Low speed high torque hydraulic motor

10. IMB hydrostatic balanced LSHT hydraulic motor series

----higher pressure. higher speed, higher power

Main characteristics:

- The hydrostatic balance is built between the con-rod and eccentric sets, solve the problem of higher-power hydraulic motor of shaft con-rod be overwhelmed by the roller, so this motor have higher pressure, higher speed, higher power.
- •Using special treatment process and hydrostatic balance between the con-rod and piston, reduce the friction loss in the load transmission, reduce the force between piston and cylinder wall, then reduce the friction loss between the piston and cylinder wall.
- The piston seal ring using special structures to reduce the friction and improve the volumetric efficiency.
- Using the hydrostatic balance shaft distributor, the distributor can rotary without connection, improve the volumetric efficiency and reduce the noise and the resistence.
- · Characteristics and data is similar with Staffa.

Due to above these advantages, it has been widely applied in all kinds of hydraulic transmission system such an ship and deck machinery construction machinery and equipment, plastic injection machine, heavy metallurgical machinery, shape and characteristics data is similar to Staffa and HMB, so IMB can instand of imports.

Ordering Code

- 1) INI hydrostatic balance low speed, high torque model

 2) Type

 3) Nominal displacement

 4) Output shaft
- a, P-Parallel keyed shaft (numbers stand for the kinds of shaft)
- b. T-Taper key shaft
- c. S-Spline Shaft (1 stand for BS3550 standard shaft, 2 stand for DIN5480)
- d. Q-Internal Spline Shaft

Example

IMB 325 5400 P3

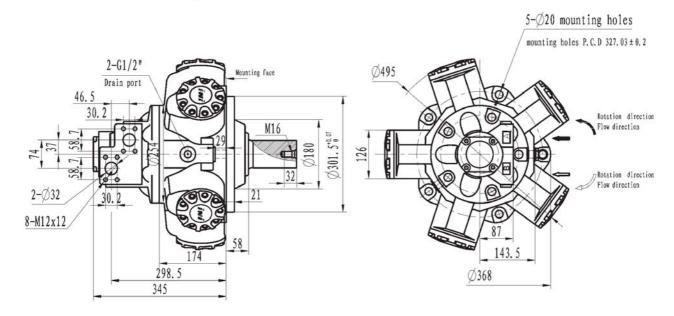
 Model
 IMB

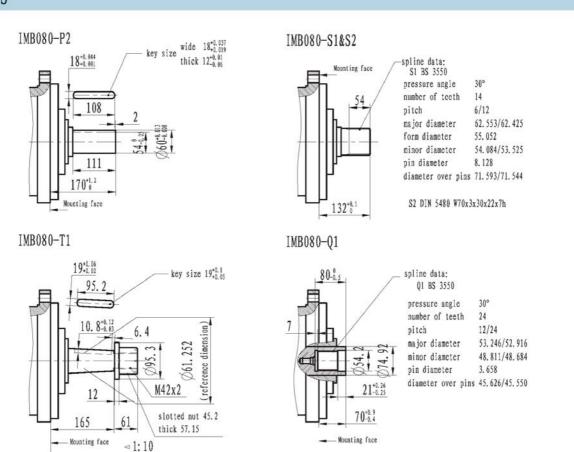
 Type
 325

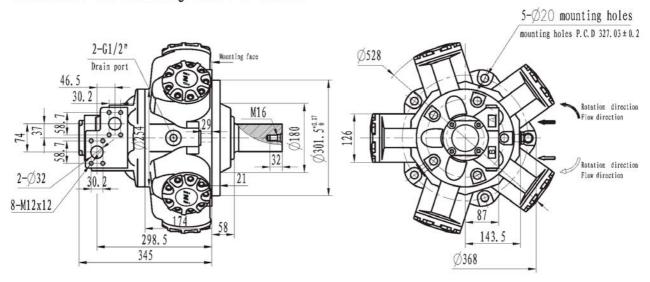
 Displacement
 5400m1/r

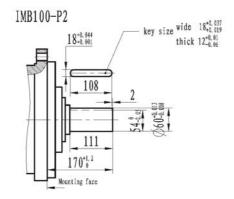
 Parallel keyed shaft
 P3

	THEORIC DIONI LONGINA	PRES	SURE	TOR	QUE	MAY CDEED	DATED DAWER	WEIGHT
TYPE	THEORIC DISPLACEMENT	RATED PRESSURE	PEAK PRESSURE	RATED TORQUE	SPECIFIC TORQUE	MAX. SPEED	RATED POWER	WEIGHI
	ml/r	MPa	MPa	N. m	N. m/MPa	r/min	Kw	kg
IMB080-1000	988	23	29	3324	145	300	90	
IMB080-1100	1088	23	29	3661	159	300	90	144
IMB080-1250	1237	23	29	4162	181	280	90	
IMB100-1400	1385	23	29	4660	203	260	100	.,,
IMB100-1600	1630	23	29	5484	238	240	100	144
IMB125-1400	1459	23	29	4909	213	300	95	
IMB125-1600	1621	23	29	5454	237	270	95	225
IMB125-1800	1864	23	29	6271	273	235	95	235
IMB125-2000	2027	23	29	6820	297	220	95	
IMB200-2400	2432	23	29	8182	356	220	120	
IMB200-2800	2757	23	29	9276	403	195	120	285
IMB200-3100	3080	23	29	10362	451	175	120	
IMB270-3300	3291	23	29	11072	481	160	130	
IMB270-3600	3575	23	29	12028	523	145	130	400
IMB270-4000	3973	23	29	13367	581	130	130	420
IMB270-4300	4313	23	29	14511	631	120	130	
IMB325-4500	4538	23	29	15268	664	115	130	
IMB325-5000	4992	23	29	16795	730	105	130	420
IMB325-5400	5310	23	29	17865	777	100	130	
IMB400-5500	5510	23	29	18135	788	120	175	
IMB400-6000	5996	23	29	19735	858	120	175	105
IMB400-6500	6483	23	29	21337	928	120	175	495
IMB400-6800	6807	23	29	22404	974	120	175	

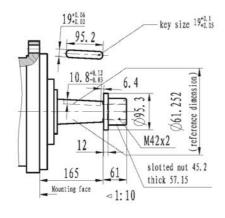




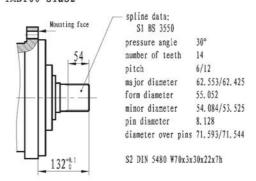




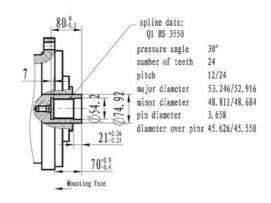
IMB100-T1



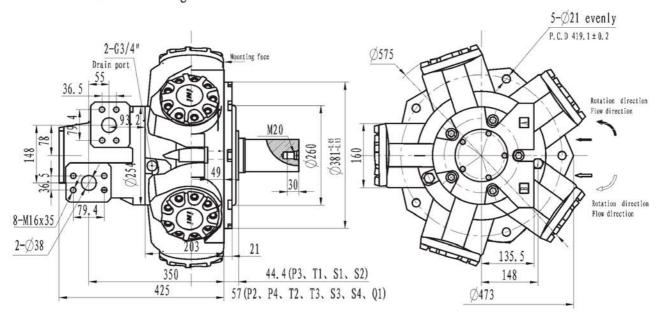
IMB100-S1&S2

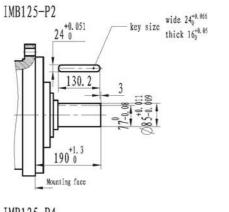


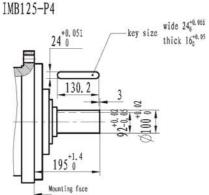
IMB100-Q1

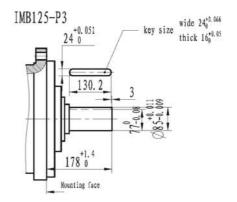


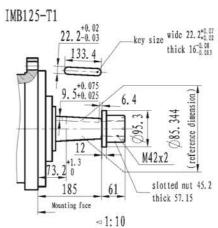




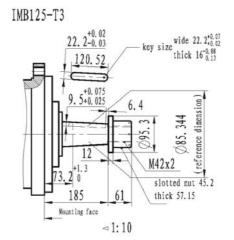




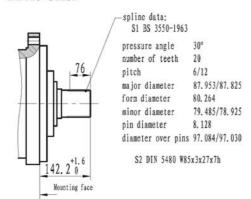




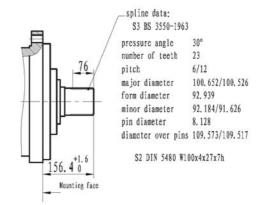
IMB125-T2 25. 4 0 0 0 3 key size wide 25.5-0.07 thick 17.5+0.039 80. 1 10. 5-0. 01 (reference dimension) 044 298. M64x2 nut 29 137 thick 98.4 Mounting face ⊲1:10

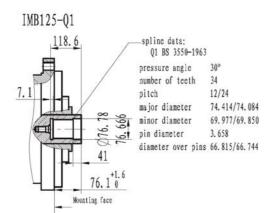


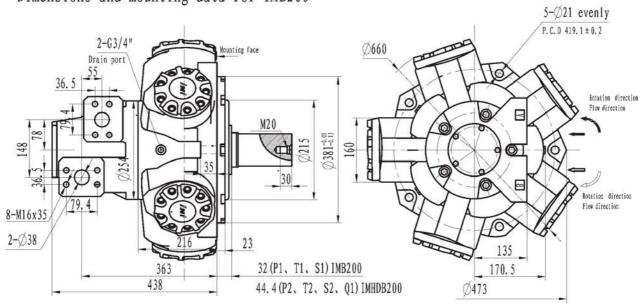
IMB125-S1&S2

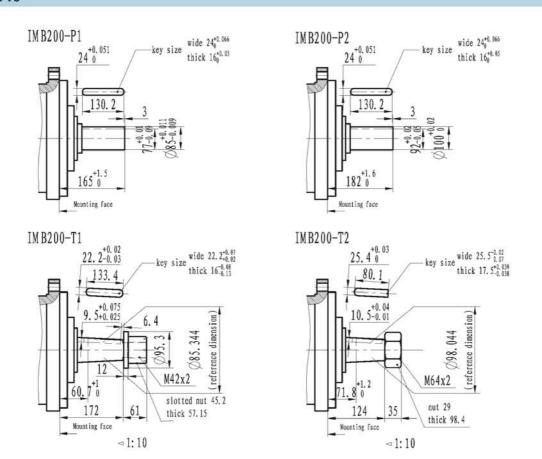






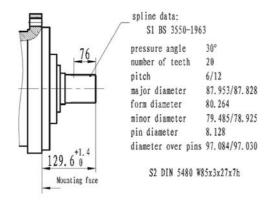


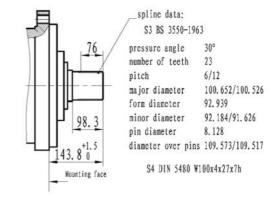




IMB200-S1&S2

IMB200-S3&S4

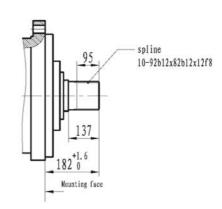


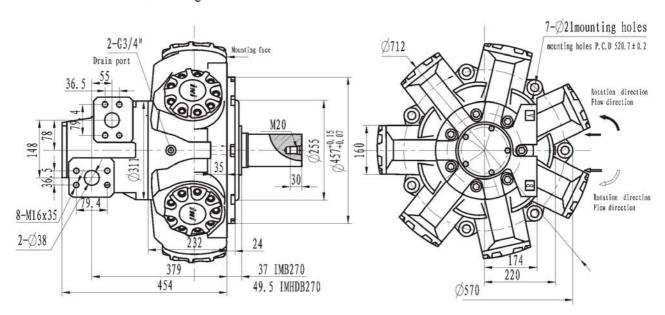


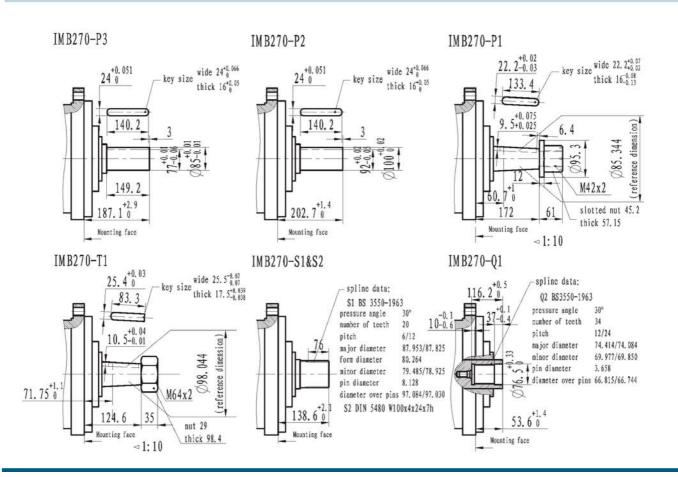
IMB200-Q1

118.6 spline data: 01 BS3550-1963 pressure angle 30° number of teeth 34 7.1 pitch 12/24 major diameter 74.414/74.084 69.977/69.850 minor diameter pin diameter 3, 658 diameter over pins 66.815/66.744 63.5 0 +1.5 Mounting face

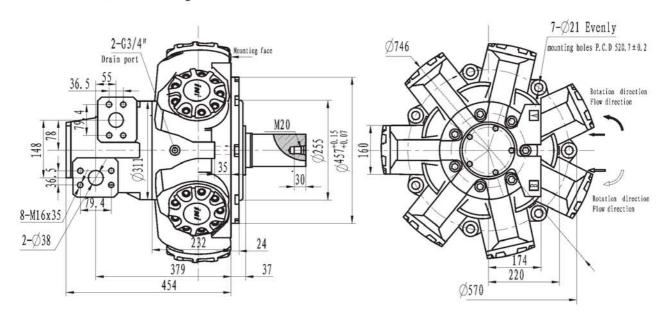
IMB200-S5

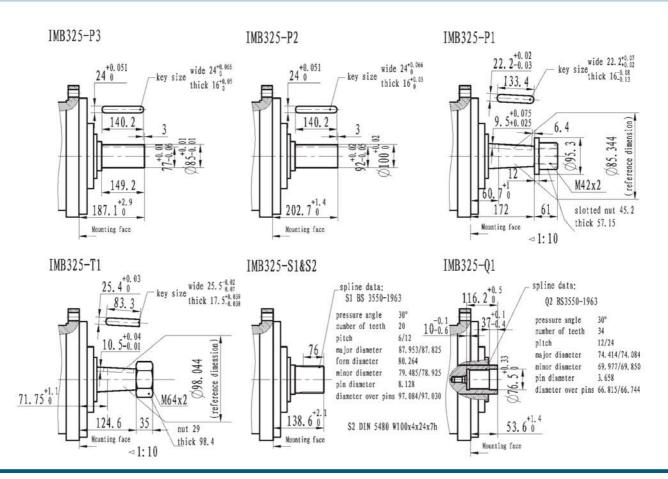


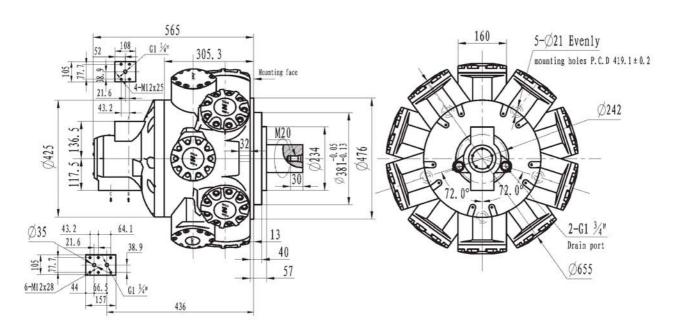


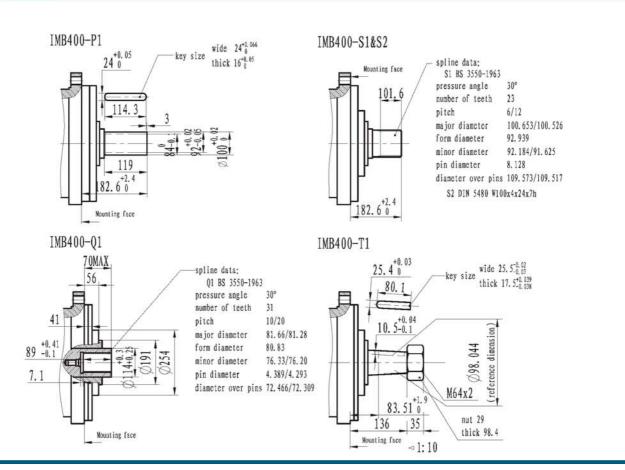












11. IMBP plane distributor LSHT hydraulic motor series

IMBP series hydraulic motor absorbs the advantages of crankshaft connecting rod hydraulic motor and plate distributor from both home and abroad, improve volumetric efficiency and grade of pressure. This series motor featured compact and elegant figure, a high volumetric efficiency and power, low noise and good operating performance. Therefore, it has been widely applied to ship, construction, petroleum, mining, geological drilling, ship and deck machiney.

Main characteristics:

- Adopt plate distirbutor, lower drain, a high volumetric efficiency.
- •Static pressure balance structure between shaft joint and connecting rod, thereby, it well smoothes the fiction joint and releases shaft pressure.
- Because of the decrease of the fiction work and heat loss, mechanical and starting efficiency increase, the motor's working force also improves.
- The shaft of this series employs fission structure to prolong motor life.
- •All the key parts of this series use special material and employ special heat treatment, therefore, efficiently prolong motor life.
- •As the dimension and performance data of this series are the same as HMB series of British Staffa Company, it could replace HMB.

Ordering Code

	**	**	7. 1	***	-	***	-	***	-	***
		1		2		3		4		5
										Ĩ
1) INI plate distributor hydrostatic balance crankshaft and connectin	g rod —									
low speed high torque hydraulic motor	0									
2) Series										
3) Nominal Displacement										
4) Output shaft										
shaft is similar to the IMB										
5) Distributor (Please see the dimension and type of distributors in a	catalogue o	f 20	011)						

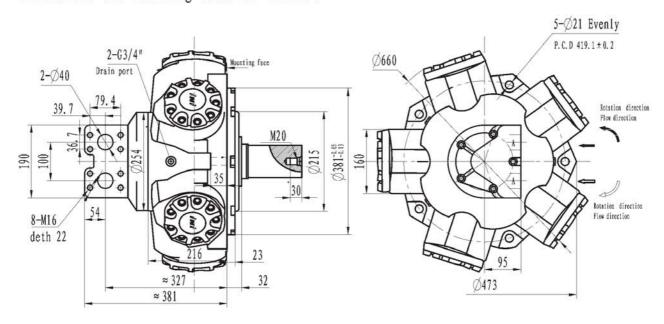
Example

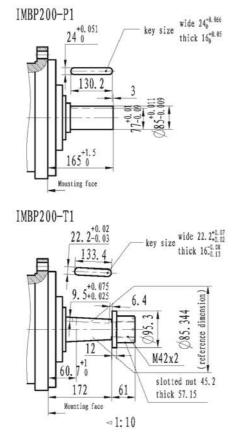
IMDI 200 2100 II	
Mode1	IMBP
Туре	200
Displacement	2400m1/r
Parallel keyed shaft	P1

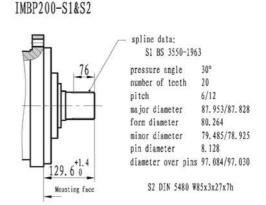
IMRP 200 2400 P1

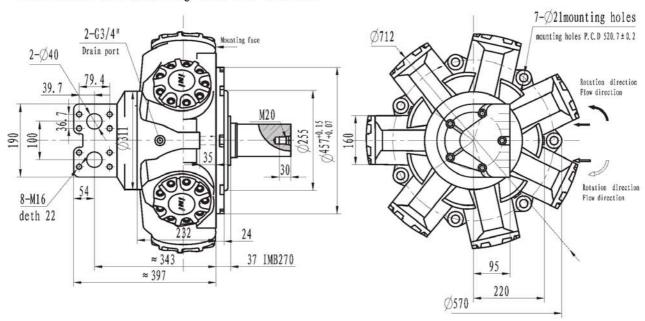
	THEODIC DIGH LOTHOUT	PRES	SURE	TO	RQUE	MAY ODDED	RATED POWER	WE LOUI	
TYPE	THEORIC DISPLACEMENT	RATED PRESSURE	PEAK PRESSURE	RATED TORQUE SPECIFIC TORQUE		MAX. SPEED	KAIED PUWER	WEIGHI	
	ml/r	MPa	MPa	N. m	N. m/MPa	r/min	Kw	kg	
IMBP200-2400	2432	23	29	8182	356	220	120		
IMBP200-2800	2757	23	29	9276	403	195	120	285	
IMBP200-3100	3080	23	29	10362	451	175	120		
IMBP270-3300	3291	23	29	11072	481	160	130		
IMBP270-3600	3575	23	29	12028	523	145	130	420	
IMBP270-4000	3973	23	29	13367	581	130	130	420	
IMBP270-4300	4313	23	29	14511	631	120	130		

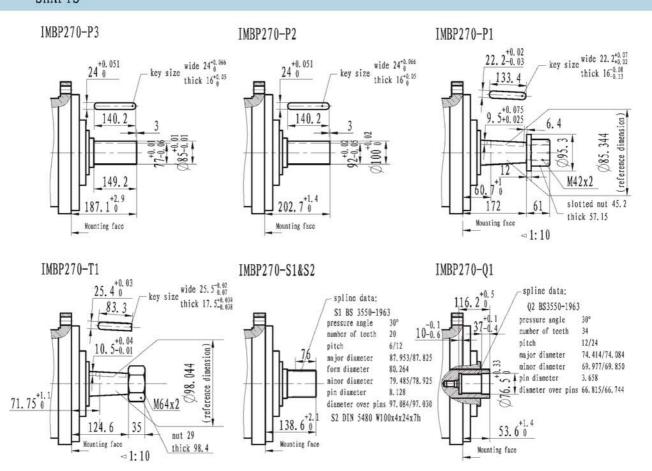












12. IMC two-speed LSHT hydraulic motor series

The IMC series hydraulic motor inherits the IMB series hydrostatic balance motor structure, high efficiency, high starting torque, high volumetric efficiency, etc.

The IMC series two-speed hydraulic motor enables users to select the required displacement for a wide range of special working conditiongs. Users can switch the displacement by using a remote control or by manual control-using the control valve mounted on the motors. The displacement can easily be changed while the motor is still running.

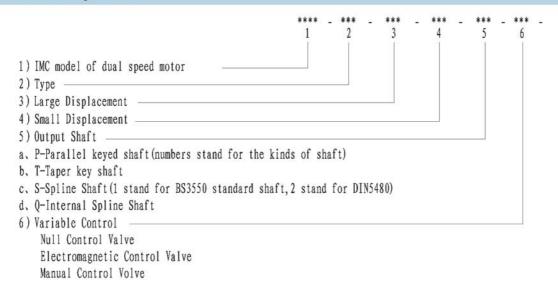
Its main characteristics are as follows:

- two-speed, so when the pump flow is constant, the motor has two-speed.
- Low speed & High-torque
 High Efficiency
 Stable Running
 Wide range of Displacement
- Switchable Displacement while the motor is running
- Switch realized with electro hydraulic or mechanical control

Main Application:

capstan, hoist, windless machinery, hydraulic drive for automobiles, etc,

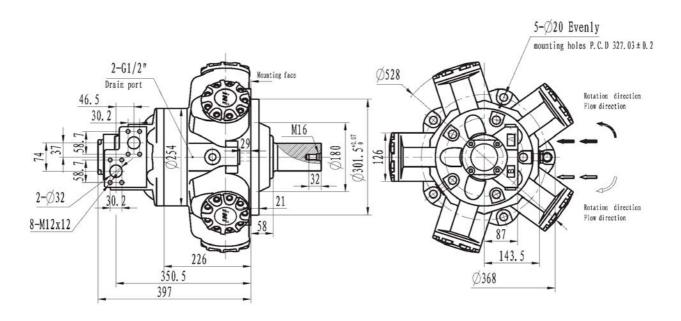
Ordering Code



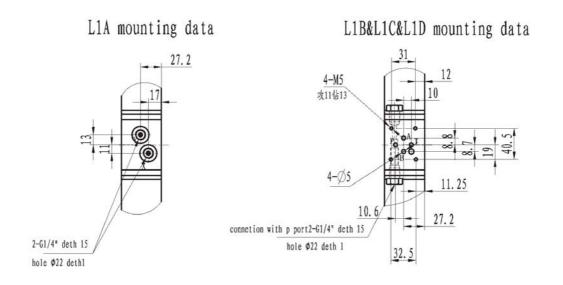
Example

IMC 200 2900 1500 S	1 L1A-**
two-speed motor	IMC
type	200
large displacement	2900ml/r
small displacement	1500ml/r
shaft	S1
variable control	L1A null control valve





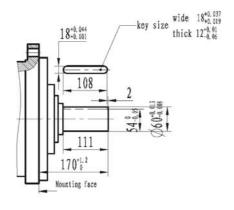
Variable Control's mounting data



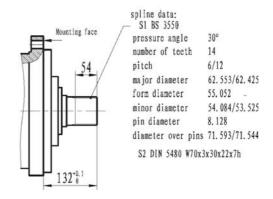


SHAFTS

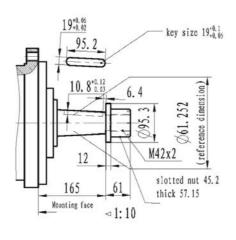
IMC100-P2



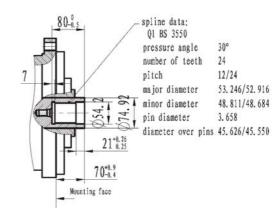
IMC100-S1&S2



IMC100-T1



IMC100-Q1



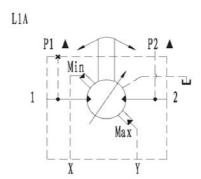


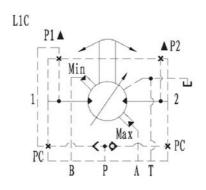
Nominal Displacement	1600	1500	1400	1300	1200	1100	1000	900	800	700	600	500	400	300	200	100
Ordering Code 3 4	1000	1300	1400	1300	1200	1100	1000	700	000	700	000	300	700	300	200	100
Displacement ml/r	1580	1481	1383	1284	1185	1086	987	889	790	691	592	494	395	296	197	98/0
Unit Torque N. M/Mpa	225	212	198	184	169	155	140	125	108	94	78	68	45	30	18	0
Max. Cont. Speed r/min	260	270	280	300	330	370	405	485	540	540	540	540	540	540	540	900
Max. Cont. Speed KW	99	98	96	93	90	84	82	79	74	69	57	46	35	23	10	0
Max. Top. Power KM	120	117	113	109	105	100	97	93	87	81	68	54	40	28	14	0
Max. Cont. Pressure Mpa	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	15
Max. Top. Pressure Mpa	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	15

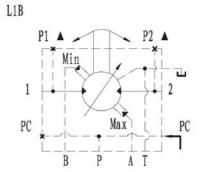
IMC100 Displacement Options

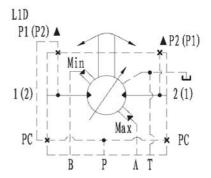
large displacement: 1600, 1500, 1400, 1300, 1200, 1100, 1000, 900, 800; small displacement: 1100, 1000, 800, 700, 600, 500, 400, 300, 200, 100

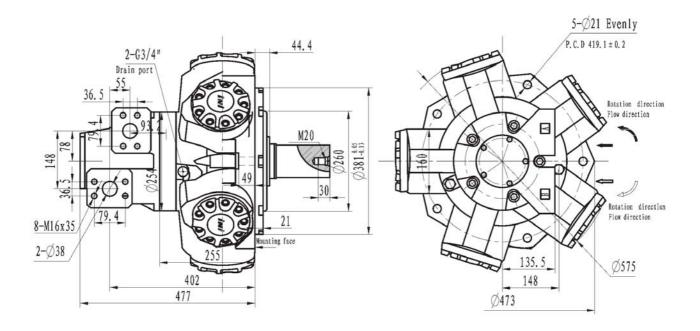
Functional Symbols



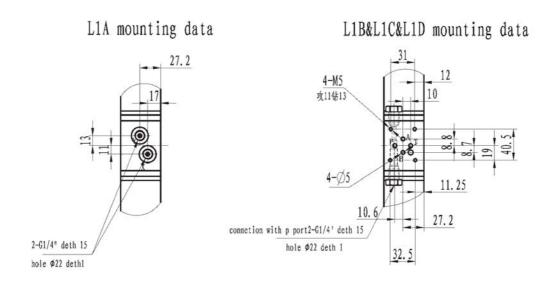






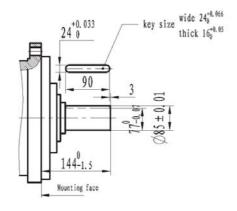


Variable Control's mounting data

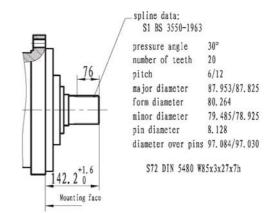


SHAFTS

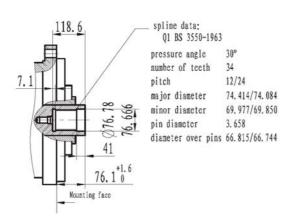
IMC125-P1



IMC125-S1&S2



IMC125-Q1





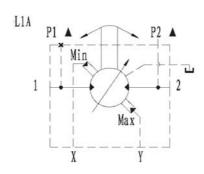
Nominal Displacement Ordering Code 3 4	2100	2000	1800	1600	1500	1300	1200	1000	830	670	510	350	190	110
Displacement ml/r	2066	1973	1811	1649	1487	1325	1163	1001	839	677	515	353	191	109/0
Unit Torque N.M/Mpa	293	281	258	231	206	180	154	125	100	79	57	39	6	0
Max. Cont. Speed r/min	170	175	190	210	230	265	305	350	395	485	540	540	540	900
Max. Cont. Speed KW	91	89	83	77	71	66	60	55	48	42	33	16	3	0
Max. Top. Power KM	106	104	99	95	90	85	79	73	65	57	44	28	5	0
Max. Cont. Pressure Mpa	21	21	21	21	21	21	21	21	21	21	21	21	21	15
Max. Top. Pressure Mpa	25	25	25	25	25	25	25	25	25	25	25	25	25	15

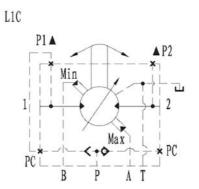
IMC125 Displacement Options

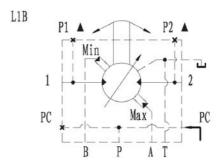
large displacement: 2100, 2000, 1800, 1600

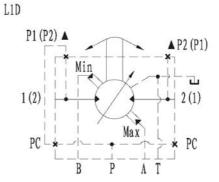
small displacement: 1600, 1500, 1300, 1200, 1000, 830, 670, 510, 350, 190, 110

Functional Symbols

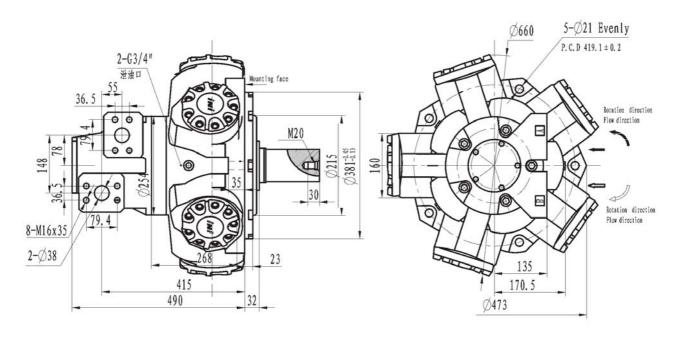




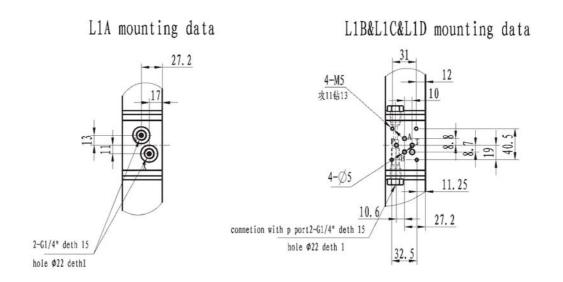






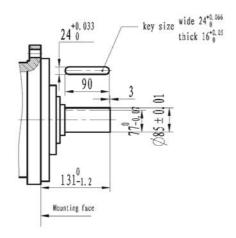


Variable Control's mounting data

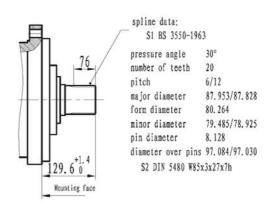


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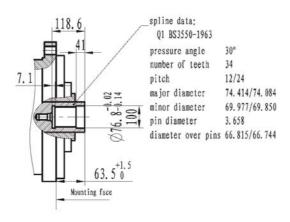
IMC200-P1



IMC200-S1&S2



IMC200-Q1





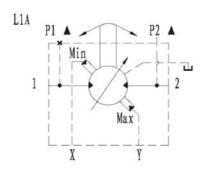
Nominal Displacement Ordering Code 3 4	3100	2900	2800	2600	2400	2300	2100	2000	1800	1600	1500	1300	1200	1000	830	670	510	350	190	110
Displacement ml/r	3080	2958	2796	2634	2472	2310	2148	1973	1811	1649	1487	1325	1163	1001	839	677	515	353	191	109/0
Unit Torque N.M/Mpa	447	422	400	375	351	326	300	281	258	231	206	180	154	125	100	79	57	30	6	0
Max. Cont. Speed r/min	110	115	125	135	140	150	160	175	190	210	230	265	305	350	395	485	540	540	540	900
Max. Cont. Speed KW	131	131	131	124	117	111	96	89	83	77	71	66	60	55	48	42	33	16	3	0
Max. Top. Power KM	146	146	146	139	131	124	116	104	99	95	90	85	79	73	65	57	44	28	5	0
Max. Cont. Pressure Mpa	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	15
Max, Top. Pressure Mpa	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	15

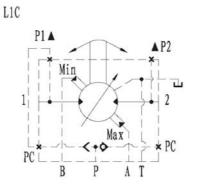
IMC200 Displacement Options

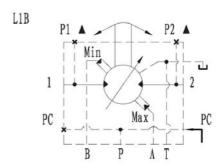
large displacement: 3100, 2900, 2800, 2600, 2400, 2300, 2100, 2000, 1800, 1600

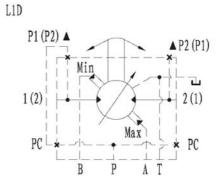
small displacement: 2300, 2100, 2000, 1800, 1600, 1500, 1300, 1200, 1000, 830, 670, 510, 350, 190, 110

Functional Symbols

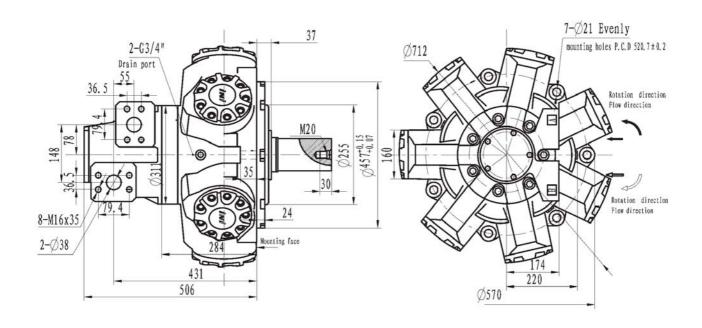




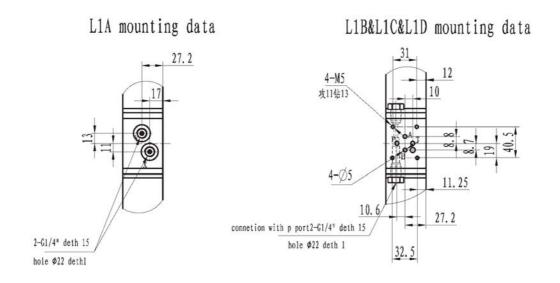






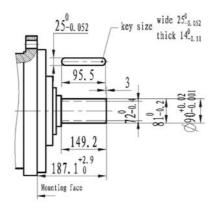


Variable Control's mounting data

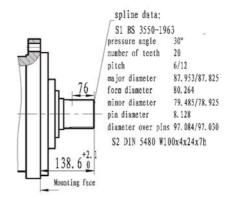


SHAFTS

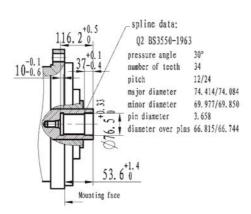
IMC270-P1



IMC270-S1&S2



IMC270-Q1





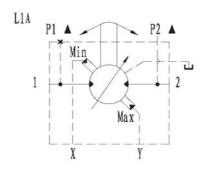
Nominal Displacement Ordering Code 3 4	4600	4100	3600	3300	3000	2600	2300	1900	1600	1400	970	680	340	170
Displacement ml/r	4597	4086	3632	3291	2951	2610	2270	1930	1649	1362	965	681	340	170/0
Unit Torque N.M/Mpa	657	585	514	460	419	356	310	259	210	168	108	73	24	0
Max. Cont. Speed r/min	108	120	135	145	165	180	215	240	290	315	315	315	315	900
Max. Cont. Speed KW	123	115	104	97	90	83	76	68	59	48	37	25	8	0
Max. Top. Power KM	153	149	142	136	129	122	112	102	91	81	68	47	12	0
Max. Cont. Pressure Mpa	21	21	21	21	21	21	21	21	21	21	21	21	21	15
Max. Top. Pressure Mpa	25	25	25	25	25	25	25	25	25	25	25	25	25	15

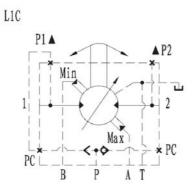
IMC270 Displacement Options

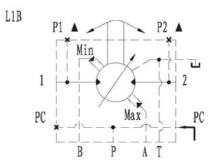
large displacement: 4600, 4100, 3600, 3300

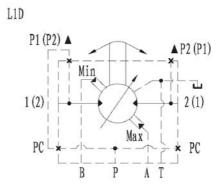
smalllarge displacement: 3300, 3000, 2600, 2300, 1900, 1600, 1400, 680, 340, 170

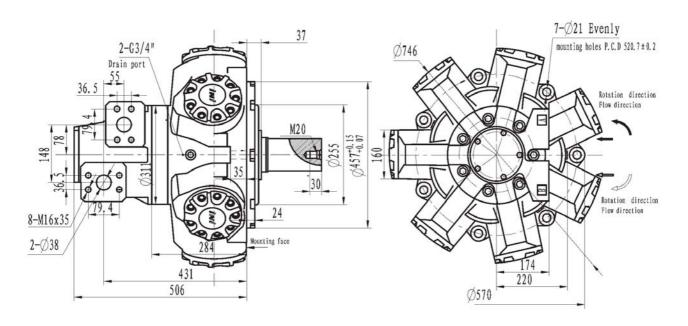
Functional Symbols



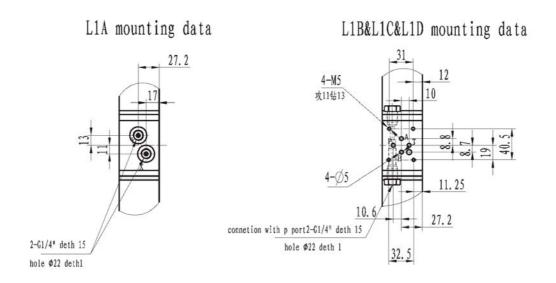








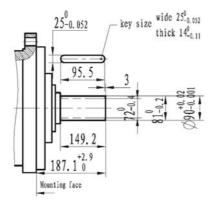
Variable Control's mounting data



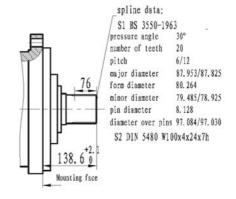


SHAFTS

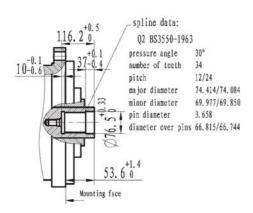
IMC325-P1



IMC325-S1&S2



IMC325-Q1





Nominal Displacement Ordering Code 3 4	5300	5100	4900	3600	3300	3000	2600	2300	1900	1600	1500	1400
Displacement ml/r	5335	5108	4937	3632	3291	2951	2610	2270	1930	1646	1532	1362
Unit Torque N.M/Mpa	763	731	706	514	460	419	356	310	259	210	196	168
Max. Cont. Speed r/min	90	105	110	135	145	165	180	215	240	290	315	315
Max. Cont. Speed KW	123	123	123	104	97	90	83	76	68	59	54	48
Max. Top. Power KM	153	153	153	142	136	129	122	112	102	91	87	81
Max. Cont. Pressure Mpa	21	21	21	21	21	21	21	21	21	21	21	15
Max. Top. Pressure Mpa	25	25	25	25	25	25	25	25	25	25	25	15

IMC325 Displacement Options

large displacement: 5300, 5100, 4900;

small displacement: 3600, 3300, 3000, 2600, 2300, 1900, 1600, 1500, 1400

Functional Symbols

