

### User Benefits

- High efficiency
- Low energy consumption
- Compact size
- Robust construction
- Reversible operation
- Ability to pump abrasive media
- Cost effective easy maintenance

# Series D

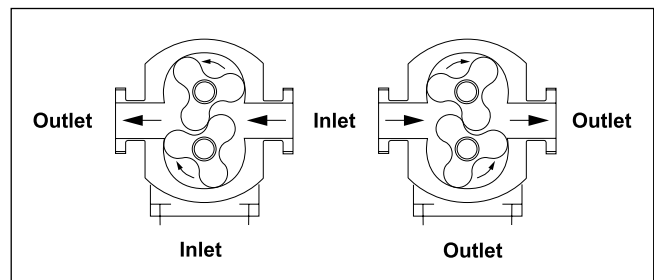
## Rotary Lobe Pumps for industrial and sludge applications

SSP brand Series D ductile iron rotary lobe pumps, from Alfa Laval Pumps Limited, fulfill positive transfer duties throughout industry where the use of stainless steel for pumphead components is not essential, in application areas such as Petrochemicals, Chemical, Paper, Paints and Polymers, Petfood, Chocolate and Sugar.

Series D pumps also cover a wide span of sludge transfer duties throughout the environmental and industrial waste treatment processes. These include Primary, Secondary and Humus Desludging, Thickener, Digester and Filterpress Feed and Tanker loading. Series D pumps may offer lower installation costs compared with other pump technologies. In most cases this saving, when combined with low running and maintenance costs and easy access to the pumphead minimizing downtime, results in a reduced lifecycle cost (LCC).

### Operation

The positive displacement of the Series D pump is provided by non-contacting, counter rotating tri-lobe or bi-lobe rotors within a fully swept pump chamber. All Series D pumps are capable of bi-rotational flow without modification.



## Performance

The Series D pump range has nine pump head displacements ranging from 20.87 gallons/100 rev to 158.52 gallons/100 rev.

- Flow rates up to 790 gpm (up to 555 for sludge)
- Differential pressures up to 215 psi (75 psi on sludge)
- Port sizes from 3" to 6" diameter

**High Volumetric Efficiency** - The Series D pump offers high efficiency transfer of low, medium and high viscosity pumped media. This important aspect of performance is achieved by maintaining high accuracy and repeatability of component part manufacture, thereby maximizing shaft rigidity and minimizing the effects of thermal expansion within the pump gearbox. This combination allows the optimum pump head geometry to be achieved which, in turn, maximizes volumetric efficiency.

## Basic Design

The Series D pump has a choice of 12 models, providing greater application flexibility and cost effective easy maintenance.

**Pumphead** – The pump casing is manufactured in ductile iron.

The Series D in standard specification has tri-lobe rotors manufactured from ductile iron (for non- sludge applications) or a metal insert covered with either NBR (which can be fitted with metal back plates for high fibre duties) or urethane, both giving long term wear resistance. The urethane rotors can be supplied slotted, providing grit channels to improve rotor life.

**Shafts** - Manufactured from surface hardened carbon steel.

**Gearbox** - The Series D pump has a robust cast iron gearbox, which provides maximum shaft rigidity. Heavy duty taper roller bearing arrangements provide maximum support for both drive and auxiliary shafts.

Pump Model	Inlet and Outlet Connection Size	Displacement	Differential Pressure	Maximum Speed		Weight Bare Shaft Pump
				rev/min	Sludge applications rev/min	
	inches	US gal/100 rev	psi	rev/min	rev/min	lb
D4-0079-H15	3.00	20.87	215	750	-	243
D4-0095-H10	3.00	25.10	145	750	-	250
D4-0095-H05	3.00	25.10	75	500	350	250
D4-0140-H05	4.00	36.99	75	500	350	287
D5-0168-H15	4.00	44.39	215	600	-	375
D5-0200-H10	4.00	52.84	145	600	-	388
D5-0200-H05	4.00	52.84	75	500	350	388
D5-0290-H05	4.00 or 6.00	76.62	75	500	350	424
D6-0353-H15	6.00	93.26	215	500	-	620
D6-0420-H10	6.00	110.96	145	500	-	638
D6-0420-H05	6.00	110.96	75	500	350	638
D6-0600-H05	6.00	158.52	75	500	350	662

Note: Only Series D pump models rated at 75 psi differential pressure are suitable for sludge pumping.

# Series

## Specification Options



### Wear plates

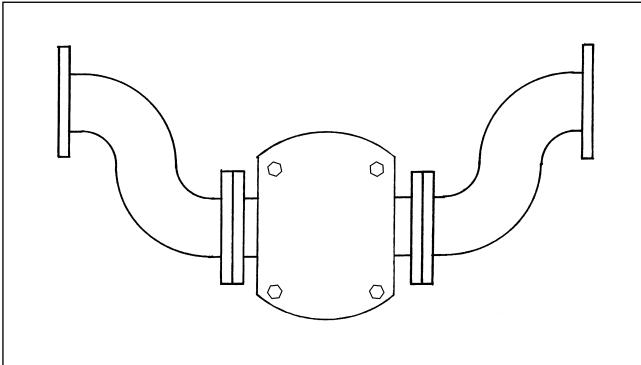
Pump casings may be supplied fitted with hardened, replaceable wear plates (standard on sludge pumps). The wear plates can be replaced with minimal pump dismantling and without removal of pump from service.

### Surface finish and coatings

For abrasive applications the ductile iron pumphead and rotors may be supplied with a tungsten carbide coating or other surface hardening treatment to increase wear resistance.

### Bi-lobe rotors

Bi-lobe stainless steel rotors are available for highly viscous, abrasive applications such as magma and masseccuite.



### Motorized pump units

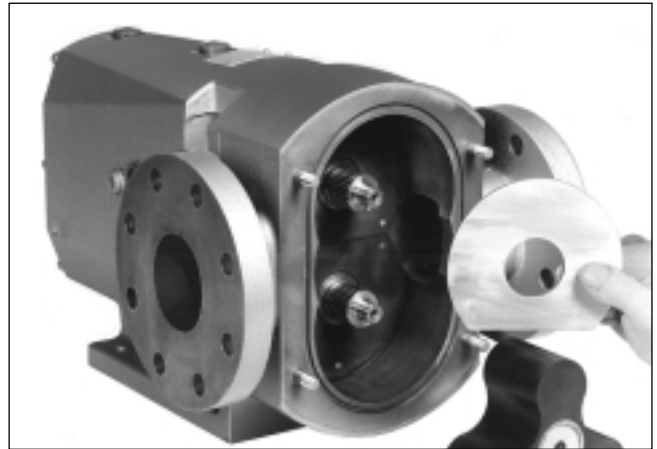
Pumps may be supplied fully motorized with fixed or variable speed drives including appropriate control systems if required, mounted on mild steel baseplates. In addition to electric motor drives, hydraulic, pneumatic, diesel or gasoline powered prime movers can be fitted.

### Pumped media seals

The optimum primary seal can be chosen to match the pumped media and duty conditions. Single or double mechanical seals include flushed variants. For arduous duties hard faced seal materials such as tungsten carbide or silicon carbide can be used. Cartridge mechanical seals are available for sludge and other similar difficult applications.

Packed glands offer a simple, low cost, and easy to maintain controlled leakage sealing arrangement.

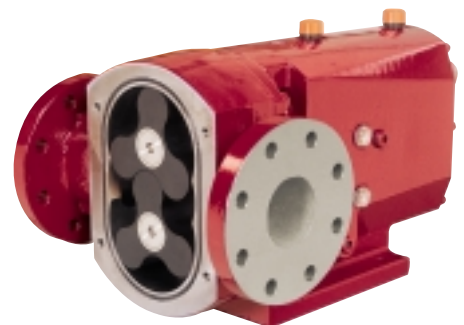
Pumped media wetted elastomers are EPDM, NBR, FPM or PTFE.



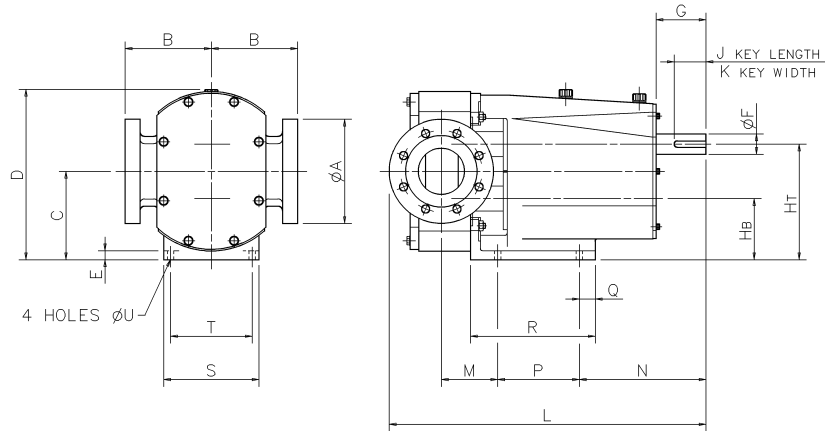
### Connections

Pump casings are supplied with integral cast flanged inlet and outlet connections to all major standards including ASA/ANSI150, BS4504/DIN2533, BS10E and more.

On models D4-0095-H05 and D4-0140-H05, the flanged connections may be fitted with priming adaptors.



## Bareshaft Pump Dimensions



All dimensions in inches, unless otherwise noted

Pump Model	A	B	C	D	E	F (mm)	G	HB	HT	J (mm)	K (mm)	L	M	N	P	Q	R	S	T	U
D4-0079-H15	3.00	6.69	6.42	12.09	0.79	38	3.15	4.53	8.31	63	10	23.35	4.65	8.86	5.91	1.38	10.04	7.24	5.91	0.55
D4-0095-H10	3.00	6.69	6.42	12.09	0.79	38	3.15	4.53	8.31	63	10	23.50	4.80	8.86	5.91	1.38	10.04	7.24	5.91	0.55
D4-0095-H05	3.00	6.69	6.42	12.09	0.79	38	3.15	4.53	8.31	63	10	23.50	4.80	8.86	5.91	1.38	10.04	7.24	5.91	0.55
D4-0140-H05	4.00	6.69	6.42	12.09	0.79	38	3.15	4.53	8.31	63	10	24.72	5.43	8.86	5.91	1.38	10.04	7.24	5.91	0.55
D5-0168-H15	4.00	7.48	7.68	14.61	0.79	45	4.33	5.31	10.04	70	14	27.24	4.65	10.98	7.09	1.38	10.83	8.27	7.09	0.55
D5-0200-H10	4.00	7.48	7.68	14.61	0.79	45	4.33	5.31	10.04	70	14	27.52	4.92	10.98	7.09	1.38	10.83	8.27	7.09	0.55
D5-0200-H05	4.00	7.48	7.68	14.61	0.79	45	4.33	5.31	10.04	70	14	27.52	4.92	10.98	7.09	1.38	10.83	8.27	7.09	0.55
D5-0290-H05	4.00	7.48	7.68	14.61	0.79	45	4.33	5.31	10.04	70	14	28.31	5.71	10.98	7.09	1.38	10.83	8.27	7.09	0.55
D5-0290-H05	6.00	7.48	7.68	14.61	0.79	45	4.33	5.31	10.04	70	14	29.41	5.71	10.98	7.09	1.38	10.83	8.27	7.09	0.55
D6-0353-H15	6.00	8.86	8.86	16.89	0.79	48	4.33	6.10	11.61	70	14	32.36	6.02	10.47	10.24	1.57	14.57	8.66	7.48	0.55
D6-0420-H10	6.00	8.86	8.86	16.89	0.79	48	4.33	6.10	11.61	70	14	32.76	6.42	10.47	10.24	1.57	14.57	8.66	7.48	0.55
D6-0420-H05	6.00	8.86	8.86	16.89	0.79	48	4.33	6.10	11.61	70	14	32.76	6.42	10.47	10.24	1.57	14.57	8.66	7.48	0.55
D6-0600-H05	6.00	8.86	8.86	16.89	0.79	48	4.33	6.10	11.61	70	14	33.74	7.40	10.47	10.24	1.57	14.57	8.66	7.48	0.55

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**PUMPS Inc.**

The information contained herein is correct at the time of issue, but may be subject to change without prior notice

Ref: DV1/0103 Printed in England.