

LQ3G Triple Screw Pump

SAFETY BY-PASS
FUNCTION PROTECTS PUMP



APPLICATIONS

LQ3G Triple screw pump is used for transport of viscous fluids with lubricating properties. They are suited for a variety of applications such as fuel-injection, oil burners, boosting, hydraulics, fuel, lubrication, circulating, feed and so on. It is only applicable to converting lubricating fluids not containing solid particles at normal temperature. It may be used as a common delivery pump, and a pressure supply pump in hydraulic drive device. The maximum working temperature is equal to or lower than 350 °C.

- Bitumen
- Heavy diesel
- Heavy fuel oil
- Heavy gear oil

FEATURES

Triple screw pump is a positive displacement pump, it is often used to pump high-pressure viscous fluids. Three screws drive the pumped liquid forth in a closed chamber. As the screws rotate in opposite directions, the pumped liquid moves along the screws' spindles.

LQ3G Triple screw pumps have several advantages. The pumped fluid is moving axially without turbulence which eliminates foaming that would otherwise occur in viscous fluids. They are also able to pump fluids of higher viscosity without losing flow rate. Also, changes in the pressure difference have little impact on PD pumps compared to centrifugal pumps.

LQ3G series pump are designed with heating jacket, it specially uses for pumping media that generally pre-heating and reduce viscosity.



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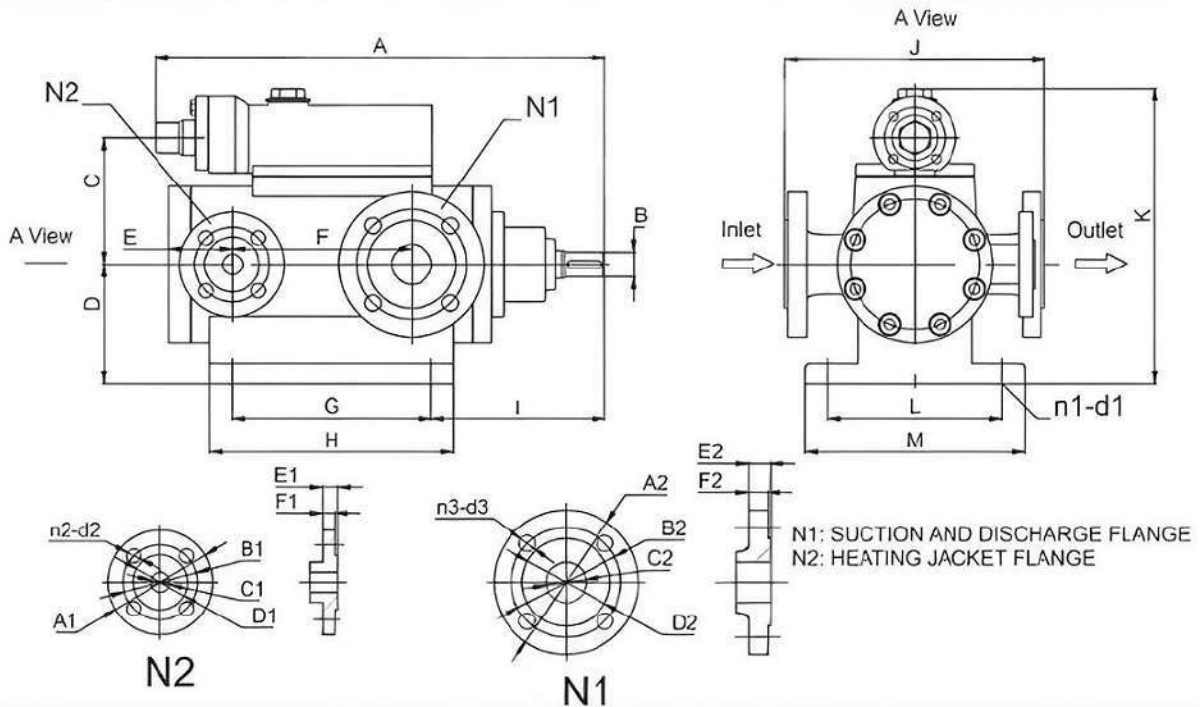
BTS
ENGINEERING

LQ3G Triple Screw Pump

PERFORMANCE TABLE

Model Size	Flow Rate		Pressure	Speed	Power kW		NPSHR
	m ³ /h	LPM	Mpa	RPM	Shaft Power	Motor	m
LQ3G45X2-46	4.28	71.28	0.6	960	1.03	1.5	5
	4.14	68.96	1.0		1.73	2.2	
	4.00	66.63	1.6		2.80	4	
	6.53	108.8	0.6	1450	1.75	2.2	
	6.32	105.3	1.0		2.61	3	
	6.10	101.7	1.6		3.75	5.5	
LQ3G54X2-46	9.89	164.8	0.6	960	2.33	3	5
	9.73	162.2	0.8		2.91	4	
	9.56	159.4	1.0		3.61	5.5	
	15.1	251.6	0.6	1450	3.56	5.5	
	14.6	243.3	1.0		5.51	7.5	
	16.8	280.3	0.6		3.50	5.5	
LQ3G80X2-46	16.3	271.2	1.0	960	5.41	7.5	5.5
	25.7	427.8	0.6		1450	5.43	
	24.8	413.9	1.0	8.51		11	
	34.2	570.3	0.6	960	7.86	11	
34.0	566.7	0.8	9.70		11		
33.1	551.7	1.0	11.4		15		
52.6	876.4	0.6	1450		12.0	15	
52.0	866.0	0.8			14.9	18.5	
51.4	856.1	1.0			18.6	22	
LQ3G100X2-46	48.7	812.2	0.6	960	10.8	15	5.5
	48.0	800.1	0.8		13.3	15	
	46.9	782.3	1.0		16.7	22	
	72.7	1212	0.6	1450	16.5	18.5	
	72.0	1200	0.8		20.4	22	
	71.2	1187	1.0		25.5	30	
LQ3G110X2-46	60.9	1015	0.6	960	13.7	18.5	5.5
	58.9	981.7	1.0		21.8	30	
	96.7	1611	0.6	1450	21.9	30	
	94.6	1577	1.0		33.9	45	

BARE PUMP DIMENSION



Model	A	B	C	D	E	F	G	H	I	J	K	L	M	n1-d1
LQ3G45	451	φ25	127	120	63.5	180	200	245	174	260	297	175	220	4-φ18
LQ3G54	555	φ28	152	160	66	190	140	310	283	320	362	225	285	4-φ18
LQ3G80	527	φ35	164	178	68.5	180	235	304	217	385	392	250	300	4-φ20
LQ3G90	631	φ40	193	195	99	236	280	365	255	440	445	290	350	4-φ22
LQ3G100	673	φ45	207	220	89.5	268	300	384	273	470	483	310	375	4-φ22
LQ3G110	795	φ55	236	225	115	310	340	464	310	440	553	354	414	4-φ23

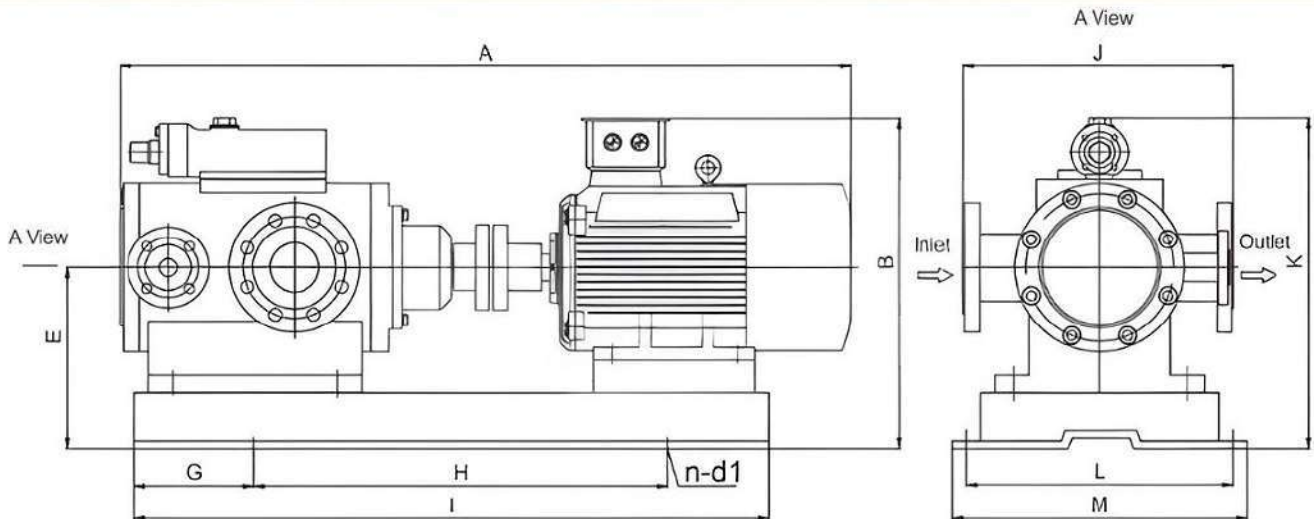


LQ3G Triple Screw Pump

Model	A1	B1	C1	D1	E1	F1	n2-d2	n1-d1	A1	B1	C1
LQ3G45	φ105	φ75	φ20	φ55	16	13	4-φ14	4-φ18	φ105	φ75	φ20
LQ3G54	φ105	φ75	φ20	φ50	16	14	4-φ14	4-φ18	φ105	φ75	φ20
LQ3G80	φ115	φ85	φ25	φ65	16	14	4-φ14	4-φ20	φ115	φ85	φ25
LQ3G90	φ115	φ85	φ25	φ65	17	15	4-φ14	4-φ22	φ115	φ85	φ25
LQ3G100	φ115	φ85	φ25	φ62	20	17.5	4-φ14	4-φ22	φ115	φ85	φ25
LQ3G110	φ115	φ85	φ25	φ65	16	13	4-φ14	4-φ23	φ115	φ85	φ25

Model	D1	E1	F1	n2-d2	A2	B2	C2	D2	E2	F2	n3-d3
LQ3G45	φ55	16	13	4-φ14	φ145	φ110	φ40	φ88	22	19	4-φ16
LQ3G54	φ50	16	14	4-φ14	φ165	φ126	φ50	φ100	22	20	4-φ18
LQ3G80	φ65	16	14	4-φ14	φ185	φ145	φ80/65	φ118	22	20	8-φ18
LQ3G90	φ65	17	15	4-φ14	φ220	φ180	φ100	φ156	25	23	8-φ18
LQ3G100	φ62	20	17.5	4-φ14	φ250	φ210	φ125	φ180	30	27	8-φ18
LQ3G110	φ65	16	13	4-φ14	φ280	φ240	φ150	φ212	28	25	8-φ22

COMPLETE WITH MOTOR DIMENSION



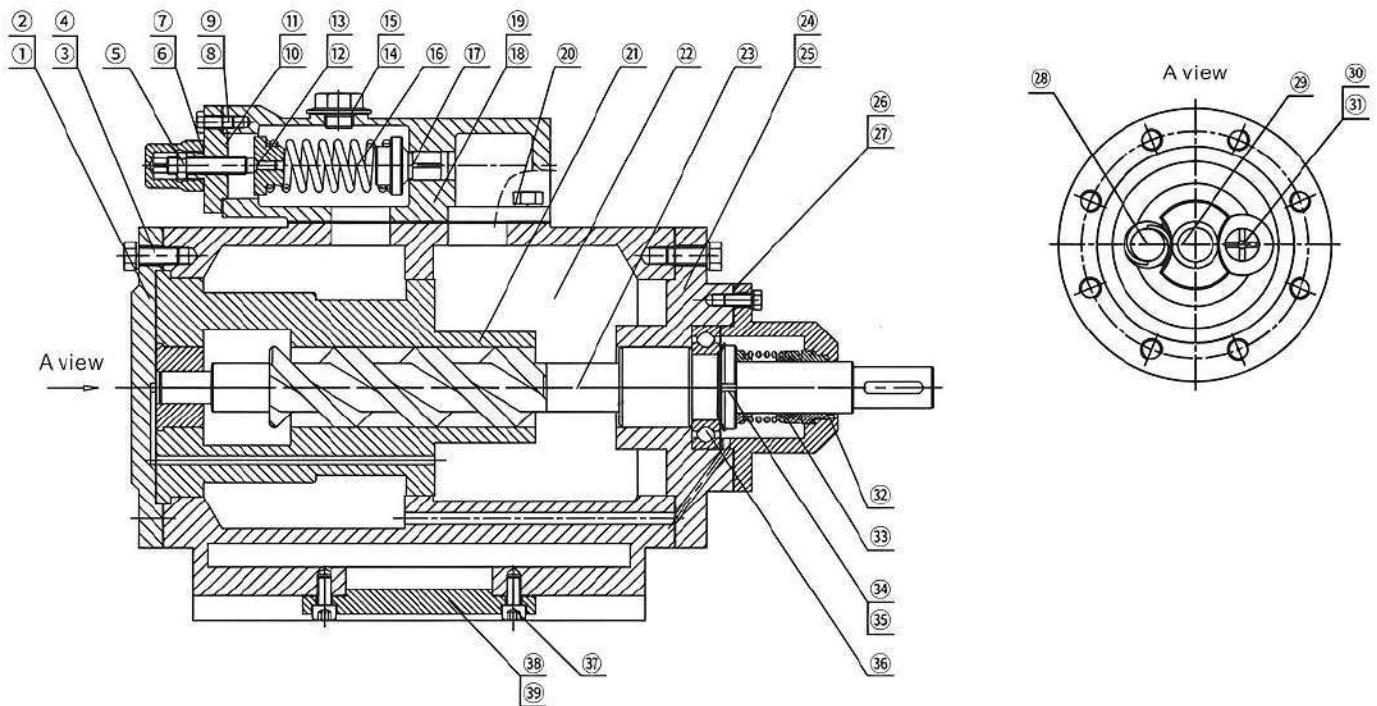
Model	Motor	A	B	E	G	H	I	n-d1	J	K	L	M
LQ3G45	Y90L	823	365	205	180	430	731	4-φ18	260	381	280	320
	Y100L	857	375	205	180	410	749	4-φ18	260	381	305	345
	Y112M	872	393	205	180	410	749	4-φ18	260	381	305	345
	Y132M	966	425	212	150	530	815	4-φ18	260	388	350	390
	Y132S	926	425	212	150	520	776	4-φ18	260	388	350	390
LQ3G54	Y112M	960	428	240	170	570	843	4-φ18	320	442	365	405
	Y132M	1070	453	240	180	600	926	4-φ18	320	442	365	405
	Y132S	1030	453	240	170	600	887	4-φ18	320	442	365	405
LQ3G80	Y132M	1042	471	258	170	600	905	4-φ18	385	472	380	420
	Y160L	1207	528	268	165	745	1120	4-φ20	385	482	370	450
	Y160M	1152	528	268	165	745	1120	4-φ20	385	482	370	450
	Y180L	1272	535	260	160	720	1072	4-φ20	385	474	460	525
	Y180M	1232	535	260	180	690	1033	4-φ20	385	474	460	525



LQ3G Triple Screw Pump

Model	Motor	A	B	E	G	H	I	n-d1	J	K	L	M
LQ3G90	Y160L	1306	535	275	190	760	1118	4-φ20	440	525	455	520
	Y160M	1251	535	275	180	750	1095	4-φ20	440	525	455	520
	Y180L	1376	585	310	200	770	1173	4-φ16	440	560	376	416
	Y180M	1336	550	275	200	750	1124	4-φ20	440	525	460	525
	Y200L	1406	620	315	200	800	1212	4-φ16	440	565	401	441
LQ3G100	Y180L	1418	610	335	200	800	1210	4-φ18	470	598	400	440
	Y180M	1378	575	300	200	800	1161	4-φ20	470	563	480	545
	Y200L	1448	640	335	200	850	1250	4-φ18	470	598	401	441
	Y225M	1523	675	340	220	880	1302	4-φ18	470	603	439	479
LQ3G100	Y200L	1601	640	335	215	980	1392	4-φ23	440	663	510	570
	Y225M	1674	670	335	215	980	1450	4-φ23	440	663	550	610

CONSTRUCTION



Item	Description	Item	Description	Item	Description	Item	Description	Item	Description
①	Back Cover	⑨	Washer	⑰	Valve Spool	⑳	Gasket	㉓	Mechanical Seal
②	Gasket	⑩	Adjusting Seat	⑱	Safety Valve Casing	㉑	Seal Gland	㉔	Lock Nut
③	Bolt	⑪	Gasket	⑲	Gasket	㉒	Gasket	㉕	Thrust Washer
④	Washer	⑫	Spring Seat	⑳	Bolt	㉓	Driven Screw	㉖	Bearing
⑤	Nut	⑬	Adjusting Screw	㉑	Screw Sleeve	㉔	Driving Screw Bush	㉗	Bolt
⑥	Safety Valve Cap	⑭	Plug	㉒	Pump Casing	㉕	Driven Screw Bush	㉘	End Cap
⑦	Gasket	⑮	Gasket	㉓	Driving Screw	㉖	Thrust Washer	㉙	Gasket
⑧	Bolt	⑯	Spring	㉔	Bearing Housing	㉗	Pin		

