

POSITIVE DISPLACEMENT RANGE OF PUMPS



Pioneer Pump's line of positive displacement pumps are ideal for a variety of applications, from waste water to hygienic solutions. A world class choice for pumping viscous, abrasive and shear sensitive products.



Orbit helical rotor pumps are ideal for the toughest of applications, well suited to abrasive, viscous, as well as shear sensitive duties. These are available as standalone pumps or complete lineup, with mechanical seal or packed gland options, and a range of materials. This pump can be tailored to suit any application.

FEATURES

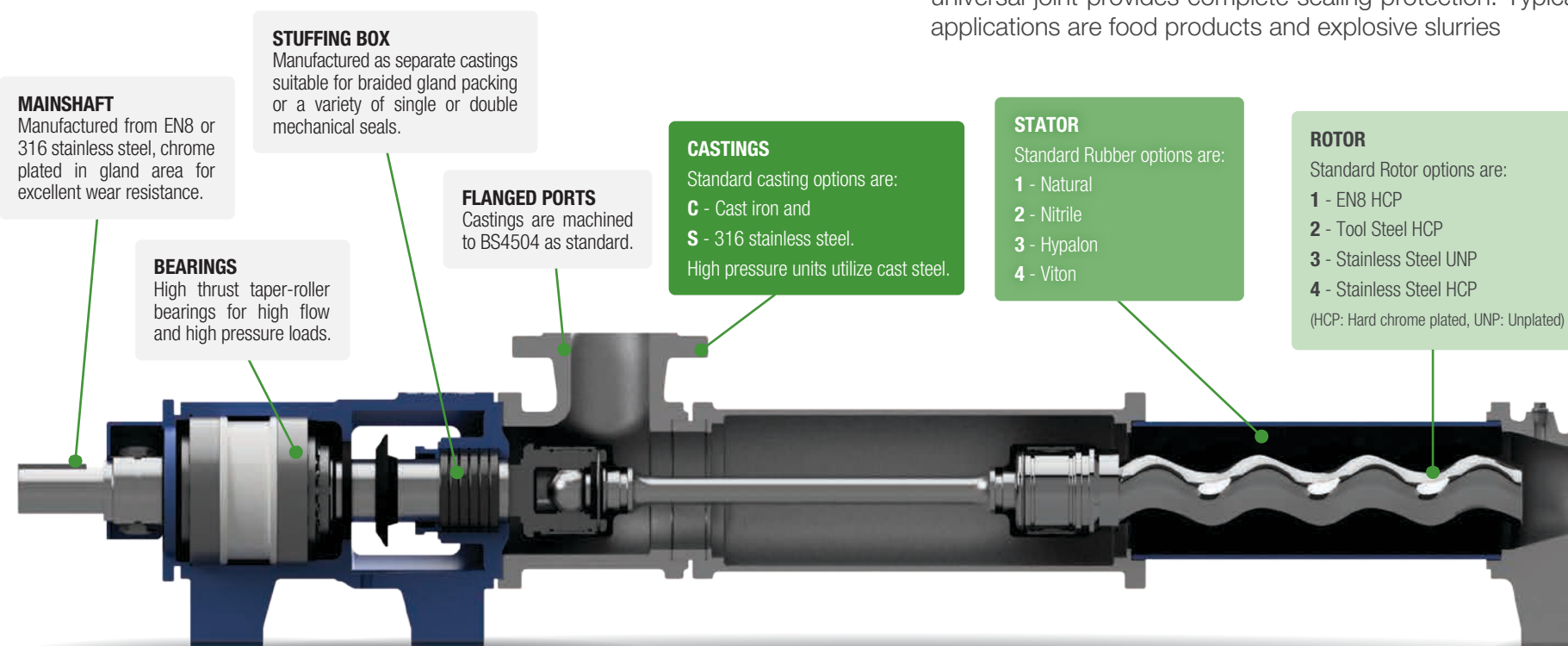
- ✓ Suitable for pumping highly **viscous products**
- ✓ Ability to pump **abrasive products**
- ✓ Ability to transfer liquids with hard or soft solids
- ✓ Reversible flow for high performance in either direction
- ✓ Variable flow at consistent head while eliminating the need for flow control devices
- ✓ Capacity proportional to speed, while pressure is independent of speed
- ✓ Uniform, non-pulsing flow for better control and system functionality
- ✓ **Low-shear** pumping action for shear sensitive products
- ✓ Robust construction allows for ease of maintenance
- ✓ **Self-priming**, low NPSHr for optimal suction capability
- ✓ Ability to pump products with large percentage of entrained gas



Standard Sealed Universal Joint: standard o-ring or square seal ring designs provide adequate sealing protection against the ingress of foreign material into the universal joint; standard seals are suitable for handling most products in the industry



Fully Sealed Universal Joint: where neither ingress of chemical product nor contamination of the product by the lubricant within the joint can be tolerated. The fully sealed universal joint provides complete sealing protection. Typical applications are food products and explosive slurries



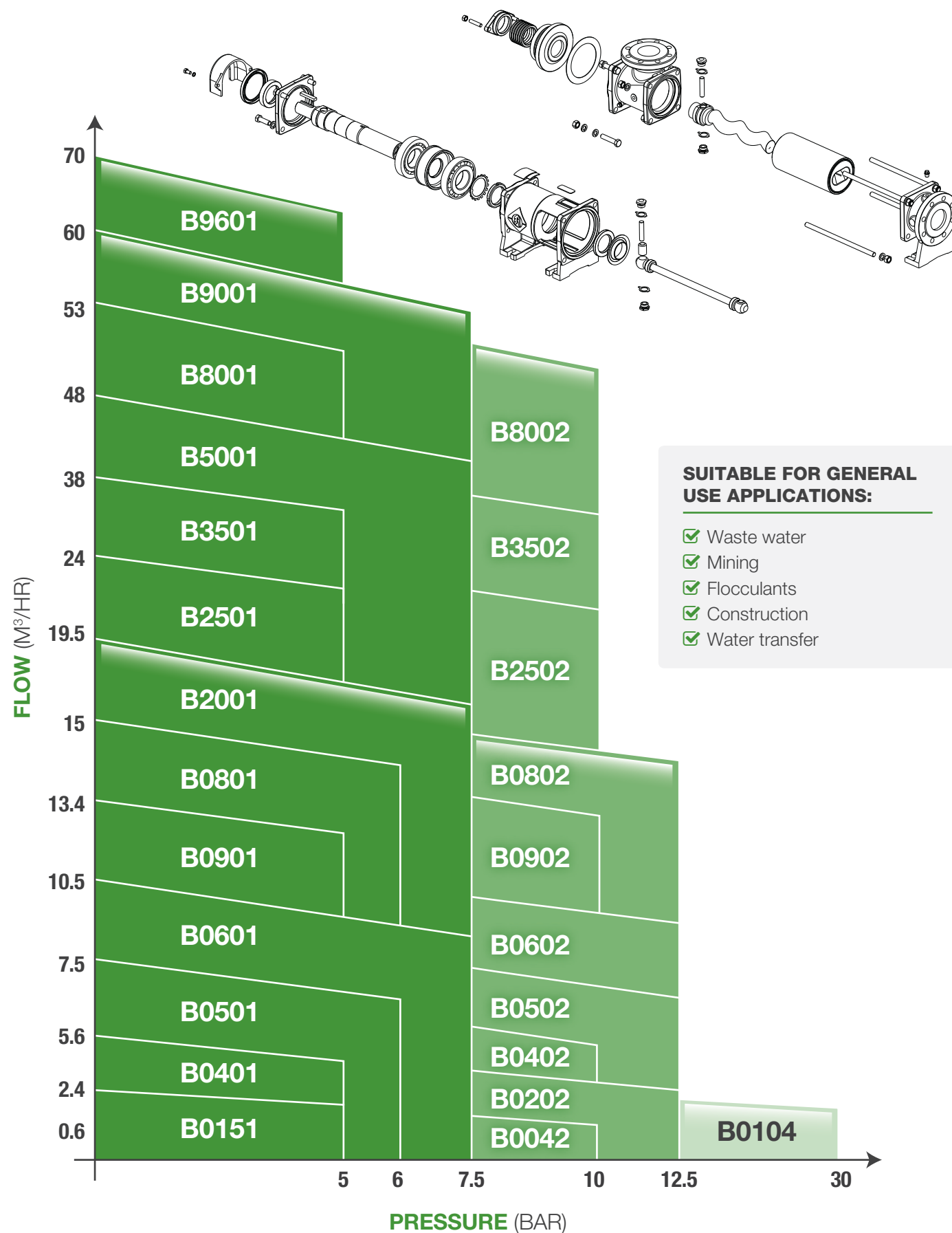
COMPATIBILITY GUIDE

		Casting material		
		Stator material (Rubber)		Rotor Material
Mining	Dewatering	C	2	1
	Coal Washing	C	1	2
	Gland Service	C	2	1
	Sludges (Alum)	C	2	4
	Oil (waste/reclaimed)	C	4	4
	Minewater (acidic)	S	2	3
	Minewater (alkaline)	C	1	4
Water & Waste	Flocculants (polyelec.)	C	2	4
	Lime Dosing (Slurry)	C	1	4
	Sludge Transfer	C	2	2
	Sewage sludge	C	2	2
	Abattoir Waste	C	2	3
	Tallow	C	2	4
Pharmaceutical	Soaps	C	4	4
	Detergents	S	2	3
Food	Fruit Pulp	S	2	3
	Glucose Syrup	S	2	3
	Honey	S	2	3
	Edible Oils	S	2	4
	Fish Paste	S	2	3
	Potato sludge	C	1	2
Beverage	Malt Extract	S	2	3
	Yeasts	S	2	4
	Wines	S	2	3
	Fruit Juices	S	2	3
Agriculture	Water (irrigation)	C	2	1
	Molasses	S	2	3
	Liquid Manure	C	2	2
	Produce Washing	C	2	1
Petrochemical	Polymers (acrylic)	C	2	4
	Adhesives (polyurethane)	C	2	4
	Lubricating oil (mineral)	C	2	4
	Diesel	C	4	4
	Ethanol	C	1	4
General	Clay Slip (Slurry)	C	1	2
	Cement (with vermiculite)	C	1	4/2
	Bentonite slurry	C	1	4
	Cutting fluids	C	4	4
	Methylated spirits	C	1	4
	Printing Ink	C	4	4
	PVA glue	C	2	4
	Toothpaste	S	2	4
	Stock Transfer	C	2	4
	Starches (Paper coating)	C	2	4
Pulp & Paper	Coatings (latex)	C	1	4
	Water Transfer	C	2	1
Oil & Gas	Gas Oil	C	4	4



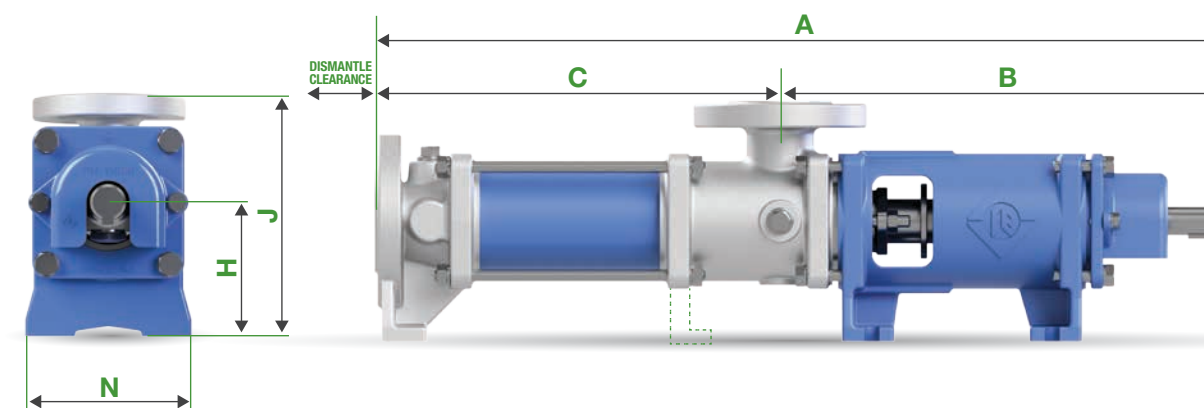
B RANGE HOLLOW SHAFT

Standard sealed joint, hollow shaft pump.



DIMENSIONS (mm)

Pump Model	A	Dismantle Clearance	B	C	H	J	N
B0042	571	315	301	270	80	160	100
B0104	766	282	377	389	90	200	125
B0151	531	275	301	230	80	160	100
B0202	822	282	377	445	90	200	125
B0401	627	300	377	250	90	200	125
B0402	757	300	377	380	90	200	125
B0501	672	282	377	295	90	200	125
B0502	847	282	377	470	90	200	125
B0601	798	430	455	343	110	230	140
B0602	958	430	455	503	110	230	140
B0901	825	430	455	370	110	230	140
B0902	1040	430	664	585	110	230	140
B0801	717	282	377	340	90	200	125
B0802	1090	385	455	635	110	230	140
B2001	870	450	455	415	110	230	140
B2501	1041	510	604	437	160	320	200
B2502	1321	510	603	718	160	320	200
B3501	1041	510	604	437	160	320	200
B3502	1536	700	644	892	160	320	200
B5001	1338	700	644	694	160	320	200
B8001	1416	700	644	772	160	320	200
B8002	1866	1600	644	1222	160	320	200
B9001	1481	800	644	837	160	320	200
B9601	1416	690	644	772	160	320	200

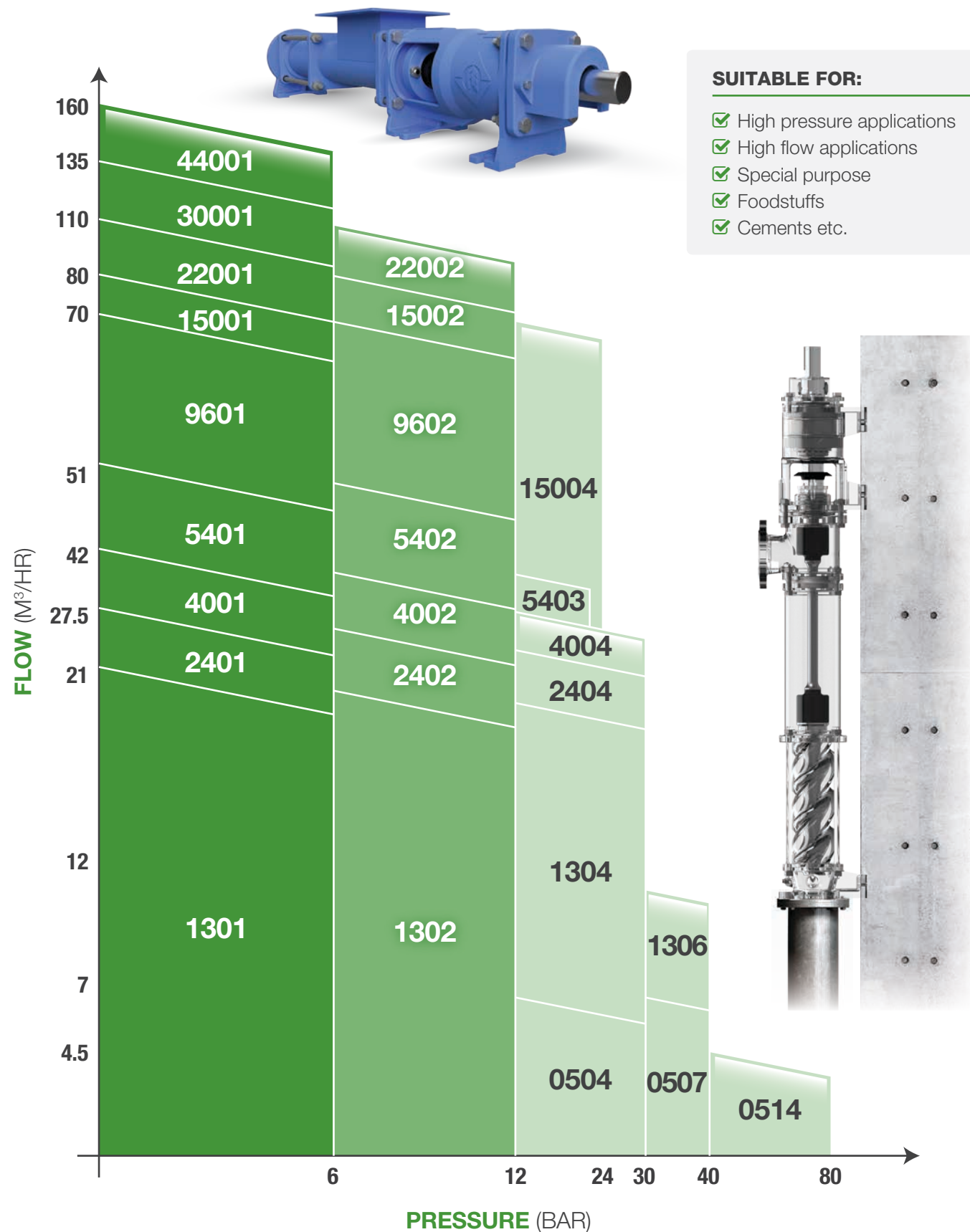


*All flanges BS4504



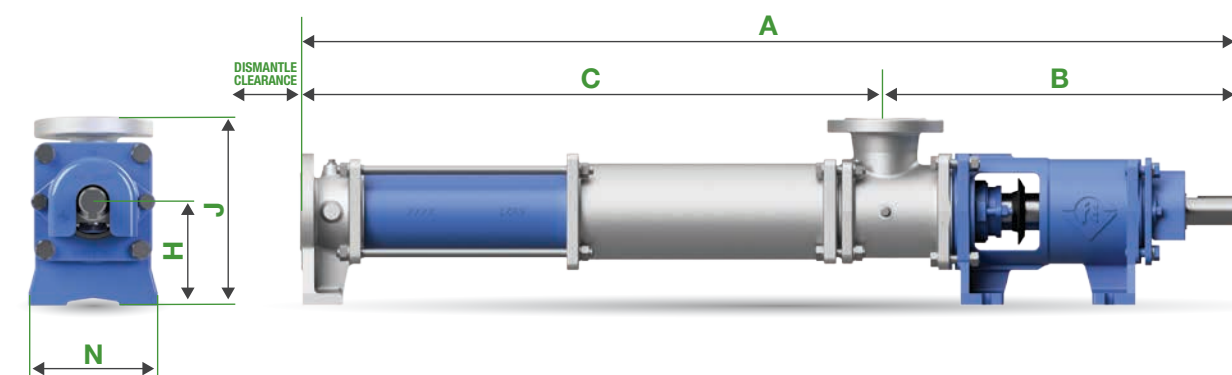
D RANGE SOLID SHAFT

Fully sealed joint, solid shaft pump. Available in wide throat with auger configuration, ideal for high viscosity applications as well as solids in suspension.



DIMENSIONS (mm)

Pump Model	A	Dismantle Clearance	B	C	H	J	N
D0504	1721	780	455	1266	110	230	145
D0507	1830	950	603	1227	160	320	200
D0514	2579	1030	603	1976	160	320	200
D1301	1226	780	455	771	110	230	145
D1302	1466	780	455	1011	110	230	145
D1304	2200	950	603	1597	160	320	200
D1306	2259	950	603	1656	160	320	200
D2401	1605	950	603	1002	160	320	200
D2402	1980	950	603	1377	160	320	200
D2404	2195	950	603	1592	160	320	200
D4001	1605	950	603	1002	160	320	200
D4002	1987	950	603	1384	160	320	200
D4004	2436	1030	603	1833	160	320	200
D5401	1670	950	603	1067	160	320	200
D5402	2117	950	603	1514	160	320	200
D9601	1669	950	603	1067	160	320	200
D9602	2367	1030	603	1764	160	320	200
D15001	1834	950	619	1215	160	320	200
D15002	2329	1970	619	1710	160	320	200
D15004	3891	3940	619	3272	160	320	200
D22001	2388	520	824	1564	200	413	285
D22002	2913	1050	824	2089	200	413	285
D30001	2571	700	824	1747	200	413	285
D44001	2913	1050	824	2089	200	413	285



*All flanges BS4504

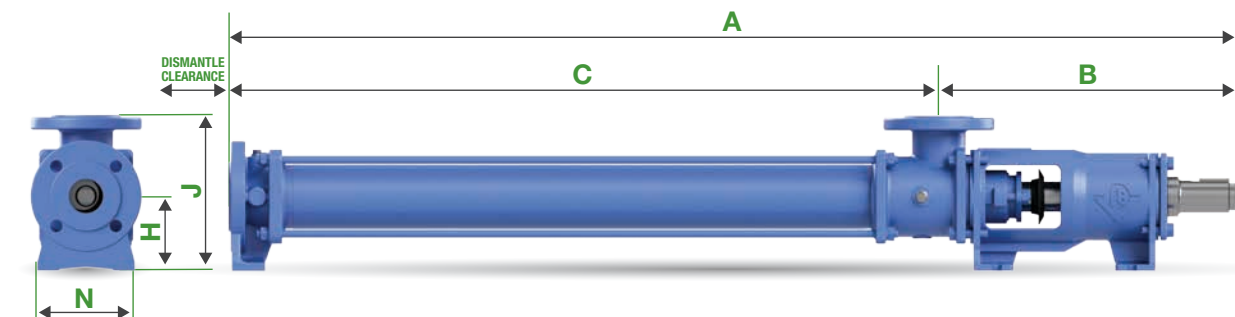
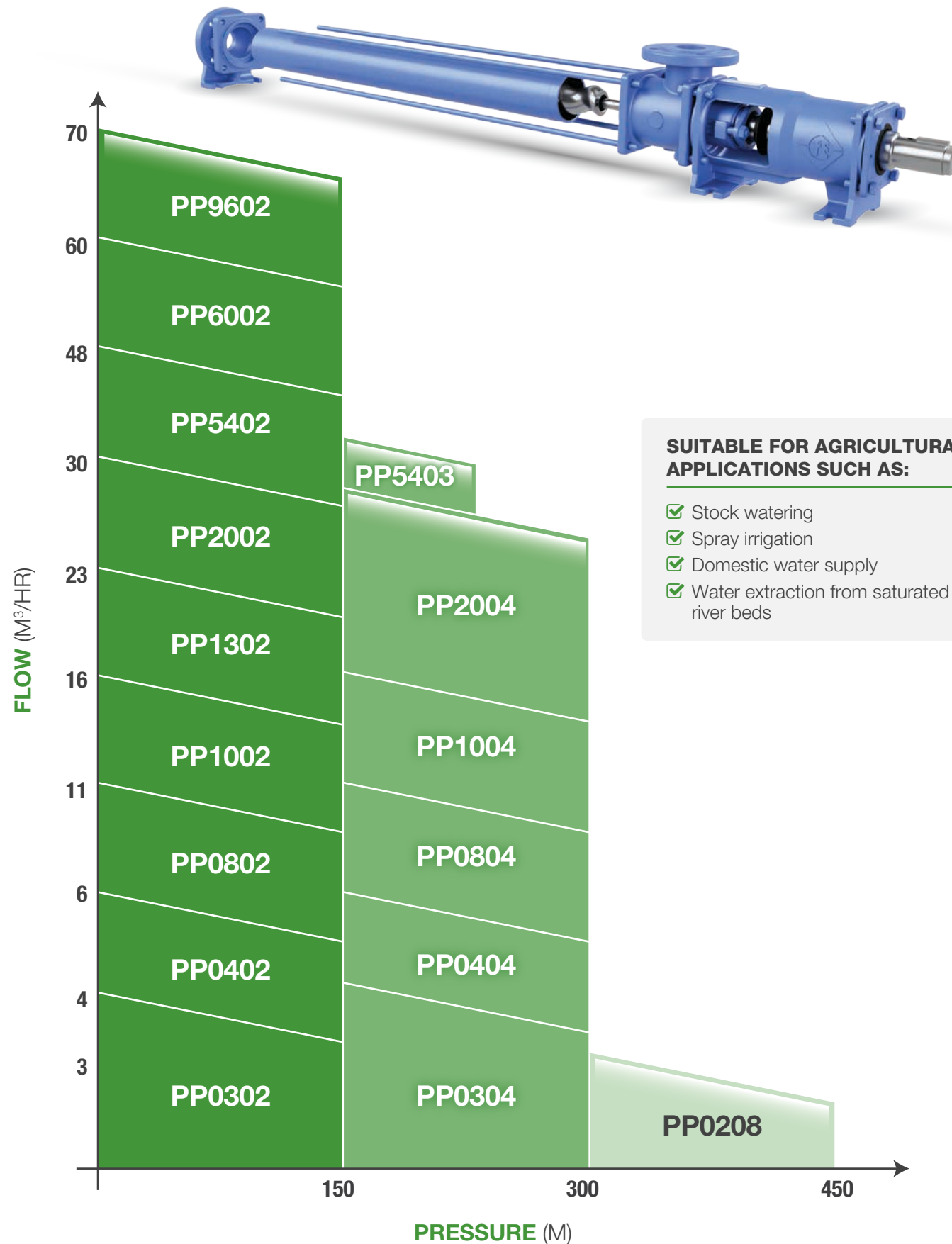
PP RANGE FLEX SHAFT

Stainless steel flexible drive shaft, hollow shaft pump.



DIMENSIONS (mm)

Pump Model	A	Dismantle Space	B	C	H	J	N
PP0208	1068	390	347	721	90	200	125
PP0302	854	390	347	507	90	200	125
PP0304	1068	390	347	721	90	200	125
PP0402	985	390	347	638	90	200	125
PP0404	1245	390	347	898	90	200	125
PP0802	1147	520	440	707	110	230	145
PP0804	1367	520	440	927	110	230	145
PP1002	1247	520	440	807	110	230	145
PP1004	1493	520	440	1053	110	230	145
PP1302	1333	520	440	893	110	230	145
PP2002	1507	665	603	904	160	320	200
PP2004	1816	665	603	1213	160	320	200
PP6002	1786	665	603	1183	160	320	200



*All flanges BS4504



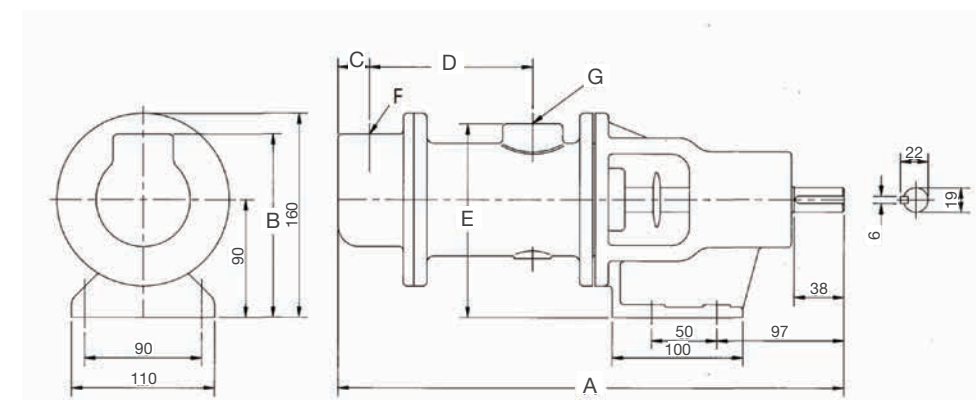
MINI-PUMP RANGE



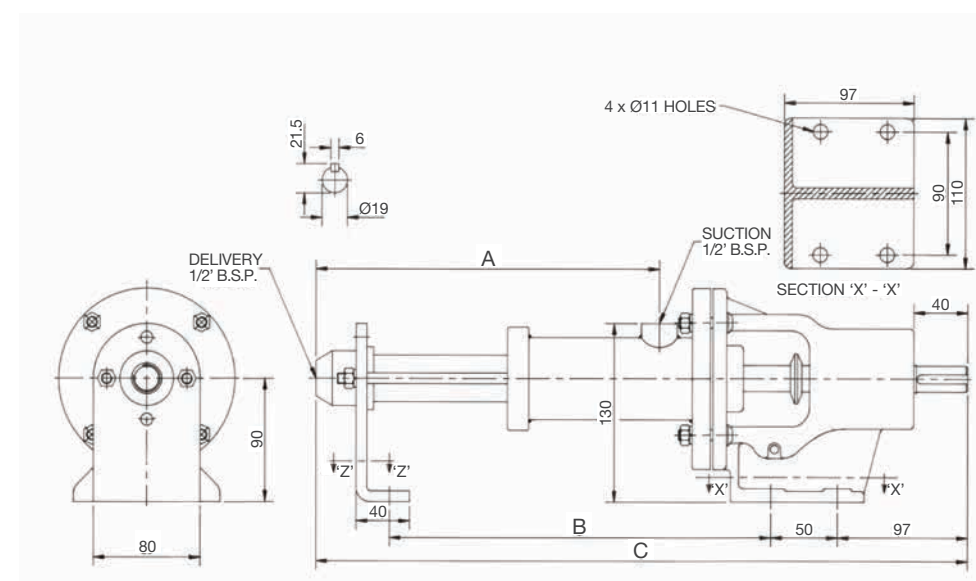
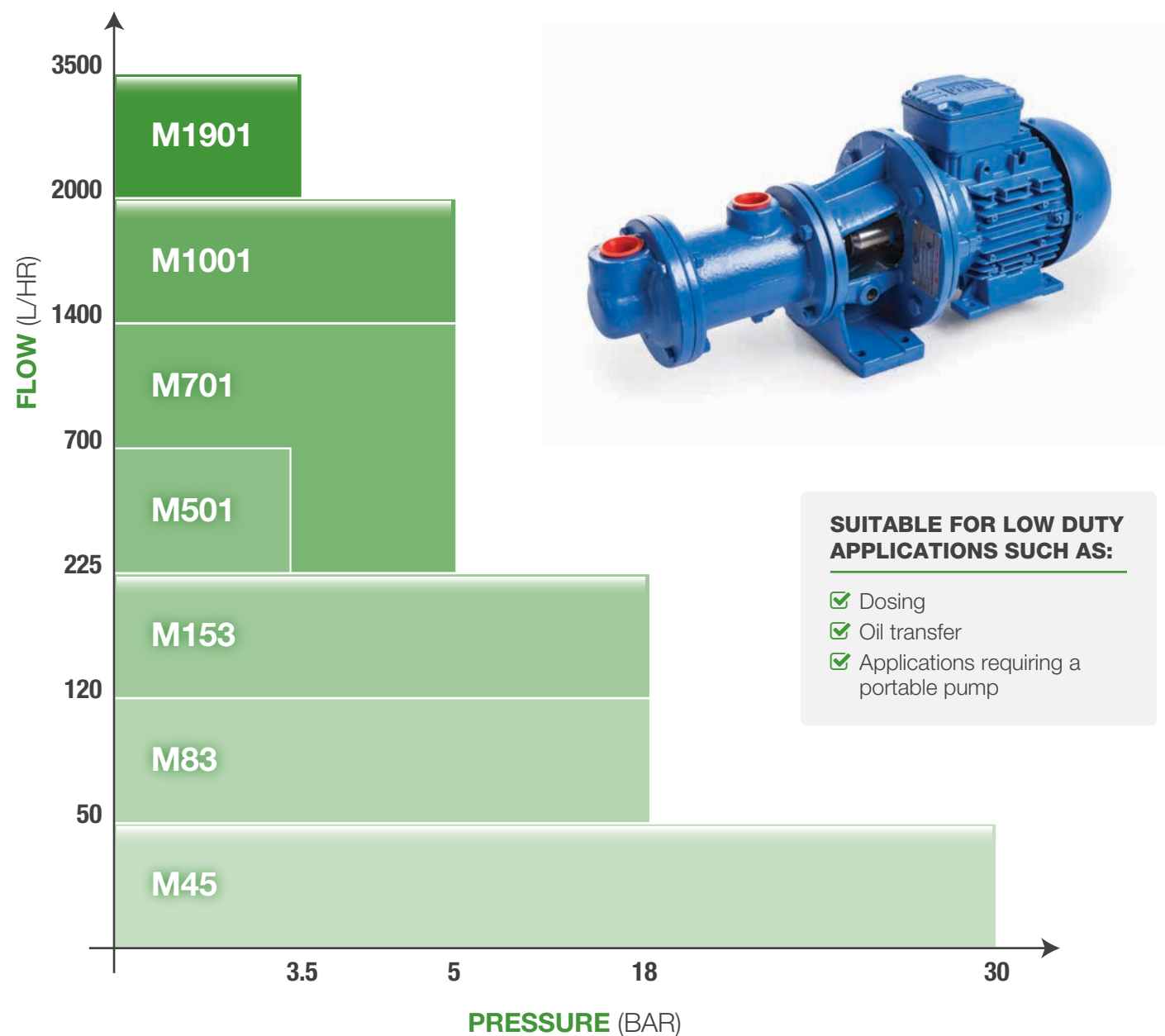
Mobile self priming pump unit,
available bareshaft or close
coupled to electric motor

DIMENSIONS (mm)

Pump Type	A	B	C	D	E	F	G
CBM 501	400	145	22	128	145	3/4" BSP FEMALE (SUCTION)	3/4" BSP FEMALE (DELIVERY)
CBM 701	389	140	24	126	148	1" BSP FEMALE (SUCTION)	1" BSP FEMALE (DELIVERY)
CBM 1001	389	140	24	126	148	1" BSP FEMALE (SUCTION)	1" BSP FEMALE (DELIVERY)
CBM 1901	389	140	24	126	148	1" BSP FEMALE (SUCTION)	1" BSP FEMALE (DELIVERY)



Pump Type	A	B	C
CBM45	257	285	487
CBM83	257	285	487
CBM153	287	315	517





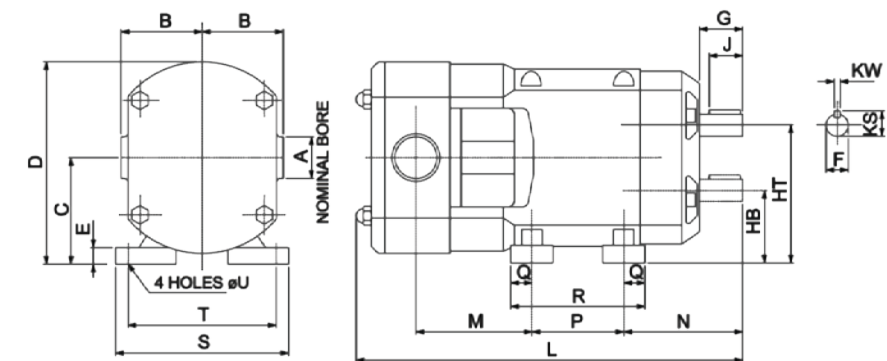
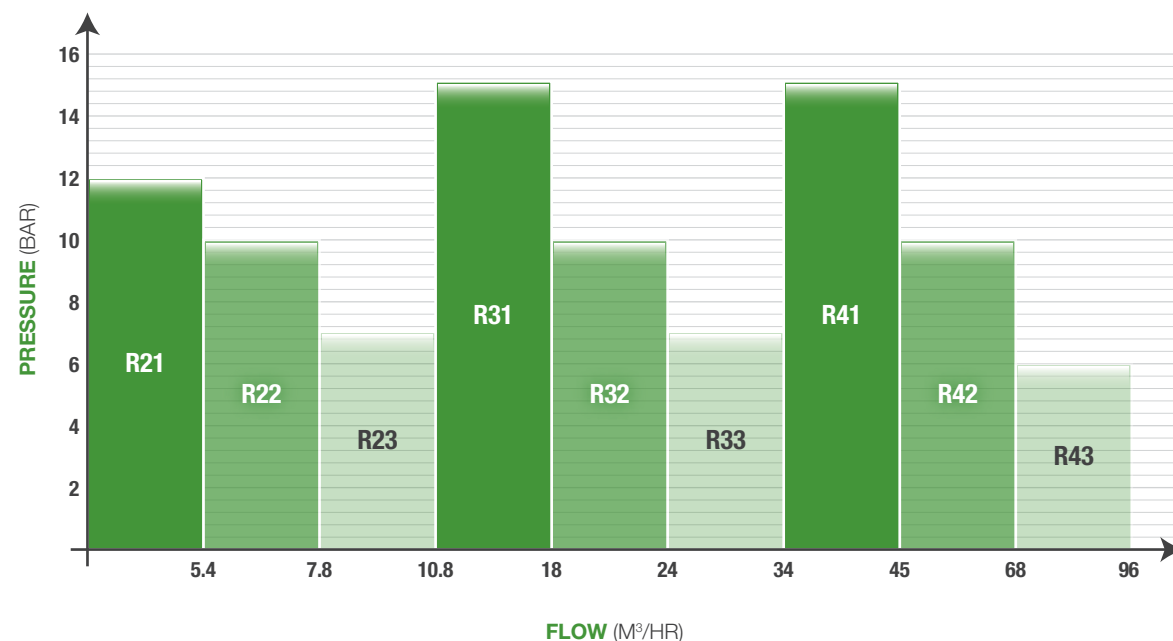
ROTORFLO ROTARY LOBE



Rotorflo rotary lobe pump is designed specifically for hygiene-conscious process industries. The compact Rotorflo series is manufactured to international standards, with all wetted parts in 316 stainless steel. The low-shear characteristics of the Rotorflo ensure the efficient transfer of all liquid viscosities up to semi-plastic, including delicate suspended solids, aggressive slurries, pastes, froths and gas/liquid mixtures without damaging the product.

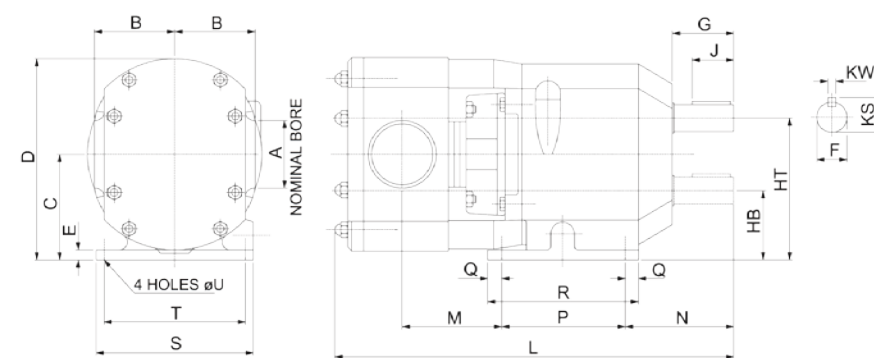
FEATURES

- ✓ Shafts are made of heavy-duty, large-sectioned **stainless steel** for less deflection and enhanced rigidity
- ✓ **Low-shear** characteristics protect delicate products
- ✓ Positive displacement technology ensures efficient transfer of all liquid viscosities
- ✓ The pumping chamber is **fully swept**, ensuring no product entrapment
- ✓ O-ring seal profiled to the edge of pumping chamber. Most covers are flush, minimising areas where bacterial growth can occur
- ✓ Full diameter porting supplied as standard. Fittings available to suit customer specification. Enlarged inlets for hopper feed also available
- ✓ The gear housing is manufactured from robust cast iron
- ✓ Keyed gears produce a positive drive to ensure that timing does not have to be reset when rotors are changed
- ✓ O-ring seals on rotor keep splines free of product contamination
- ✓ The front cover can be supplied with a pressure relief valve built in to protect against overload
- ✓ Heat jackets available for product being pump at temperature
- ✓ Helical gears time the main and lay shafts to maintain accurate clearances between the rotors. These clearances ensure high volumetric efficiency and increased suction
- ✓ The spigotted rotor case is positively located on the bearing housing, eliminating loose dowels
- ✓ The 12-involute spline configuration ensures accurate positioning of rotors during assembly



	A	B	C	D	E	F	G	HB	HT	J	KS	KW	L	M	N	P	Q	R	S	T	U	MASS KG
R21S	25												275	57								17.6
R21L													300	84								
R22S		66.5	88	167	14	20	36	60	116	26	22.5	6x6	285	59	101	75	17.5	110	144	124	10	18
R22L	40												310	86								
R23S													295	70								19
R23L													320	97								

	A	B	C	D	E	F	G	HB	HT	J				M	N	P	Q	R	S	T	U	MASS KG
R31S	40												385	74								42
R31L													420	109								
R32S	50	85	108	215	14	30	60	69	147	40	33	8x7	400	80	143	112	17.5	147	174	154	10	44
R32L													435	116								
R33S	65												420	92								47
R33L													455	126								

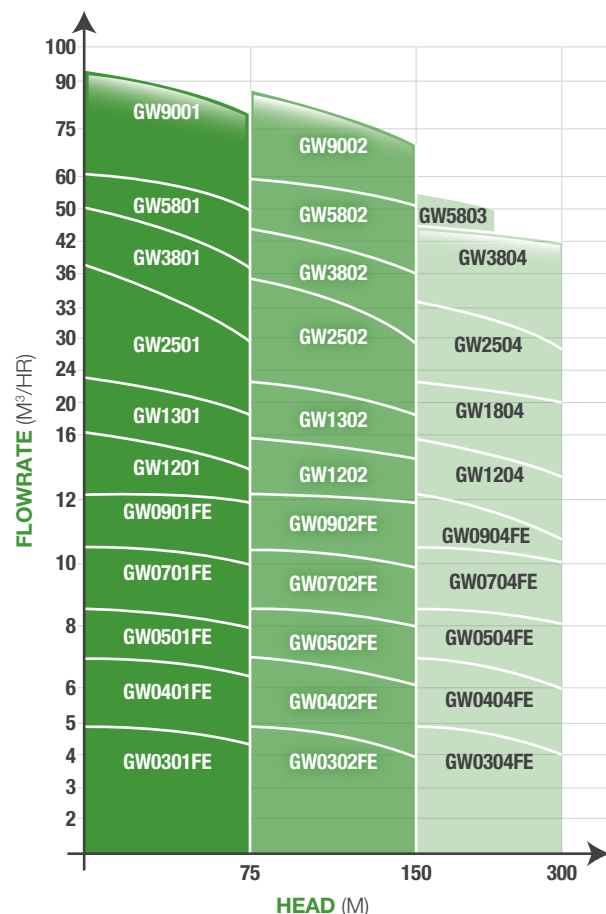


	A	B	C	D	E	F	G	HB	HT	J	KS	KW	L	M	N	P	Q	R	S	T	U	MASS KG
R41	65												520	104								112
R42	80	118.5	157	300	15	45	84	103	211	60	48.5	14x9	545	122	155	180	20	220	240	200	14	117
R43	100												575	140								126

The Orbit GW range of pumps offers reliable performance over a broad range of heads and speeds. The abrasion-resistant pump also features low noise and vibration levels.

FEATURES

- ✓ Discharge head suitable for drive by electric motor (AC/DC/solar), petrol or diesel engine, tractor or rotary windmill driver
- ✓ Flow is proportional to speed
- ✓ High developed head allows irrigation directly from borehole
- ✓ Stainless steel flexible shaft and bearing pieces
- ✓ Rubber stabilizers centralize pump and columns firmly in the borehole
- ✓ Pressure head developed is independent of pump speed
- ✓ Abrasion-resistant
- ✓ High load capability and angular contact thrust bearings in discharge head allow for pump setting depths of up to 300m
- ✓ High tensile drive shafts with rolled threads
- ✓ Stainless steel, precision-ground flexible shaft
- ✓ Stainless steel bearing pieces
- ✓ Truncated parallel threads on pump and columns ensure high strength with perfect fit and alignment
- ✓ Can be installed on an incline or riverbank



APPLICATIONS:

- ✓ Residential
- ✓ Commercial
- ✓ Agricultural
- ✓ Mining
- ✓ Marine
- ✓ Municipal
- ✓ Industrial
- ✓ River water extraction



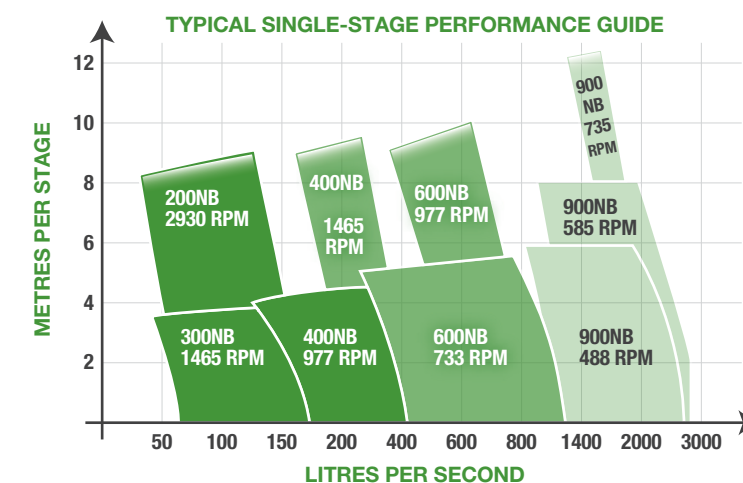
The Tsunami axial flow pumps are engineered and designed to move large volumes of water at relatively low heads.

FEATURES

- ✓ Low cost installation with minimal civil requirements
- ✓ Permanently submerged turbine
- ✓ Motor can be positioned well above the flood level
- ✓ No valves or return valves required
- ✓ Self-flushing
- ✓ High efficiencies
- ✓ Low load starting conditions
- ✓ Varying head conditions result in small variations in flow
- ✓ Range of materials of construction to suit various conditions
- ✓ Heavy duty thrust assembly coupled with a Hardy Spicer shaft or a right-angled gear drive
- ✓ Stainless steel shafts, impellers and impeller rings
- ✓ Standard materials of construction
- ✓ Simple and reliable

APPLICATIONS:

- ✓ Transfer of large volumes of water at relatively low levels
- ✓ Aqua-culture and other marine industries
- ✓ Effluent recycling within sewage works
- ✓ Features in water parks
- ✓ Backwash water from filters
- ✓ Water harvesting from rivers and dams
- ✓ Product transfer in process plants
- ✓ Flood irrigation





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