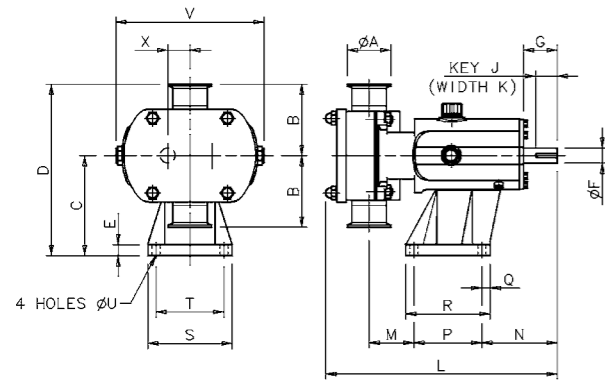
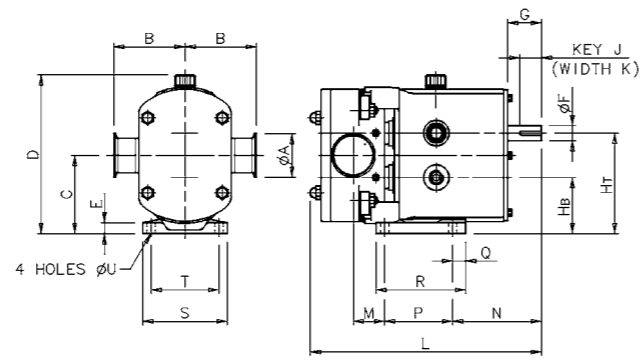


Bareshaft Pump Dimensions

Vertically ported



Horizontally ported



Vertically ported All dimensions in mm

Pump Model	A	B	C	D	E	F	G	J	K	L	M	N	P	Q	R	S	T	U	V	X
X1-0005-U06 or U12 X1-0007-U07	25 40	95 95	113 113	208 208	15 15	16 16	40 40	30 30	5 5	281 294	53 60	100 100	80 80	22 22	114 114	104 104	80 80	10 10	174 174	23.5 23.5
X2-0013-U05 or U15 X2-0018-U07	40 50	105 105	147 147	252 252	15 15	22 22	50 50	32 32	6 6	325 341	59 66	111 111	100 100	12 12	124 124	124 124	100 100	12 12	213 213	32.5 32.5
X3-0027-U05 or U15 X3-0035-U07	50 65	125 125	175 175	300 300	22 22	28 28	61 61	40 40	8 8	431 447	71 77	142 142	155 155	15 15	185 185	155 155	125 125	14 14	246 246	37.5 37.5
X4-0046-U05 or U15 X4-0063-U05 or U10	50 65	150 150	213 213	363 363	25 25	38 38	80 80	63 63	10 10	514 533	74 81	174 174	200 200	17 17	234 234	184 184	150 150	14 14	301 301	49.5 49.5
X5-0082-V15 X5-0115-V10	65 80	175 175	256.5 256.5	431.5 431.5	30 30	45 45	110 110	70 70	14 14	599 626	61 81	264 264	200 200	20 20	240 240	220 220	180 180	14 14	344 344	60 60
X6-0140-V15 X6-0190-V10	80 100	190 190	295 295	485 485	30 30	48 48	110 110	70 70	14 14	687 715	77 89	267 267	260 260	20 20	300 300	250 250	210 210	14 14	400 400	70 70
X7-0250-V15 X7-0380-V10	100 150	205 205	365 365	570 570	30 30	60 60	110 110	90 90	18 18	763 817	94 121	288 288	280 280	25 25	330 330	290 290	240 240	18 18	475 475	81.5 81.5

Horizontally ported All dimensions in mm

Pump Model	A	B	C	D	E	F	G	HB	HT	J	K	L	M	N	P	Q	R	S	T	U
X1-0005-U06 or U12 X1-0007-U07	25 40	95 95	90.5 90.5	189 189	10 10	16 16	40 40	67 67	114 114	30 30	5 5	281 294	29 36	124 124	80 80	10 10	100 100	100 100	80 80	10 10
X2-0013-U05 or U15 X2-0018-U07	40 50	105 105	115 115	233 233	15 15	22 22	50 50	82.5 82.5	147.5 147.5	32 32	6 6	325 341	39 46	131 131	100 100	19 19	132 132	124 124	100 100	12 12
X3-0027-U05 or U15 X3-0035-U07	50 65	125 125	137.5 137.5	272 272	18 18	28 28	60 60	100 100	175 175	40 40	8 8	431 447	68 74	175 175	125 125	30 30	181 181	154 154	125 125	14 14
X4-0046-U05 or U15 X4-0063-U05 or U10	50 65	150 150	163 163	325 325	20 20	38 38	80 80	113.5 113.5	212.5 212.5	63 63	10 10	514 533	74 81	225 225	150 150	35 35	202 202	184 184	150 150	14 14

P/102/0505

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

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Series X

Rotary Lobe Pumps for high level cleanability



SSP Series X stainless steel rotary lobe pumps provide the ultimate in clean pumping. Series X pumps complement the SSP Series S pumps, which are used throughout industrial and clean processes worldwide. Series X pumps are EHEDG accredited (European Hygienic Equipment Design Group) for the highest level of cleanability.

Handling from low to high viscosity pumped media the characteristic smooth, low shear pumping action is ideal for gentle transfer of delicate and sensitive media.

User Benefits

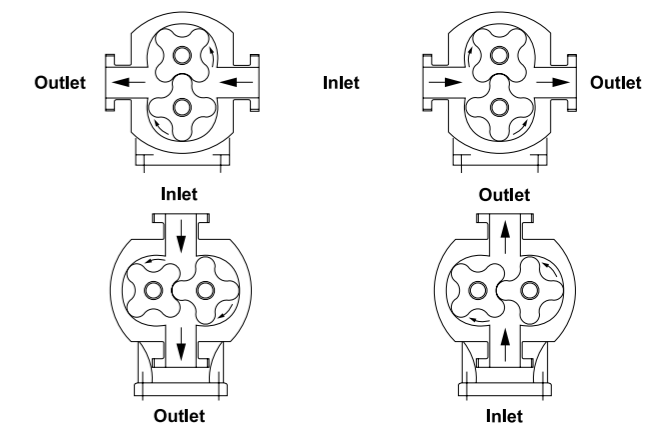
- High efficiency
- Low energy consumption
- Compact size
- Smooth flow
- Reversible operation
- Low shear pumping
- Minimal pumped media agitation
- Easy maintenance
- EHEDG accreditation
- Self draining

Series X pumps are suitable for CIP (Cleaning In Place) and SIP (Sterilisation In Place) and conform to USA 3A Sanitary Standard.



Operation

The positive displacement of the Series X pump is provided by noncontacting, contra rotating four-lobe rotors within a fully swept pump chamber. All Series X pumps are capable of birotational flow without modification.



Performance

The Series X pump range has fourteen pump head displacements ranging from 0.05 litres/rev to 3.80 litres/rev.

- Flow rates up to 115 m³/h
- Differential pressures up to 15 bar
- Port sizes from 25 mm to 150 mm diameter

Computational Fluid Dynamics (CFD) has been used to establish mathematically exact geometry for the rotors and rotorcase, ensuring high efficiency transfer with low pulsation, low shear and low noise characteristics.

Low NPSH – The Series X pump has full through-bore inlet and outlet ports to International Standards. This reduces inlet and outlet port losses, thereby lowering NPSH requirements.

Basic Design

Pumphead – All metallic pumped media wetted components are manufactured in 316L stainless steel. The Series X has four-lobe rotors allowing the pump to be operated at a maximum temperature of 150°C for both process and CIP/SIP. A unique self-cleaning design rotor retention device incorporates

a high integrity cup seal to fully isolate splines from the pumped media. The precise involute splines ensure accurate rotor synchronisation.

Shafts – Manufactured from high strength duplex stainless steel.

Gearbox – The Series X pump has a robust cast iron gearbox with a universal design for models X1 to X4. This gives the flexibility of mounting pumps with the inlet and outlet ports in either a vertical or horizontal plane by changing the foot and its position. For the larger models X5 to X7 only vertical plane inlet and outlet porting is available by using a dedicated gearbox casting.

For EHEDG design and installation compliance and conformity to the Machinery Safety Directive 89/392/EEC (1989), Series X pumps are supplied vertically ported.

Pump Model	Inlet and Outlet Connection size International standard mm	Displacement litres/rev	Differential Pressure bar	Maximum Speed rev/min	Weight Bare Shaft Pump	
					Horizontal Porting kg	Vertical Porting kg
X1-0005-U06	25	0.05	6	1200	15	16
X1-0005-U12	25	0.05	12	1200	15	16
X1-0007-U07	40	0.07	7	1200	16	17
X2-0013-U05	40	0.128	5	1000	32	33
X2-0013-U15	40	0.128	15	1000	32	33
X2-0018-U07	50	0.181	7	1000	33	34
X3-0027-U05	50	0.266	5	1000	57	59
X3-0027-U15	50	0.266	15	1000	57	59
X3-0035-U07	65	0.35	7	1000	59	61
X4-0046-U05	50	0.46	5	1000	107	110
X4-0046-U15	50	0.46	15	1000	107	110
X4-0063-U05	65	0.63	5	1000	113	116
X4-0063-U10	65	0.63	10	1000	113	116
X5-0082-V15	65	0.82	15	600	-	155
X5-0115-V10	80	1.15	10	600	-	165
X6-0140-V15	80	1.40	15	500	-	278
X6-0190-V10	100	1.90	10	500	-	290
X7-0250-V15	100	2.50	15	500	-	340
X7-0380-V10	150	3.80	10	500	-	362

U = Universal mounting (Horizontal or Vertical Porting)

V = Vertical Porting

For EHEDG pumps must be supplied with vertical porting

Specification Options



Heating / Cooling device

A rotorcase cover jacket is used for heating the pumphead so as to maintain the pumped media viscosity and reduce risk of any crystallisation/solidification. This may also be used for cooling purposes when required.

Surface finish

The standard surface finish of 0.8µm Ra for the pumphead and rotors can be enhanced for overall cleanability by electro polishing to ≤ 0.8µm Ra with option of 0.5µm Ra from mechanical and electro polishing. Higher surface finishes are available on request.

Full material traceability

To meet the stringent demands of sensitive applications requiring integrity of materials and/or safety, pumps may be supplied with full material traceability to BSEN 10204.

Pumped media seals

The optimum primary seal configuration and material combinations can be chosen to match the pumped media and duty conditions. All sealing options are fully front loading and fully interchangeable without the need for additional housings or pump component changes. This enhances cleanability, simplifies access and significantly reduces maintenance downtime. Single or double mechanical seals include flushed or aseptic variants. For arduous duties hard faced seal materials such as silicon carbide can be used. The seal seat/face material combinations and EPDM/FPM elastomers are all EHEDG compliant.

All pumped media wetted elastomers are controlled compression joints, the latest technology where static and dynamic elastomer seals are used to prevent pumped media leakage – materials are EPDM, MVQ, FPM all FDA conforming.

Connections

Comprehensive choice covering

- Screwed male connections to all major standards including DIN11851, ISS/IDF, RJT, SMS, and Tri-clamp.
- Aseptic male connections to DIN11864-1 Form A (ISO2037/BS4825).

Motorised pump units

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

