	4	30	1.2	242	9.5
DL-30	150	6	30	1.2	285	11.2
DL-50B	200	8	25	1.0	325	12.8
DL-75	250	10	25	1.0	344	13.5
DL-100	250	10	25	1.0	360	14.2

CHOPPER			
TPMA MODEL	DL-4C		DL-7.5C
MAX #SOLIDS	10mm	0.4"	30mm 1.2"
PERFORMANCE FOR WATER @ 68°F/20°C AND 1.0 S.G. CORRECT FOR OTHER CONDITIONS AND/OR SOLIDS EFFECT			



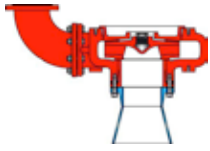
The hassle free Toyo DL can be found hard at work in the below applications as well as many others.

- Quarries & mine drainage ponds
- Plant cleanup sumps
- Pulp & Paper (Chopper)
- Municipal (Chopper)
- Conveyor tunnel pumps
- Replacing vacuum trucks
- Any dirty water to light slurry sumps requiring a portable pump
- Contractors, you won't want to miss out on the economically power packed DL 1

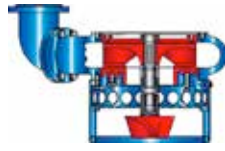


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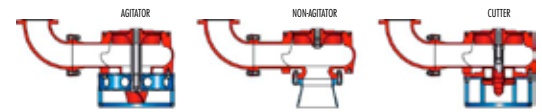
The Toyo Modular Program allows you the flexibility of using the wet ends below on various drive configurations. This advantage of the Toyo Product Line can significantly reduce spare parts inventory to an absolute minimum.



- 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



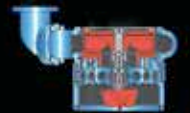
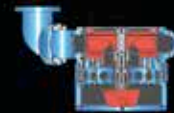
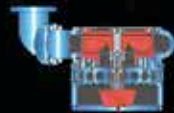
HORIZONTAL

SUBMERSIBLE

VERTICAL
CANTILEVER

LINE-SHAFT
STANDARD

LINE-SHAFT
'O' SERIES



Toyo Pumps North America
Corporate Head Office
1550 Brigantine Drive
Coquitlam, B.C.
Canada V3K 7C1



For more information please visit
www.toyopumps.com

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