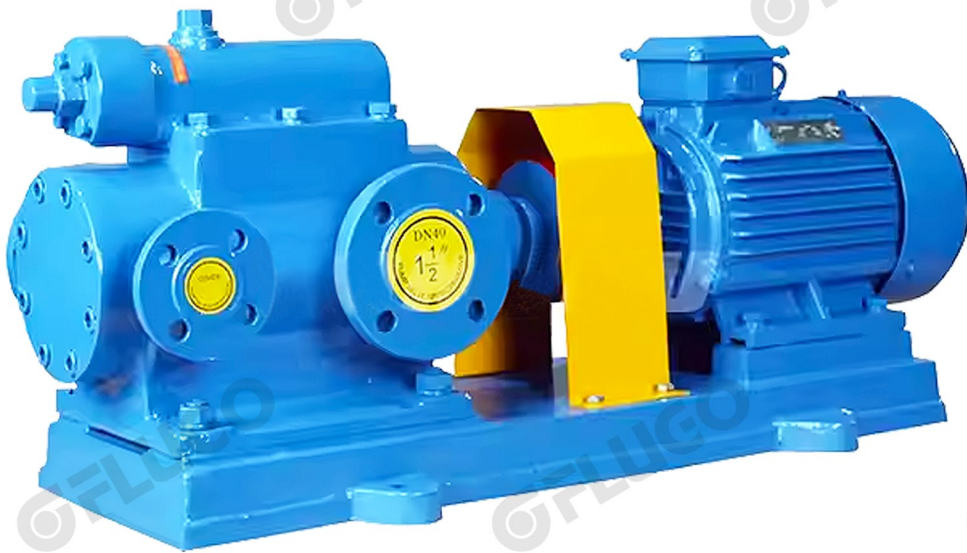




Technical Catalogue



LQ3G Series

Three Screw Spindle Pumps

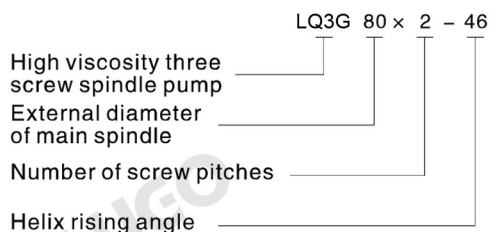


LQ3G THREE SCREW SPINDLE PUMPS

Patent No : ZL200520114592.6 ZL201220263927.0

Three-screw pump is a positive displacement pump, and has the remarkable advantages such as simple structure, small volume, being allowed to rotate at high speed, stability and reliability, small pressure pulsation, stable flow rate, low noise, high efficiency, etc. By using the principle of screw meshing and relying on the mutual meshing of rotating screws in pump block, the three-screw pump sucks the medium conveyed and seals it in the meshing cavity, then pushes it to the discharge port along the axial direction of screws at uniform speed, and forms stable pressure at the discharge port. Three-screw pump is only applicable to conveying 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 LQ3G series heat-preservation high-viscosity three-screw pumps (Patent No: ZL200520114592.6; Patent No.: ZL201220263927.0) developed by the company after many of research optimize the cooperation between screws and pump block, and between driving screw and driven screws and pump block, and between driving screw and driven screw based on three-screw pump, in order to realize the delivery of high-temperature and high-viscosity media. The LQ3G series heat-preservation high-viscosity three-screw pumps are mainly used to convey high-viscosity lubricating fluids. They are usually used as the delivery pumps of asphalt, heavy fuel oil, heavy gear oil, and heavy diesel are set up, gas or liquid could be used as heat-carrier, and their maximum working temperature is equal to or lower than 350°C. High-viscosity media are generally conveyed viscosity is generally 3.0 ~ 760mm²/s. The company LQ3G series heat-preservation high-viscosity three-screw pumps include various models with inlet and outlet diameter of from DN40 to DN300 and flow rate of from 2.8m³/h to 300m³/h, and could meet different customers demands.

• Type code



• Critical factors for pump selecting

Select the appropriate rotate speed of pump according to the viscosity of oil in order to assure the NPSHR of the pump meet the customer's actual absorbing condition. Please contact us in case the viscosity of oil is over than 760mm²/s, and we will help customer to select pump.

• Following data should be provided for purchasing

- characteristics of medium (temperature, corrosion etc.)
- viscosity of medium in working temperature
- inlet and outlet pressure of pump
- working flow rate of pump
- installation type of pump
- accessories requirements



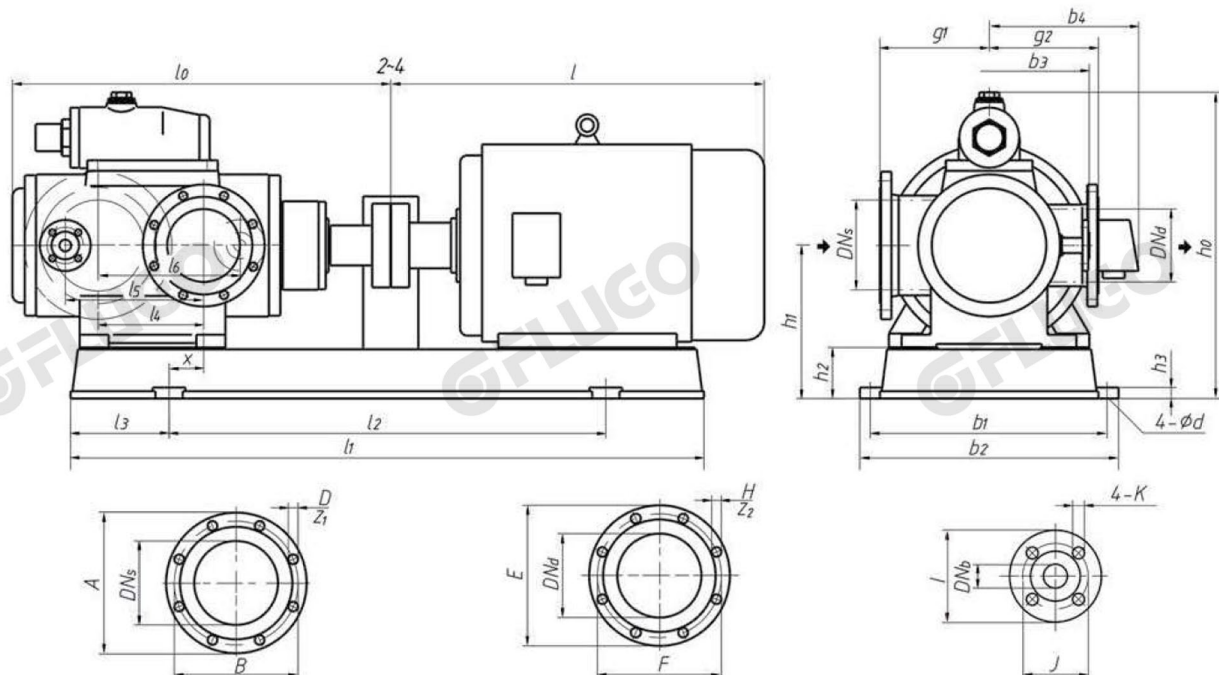
BASIC TECHNICAL PARAMETERS OF LQ3G SCREW SPINDLE PUMP

Pump size	Flowrate		MPa Pressure MPa	Rotate speed r/min	Power kW		NPSHR m	Motor size
	m ³ /h	l/min			Shaft power	Motor power		
45×3-36	2.99	49.89	0.6	950	0.68	1.1	5	90L-6-B3
	2.90	48.26	1.0		1.15	1.5		100L-6-B3
	2.80	46.64	1.6		1.83	3		132S-6-B3
	2.54	42.29	2.5		2.80	4		132M1-6-B3
	4.57	76.16	0.6	1450	1.03	1.5		90L-4-B3
	4.42	73.68	1.0		1.73	2.2		100L1-4-B3
	4.27	71.20	1.6		2.80	3		100L2-4-B3
	3.87	64.58	2.5		4.31	5.5		132S-4-B3
45×2-46	4.28	71.28	0.6	950	1.03	1.5	5	100L-6-B3
	4.14	68.96	1.0		1.72	2.2		112M-6-B3
	4.00	66.63	1.6		2.80	4		132M1-6-B3
	6.53	108.8	0.6	1450	1.75	2.2		100L1-4-B3
	6.32	105.3	1.0		2.61	3		100L2-4-B3
	6.10	101.7	1.6		3.75	5.5		132S-4-B3
55×2-46	7.81	130.2	0.6	950	1.42	2.2	5	112M-6-B3
	7.55	125.9	1.0		2.53	4		132M1-6-B3
	11.7	194.5	0.6	1450	2.74	4		112M-4-B3
	11.3	188.3	1.0		4.24	5.5		132S-4-B3
60×2-43	8.60	143.4	0.6	950	2.06	3	5	132S-6-B3
	8.27	137.9	1.0		3.18	4		132M1-6-B3
	13.1	218.9	0.6	1450	3.15	4		112M-4-B3
	12.6	210.5	1.0		4.86	7.5		132M-4-B3
60×2-46	9.89	164.8	0.6	950	2.33	3	5	132S-6-B3
	9.73	162.2	0.8		2.91	4		132M1-6-B3
	9.56	159.4	1.0		3.61	5.5		132M2-6-B3
	15.1	251.6	0.6		3.56	5.5		132S-4-B3
	14.6	243.3	1.0	1450	5.51	7.5		132M-4-B3
70×2-46	16.0	266.3	0.6	950	3.71	5.5	5	132M2-6-B3
	15.5	258.9	1.0		5.73	7.5		160M-6-B3
	24.4	406.4	0.6	1450	5.66	7.5		132M-4-B3
	23.7	395.2	1.0		8.75	11		160M-4-B3
80×2-36	16.8	280.3	0.6	950	3.50	5.5	5.5	132M2-6-B3
	16.3	271.2	1.0		5.41	7.5		160M-6-B3
	25.7	427.8	0.6	1450	5.43	7.5		132M-4-B3
	24.8	413.9	1.0		8.51	11		160M-4-B3
80×2-46	24.0	400.1	0.6	950	5.52	7.5	5.5	160M-6-B3
	23.4	389.5	1.0		8.60	11		160L-6-B3
	36.6	610.3	0.6	1450	8.43	11		160M-4-B3
	35.7	594.5	1.0		13.1	15		160L-4-B3
80×2-51	29.1	485.3	0.6	950	6.31	11	5.5	160L-6-B3
	27.9	464.9	1.0		10.5	15		180L-6-B3
	44.0	733.6	0.6	1450	9.61	11		160M-4-B3
	42.6	709.6	1.0		16.0	18.5		180M-4-B3
80×2-54	34.2	570	0.6	950	8.05	11	5.5	160L-6-B3
	33.1	551	1.0		12.75	15		180L-6-B3
90×2-36	24.3	405	0.6	950	5.7	7.5	5.5	160M-6-B3
	23.6	393.3	1.0		8.8	11		160L-6-B3
	37.0	615.9	0.6	1450	8.42	11	5.5	160M-4-B3
	36.1	602.4	1.0		13.0	15		160L-4-B3

BASIC TECHNICAL PARAMETERS OF LQ3G SCREW SPINDLE PUMP

Pump size	Flowrate		MPa Pressure MPa	Rotate speed r/min	Power kW		NPSHR m	Motor size
	m³/h	l/min			Shaft power	Motor power		
90×2-42	28.3	470.9	0.6	950	6.55	11	5.5	160L-6-B3
	27.5	457.6	1.0		10.2	15		180L-6-B3
	43.1	718.8	0.6	1450	10.0	15		160L-4-B3
	41.9	698.5	1.0		15.5	18.5		180M-4-B3
90×2-46	34.2	570.3	0.6	950	7.86	11	5.5	160L-6-B3
	34.0	566.7	0.8		9.70	11		160L-6-B3
	33.1	551.7	1.0		11.4	15		180L-6-B3
	52.6	876.4	0.6	1450	12.0	15		160L-4-B3
	52.0	866.0	0.8		14.9	18.5		180M-4-B3
	51.4	856.1	1.0		18.6	22		180L-4-B3
90×2-51	42.8	713.3	0.6	950	9.9	15	5.5	180L-6-B3
	41.6	693.3	1.0		16.0	18.5		200L1-6-B3
	66.0	1100	0.6	1450	14.8	18.5		180M-4-B3
	64.6	1076.7	1.0		24.1	30		200L-4-B3
100×2-46	48.7	812.2	0.6	950	10.8	15	5.5	180L-6-B3
	48.0	800.1	0.8		13.3	15		180L-6-B3
	46.9	782.3	1.0		16.7	22		200L2-6-B3
	72.7	1212	0.6	1450	16.5	18.5		180M-4-B3
	72.0	1200	0.8		20.4	22		180L-4-B3
	71.2	1187	1.0		25.5	30		200L-4-B3
100×2-51	56.9	948.9	0.6	950	12.5	15	5.5	180L-6-B3
	55.7	928.6	1.0		20.8	30		225M-6-B3
	86.9	1448	0.6	1450	19.1	22		180L-4-B3
	85.0	1417	1.0		31.8	37		225S-4-B3
110×2-46	60.9	1015	0.6	950	13.7	18.5	5.5	200L1-6-B3
	58.9	981.7	1.0		21.8	30		225M-6-B3
	96.7	1611	0.6	1450	21.9	30		200L-4-B3
	94.6	1577	1.0		33.9	45		225M-4-B3
120×2-42	67.9	1131	0.6	950	15.5	18.5	5.5	200L1-6-B3
	66.7	1112	0.8		19.2	22		200L2-6-B3
	65.4	1090	1.0		24.5	30		225M-6-B3
	108	1802	0.6	1450	24.7	30		200L-4-B3
	105	1760	1.0		38.2	45		225M-4-B3
120×2-46	79.6	1327	0.6	950	17.8	22	5.5	200L2-6-B3
	77.2	1286	1.0		28.2	37		250M-6-B3
	125	2101	0.6	1450	28.5	37		225S-4-B3
	123	2059	1.0		44.1	55		250M-4-B3
120×2-51	91.9	1532	0.6	950	20.5	30	5.5	225M-6-B3
	89.9	1498	1.0		32.8	37		250M-6-B3
	153	2550	0.4		20.2	22		180L-4-B3
	146.5	2441	0.6	1450	33.1	45		225M-4-B3
	143.5	2390	1.0		48.0	55		250M-4-B3
140×2-46	128	2147	0.6	950	28.3	37	5.5	250M-6-B3
	125	2093	1.0		44.8	55		280M-6-B3
	202	3375	0.6	1450	45.3	55		250M-4-B3
	199	3321	1.0		70.0	90		280M-4-B3
150×2-46	158	2640	0.6	950	34.6	45	5.5	280S-6-B3
	154	2582	1.0		54.5	75		315S-6-B3
	242	4030	0.6	1450	53.8	75		280S-4-B3
	237	3942	1.0		82.2	90		280M-4-B3
150×2-51	188	3133	0.6	950	41.1	55	5.5	280M-6-B3
	184	3065	1.0		64.7	75		315S-6-B3
	299	4993	0.6	1450	66.7	75		280S-4-B3
	293	4888	1.0		101.9	110		315S-4-B3

OUTLINE AND ASSEMBLING DIMENSIONS OF LQ3G SCREW SPINDLE PUMP



Pump Size	Motor Size	Base plate dimension								Pump dimension								Out line dimension						Inlet flange					Outlet flange					Instlation flange			
		l1	l2	l3	b1	b2	h2	h3	d	l4	l5	l6	g1	g2	b3	x	b4	l0	l	h1	h0	DNs	A	B	D	Z1	DNd	E	F	H	Z2	DNb	I	J	K		
45 × 2-46 45 × 3-36	90L	680	430	145													150	353																			
	100L	727	415	153	315	355	85										180	393	205	381																	
	112M							25	23	157	180	180	130	130	240	44	190	459	410			40	145	110	19	4	40	145	110	19	4						
	132S	799	485	145	340	380	97										34	210	485	217	400																
55 × 2-46	132M																210	525																			
	112M	790	490	130	340	400		22									66	190	414																		
	132S	880	610	135	360	420	90	25	23	125	157	157	150	150	290	62	210	520	484	222	424	50	160	125	19	4	50	160	125	19	4		20	105	75	14	
	132M																210	524																			
60 × 2-43 60 × 2-46	112M	790	490														190	412																			
	132S	853	585	130	340	400	90	22	23	114	140	140	165	165	314	49	210	516	482	222	458	50	160	125	19	4	50	160	125	19	4						
	132M																210	520																			
	160M	1010	763	123	380	440	100	25	23	180	200	200	180	180	340	122	210	680	525	260	529	65	185	145	19	4	65	180	145	19	4						
80 × 2-36	160M	1087	840		410	470											255	635																			
	132M	930	705	130	370	440	87	25	23	109	176	179	195	185	350	94	210	575	526	265	528	80	195	160	19	8	65	180	145	19	4						
	160M	1030	750	135	380	440	100										89	255	575	630	278	541															
	160M	1030	750	135	380	440											255	637	630																		
80 × 2-46 80 × 2-51 80 × 2-54	160L	1090															255	633	693	278	541	80	195	160	19	8	80	195	160	19	8						
	180M	800	140														280	723																			
	180L	1120			420	480											280	763																			
	160M																255	631	638	260	571																
90 × 2-36 90 × 2-42 90 × 2-46 90 × 2-51	160L	1115															255	631	638																		
	160L																255	631	693																		
	180M																280	723																			
	180L	1150															280	763																			
100 × 2-46 100 × 2-51	180M																280	763																			
	180L	1256			233	450	510	110									93	280	723	310	639																
	200L	1270	800		220	490	550	105	30	23	208	275	275	245	245	440	98	305	709	803	305	633	125	245	210	19	8	125	245	210	19	8					
	225S	1316			250	520	580	130									62	335	848	330	658																
110 × 2-46	225M																110	305	854																		
	200L	1380	920	220													130	370																			
	225M	1440	980	230	570	630	115	30	23	220	323	323	240	240	460	110	305	854	803	340	678	200	335	295	23	12	150	280	240	23	8						
	180L	1318															170	280	773																		
120 × 2-42 120 × 2-46 120 × 2-51	200L	1375	920	219													150	305	840	380	730																
	225S																150	335	840																		
	225M	1440	980	230													120	370	943	400	750																
	250M	1500	1000	250	630	690	135										130	370	943																		
140 × 2-46	250M	1648	1160	243	590	650											130	370	943	420	837	250	405	355	26	12	200	335	295	23	12						
	280M	1745	1200	273	650	710	140	30	23	290	380	380	300	300	530	100	410	1065																			
	280M																88	410	1068	420	850																
	315S	1800	1300	243	780	840	175	30	23	240	380	355	300	300	560	123	530	1077	1303	455	887	300	460	410	26	12	250	405	355	26	12		32	135	100	18	

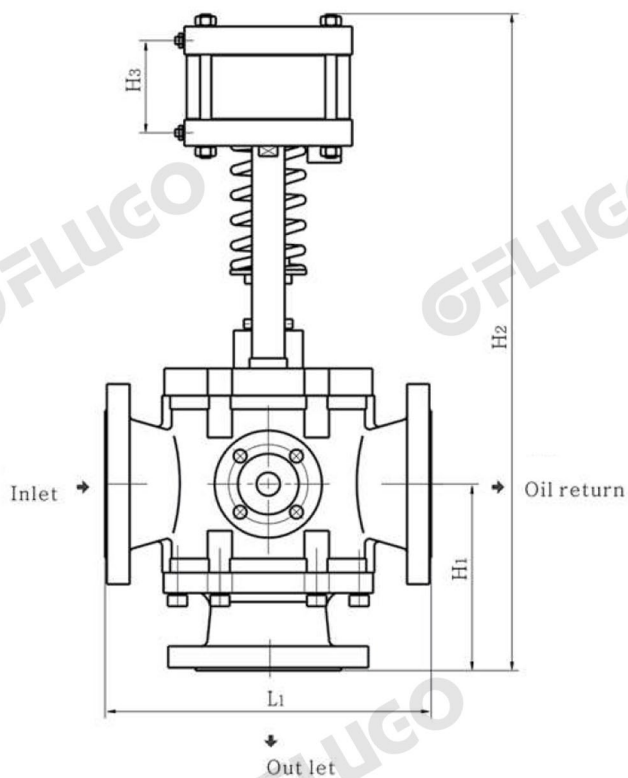
THREE SCREW SUPPORTING PART - BJ643H SERIES THREE-WAY VALVE OF PNEUMATIC INSULATION



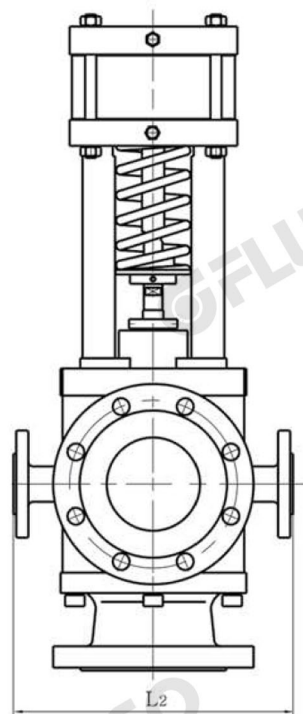
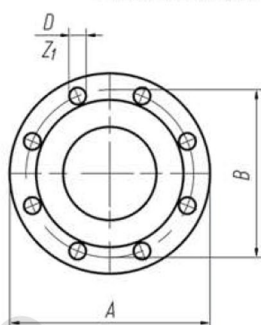
According to the high-viscosity characteristic of asphalt, based on the existing valves, starting from practical situation, and absorbing domestic and overseas advanced thoughts, the company has researched and developed BJ643H series pneumatic heat-preservation tee valve for conveying high-temperature asphalt, in order to greatly raise the production efficiency of china asphalt mixing equipment and asphalt system (patent No: ZL2021220263875.7).

BJ643H series pneumatic heat-preservation tee valve adopts flange connection for its connection structure, and its valve body is made of cast steel. The valve core is made of aluminum alloy, and during utilization process, the valve core will be automatically adjusted and repaired according to the stainless steel sealing face of valve body, in order to extend the valve service life. Both the air cylinder and piston are designed and custom-made according to valve parameters, in order to ensure the valve's best opening and closing, and further extend the valve's service life. The upright post and valve rod are made of stainless steel, and they could ensure the normal use of the valve without being rusted in abominable environment. The spring installed on the piston rod not only guarantees the use of the valve under the pressure of 0.3Mpa ~ 1.0Mpa, but also exert buffer function, protects valve core and piston, and meanwhile, when the air cylinder is lack of air, it could seal the outlet oil loop, BJ643H series pneumatic heat-preservation tee valve forms two seal cavities in the air cylinder by using the piston, achieves its own opening and closing through the pressure difference of the two seal cavities, and equips limit switches on the upper and lower covers of air cylinder, not only guaranteeing the displacement of valve core, but also realizing automatic control.

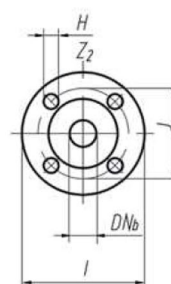
BJ643 SERIES PNEUMATIC THREE-WAY VALVE SHAPE AND INSTALLATION SIZE



Inlet & outlet flange

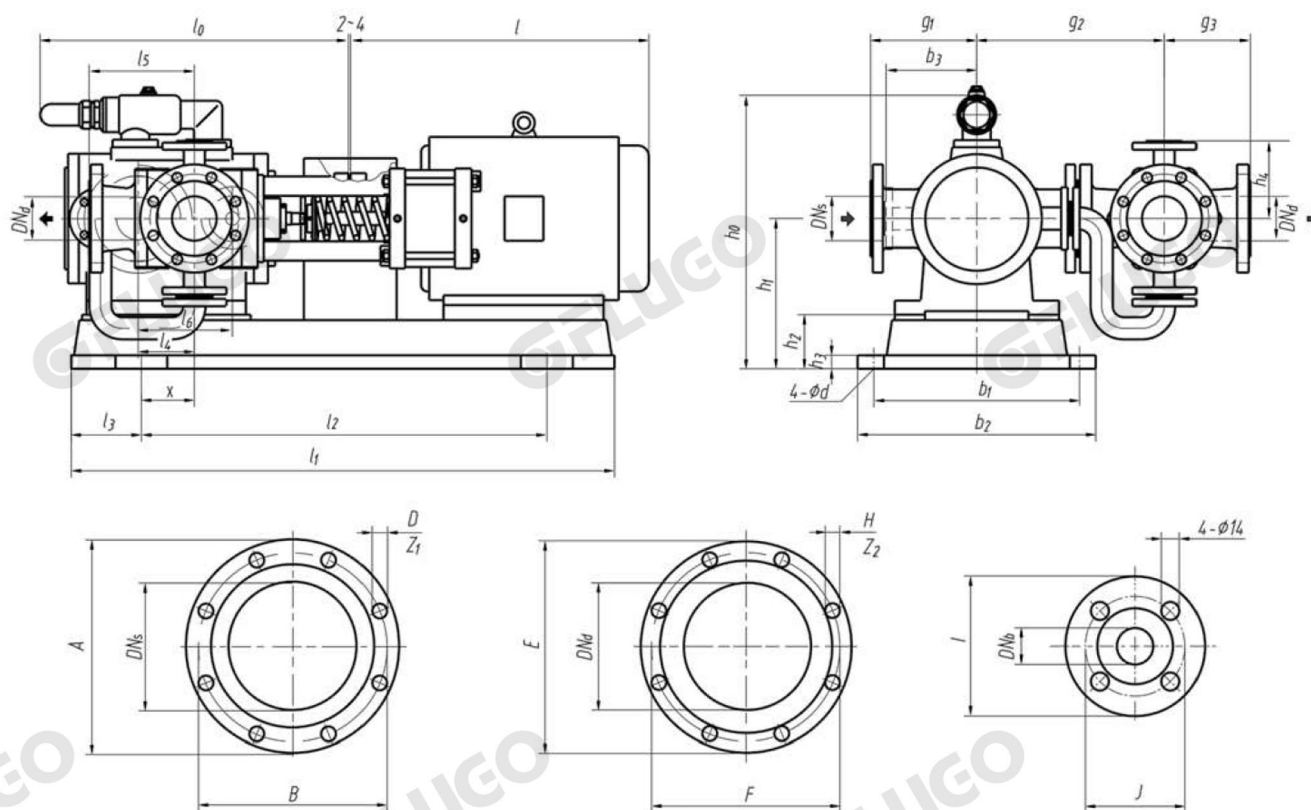


Insulation flange



Inside nominal diameter	Installation size					Inlet & outlet flange PN 16 GB/T17241.6				Insulation flange PN 16 GB/T17241.6				
	L1	L2	H1	H2	H3	A	B	D	Z1	DNb	I	J	H	Z2
50	230	230	205	651	100	160	125	19	4	20	105	75	14	4
65	290	260	180	650	110	180	145	19	4	25	115	85	14	4
80	310	280	190	666	110	195	160	19	8	25	115	85	14	4
100	350	300	200	717	122	215	180	19	8	25	115	85	14	4
125	400	350	230	807	151	245	210	19	8	32	115	85	14	4
150	440	380	270	1039	170	280	240	23	8	32	135	100	19	4

THREE SCREW PUMP AND PNEUMATIC THREE-WAY VALVE SHAPE AND INSTALLATION SIZE



Pump size	Motor size	Base plate dimension								Pump dimension								Outline dimension				Inlet flange					Outlet flange					Insulation flange				
		l ₁	l ₂	l ₃	b ₁	b ₂	h ₂	h ₃	d	l ₄	l ₅	l ₆	g ₁	g ₂	g ₃	h ₄	b ₃	x	l ₀	I	h ₁	h ₀	DN _s	A	B	D	Z _i	DN _a	E	F	H	Z ₂	DN _b	I	J	
55 × 2-46	112M	790	490	130	340	400	90	22	23	125	206	157	150	265	115	115	145	66	520	414	222	424	50	160	125	19	4	50	160	125	19	4	20	105	75	
	132M	880	610	135	360	420		25												524		448														
60 × 2-43	112M	790	490	130	340	400	90	22	23	114	206	140	165	280	115	115	157	49	516	412	222	456	50	160	125	19	4	50	160	125	19	4				
	132S	853	585																482	520																
60 × 2-46	132M																																			
70 × 2-46	132M	1010	763	123	380	440	100	25	23	180	180	200	180	325	145	130	170	122	680	525	260	529	65	185	145	19	4	65	180	145	19	4				
	160M	1087	840		410	470													635	529																
80 × 2-36	132M	930	705	130	370	440	87	25	23	109	180	179	195	330	145	130	175	94	575	526	265	528	80	195	160	19	8	65	180	145	19	4				
	160M	1030	750	135	380	440	100												630	278	541															
80 × 2-46	160M	1030	750	135	380	440	100	25	23	193	190	221	195	340	155	140	175	97	622	637	630	278	541	80	195	160	19	8	80	195	160	19	8			
80 × 2-51	160L	1090																	693	630																
80 × 2-54	180M		800	140	420	480	100	25	23	193	190	221	195	340	155	140	175	97	622	723	763	278	541	80	195	160	19	8	80	195	160	19	8			
180L	1120																		723	763																
90 × 2-36	160M	1115		206	410	480	100	25	23	202	200	236	220	395	175	150	206	82	601	638	260	571	100	215	180	19	8	100	215	180	19	8				
90 × 2-42	160L		700																	693	630															
90 × 2-46	180M	1150		202	410	480	100	25	23	202	200	236	220	395	175	150	206	82	601	723	280	591	100	215	180	19	8	100	215	180	19	8				
90 × 2-51	180L																			723	763															
100 × 2-46	180M	1256		233	450	510	110	30	23	208	230	275	245	445	200	175	220	93	723	310	639	125	245	210	19	8	125	245	210	19	8					
	100 × 2-51	180L				723	763																													
	200L	1270	800	220	490	550	105	30	23	208	230	275	245	445	200	175	220	98	709	803	305	633	125	245	210	19	8	125	245	210	19	8				
	225S	1316		250	520	580	130												848	330	655															
	225M																																			
110 × 2-46	200L	1380	920	220	570	630	115	30	23	220		323	240	460			230	110	821	803	340	678	200	335	295	23	12	150	280	240	23	8				
	225M	1440	980	230															878	730																
120 × 2-42	200L	1375	920	219	570	630	115		30	23	270	270		470	220	190		240	150	840	848	380	730	200	335	295	23	12	150	280	240	23	8			
	225S																			878	730															
120 × 2-46	225M	1440	980	230	570	630	115		30	23	270		470	220	190			240	150	840	848	380	730	200	335	295	23	12	150	280	240	23	8			
	250M	1500	1000	250																630	690	135	943													



LQ3G Series - Three Screw Spindle Pumps

Authorized Distributor