



BEDFORD PUMPS LTD.

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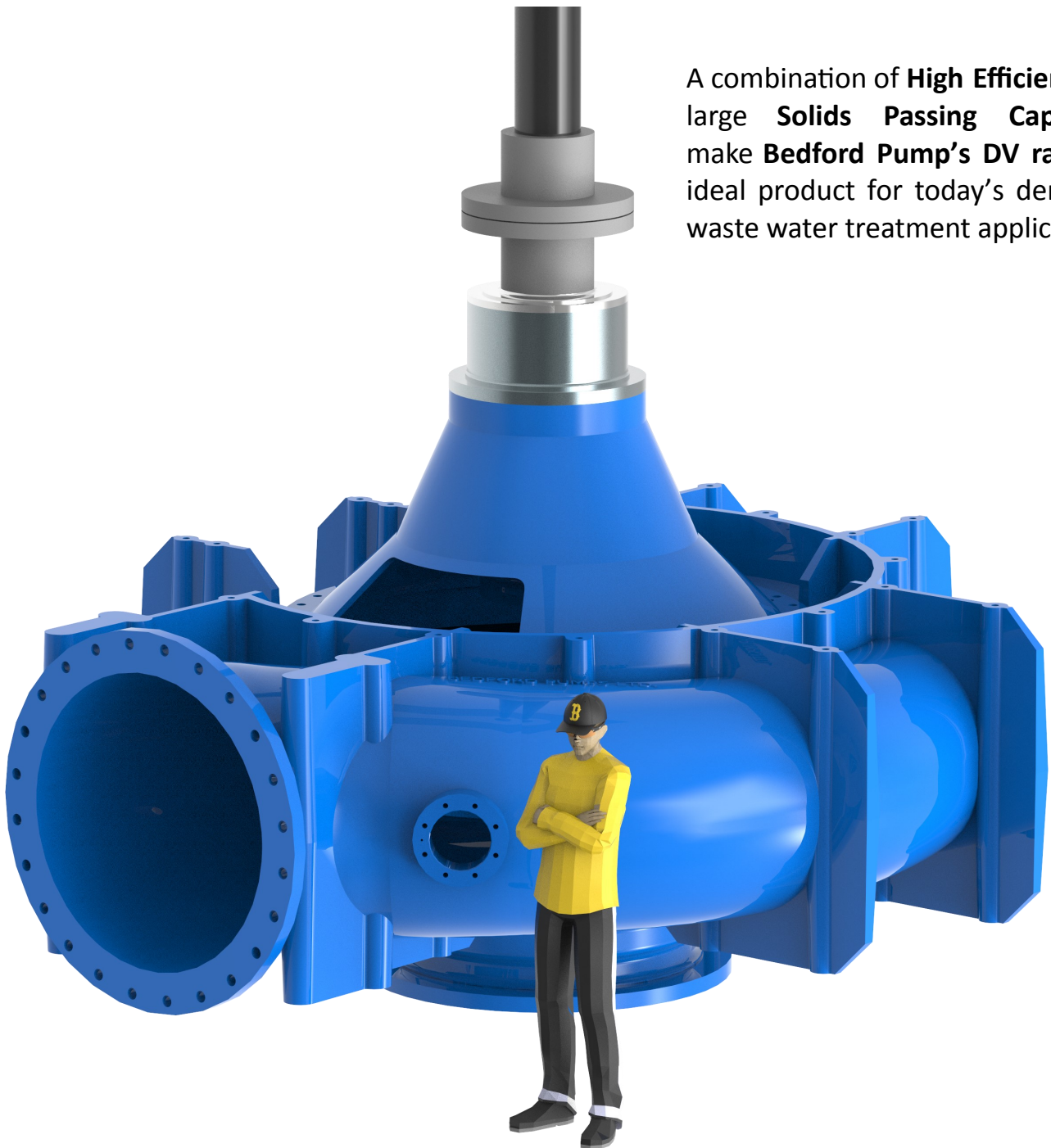
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DV Range

A combination of **High Efficiency** with large **Solids Passing Capabilities** make **Bedford Pump's DV range** the ideal product for today's demanding waste water treatment applications.



WASTE WATER VOLUTE PUMPS

Bedford Pumps Ltd

Bedford Pumps Ltd is a knowledge based business, built on a 140 year legacy of design and manufacture of high capacity water and waste water pumps. Our initiative designs are both efficient and robust and we have an unrivalled ability to engineer bespoke solutions to match the most demanding of customer needs.

Quality Assurance

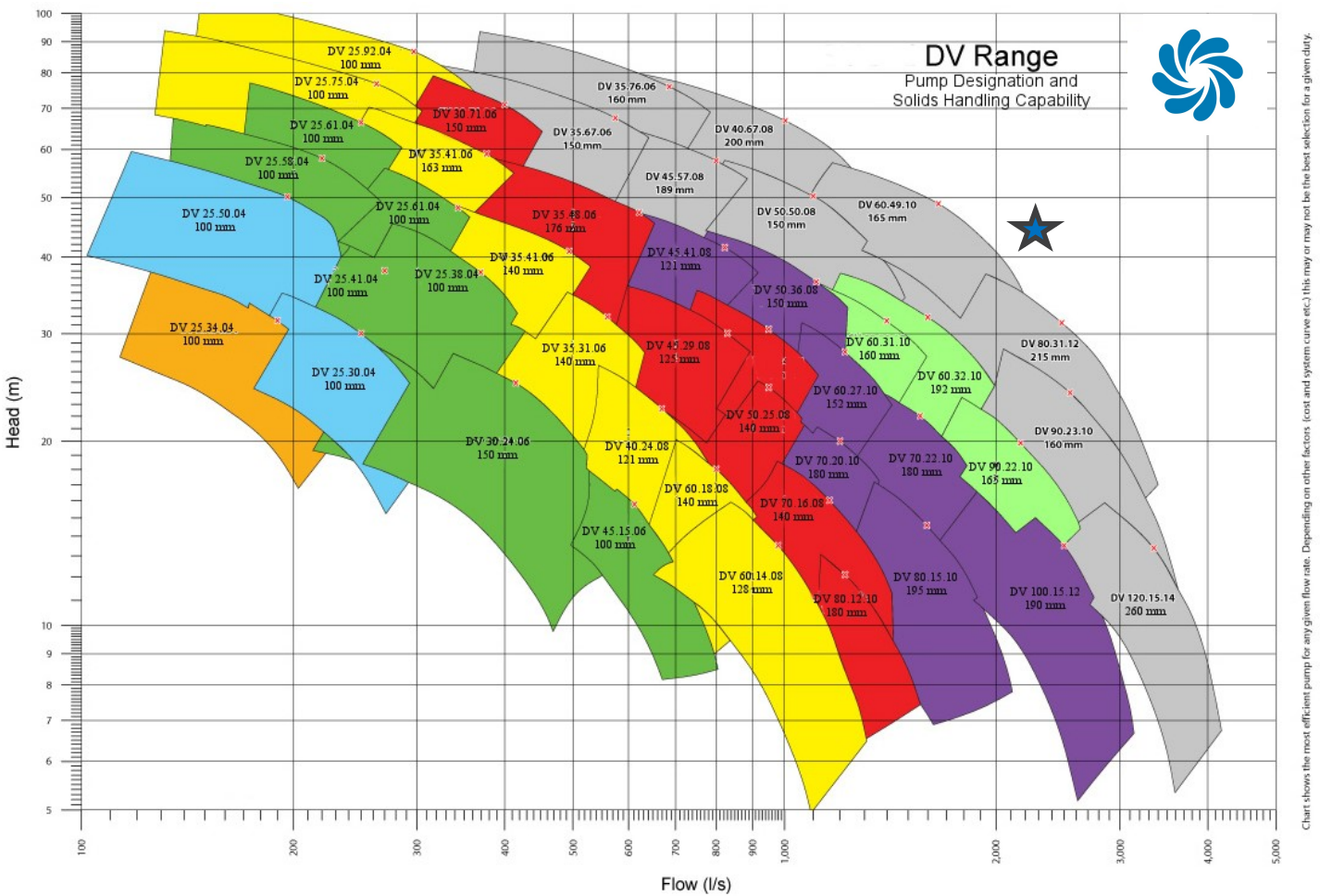
Bedford Pumps operate a quality system approved to ISO 9001:2015 for the design, development and manufacture of Rotodynamic Pumps and the design, development, procurement, installation and commissioning of pumping systems for the water and sewerage industries. This is in addition to the company's project management of pumping systems projects for the water and sewerage industries.



Waste Water Volute Pumps

Our robust range of volute-casing waste water pumps are designed to handle sewage and effluent containing rags and stringy matter.

Pre-Engineered Range Chart



★ Large engineered to order pumps are available outside of this envelope.

Features and Benefits

- High efficiency
- Back pull-out design
- Robust cast construction
- Choice of seal arrangements
- Minimum number of impeller blades
- Adjustable wearplate
- Choice of materials
- Low running costs
- Pipework remains in situ
- Suitable for aggressive environments
- Optimisation
- Low blockage frequency
- Non-intrusive maintenance
- Suitable for all applications



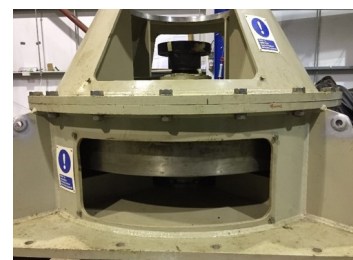
Flywheel Assemblies

Typical Applications

A range of highly efficient, robustly constructed solids handling pumps suitable for:

- Raw sewage
- Primary and activated sludge
- Screened sewage
- Surface and storm water
- General industrial duties
- Power station re-circulation
- Dock dewatering/impounding

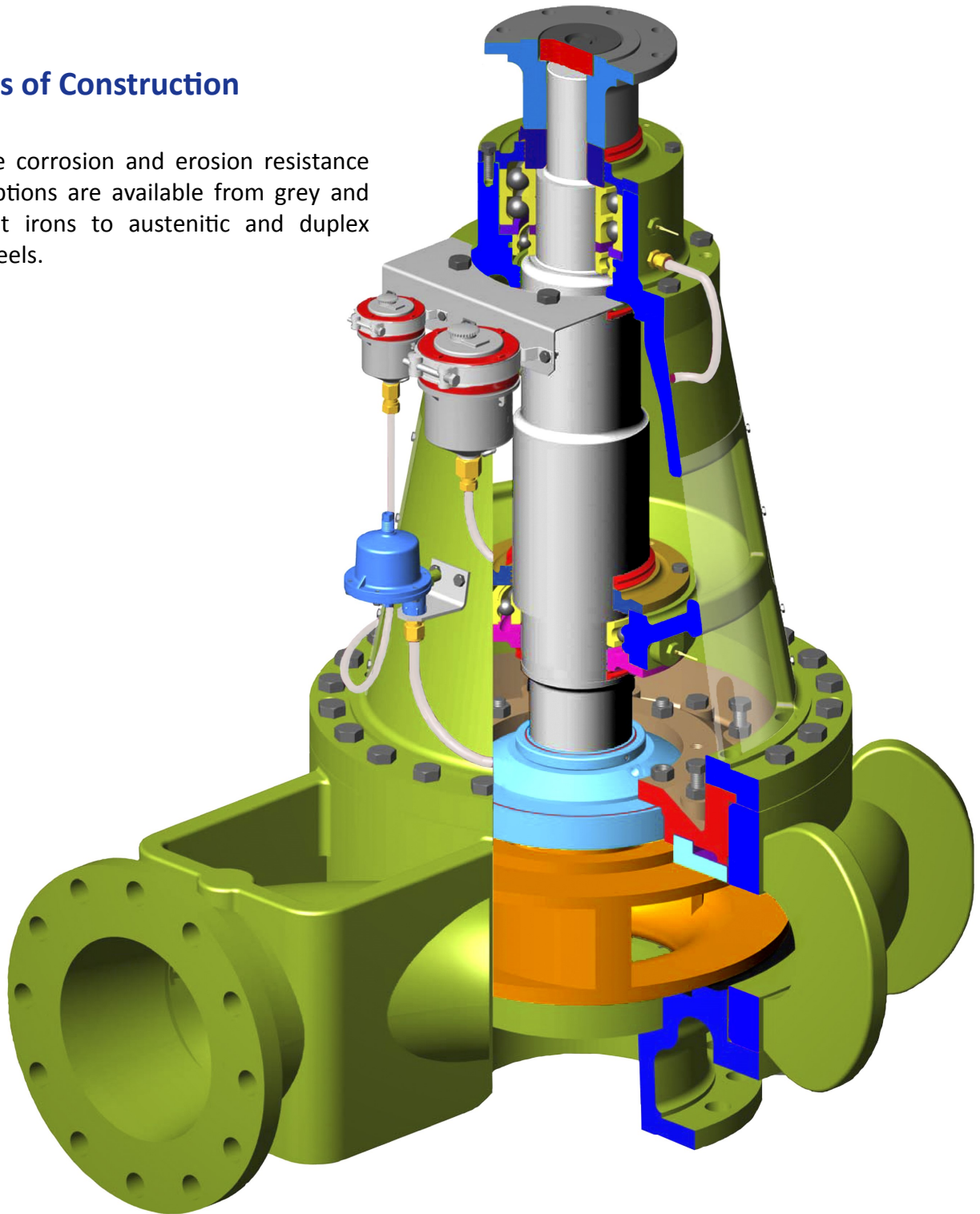
Mechanical surge suppression is a key component of waste water pumping. Bedford Pumps offer a range of robustly designed flywheel assemblies to ensure the safety and securing of your wastewater infrastructure.



Pump Construction

Materials of Construction

All castable corrosion and erosion resistance material options are available from grey and ductile cast irons to austenitic and duplex stainless steels.



High Energy IP68 Stand-Alone Motor Options

Flooding of pump rooms is often a major risk factor for which Bedford Pumps have a number of state of the art solutions available, including direct mounted IP68 motors. Integral immersible dry well submersible motors have limitations in terms of KW rating and suitability for the higher axial loads associated with high capacity and high head waste water pumps. Our IEC or NEMA designs of stand-alone dry well immersible motors have no such limitations and facilitate direct mounting of flood proof high energy medium and high voltage motors up to 11KV and with explosion proof options.

Pump Construction

Pump Casing and Bearing Bracket

The single volute type casing and the bearing bracket are of substantial cast construction with generous wall thickness and strengthening ribs. Handhole covers and air release bosses are standard features.

Adjustable wear plates are fitted to the back cover to enable running clearances to be maintained without the need to dismantle the pump.

The closed and open impeller options both incorporate a suction cover fitted with a renewable wear ring and rubber lining to withstand abrasion.

The open impeller option incorporates a renewable suction shroud.

Impeller

The high efficiency open-bladed design is of solid cast construction. It utilises the minimum number of blades in order to provide large passageways, thereby reducing the risk of blockage. The minimum solids handling capability of the range is 100mm sphere, with solids passing capabilities of over 250mm on large pump sizes.

The optional shrouded impeller offers equally high efficiency with reduced thrust loads. It features a dam ring in addition to the wear ring thereby reducing the rate of wear to a minimum, increases maintenance intervals and prolongs the efficient operation of the pump.

Pump Shaft

The design incorporates a large diameter shaft with minimum bearing overhang to reduce the effects of shock loading and minimise deflection. The first critical speed is nominally in excess of 125% of the design running speed.

Shaft Seals

A wide range of sealing options are available including double and single cartridge type mechanical seals.

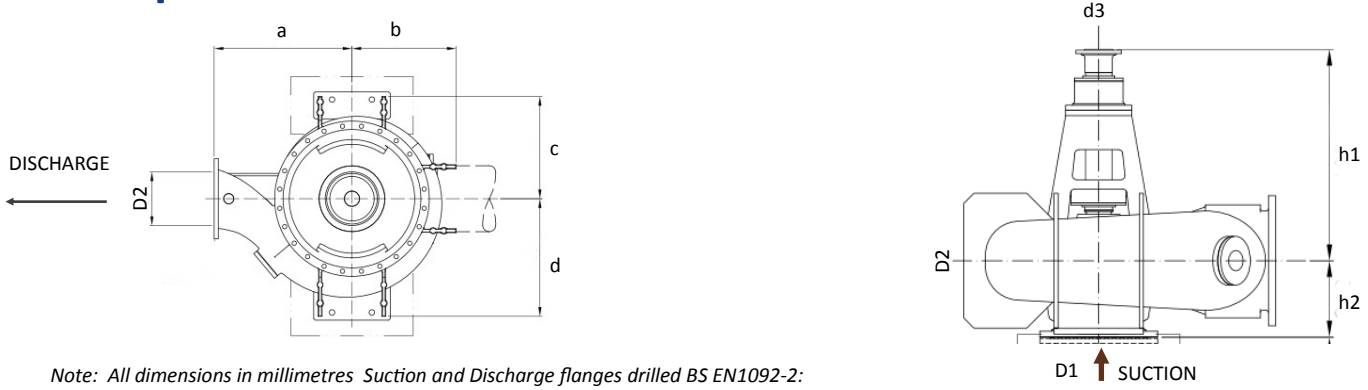
Bearings

The thrust bearing assembly is designed to take the full axial thrust. It consists of two angular contact and one deep groove ball bearings. Design life normally exceeds 100,000 hours, depending on impeller type and duty.

The journal bearing is a single deep groove ball or roller type, depending on the pump size. Bearing lubrication is normally via automatic grease dispenses.

An option white metal tiling pad thrust bearing design is available on certain larger pump sizes.

Pump Frame Outline Dimensions



Note: All dimensions in millimetres Suction and Discharge flanges drilled BS EN1092-2:

FRAME NO.	D1	D2	d3	h1	h2	a	b	c	d
DV 25.30.04	250	250	60	915	255	545	397	349	458
DV.25.34.4	250	250	70	945	255	545	400	350	465
DV.25.34.6	250	250	70	939	255	545	400	350	465
DV 25.38.04	300	250	60	912	282	574	428	400	500
DV.25.41.4	300	250	80	1063	285	545	400	350	465
DV.25.41.6	300	250	70	939	285	545	400	350	465
DV.25.50.4	250	250	80	1046	270	740	420	415	480
DV.25.50.6	250	250	70	928	270	740	420	415	480
DV.25.51.4	300	250	80	1073	322	700	460	410	530
DV.25.51.6	300	250	70	955	322	700	460	410	530
DV 25.58.04	250	250	60	1050	290	735	414	374	470
DV 25.60.04	300	250	60	1049	308	740	455	405	505
DV.25.61.4	250	250	80	1046	290	740	420	415	480
DV.25.61.6	250	250	70	928	290	740	420	415	480
DV.25.92.4	250	250	90	1170	300	750	475	425	545
DV 25.75.04	300	250	80	1175	300	750	474	427	545
DV.30.12.4	300	300	70	958	215	550	380	300	460
DV.30.16.4	300	300	70	958	260	605	450	355	550
DV.30.16.6	350	300	70	952	260	605	450	355	550
DV.30.24.6	300	300	80	958	330	670	530	445	630
DV.30.42.4	300	300	80	1062	300	590	490	415	560
DV.30.42.6	300	300	70	944	300	590	490	415	560
DV 30.71.06	350	300	100	1200	345	860	610	570	660
DV.35.10.6	350	350	70	948	330	700	515	405	630
DV.35.10.8	350	350	70	98	330	700	515	405	630
DV.35.31.6	400	350	80	1070	370	790	615	535	630
DV.35.31.8	400	350	80	952	370	790	615	535	630
DV 35.41.06	350	350	80	1235	375	900	650	620	710
DV.35.48.6	400	350	100	1188	330	910	640	560	675
DV.35.48.8	400	350	80	1143	330	910	640	560	675
DV.35.56.6	350	350	100	1314	310	850	605	540	675
DV 35.67.06	400	350	100	1230	390	900	680	665	765
DV 35.76.06	400	350	100	1250	390	900	680	665	765
DV.40.13.6	400	400	70	941	309	790	620	500	750
DV.40.13.8	400	400	70	934	309	790	620	500	750
DV.40.24.8	400	400	80	1133	430	915	695	585	745
DV 40.57.08	500	400	100	1238	420	1050	796	776	906
DV 40.67.08	500	400	110	1238	420	1050	796	776	906
DV.40.68.4	400	400	105	1150	445	1150	645	635	735
DV.45.15.6	400	450	80	1063	375	870	660	530	800
DV.45.15.8	400	450	70	945	375	870	660	530	800
DV.45.29.8	500	450	100	1268	420	1030	760	645	810
DV 45.34.08	500	450	100	1288	440	1030	750	750	875
DV.45.41.8	500	450	110	1257	400	1100	775	680	815
DV.50.5.8	600	500	120	1270	445	1200	860	750	900
DV 50.25.08	500	500	80	1240	385	1000	802	682	922
DV 50.36.08	600	500	100	1240	577	1100	857	757	997
DV 50.50.08	600	500	100	1238	420	1200	902	802	1002
DV.60.14.8	500	600	80	1091	470	1100	820	640	995
DV.60.14.10	500	600	80	973	470	1100	820	640	995
DV 60.18.08	500	600	80	1140	445	1050	808	658	958
DV.60.27.10	600	600	110	1271	550	130	960	820	1150
DV.60.27.12	600	600	110	1119	550	1300	960	820	1150
DV 60.31.10	600	600	110	1351	573	1300	970	881	1142
DV 60.32.10	600	600	120	1351	565	1300	970	904	1142
DV 60.49.10	700	600	140	1275	510	1400	1049	1199	1199
DV.70.16.8	600	700	95	1086	490	1205	895	720	1090
DV.70.16.10	600	700	95	1086	490	1205	895	720	1090
DV 70.20.10	600	700	90	1245	605	1250	970	765	1140
DV 70.22.10	700	700	100	1265	573	1250	970	765	1140
DV.70.35.10	700	700	120	1270	610	1500	1065	910	1280
DV 70.39.10	700	700	140	1420	635	1500	1085	1000	1270
DV 80.12.10	600	800	90	1235	635	1275	991	811	1201
DV.80.15.10	700	800	100	1324	645	1370	1010	795	1235
DV.80.15.12	700	800	95	1186	645	1370	1010	795	1235
DV 80.31.12	800	800	130	1464	700	1625	1325	1160	1425
DV.90.15.10	700	900	110	1322	605	1700	1260	950	1640
DV.90.15.12	700	900	100	1296	605	1700	1260	950	1640
DV 90.22.10	700	900	100	1353	605	1800	1229	973	1530
DV.90.23.13	800	900	120	1330	745	1900	1500	1210	1810
DV 100.15.12	900	1000	100	1423	600	1900	1344	984	1644
DV 120.15.14	1000	1000	130	1389	700	2050	1467	1139	1817

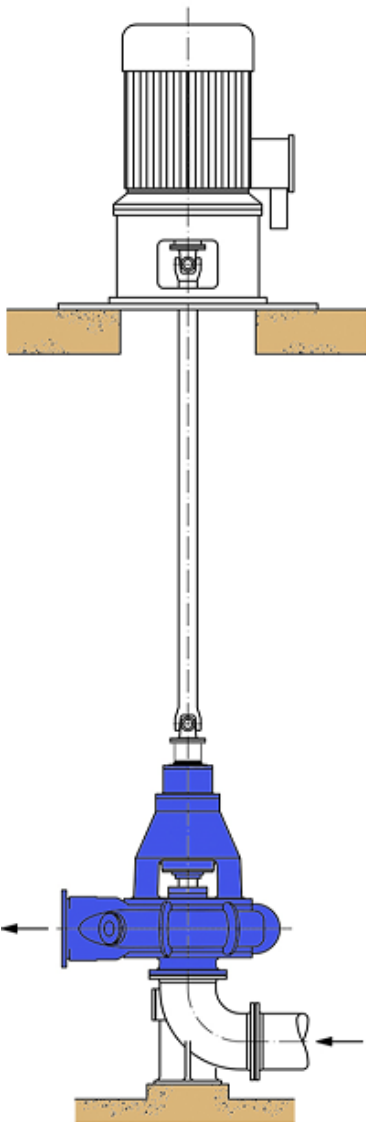
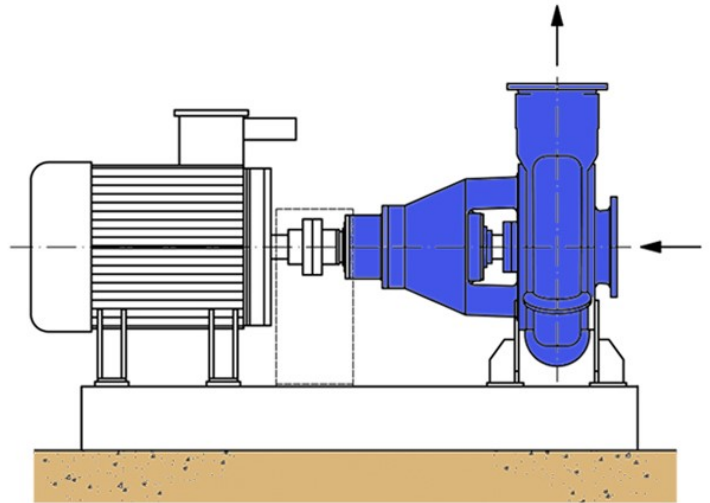
Typical Arrangements

This robust solids handling pump can be installed in the following configurations:

Horizontal

Mounted on a baseplate and driven by a foot mounted motor or diesel engine. The discharge branch can be rotated to deliver either on a horizontal or vertical centreline.

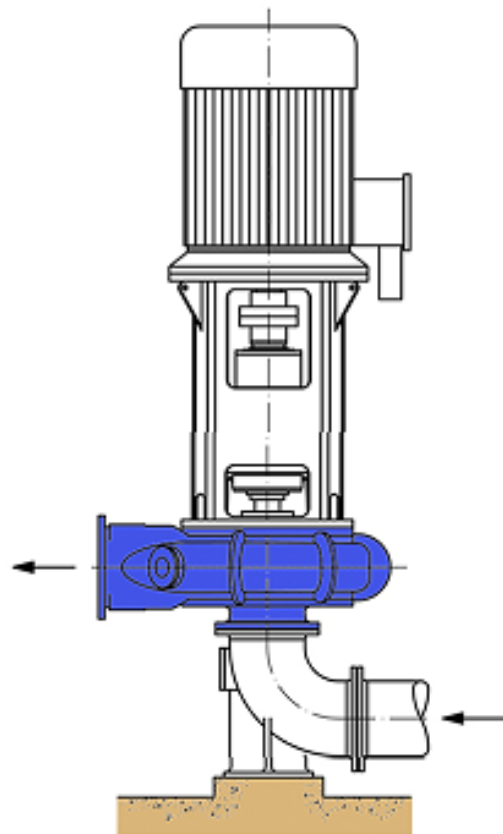
Generally used in a dry well which is unlikely to flood.



Close Coupled

Mounted vertically with motor directly coupled to the pump via a flexible coupling. The motor stool could incorporate a flywheel if required.

Generally used in a dry well, which is unlikely to flood.



Long Coupled

Mounted vertically and driven via a carden shaft. The prime mover can be a motor or diesel/right angle gearbox. Used in a dry well with prime mover mounted above potential flood level.



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