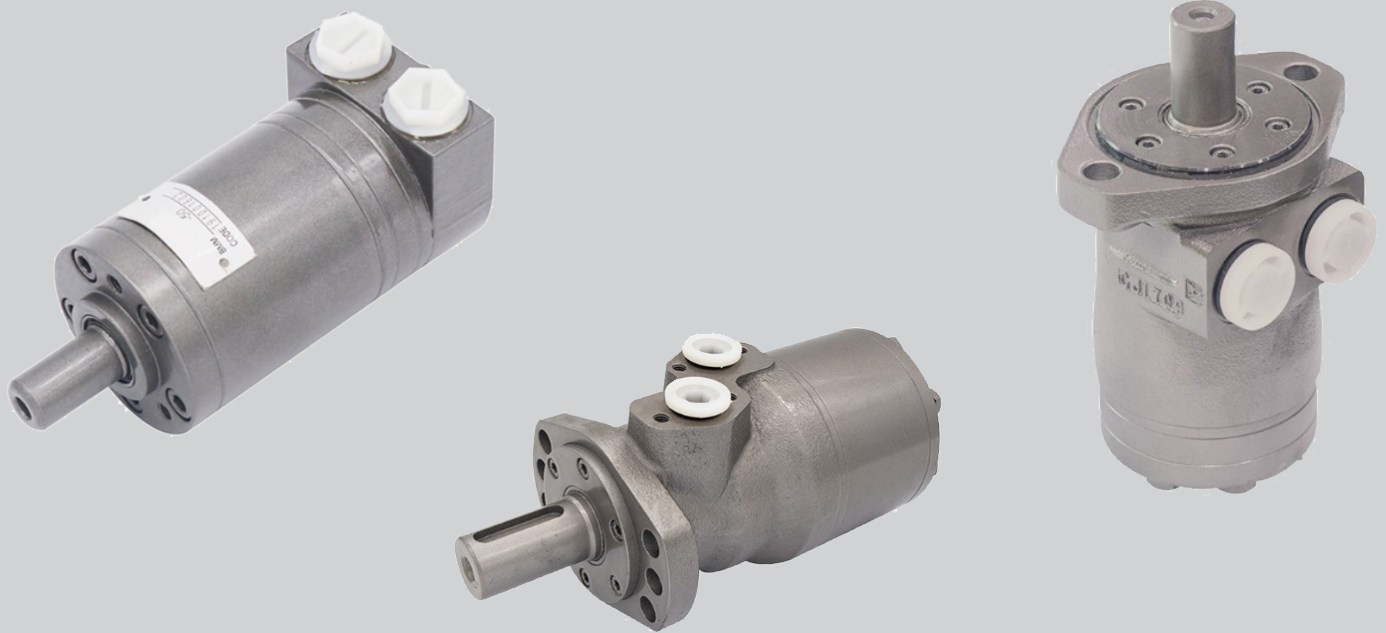




ORBITAL HYDRAULIC MOTORS



PMM Orbital hydraulic motor

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PHP Cycloid rotor pump

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ZPM, ZPMR Hydraulic motor with braker

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ZDM Hydraulic braker

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Orbital motor with valve

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PMM Introduction



This series of motors features a housing made of ductile cast iron, offering suitable strength for applications involving moderate loads and intermittent operation. It is widely used across industries such as agriculture, forestry, plastics, machine tools, and mining equipment

PMM Characteristics

1. The axial oil distribution design ensures a compact structure, high efficiency, and extended service life.
2. The shaft seal is capable of withstanding high pressure, allowing the motor to operate in both parallel and series configurations.

PMM Technical data

Type	Displacement ml/r	Max Pressure Drop			Max torque			Speed range	Max Flow	Max output power	Weight Kg
		Continuous Mpa	Intermittent Mpa	Peak Mpa	Continuous Nm	Intermittent Nm	Peak Nm	Continuous r/min	Continuous L/min	Continuous Kw	
PMM-8	8.2	10	14	20	11	15	21	1950	16	1.8	1.9
PMM-12.5	12.9	10	14	20	16	23	33	1550	20	2.4	2
PMM-20	19.9	10	14	20	25	35	51	1005	20	2.4	2.1
PMM-32	31.6	10	14	16	40	57	64	630	20	2.4	2.2
PMM-40	39.8	9	14	16	45	70	82	500	20	2.2	2.3
PMM-50	50.3	7	14	16	46	88	100	395	20	1.8	2.4

Intermittent operation the permissible values may occur for max 10% of every minute,
Peak load: the permissible values may occur for max 1% of every minute.

PMM Performance data

PMM 8(8.2ml/r)

		Pressure(Mpa)			Max.cont.		Max.int.	
		3.5	5	7	10	12	14	
Flow(L/min)	2	3	5	8	10	12	14	
		228	218	206	156	111	58	
	4	3	5	7	11	13	15	
		474	471	463	426	391	331	
	8	3	5	7	11	13	15	
Max.cont.		953	946	926	884	855	816	
	12	2	5	7	10	13	15	
		1444	1426	1402	1360	1324	1288	
	16		4	7	10	12	14	
			1912	1900	1861	1833	1780	
Max.int.	20			6	10	11	14	
				2395	2350	2328	2281	

PMM 12.5(12.9ml/r)

		Max.cont.				Max.int.	
		3.5	5	7	10	12	14
Flow(L/min)	2	6 140	8 136	11 119	15 68	19 35	
	4	6 296	8 289	12 274	16 229	19 200	23 145
	8	5 605	8 596	12 583	16 543	20 514	24 469
	12	5 912	8 905	11 895	16 859	20 834	24 784
	15	5 1152	7 1144	11 1136	16 1102	19 1078	23 1036
	20	3 1542	7 1532	10 1521	15 1500	19 1482	22 1437
	25	2 1910	6 1891	9 1878	14 1848	18 1828	22 1788
	Max.cont.						
	Max.int.						

PMM 20(19.9ml/r)

		Pressure(Mpa)			Max.cont.		Max.int.	
		1.7	3.5	5	7	10	12	14
Flow(L/min)	2	4	9	14	19	24	30	
		99	96	89	74	42	21	
	4	4	9	14	19	24	31	36
		197	191	182	178	134	112	74
	8	4	9	13	19	25	31	36
Max.cont.		398	395	391	377	340	319	288
	12	3	8	13	18	25	31	37
		596	594	588	579	545	523	493
	15	3	8	12	17	25	30	36
		745	741	738	728	695	684	660
Max.int.	20	1	6	11	19	24	29	35
		998	995	991	985	962	916	885
Max.int.	25		4	9	14	23	28	33
			1247	1245	1242	1189	1180	1176

PMM 32(31.6ml/r)

		Pressure(Mpa)			Max.cont.		Max.int.	
		2	3.5	5	7	10	12	14
Flow(L/min)	2	7	15	21	28	39		
		61	57	52	47	16		
	4	7	15	21	29	40	48	57
		126	121	114	106	82	67	49
	8	7	15	21	29	40	49	58
Max.cont.		250	244	239	231	207	194	167
	12	6	13	20	28	40	48	58
		378	374	369	362	338	322	297
	15	4	12	18	27	39	47	57
		474	472	468	462	441	429	406
Max.int.	20	3	10	17	25	37	46	55
		631	630	627	619	601	585	566
Max.int.	25	1	8	15	23	35	43	52
		791	789	787	783	766	753	732

PMM 40(39.8ml/r)

		Pressure(Mpa)			Max.cont.		Max.int.	
		3	5	7	9	10	12	
Flow(L/min)	2	16	27	36	44	51		
		45	40	34	28	17		
	4	16	27	37	45	52	62	
		96	93	85	79	65	52	
	8	15	26	36	45	52	63	
Max.cont.		197	195	182	176	166	154	
	12	14	25	35	43	51	62	
		293	287	282	277	268	257	
	15	13	24	34	42	50	62	
		371	365	360	355	347	338	
Max.int.	20	10	21	31	39	48	59	
		497	492	487	480	472	463	
Max.int.	25	7	19	29	37	44	56	
		622	617	612	607	600	591	

PMM 50(50.3ml/r)

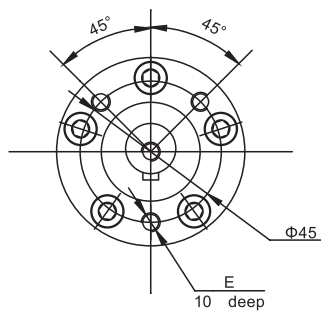
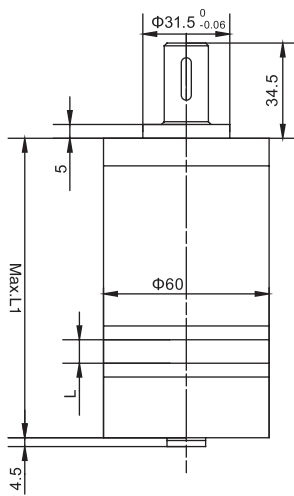
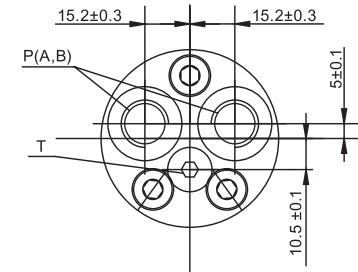
		Pressure(Mpa)			Max.cont.		Max.int.	
		1.5	3	5	7	10		
Flow(L/min)	2	9	18	32	45			
		37	33	27	22			
	4	9	19	33	46	64		
		76	73	68	63	55		
	8	9	19	33	46	64		
Max.cont.		157	154	149	145	137		
	12	9	18	32	46	63		
		237	234	231	226	218		
	15	8	17	31	42	62		
		296	295	294	288	282		
Max.int.	20	6	13	27	40	59		
		395	395	393	390	381		
Max.int.	25	4	11	25	37	58		
		497	496	494	490	484		

(Torque) : 44Nm
(Speed) : 600r/min

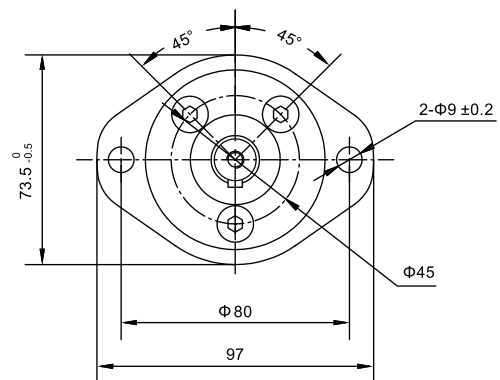
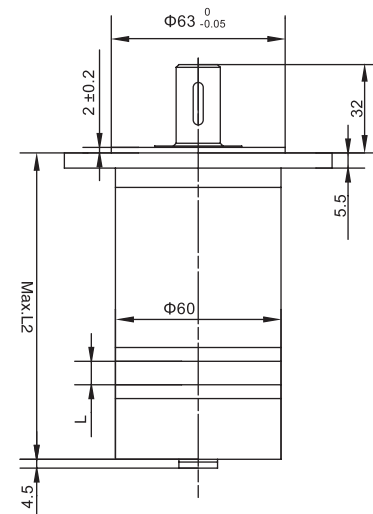
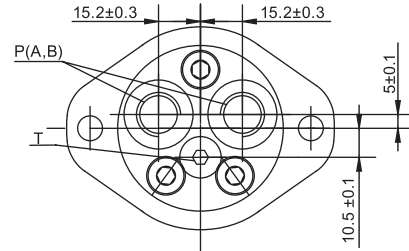
Cont.
Int.

PMM Installation

Flange C, C1



End port Y*

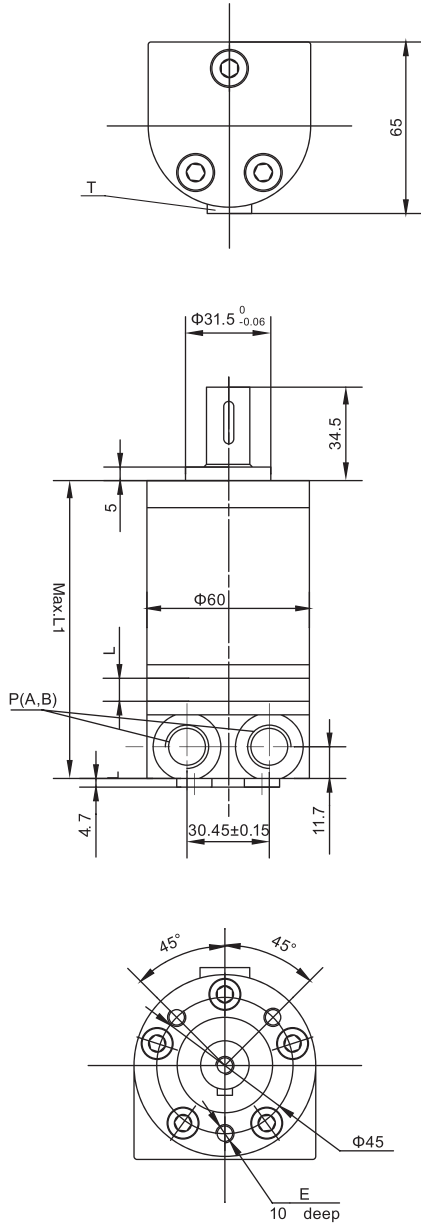


Flange	E
C	3 x M6
C1	3 x 1/4-28 UNF

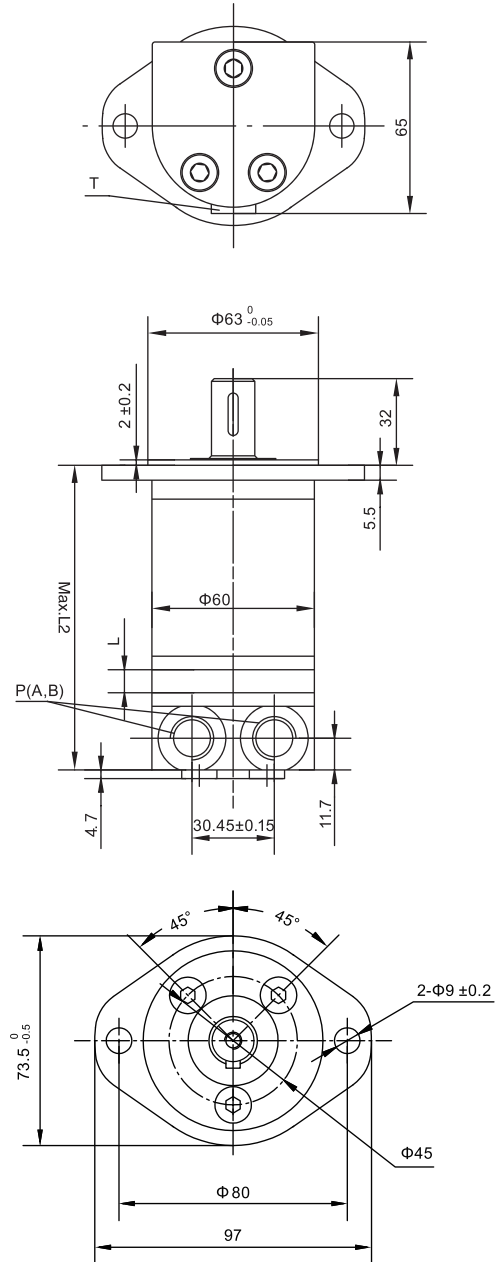
Type	L mm	L1 mm	L2 mm
PMM-8	3.5	104.5	107
PMM-12.5	5.5	106.5	109
PMM-20	8.5	109.5	112
PMM-32	13.5	114.5	117
PMM-40	17	118	120.5
PMM-50	21.5	122.5	125

PMM Installation

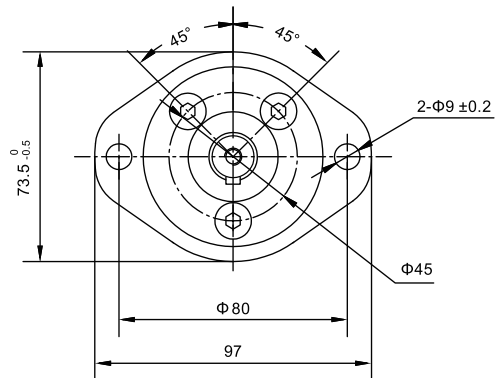
Flange C, C1



Side port S*



A2 2-holes oval flange

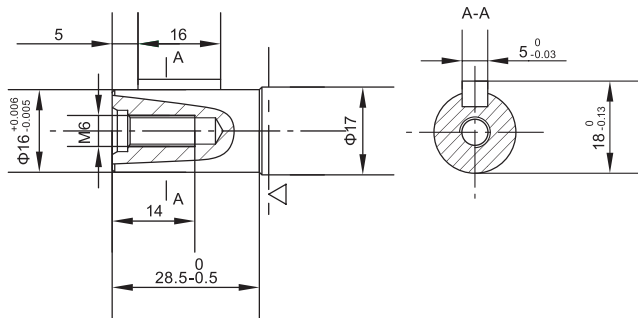


Flange	E
C	3 x M6
C1	3 x 1/4-28 UNF

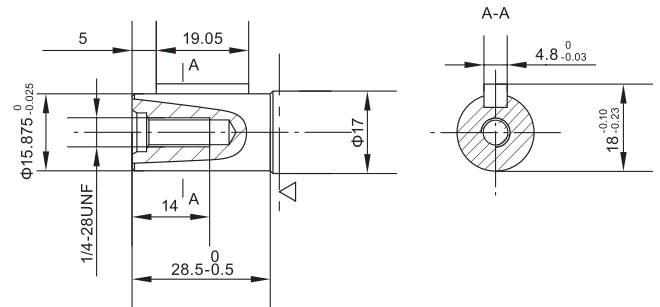
Type	L mm	L1 mm	L2 mm
PMM-8	3.5	106	108.5
PMM-12.5	5.5	108	110.5
PMM-20	8.5	111	113.5
PMM-32	13.5	116	118.5
PMM-40	17	119.5	122
PMM-50	21.5	124	126.5

PMM Shaft version

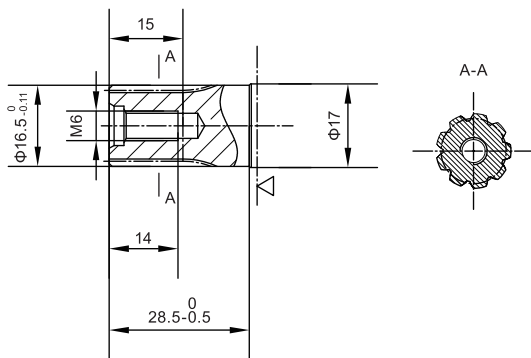
P1: Ø16 Cylindrical shaft, parallel key 5x5x16



P2: Ø15.875 Cylindrical shaft, parallel key 4.8x4.8x19.05



K1: Ø16.5 involute splined shaft B17x14 DIN5482

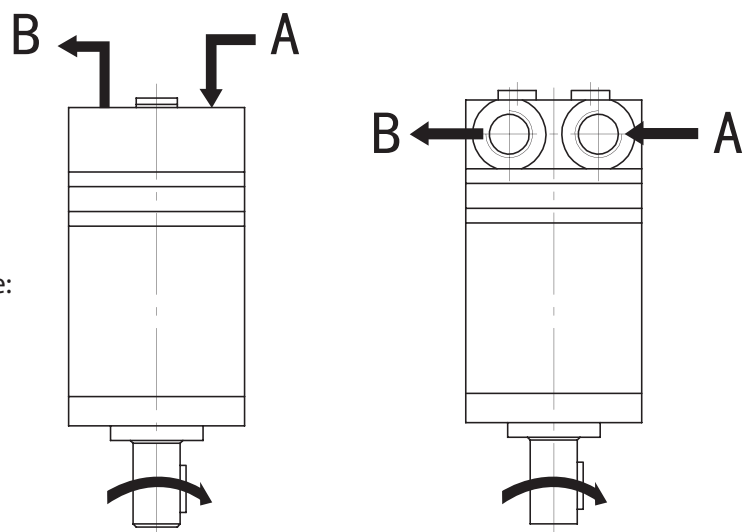


◁ : Motor mounting surface

PMM Direction of Shaft rotation: Standard

Direction of shaft rotation: Standard

When facing shaft end of motor, shaft to rotate:
Clockwise when port "A" is pressurized,
Counter-clockwise when port "B" is pressurized.



PMM Ordering code

1		2	3	4	5		6		7
PMM	-					/		-	

1	Series	
	Hydraulic motor with spool valve	PMM

2	Displacement	
	ml/r	8
		12.5
		20
		32
		40
		50

3	Output	
	Ø16 Cylindrical shaft parallel 5x5x16	P1
	Ø15.875 Cylindrical shaft, parallel key 4.8x4.8x19.05	P2
	Ø16.5 involute splined shaft, B17x14 DIN5482	K1

4	Flange	
	3-M6 Flange, pilot Ø31.5	C
	3-1/4-28UNF Flange, pilot Ø31.5	C1
	2-Ø9 Oval flange, pilot Ø63	A2

5	Ports	
	End port Y *	Y
	G3/8 (12) - G1/8" (8)	Y1
	9/16 -18UNF (12) - 3/8-24UNF (8)	Y2
	Side port S*	S
	G3/8 (12) - G1/8 (8)	S1
	9/16-UNF (12) - 3/8-24UNF (8)	S2

6	Special features	
	Standard	

7	Rotation direction	
	Standard	
	Opposite	L

PMR Introduction



This series of motors features a ductile cast iron housing with adequate strength, making it suitable for applications involving light loads and intermittent operation. It is widely used across industries such as agriculture, forestry, plastics, machine tools, and mining equipment. Typical applications include mould height adjustment in injection moulding machines, cleaning equipment, sawmills, and worktables.

PMR Characteristics

1. The output shaft is supported by deep groove ball bearings, enabling it to withstand both axial and radial loads.
2. The axial oil distribution design allows for a more compact and lightweight construction.
3. Equipped with two internal check valves, eliminating the need for a drain line.
4. The cycloidal gear set with rollers reduces friction and ensures high mechanical efficiency.

PMR Technical data

Type	Displacement ml/r	Max Pressure Drop			Max torque			Speed range r/min	Max Flow Continuous L/min	Max output power Continuous Kw	Weight Kg
		Continuous Mpa	Intermittent Mpa	Peak Mpa	Continuous Nm	Intermittent Nm	Peak Nm				
50	51.7	14	17.5	20	93	118	135	770	40	7	6.5
80	80.5	14	17.5	20	152	189	216	745	60	10	6.9
100	100.5	14	17.5	20	194	236	270	595	60	10	7.0
125	126.3	14	17.5	20	237	296	338	475	60	10	7.3
160	160.8	14	17.5	20	310	378	433	370	60	10	7.5
200	200.9	14	17.5	20	369	450	509	295	60	8	8.0
250	252.6	11	14	16	380	470	540	235	60	6	8.5
315	321.5	9	11	13	380	470	540	185	60	5	9.0
400	401.9	7	9	11	380	470	540	150	60	4	11

Intermittent operation the permissible values may occur for max 10% of every minute,

Peak load: the permissible values may occur for max 1% of every minute.

PMRY Technical data

Type	Displacement	Max Pressure Drop			Max torque			Speed range	Max Flow	Max output power	Weight
		Continuous	Intermittent	Peak	Continuous	Intermittent	Peak	Continuous	Continuous	Continuous	
	ml/r	Mpa	Mpa	Mpa	Nm	Nm	Nm	r/min	L/min	Kw	Kg
50	51.7	17.5	20	22	110	135	144	770	40	7.5	6.9
80	80.5	17.5	20	22	189	216	225	745	60	12	7.3
100	100.5	17.5	20	22	236	270	281	595	60	12	7.4
125	126.3	17.5	20	22	296	338	353	475	60	12	7.7
160	160.8	17.5	20	22	378	433	450	370	60	12	7.9
200	200.9	17.5	19	20	450	486	511	295	60	11	8.4
250	252.6	14	16	18	470	540	579	235	60	9.5	8.9
315	321.5	12	14	15	485	573	641	185	60	7.5	9.4
400	401.9	10	12	14	500	614	710	150	60	6.5	11.4

Intermittent operation the permissible values may occur for max 10% of every minute,
Peak load: the permissible values may occur for max 1% of every minute.

PMR Performance data

		PMR 50[51.7ml/r] Pressure (Mpa)					Max.cont.		Max.int.	
		5	7	9	10	12	14	16	17.5	
Flow(L/min)	5	34 94	44 85	58 77	65 77	75 72	88 50			
	10	35 188	45 179	61 167	68 163	79 154	94 137	107 119	119 98	
	15	34 285	48 279	62 271	72 263	87 252	100 232	108 213	122 187	
	20	34 379	46 377	60 367	68 363	82 348	95 332	109 304	125 272	
	30	32 578	43 571	59 563	66 556	79 544	94 533	107 502	121 467	
	40	30 762	40 760	57 755	65 752	78 740	91 726	105 702	120 672	
	45	29 858	39 855	56 851	64 847	77 837	89 817	104 798	120 772	
	50	25 952	36 942	52 927	59 908	72 882	84 854	98 834	113 803	

PMR 80[80.5m/r]									
Pressure (Mpa)						Max.cont.		Max.int.	
		5	7	9	10	12	14	16	17.5
Flow(L/min)	5	48 61	58 52	84 52	106 46	129 40			
	10	50 122	74 116	96 112	106 108	126 106	145 99	170 60	
	20	54 243	76 239	100 231	109 219	131 206	152 192	174 176	193 152
	30	50 362	72 358	96 356	104 350	128 349	148 335	172 325	191 300
	40	45 484	70 480	95 478	104 476	125 470	146 468	171 440	188 438
	50	41 610	68 608	91 606	101 603	122 600	145 598	158 550	186 520
	60	35 726	65 723	88 720	96 718	120 710	142 700	164 698	182 680
	70	30 845	58 834	81 820	93 802	114 789	136 767	158 754	175 730
Max.int.	75	19 910	48 895	76 881	88 867	108 852	132 830	151 806	168 787

PMR Performance data

PMR 100[100.5ml/r]
Pressure (Mpa)

						Max.cont.		Max.int.	
		5	7	9	10	12	14	16	17.5
Flow(L/min)	5	64 49	90 48	118 46	134 42	154 38			
	10	65 96	93 94	122 93	134 91	155 80	183 60	210 48	
	20	62 192	93 188	121 184	135 178	153 171	184 168	208 158	236 146
	30	61 296	90 294	118 290	130 290	150 288	180 282	200 270	232 258
Max.cont.	40	55 387	86 380	115 369	126 361	146 356	181 348	206 338	228 320
	50	46 484	77 479	108 472	121 463	146 452	181 445	200 428	221 410
	60	34 583	62 567	98 569	110 555	136 540	170 536	186 528	199 516
	70	30 680	63 672	97 662	110 650	138 640	170 635	190 620	210 606
Max.int.	75	20 728	54 720	90 710	106 695	130 681	165 667	188 650	200 634

PMR 125[126.3ml/r]
Pressure (Mpa)

						Max.cont.		Max.int.	
		5	7	9	10	12	14	16	17.5
Flow(L/min)	5	74 37	106 32	140 27	163 21				
	10	81 78	114 77	152 74	172 59	200 45	220 29	250 20	
	20	80 157	114 156	150 154	170 151	200 146	221 142	254 120	292 114
	30	78 232	112 230	149 228	169 222	198 220	220 218	252 199	290 170
Max.cont.	40	77 312	111 311	147 307	168 300	196 298	218 284	250 270	288 252
	50	62 391	105 388	143 384	165 380	195 372	223 362	254 346	287 330
	60	52 470	98 468	136 464	160 459	191 448	220 434	250 412	282 405
	70	41 548	90 544	130 540	156 541	187 538	215 535	242 530	278 496
Max.int.	75	32 586	79 583	126 578	148 570	180 560	208 546	234 532	262 520

PMR 160[160.8ml/r]
Pressure (Mpa)

						Max.cont.		Max.int.	
		5	7	9	10	12	14	16	17.5
Flow(L/min)	5	100 29	142 26	188 21	207 19				
	10	104 62	146 60	191 58	211 49	245 45	282 32	330 25	
	20	102 124	148 120	194 118	218 114	251 109	290 104	338 99	368 94
	30	96 183	141 181	186 179	215 176	248 166	288 158	335 144	364 132
Max.cont.	40	87 246	136 242	180 240	206 235	248 231	286 219	330 200	358 181
	50	70 309	126 307	172 300	198 295	238 287	278 278	320 262	350 247
	60	58 371	111 367	168 359	191 354	232 346	271 338	312 323	342 306
	70	47 435	104 430	160 421	190 415	228 403	267 393	301 381	338 365
Max.int.	75	34 470	91 463	150 450	180 441	221 431	261 420	291 405	328 389

(Torque) : 150Nm
(Speed) : 450r/min

Cont.
Int.

PMR 200[200.9ml/r]
Pressure (Mpa)

						Max.cont.		Max.int.	
		5	7	9	10	12	14	16	17.5
Flow(L/min)	5	129 24	176 22	230 18	256 13				
	10	133 49	182 47	236 45	261 43	310 38	352 33	400 24	
	20	131 99	181 97	232 94	256 92	308 88	354 83	400 74	431 64
	30	126 149	176 147	229 144	252 141	308 135	353 126	400 113	430 105
Max.cont.	40	112 200	168 197	224 194	248 191	304 185	350 174	393 160	423 151
	50	94 252	154 249	220 246	243 243	294 238	343 228	384 212	414 194
	60	78 304	144 301	213 298	236 294	287 286	339 276	382 262	410 243
	70	67 355	135 353	206 349	228 340	277 329	336 316	375 300	408 288
Max.int.	75	58 382	125 379	197 373	220 362	270 350	321 337	360 322	398 312

PMR Performance data

PMR 250[252.6ml/r]
Pressure (Mpa)

		Pressure (Mpa)				Max.cont.		Max.int.	
		5	7	9	10	11	12	14	
Flow(L/min)	5	172 20	240 19	300 18	338 16	352 15			
	10	173 42	242 38	308 36	340 33	351 33	405 28	462 22	
	20	170 79	238 77	301 75	339 72	350 71	402 69	460 61	
	30	160 117	231 114	298 111	330 109	347 108	398 103	455 95	
	40	141 157	221 155	298 153	327 150	342 148	394 146	445 135	
	50	122 196	206 193	287 190	321 177	332 175	382 170	438 163	
	60	101 236	190 233	278 230	312 227	328 225	369 221	424 208	
	70	86 276	176 273	262 270	298 266	302 264	353 255	416 245	
Max.int.	75	60 297	163 294	254 290	286 286	291 282	345 277	410 266	

PMR 315[321.5ml/r]
Pressure (Mpa)

		Max.cont.			Max.int.		
		3	5	7	9	10	11
Flow(L/min)	5	110 14	199 12				
	10	108 31	190 30	272 29	360 28	400 26	451 25
	20	110 61	196 60	279 59	356 57	398 55	448 53
	30	106 91	186 90	270 89	355 86	390 84	442 82
	40	100 123	179 122	262 120	350 117	382 112	436 110
Max.cont.	50	92 154	169 153	252 151	342 147	373 140	432 136
	60	86 185	159 184	241 182	339 177	369 172	428 170
	70	77 217	146 216	235 213	324 208	342 201	412 200
Max.int.	75	66 232	132 231	212 228	303 222	332 216	402 214

PMR 400[401.9ml/r]
Pressure (Mpa)

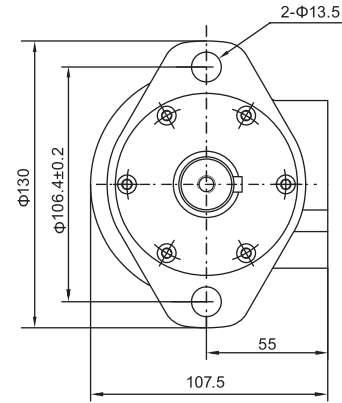
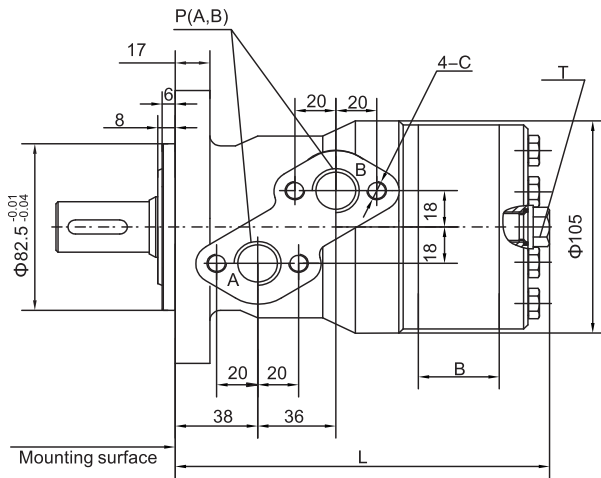
		Max.cont.			Max.int.		
		3	4	6	7	8	9
Flow(L/min)	5	152 12					
	10	154 24	205 21	308 18	349 17		
	20	150 49	201 48	302 47	340 46	392 44	441 41
	30	146 73	198 74	296 73	331 72	387 70	438 67
	40	140 98	191 97	290 96	321 95	381 94	421 92
Max.cont.	50	132 122	182 121	281 118	315 115	376 112	402 110
	60	128 146	176 145	272 143	312 140	362 138	389 132
	70	110 170	171 168	259 166	301 162	341 160	379 154
Max.int.	75	98 182	162 180	232 178	292 176	320 174	356 170

(Torque) : 232Nm
(Speed) : 178r/min

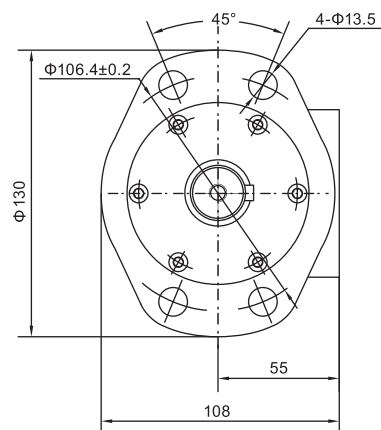
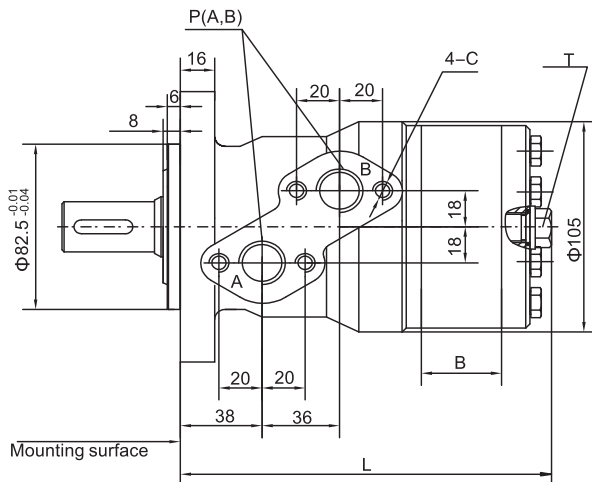
Cont.
Int.

PMR PMRE Installation

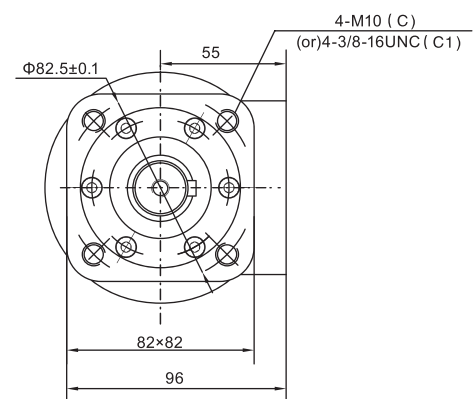
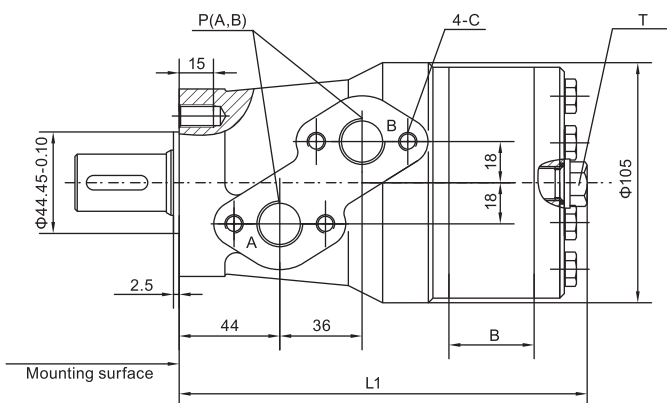
2-holes oval flange A2



4-holes oval flange A IV



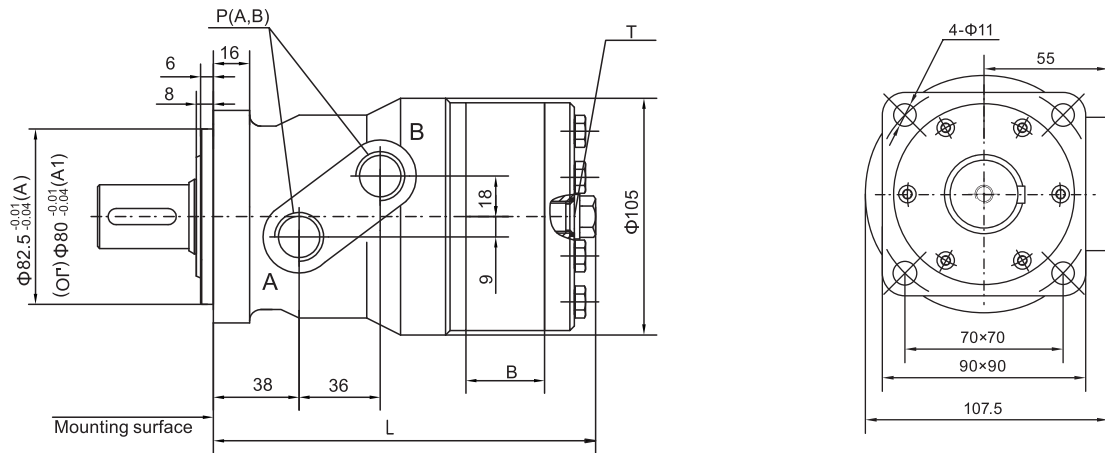
Square flange C, C1



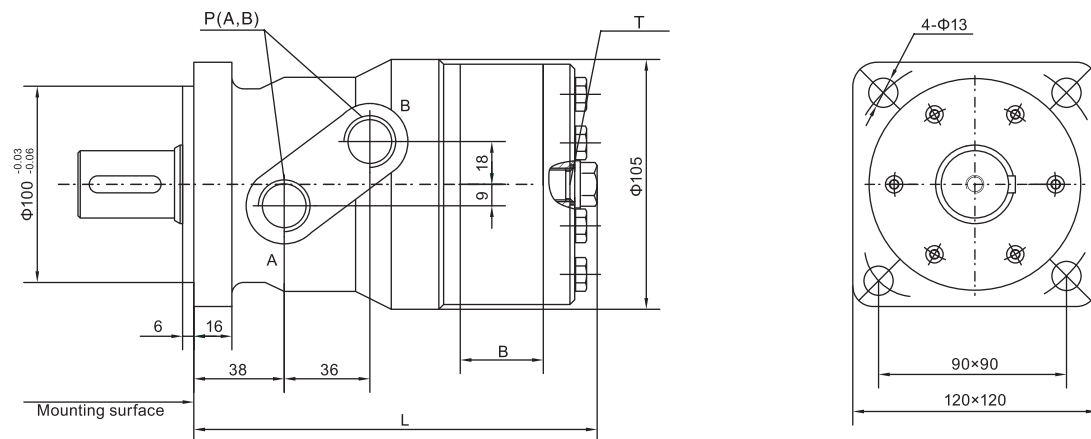
Note: C, C1 mounting are assembling to PMRS' shaft

PMR PMRE Installation

Square flange A, A1



Square flange A2 III



Type	L mm	L1 mm	B mm
PMR-50	143	151	9
PMR-80	148	156	14
PMR-100	151.5	159.5	17.5
PMR-125	156	164	22
PMR-160	162	170	28
PMR-200	169	177	35
PMR-250	178	186	44
PMR-315	190	198	56
PMR-400	204	212	70

PMRY Installation

Type	L mm	L1 mm	B mm
PMRY-50	150	158	9
PMRY-80	155	163	14
PMRY-100	158.5	166.5	17.5
PMRY-125	163	171	22
PMRY-160	169	177	28
PMRY-200	176	184	35
PMRY-250	185	193	44
PMRY-315	197	205	56
PMRY-400	211	219	70

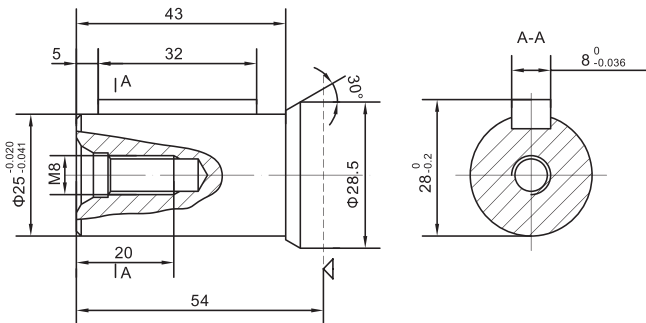
PMR PMRE Ports code

PORTS CODE	P (A, B) (deep mm)	C (deep mm)	T (deep mm)
Y	G1/2 (15)	M8 (13)	M14x1.5 (12)
Y1	M18x1.5 (15)	M8 (13)	M14x1.5 (12)
Y2	M22x1.5 (15)	M8 (13)	M14x1.5 (12)
Y4	ZG 3/8 (15)	M8 (13)	M14x1.5 (12)
Y5	7/8-UNF (15)	-	M14x1.5 (12)
Y7	ZG1/2 (15)	M8 (13)	M14x1.5 (12)
Y8	NPT 1/2 (15)	M8 (13)	M14x1.5 (12)
Y9	NPTF 1/2 (15)	5/16-18 UNC (13)	7/16-20 UNF (12)
Y10	G1/2 (15)	M8 (13)	G1/4 (12)
Y15	7/8-14 UNF (15)	5/16-18 UNC (13)	7/16-20 UNF (12)

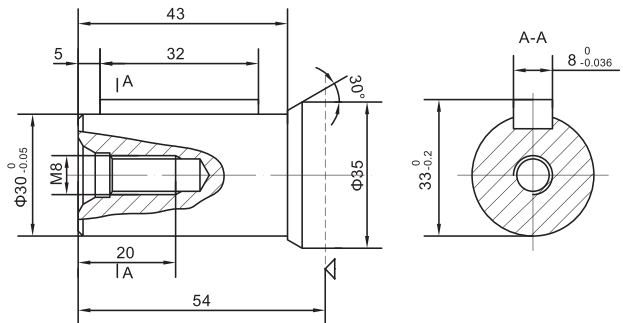
Note: P(A, B) Ports, C=Mounting thread, T=Drain connection

PMR PMRE Shaft versione

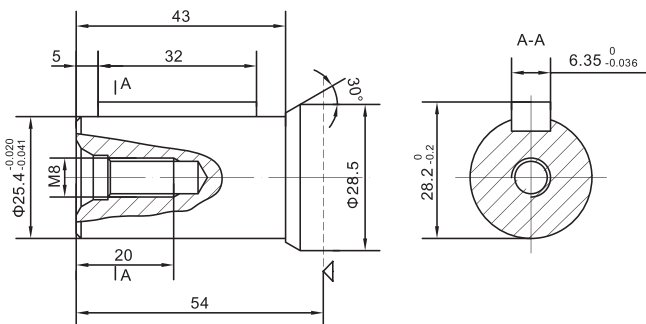
**P1: Ø25 Cylindrical shaft,
parallel key 8x7x32**



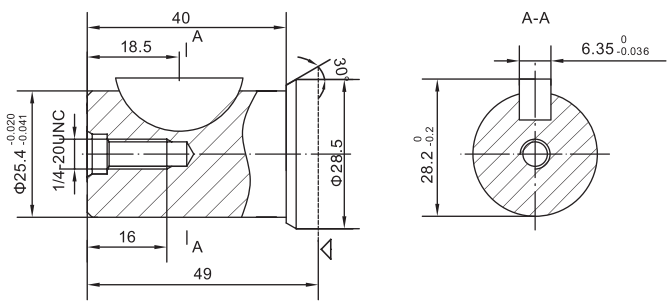
**P2: Ø30 Cylindrical shaft,
parallel key 8x7x32**



**P3: Ø24.5 Cylindrical shaft,
parallel key 6.35x6.35x32**



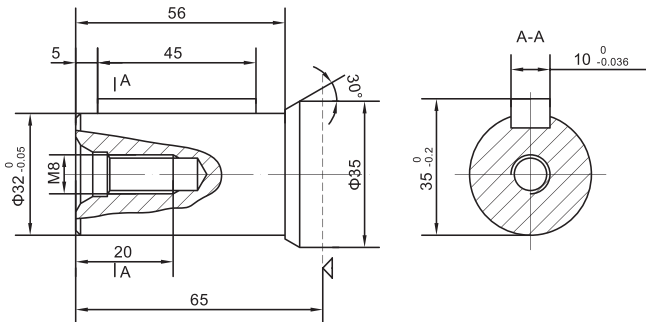
**P4: Ø24.5 Cylindrical shaft,
woodruff key Ø25.4x6.35**



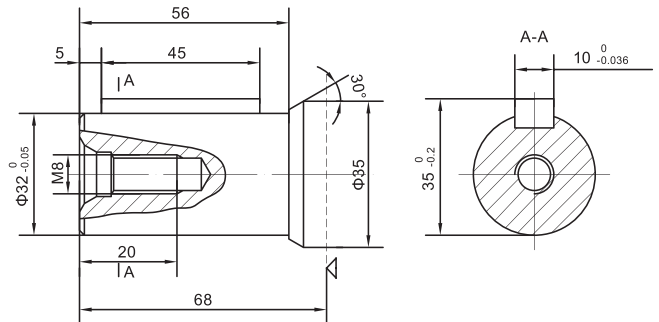
◁ : Motor mounting surface

PMR PMRE Shaft version

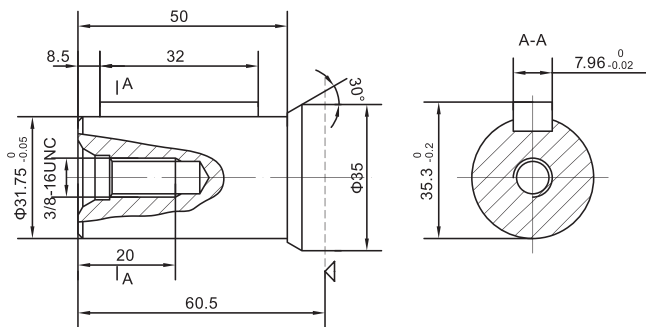
**P5: Ø32 Cylindrical shaft,
parallel key 10x8x45**



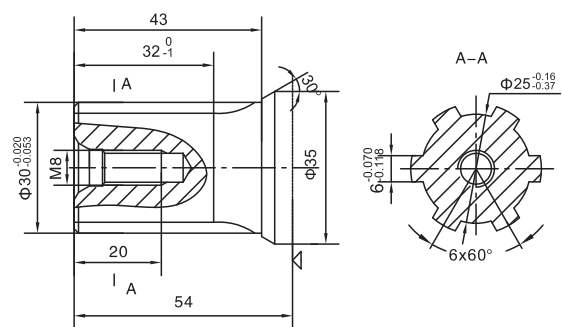
**P52: Ø32 Cylindrical shaft,
parallel key 10x8x45**



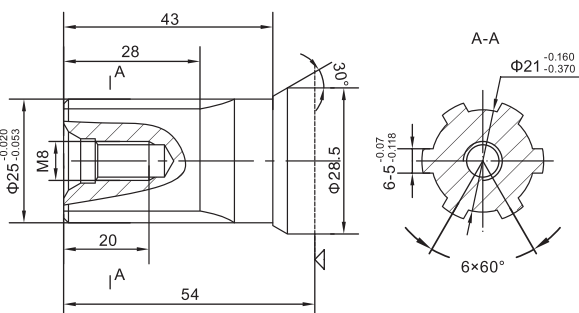
**P6: Ø31.75 Cylindrical shaft,
parallel key 7.96x7.96x32**



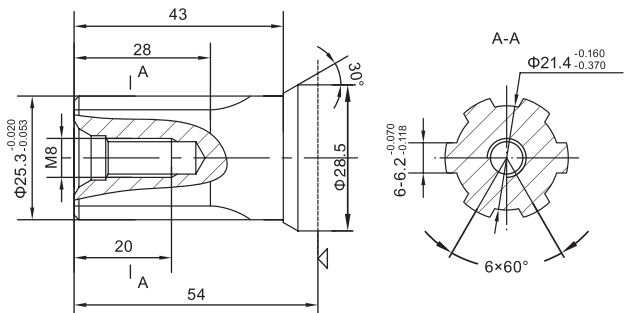
**H1: Ø30 Splined shaft,
6-30x25x6**



**H2: Ø25 Splined shaft,
6-25x21x5**



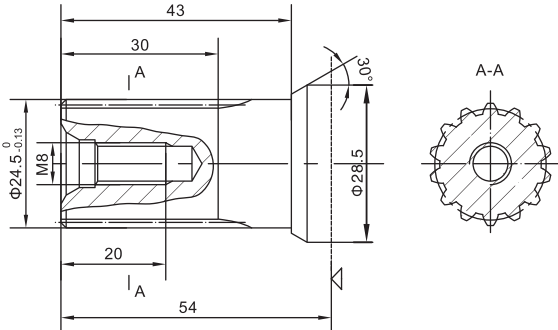
**H3: Ø25.3 Splined shaft,
6-25.3x21.4x6.2**



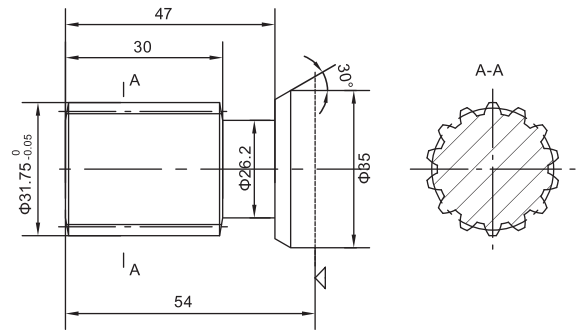
◁ : Motor mounting surface

PMR PMRE Shaft versione

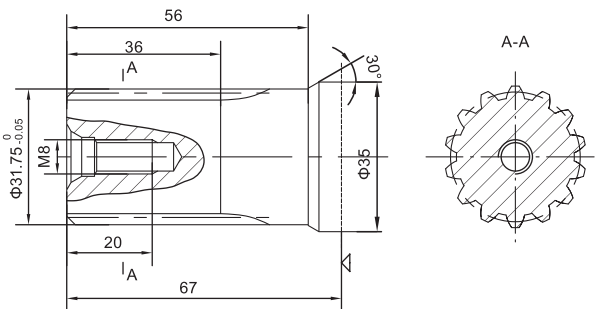
**K4: Ø24.5 involute splined shaft
B25x22 DIN5482
m:1.6 Z:14**



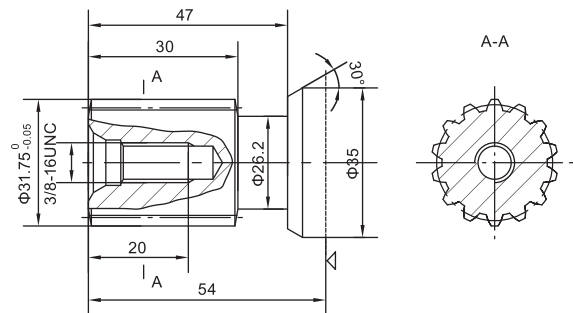
**K10: Ø31.75 involute splined shaft
14-DP12/24
a=30°**



**K13: Ø31.75 involute splined shaft
14-DP12/24 a=30°**



**K14: Ø31.75 involute splined shaft
14-DP12/24
a=30°**



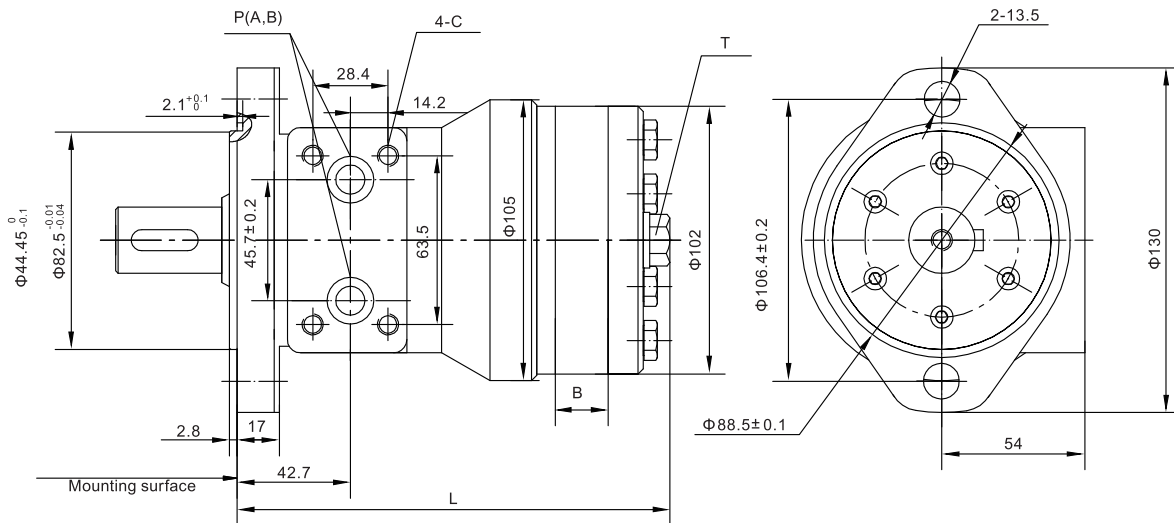
P2 □ P5 □ P52 □ P6 □ H1 □ K4 □ K10 □ K13 □ K14.

Note: PMRE series motors don't include the following output shafts: P2, P5, P52, P6, H1, K4, K10, K13, K14.

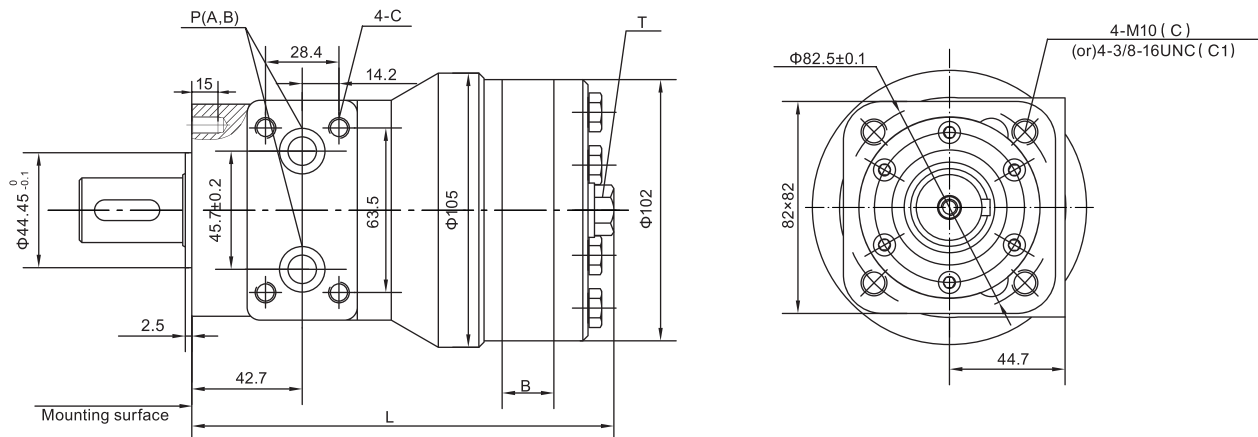
◁ : Motor mounting surface

PMRS Installation

2-holes oval flange A2



Square flange C, C1



Type	L mm	B mm
PMRS-50	151	9
PMRS-80	156	14
PMRS-100	159.5	147.5
PMRS-125	164	22
PMRS-160	170	28
PMRS-200	177	35
PMRS-250	186	44
PMRS-315	198	56
PMRS-400	212	70

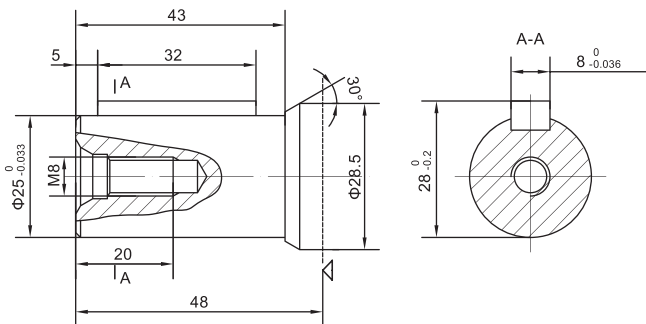
PMRS Ports code

PORTS CODE	P (A, B) (deep mm)	C (deep mm)	T (deep mm)
Y	G1/2 (15)	-	M14x1.5 (12)
Y5	7/8-UNF (15)	-	7/16-20 UNF (12)
Y7	NPTF 1/2 (15)	-	G1/4 (12)
Y9	G1/2 (15)	-	7/16-20 UNF (12)
Y10	3/4-16UNF (15)	-	G1/4 (12)
Y17	3/4-16 UNF (15)	-	7/16-20UNF (12)
Y19	Ø11 (15)	5/16-18UNC (13)	7/16-20UNF (12)
Y20	M18x1.5 (15)	M8 (13)	G1/4 (12)

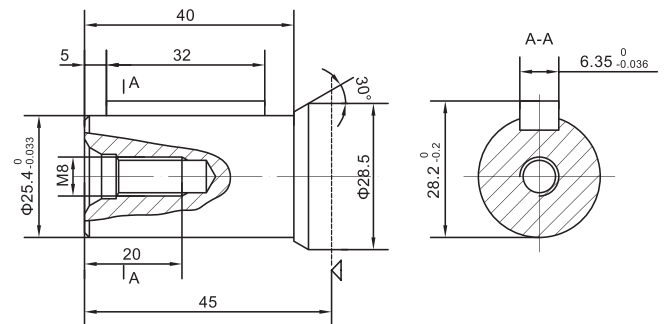
Note: P(A, B) Ports, C=Mounting thread, T=Drain connection

PMRS Shaft version

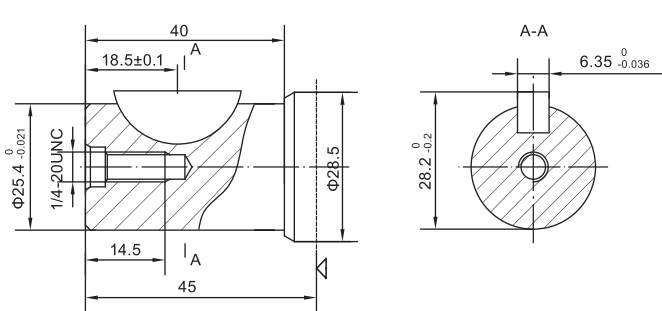
**P1: Ø25 Cylindrical shaft,
parallel key 8x7x32**



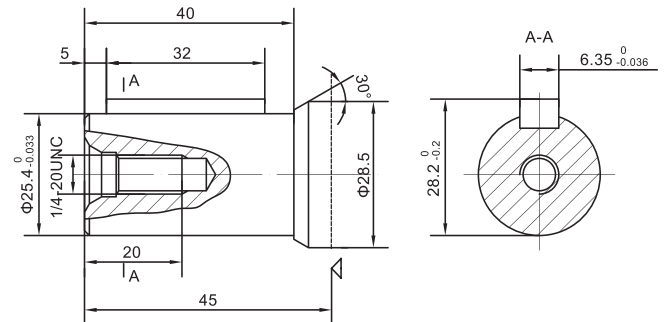
**P3: Ø24.5 Cylindrical shaft,
parallel key 6.35x6.35x32**



**P4: Ø24.5 Cylindrical shaft,
woodruff key Ø25.4x6.35**



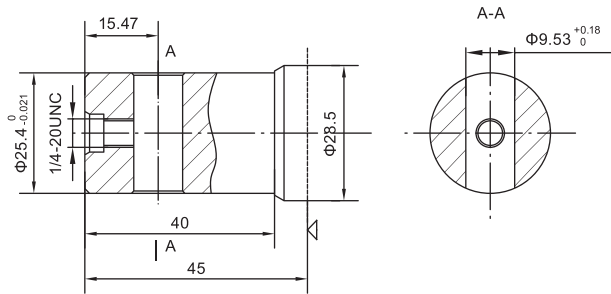
**P33: Ø24.5 Cylindrical shaft,
parallel key 6.35x6.35x32**



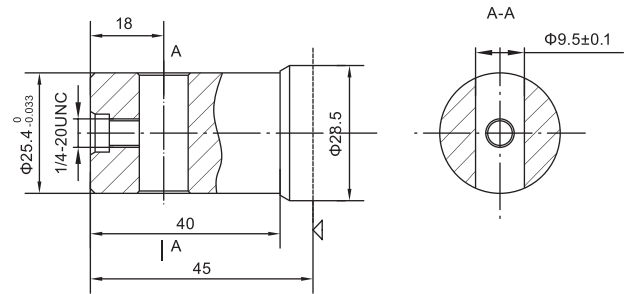
◁ : Motor mounting surface

PMRS Shaft version

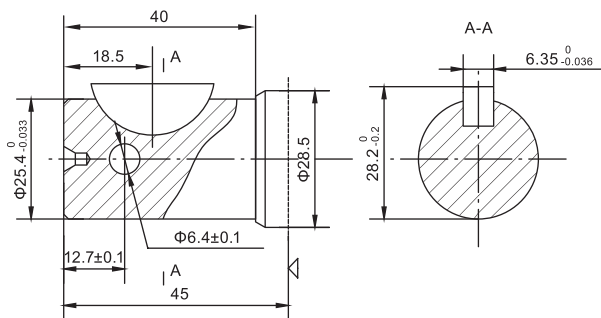
**P89: Ø25.4 Cylindrical shaft,
Pin hole Ø9.53**



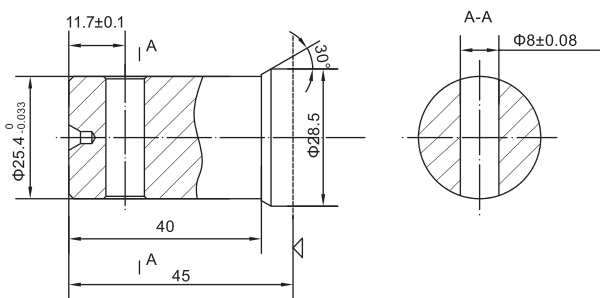
**P93: Ø25.4 Cylindrical shaft,
Pin hole Ø9.5**



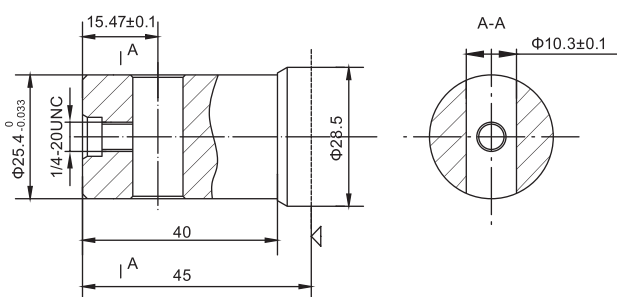
**P95: Ø25.4 Cylindrical shaft,
Pin hole Ø6.4
Woodruff key Ø25.4x6.35**



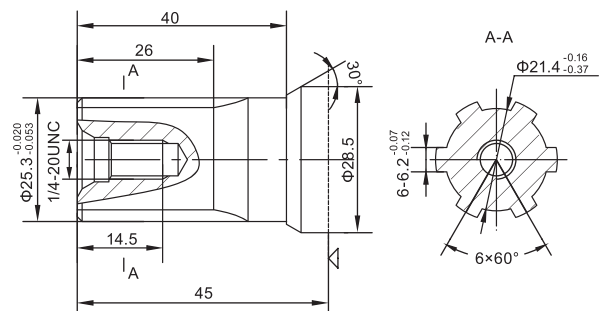
**P96: Ø25.4 Cylindrical shaft,
Pin hole Ø8**



**P97: Ø25.4 Cylindrical shaft
Pin hole Ø10.3**



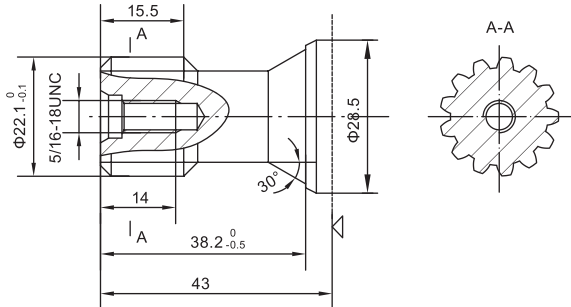
**H4: Ø25.3 Splined shaft,
6-25.3x21.4x6.2**



◁ : Motor mounting surface

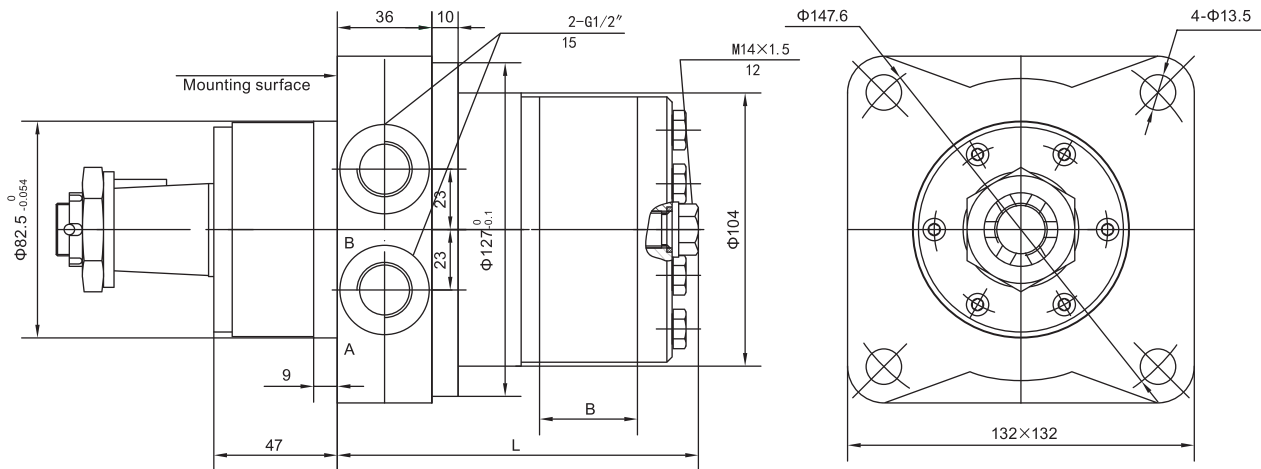
PMRS Shaft version

**K8: Ø22.1 involute splined shaft,
13-DP16/32**



◁ : Motor mounting surface

PMRW Installation



Type	L mm	B mm
PMRW-50	108	9
PMRW-80	113	14
PMRW-100	117	17.5
PMRW-125	121	22
PMRW-160	127	28
PMRW-200	134	35
PMRW-250	143	44
PMRW-315	155	56
PMRW-400	169	70

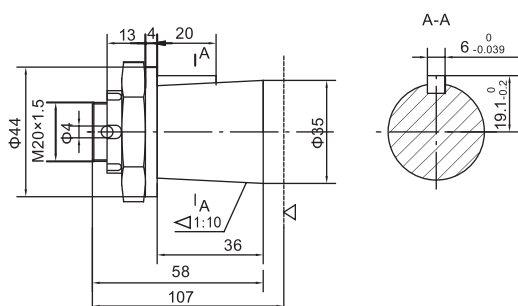
PMRW Ports code

PORTS CODE	P (A, B) (deep mm)	C (deep mm)	T (deep mm)
Y	G1/2 (15)	-	M14x1.5 (12)

Note: P(A, B) Ports, C=Mounting thread, T=Drain connection

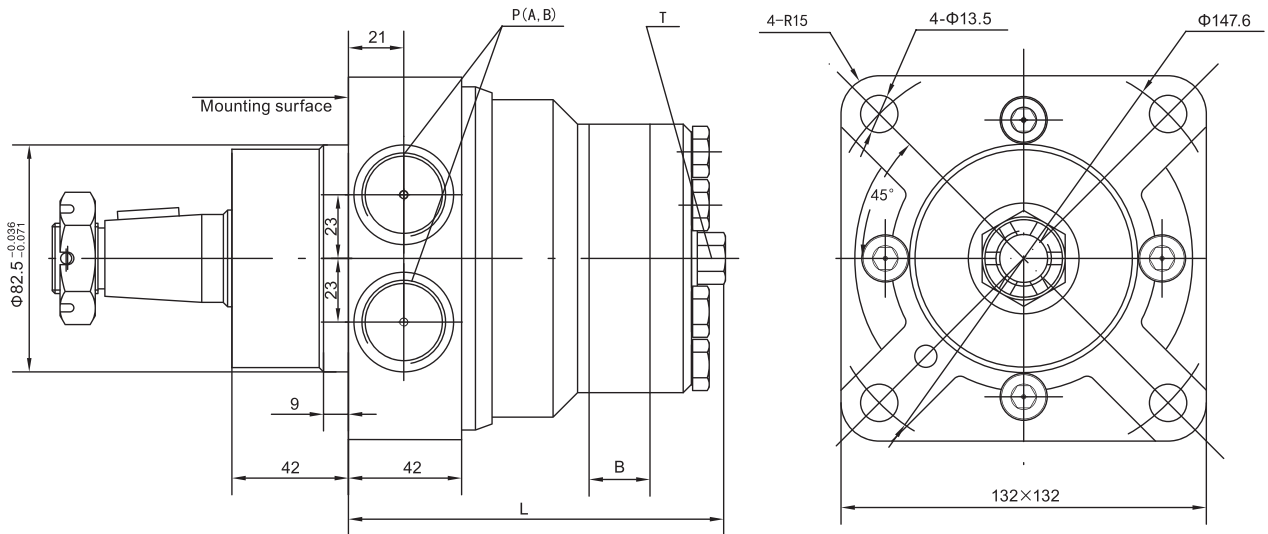
PMRW Shaft version

**Z: $\Phi 35$ Tapered shaft, taper 1:10
parallel key B6x6x20**



$\triangleleft$: Motor mounting surface

PMRW1 Installation



Type	L mm	B mm
PMRW1-50	125	9
PMRW1-80	130	14
PMRW1-100	134	17.5
PMRW1-125	138	22
PMRW1-160	144	28
PMRW1-200	151	35
PMRW1-250	160	44
PMRW1-315	172	56
PMRW1-400	186	70

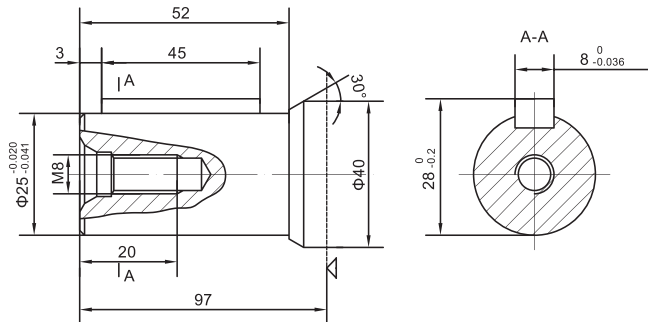
PMRW Ports code

PORTS CODE	P (A, B) (deep mm)	C (deep mm)	T (deep mm)
Y	G1/2 (15)	-	M14x1.5 (12)
Y5	7/8-14UNF (15)	-	M14x1.5 (12)
Y10	G1/2 (15)	-	G1/4 (12)

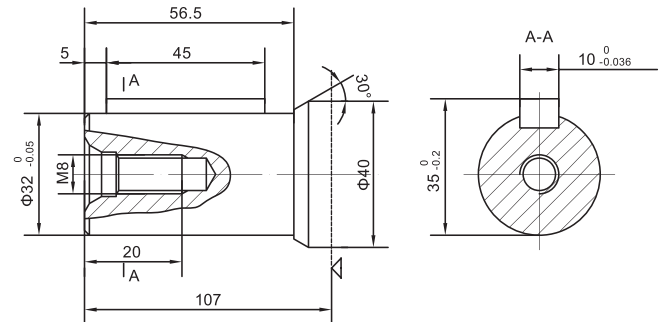
Note: P(A, B) Ports, C=Mounting thread, T=Drain connection

PMRW1 Shaft version

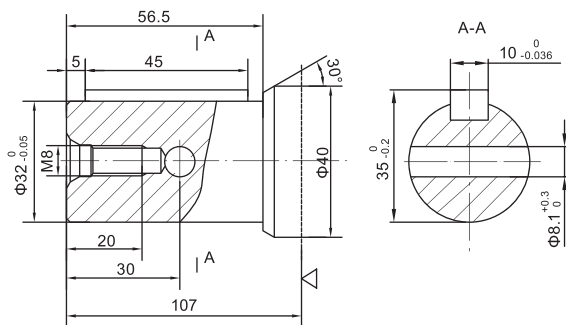
**P1: Ø25.4 Cylindrical shaft,
parallel key 8x7x45**



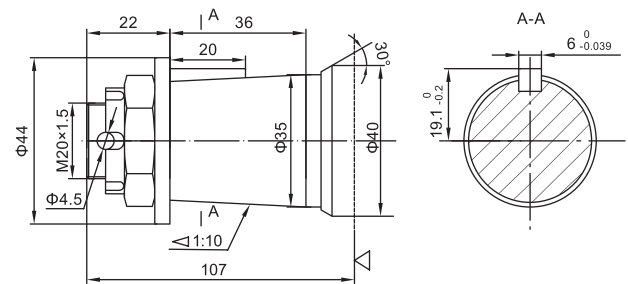
**P5: Ø25.4 Cylindrical shaft,
parallel key 10x8x45**



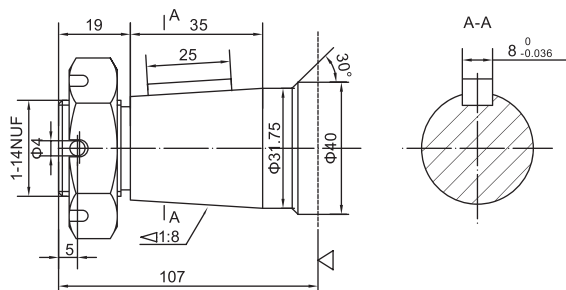
**P6: Ø32 Cylindrical shaft,
Pin hole Ø8.1
parallel key 10x8x45**



**Z: Ø35 Tapered shaft,
taper 1:10
parallel key B6x6x20**



**Z1: Ø31.75 tapered shaft
taper 1:8
parallel key 8x7x25**

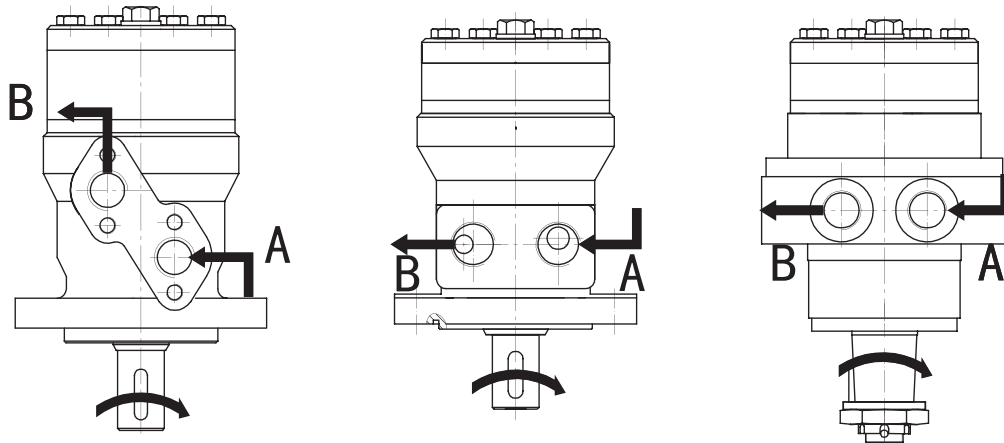


◁ : Motor mounting surface

PMR, PMRS, PMRW Series motor

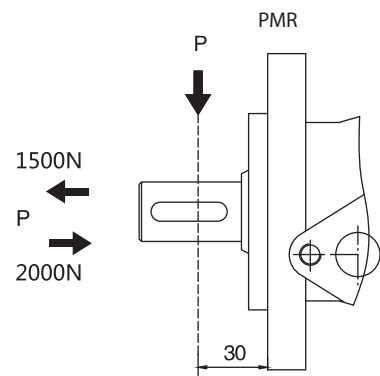
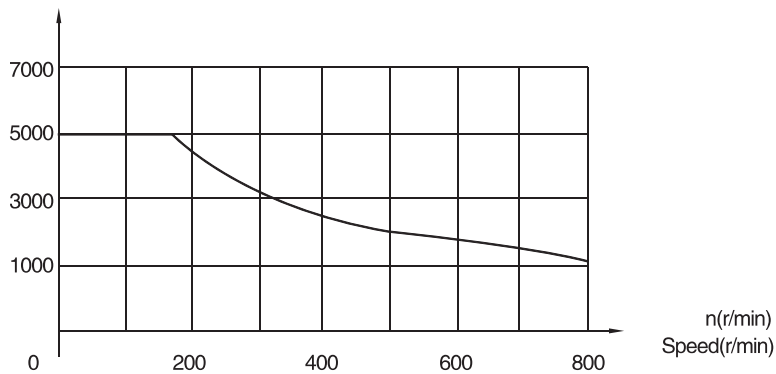
Direction of shaft rotation: Standard

When facing shaft end of motor, shaft to rotate:
Clockwise when port "A" is pressurized,
Counter-clockwise port "B" is pressurized.

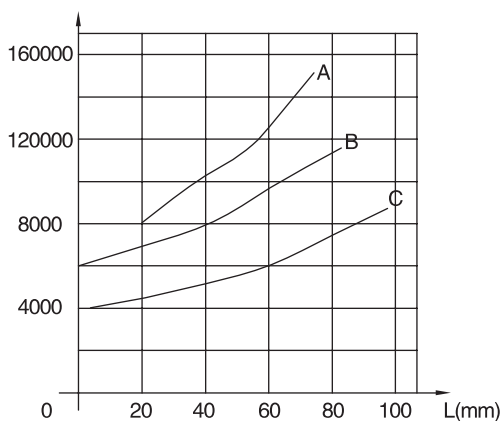


PMR, PMRW Permissible shaft loads

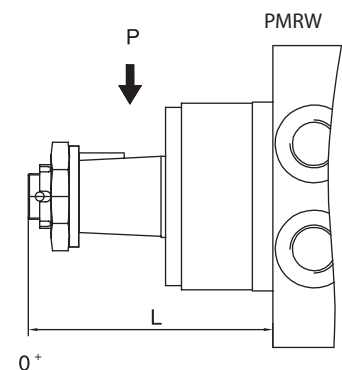
P (N) Radial force



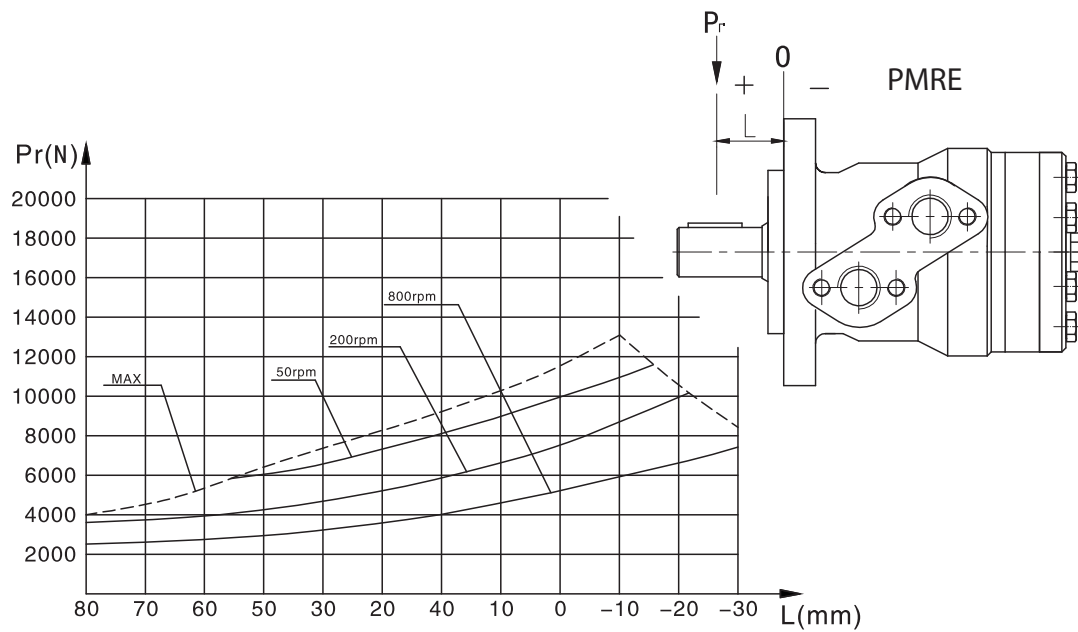
P (N) Radial force



A: n=50 r/min
B: n=200 r/min
C: n=800 r/min



PMRE Permissible shaft load



PMR, PMRE, PMRS, PMRW Ordering code

1	2	3	4	5	6	7
PMM / PMRE	-				/	-

1	Series
	Hydraulic motor with spool valve PMR
	Hydraulic motor with spool valve PMRE

2	Displacement
	50
	80
	100
	125
	160
	200
	250
	315
	400

3	Output
	Ø25.4 Cylindrical shaft, parallel key 8x7x45 P1
	Ø30 Cylindrical shaft, parallel key 8x7x32 P2
	Ø24.5 Cylindrical shaft, parallel key 6.35x6.35x32 P3
	Ø24.5 Cylindrical shaft, woodruff key Ø25.4x6.35 P4
	Ø32 Cylindrical shaft, parallel key 10x8x45 P5
	Ø32 Cylindrical shaft, parallel key 10x8x45 P52
	Ø31.75 Cylindrical shaft, parallel key 7.96x7.96x32 P6
	Ø30 Splined shaft, 6-30x25x6 H1
	Ø25 Splined shaft, 6-25x21x5 H2
	Ø25.3 Splined shaft, 6-25.3x21.4x6.2 H3
	Ø24.5 involute splined shaft B25x22 DIN5482 K4
	Ø31.75 involute splined shaft 14-DP12/24 a=30° K10
	Ø31.75 involute splined shaft 14-DP12/24 a=30° K13
	Ø31.75 involute splined shaft 14-DP12/24 a=30° K14
	Ø28.56 Tapered shaft, taper 1:10, parallel key 5x5x14 Z1

4	Flange
	2-Ø13.5 Oval flange, pilot 682.5x6 A2
	4-613.5 Oval flange, pilot Ø82.5x6 A IV
	4-M10 Square flange, pilot Ø44.45x2.5 C
	4-3/8-16 UNC Square flange, pilot Ø44.5x2.5 C1
	4-Ø11 Square flange, pilot Ø82.5x6 A
	4-Ø11 Square flange, pilot Ø80x6 A1
	4-Ø13 Square flange, pilot Ø100x6 A2 II

5	Ports
	G1/2 (15) - M14x1.5 (12) Y
	M18x1.5 (15) - M14x1.5 (12) Y1
	M22x1.5 (15) - M14x1.5 (12) Y2
	ZG3/8 (15) - M14x1.5 (12) Y4
	7/8-14-UNF (15) - M14x1.5 (12) Y5
	ZG1/2 (15) - M14x1.5 (12) Y7
	NPT1/2 (15) - M14x1.5 (12) Y8
	NPTF 1/2 (15) - 7/16-20UNF (12) Y9
	G1/2 (15) - G1/4 (12) Y10
	7/8-14UNF (15) - 7/16-20UNF (12) Y15

6	Special features
	Standard
	With dustproof ring T7
	With high pressure seals T10

7	Rotation direction
	Standard
	Opposite L

PMRE series motors don't include the following output shaft: P2, P5, P52, P6, H1, K4, K10, K13, K14.

PMR, PMRS, PMRW Ordering code

1	2	3	4	5	6	7
PMRS	-				/	-

1	Series
	Hydraulic motor with spool valve PMRS

2	Displacement
	ml/r
	50
	80
	100
	125
	160
	200
	250
	315
	400

3	Output
	Ø25 Cylindrical shaft, parallel key 8x7x45 P1
	Ø25.4 Cylindrical shaft, parallel key 6.35x6.35x32 P3
	Ø25.4 Cylindrical shaft, woodruff key Ø25.4x6.35 P4
	Ø25.4 Cylindrical shaft, parallel key 6.35x6.35x32 P33
	Ø25.4 Cylindrical shaft, pin hole Ø9.53 P89
	Ø25.4 Cylindrical shaft, pin hole Ø9.5 P93
	Ø25.4 Cylindrical shaft, pin hole Ø6.4, woodruff key Ø25.4x6.35 P95
	Ø25.4 Cylindrical shaft, pin hole Ø8 P96
	Ø25.4 Cylindrical shaft, pin hole Ø10.3 P97
	Ø25.3 Splined shaft, 6-25.3x21.4x6.2 H4
	Ø22.1 involute splined shaft, 13-DP16/32 K8

4	Flange
	2-Ø13.5 Oval flange, pilot Ø82.5x2.8 A2
	4-M10 Square flange, pilot Ø44.45x2.8 C
	4-3/8-16UNC Square flange, pilot Ø44.5x2.8 C1

5	Ports
	G1/2 (15) - M14x1.5 (12) Y
	7/8-14-UNF (15) - 7/16-20UNF (12) Y5
	ZG1/2 (15) - G1/4 (12) Y7
	NPTF 1/2 (15) - 7/16-20UNF (12) Y9
	G1/2 (15) - G1/4 (12) Y10
	3/4-16UNF (15) - 7/16-20UNF (12) Y17
	Ø11 (15) - 7/16-20UNF (12) Y19
	M18x1.5 (15) - G1/4 (12) Y20

6	Special features
	Standard
	No case drain T21

7	Rotation direction
	Standard
	Opposite L

PMR, PMRS, PMRW Ordering code

1		2	3	4	5		6		7
PMRW	-					/		-	

1	Series	
	Hydraulic motor with spool valve	PMRW

2	Displacement	
ml/r	50	
	80	
	100	
	125	
	160	
	200	
	250	
	315	
	400	

3	Output	
	Ø35 Tapered shaft, taper 1:10, parallel key B6x6x20	Z

4	Flange	
	4-Ø13.5 Square flange, pilot Ø82.5x9	A

5	Ports	
	G1/2 (15) - M14x1.5 (12)	Y

6	Special features	
	Standard	

7	Rotation direction	
	Standard	
	Opposite	L

1		2	3	4	5		6		7
PMRW1	-					/		-	

1	Series	
	Hydraulic motor with spool valve	PMRW1

2	Displacement	
ml/r	50	
	80	
	100	
	125	
	160	
	200	
	250	
	315	
	400	

3	Output	
	Ø25.4 Cylindrical shaft, parallel key 8x7x45	P1
	Ø32 Cylindrical shaft, parallel key 10x8x45	P5
	Ø32 Cylindrical shaft, pin hole Ø8.1 parallel key 10x8x45	P6
	Ø35 Tapered shaft, tape 1:10, parallel key B6x6x20	Z
	Ø31.75 Tapered shaft, taper 1:8 parallel key 8x7x25	Z1

4	Flange	
	4-Ø13.5 Square flange, pilot Ø82.5x9	A

5	Ports	
	G1/2 (15) - M14x1.5 (12)	Y
	7/8-14UNF (15) - M14x1.5 (12)	Y5
	G1/2 (15) - G1/4 (12)	Y10

6	Special features	
	Standard	
	With dustproof ring	T7

7	Rotation direction	
	Standard	
	Opposite	L

PS Introduction



This series of motors features a spool valve design combined with an advanced Geroler gear set and a ductile iron housing of adequate strength. It is suitable for light-load and intermittent operation applications, and is widely used in agricultural machinery, forestry equipment, plastic injection moulding machines, mining equipment, metalworking machines, conveyors, and similar applications.

PS Characteristics

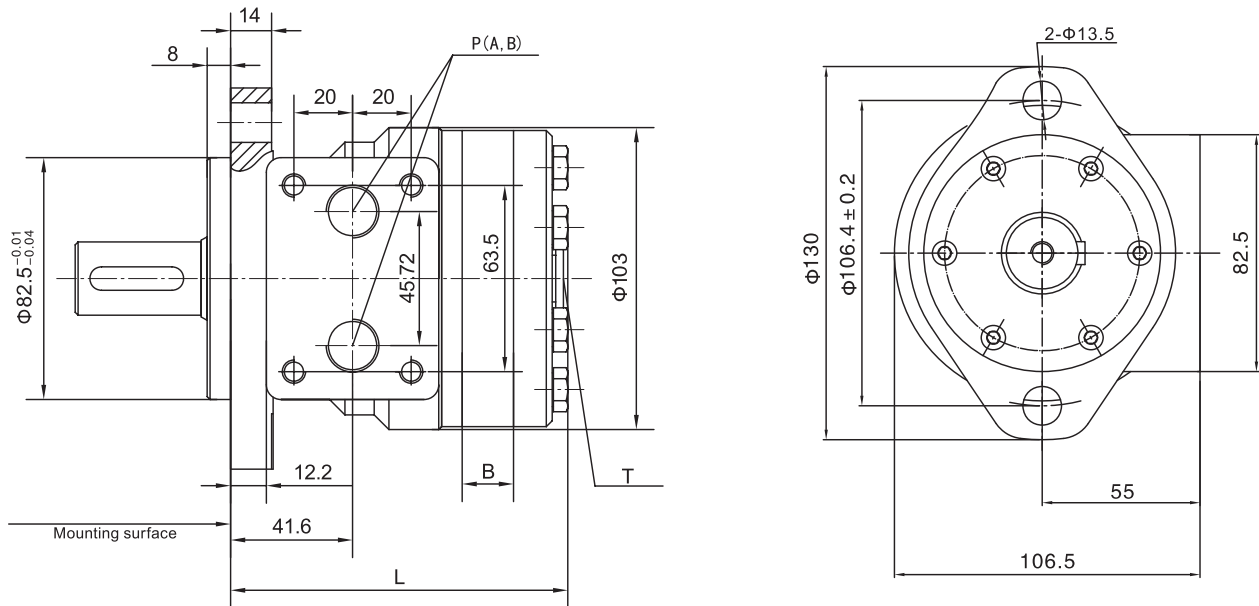
1. Compact design for easy installation, particularly in applications with limited space.
2. Geroler gear set designed for low friction, low starting pressure, high efficiency, smooth operation, and extended service life.
3. Spool valve design with reduced size and weight.
4. Equipped with two internal check valves, allowing the drain line to be closed.
5. High-pressure seals enable the motor to be used in both parallel and series configurations.

PS Technical data

Type	Displacement ml/r	Max Pressure Drop			Max torque			Max Speed	Max Flow	Max output power
		Continuous Mpa	Intermittent Mpa	Peak Mpa	Continuous Nm	Intermittent Nm	Peak Nm	Continuous r/min	Continuous L/min	Continuous Kw
PS-50	51.7	14	17.5	20	93	118	135	770	40	7
PS-80	80.5	14	17.5	20	152	189	216	745	60	10
PS-100	100.5	14	17.5	20	194	236	270	595	60	10
PS-125	126.3	14	17.5	20	237	296	338	475	60	10
PS-160	160.8	14	17.5	20	310	378	433	370	60	10
PS-200	200.9	12.5	15.5	18	320	398	460	295	60	7
PS-250	252.6	11	14	16	380	470	540	235	60	6
PS-315	321.5	9	11	13	380	470	540	185	60	5
PS-400	401.9	7	9	11	380	470	540	150	60	4

Intermittent operation the permissible values may occur for max 10% of every minute,
Peak load: the permissible values may occur for max 1% of every minute.

PS Installation



Type	L mm	B mm
PS-50	107	9
PS-80	112	14
PS-100	115.5	17.5
PS-125	120	22
PS-160	126	28
PS-200	133	35
PS-250	142	44
PS-315	154	56
PS-400	168	70

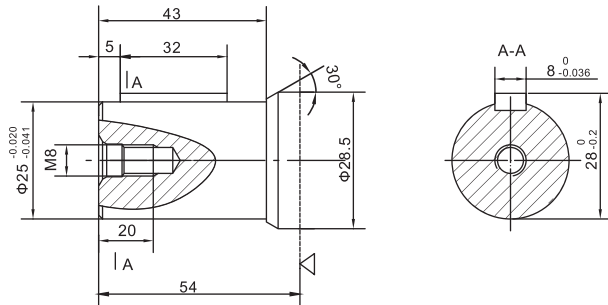
PS Ports code

PORTS CODE	P (A, B) (deep mm)	C (deep mm)	T (deep mm)
Y	G1/2 (15)	M8 (13)	M14x1.5 (12)
Y1	M18x1.5 (15)	M8 (13)	M14x1.5 (12)
Y2	M22x1.5 (15)	M8 (13)	M14x1.5 (12)
Y9	NPTF 1/2 (15)	5/6-UNC (13)	7/16-20 UNF (12)
Y10	G1/2 (15)	M8 (13)	G1/4 (12)
Y15	7/8-14 UNF (15)	5/6-18UNC (13)	7/16-20 UNF (12)

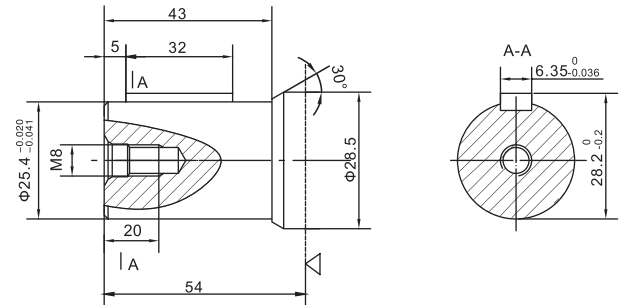
Note: P(A, B) Ports, C=Mounting thread, T=Drain connection

PS Shaft version

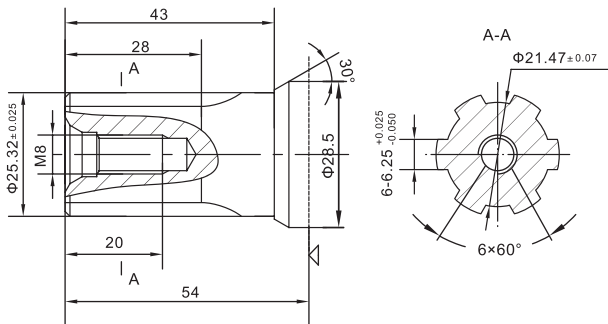
**P1: Ø25 Cylindrical shaft,
parallel key 8x7x32**



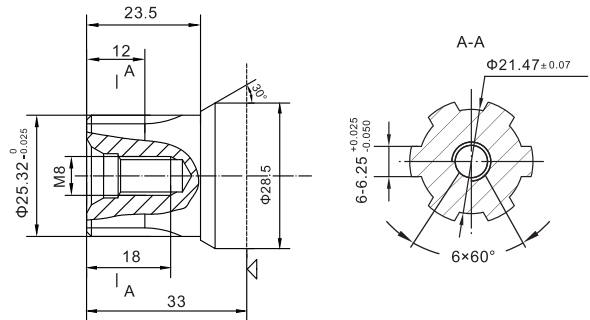
**P3: Ø25.4 Cylindrical shaft,
parallel key 6.35x6.35x32**



**H3: Ø25.3 splined shaft
6-25.32x21.47x6.25**



**H5: Ø25.3 splined shaft
6-25.32x21.47x6.25**



◁ : Motor mounting surface

PS Ordering code

1		2	3	4	5		6		7
PS	-					/		-	

1	Series	
	Hydraulic motor with spool valve	PS

2	Displacement	
ml/r		50
		80
		100
		125
		160
		200
		250
		315
		400

3	Output	
	Ø25 Cylindrical shaft, parallel key 8x7x32	P1
	Ø25.4 Cylindrical shaft, parallel key 6.35x6.35x32	P3
	Ø25.3 splined shaft 6-25.32x21.47x6.25	H3
	Ø25.3 splined shaft 6-25.32x21.47x6.25	H5

4	Flange	
	2-Ø13.5 Oval flange pilot Ø82.5x8	A2

5	Ports	
	G1/2 (15) - M14x1.5 (12)	Y
	M18x1.5 (15) - M14x1.5 (12)	Y1
	M22x1.5 (15) - M14x1.5 (12)	Y2
	NPTF 1/2 (15) - 7/16-20 UNF (12)	Y9
	G1/2 (15) - G1/4 (12)	Y10
	7/8-14 UNF (15) - 7/16-20 UNF (12)	Y15

6	Special features	
	Standard	

7	Rotation direction	
	Standard	
	Opposite	L

PMH Introduction



This series of motors features a ductile cast iron housing of adequate strength, making it suitable for light-load and intermittent operation applications. It is widely used in agriculture, forestry, plastics, machine tools, and mining equipment. Typical applications include mould height adjustment in injection moulding machines, cleaning equipment, sawmills, and worktables.

PMH Characteristics

1. The output shaft is supported by deep groove ball bearings, allowing it to withstand both axial and radial loads.
2. The axial oil distribution design ensures a more compact and lightweight structure.
3. Equipped with two internal check valves, eliminating the need for a drain connection.
4. The cycloid gear set with rollers reduces friction and provides high mechanical efficiency.

PMH Technical data

Type	Displacement ml/r	Max Pressure Drop			Max torque			Max speed	Max Flow	Max output power	Weight
		Continuous Mpa	Intermittent Mpa	Peak Mpa	Continuous Nm	Intermittent Nm	Peak Nm	Continuous r/min	Continuous L/min	Continuous Kw	Kg
PMH-200	203	16	19	22	425	510	590	365	75	13.8	10.5
PMH-250	253.7	16	19	22	530	635	735	295	75	13.8	11
PMH-315	318	15	18	21	610	750	875	235	75	12.5	11.5
PMH-400	405.9	14	17	20	825	900	1055	180	75	11.5	12.5
PMH-500	471.1	12	15	18	720	910	1090	155	75	9.8	13

Intermittent operation the permissible values may occur for max 10% of every minute,
Peak load: the permissible values may occur for max 1% of every minute.

PMH Performance data

PMH 200(203ml/r)

Pressure (Mpa)

Max.cont. Max.int.

	3.5	7	10.5	14	16	19
5	91	192	284			
	25	24	23			
10	92	191	282	344	440	520
	48	47	46	44	42	38
20	90	188	280	342	438	516
	96	95	94	92	90	88
30	88	181	278	388	435	511
	144	143	139	130	114	101
40	86	172	270	384	432	506
	193	192	191	188	186	171
50	83	168	264	380	428	498
	241	240	238	234	230	228
60	80	156	258	375	420	492
	290	289	287	284	271	264
70	75	149	249	362	419	489
	334	333	331	329	324	320
75	69	132	240	351	408	478
	362	360	359	358	351	342
80	53	124	231	338	395	453
	382	381	380	374	365	360
90	41	119	228	324	387	446
	434	433	431	429	418	411

PMH 250(253.7ml/r)

Pressure (Mpa)

Max.cont. Max.int.

	3.5	7	10.5	14	16	19
5	118	242	311			
	19	19	18			
10	126	251	326	421	550	
	38	37	36	34	30	
20	124	250	325	414	542	640
	85	84	83	81	78	71
30	118	243	321	410	538	634
	115	113	111	105	95	84
40	111	238	315	402	530	629
	153	152	150	143	139	132
50	106	231	310	395	523	621
	190	188	187	186	183	172
60	101	223	302	390	518	613
	230	229	227	224	217	209
70	96	218	294	381	512	602
	268	267	266	262	257	241
75	84	210	284	375	506	596
	287	285	284	280	275	270
80	76	201	271	368	497	581
	306	305	303	301	297	286
90	56	182	268	351	481	562
	347	345	341	337	333	328

PMH 315(318.9ml/r)

Pressure (Mpa)

Max.cont. Max.int.

	3.5	7.5	10	15	18
10	148	312	416	650	
	31	30	28	23	
20	142	308	411	645	765
	61	60	58	51	46
30	140	301	402	639	751
	91	90	89	86	78
40	131	294	398	631	732
	122	121	120	117	107
50	128	289	391	623	715
	152	151	149	144	135
60	121	281	382	611	703
	183	181	179	174	170
70	110	273	372	600	692
	215	214	211	207	200
75	98	261	357	586	679
	228	226	224	221	214
80	72	258	346	571	666
	243	240	237	233	222
90	62	243	332	559	643
	274	272	270	263	252

PMH 400(405.9ml/r)

Pressure (Mpa)

Max.cont. Max.int.

	3.5	5.5	7	10.5	14	17
10	186	284	370			
	24	22	20			
20	184	282	365	541	760	920
	48	47	45	41	34	28
30	182	280	361	538	751	911
	72	71	70	64	59	48
40	178	274	356	532	740	899
	96	95	93	91	85	78
50	175	270	351	530	731	882
	119	118	116	111	106	99
60	171	261	342	522	712	870
	143	141	138	135	129	116
70	164	248	338	513	703	857
	167	165	161	158	152	146
75	152	240	332	510	689	841
	179	177	175	171	166	159
80	141	223	330	497	670	823
	193	192	190	187	181	172
90	120	218	320	480	645	800
	217	215	211	208	202	185

(Torque) : 320Nm
(Speed) : 211r/min

PMH 500(471.1ml/r)

Pressure (Mpa)

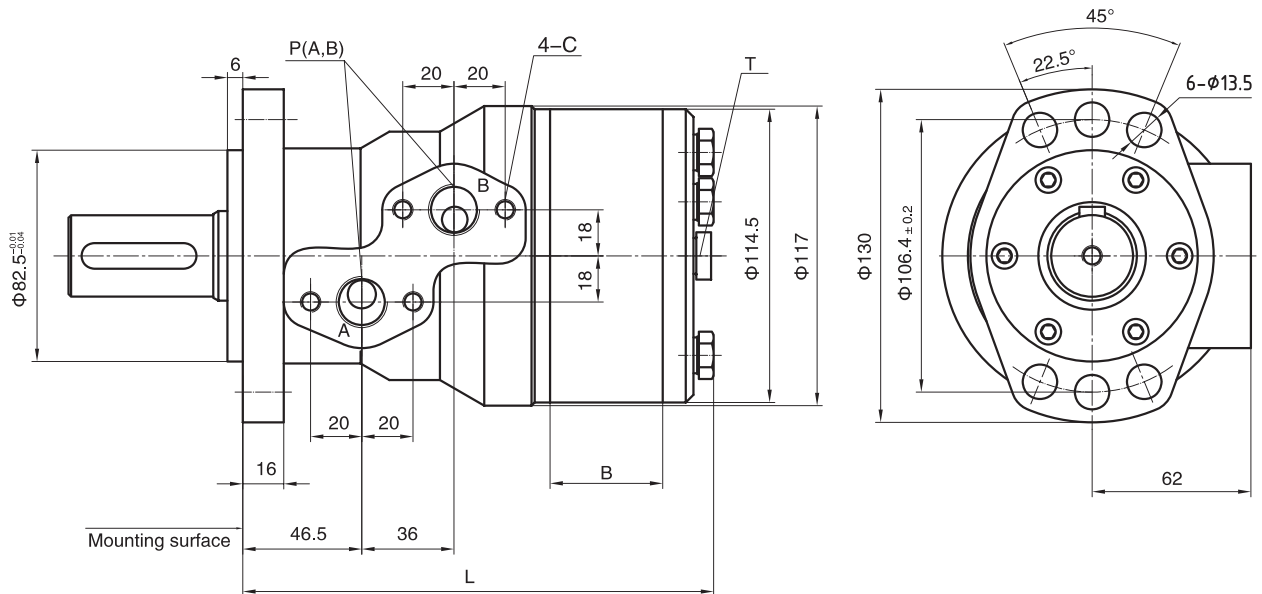
Max.cont. Max.int.

	2.5	4	6	8.5	12	15
10	153	249				
	21	20				
20	152	242	370	650	755	940
	42	41	40	34	29	23
30	150	236	361	645	742	931
	62	61	60	55	49	45
40	147	230	352	640	731	922
	82	81	80	74	69	65
50	145	224	340	637	720	911
	104	102	100	96	90	84
60	142	212	331	632	703	899
	124	122	120	114	110	104
70	140	202	328	621	689	887
	146	143	140	136	131	125
75	130	197	324	612	682	879
	154	152	150	142	136	130
80	121	183	310	601	661	865
	165	163	161	150	142	138
90	110	172	294	583	654	848
	185	184	182	172	167	161

Cont.
Int.

PMH Introduction

6-holes oval flange A IV



Type	L mm	B mm
PS-200	168	28
PS-250	175	35
PS-315	184	44
PS-400	196	56
PS-500	205	65

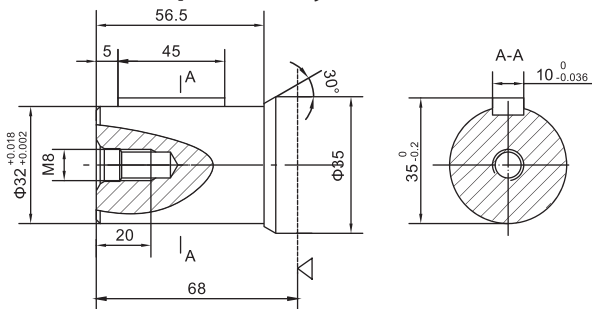
PMH Ports code

PORTS CODE	P (A, B) (deep mm)	C (deep mm)	T (deep mm)
Y	G1/2 (15)	M8 (13)	M14x1.5 (12)
Y5	7/8-14 UNF (15)	3/8-16 UNC (13)	7/16-20 UNF (12)
Y8	NPT 1/2 (15)	5/16-18 UNC (13)	7/16-20 UNF (12)
Y25	7/8-14 UNF (15)	M8 (13)	7/16-20 UNF (12)

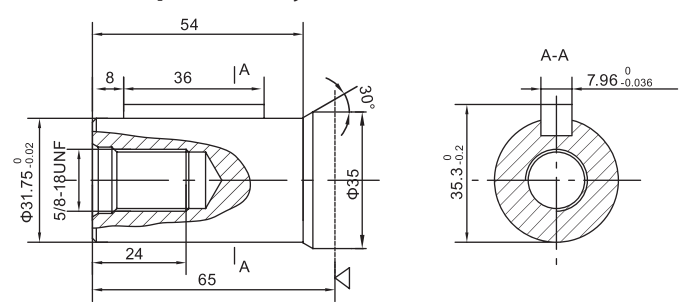
Note: P(A, B) Ports, C=Mounting thread, T=Drain connection

PMH Shaft version

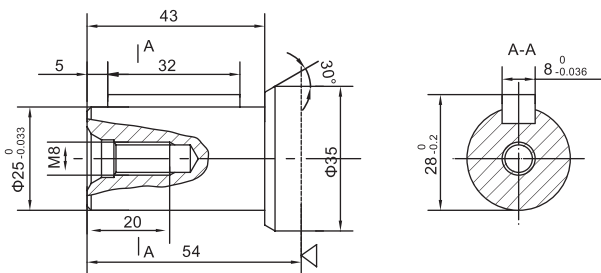
**P1: Ø32 Cylindrical shaft,
parallel key 10x8x45**



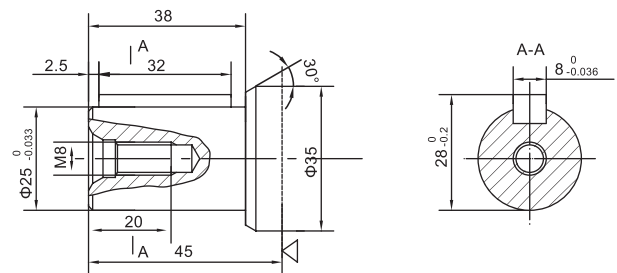
**P2: Ø31.75 Cylindrical shaft,
parallel key 7.96x7.96x36**



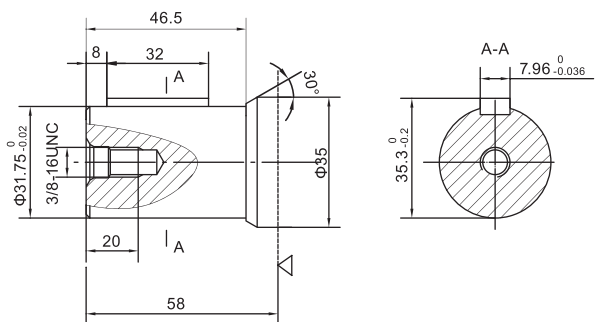
**P3: Ø25 Cylindrical shaft
parallel key 8x7x32**



**P4: Ø25 Cylindrical shaft
parallel key 8x7x32**



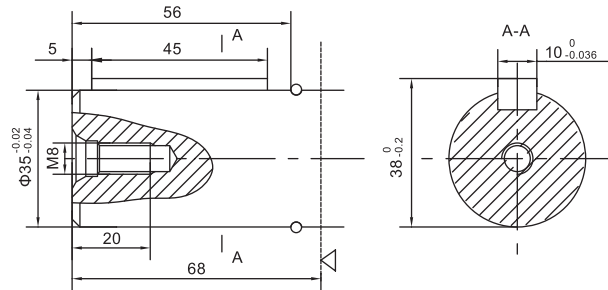
**P5: Ø31.75 cylindrical shaft
parallel key 7.96x7.96x32**



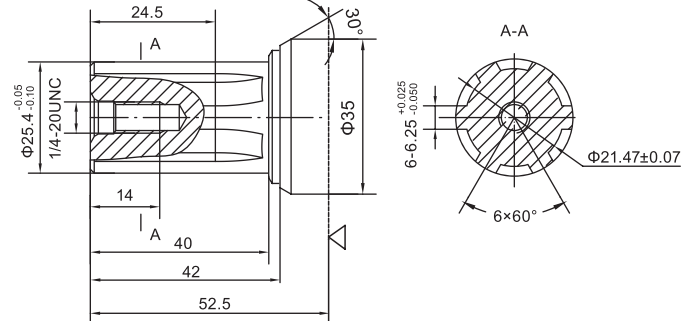
◁ : Motor mounting surface

PMH Shaft version

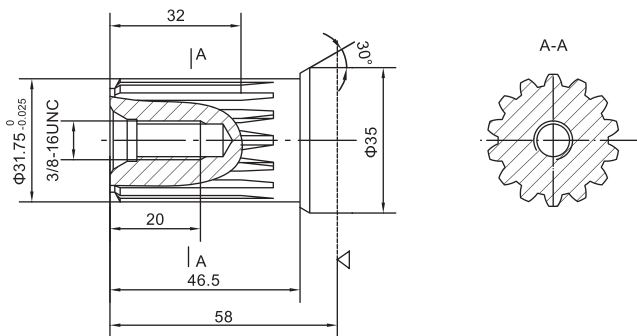
**P7: Ø35 Cylindrical shaft,
parallel key 10x8x45**



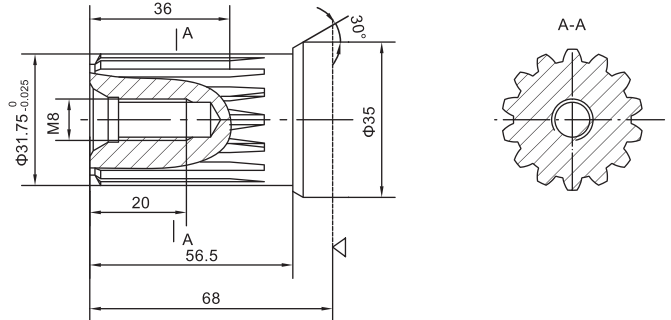
**H3: Ø25.4 Splined shaft,
6-25.32x21.47x6.25**



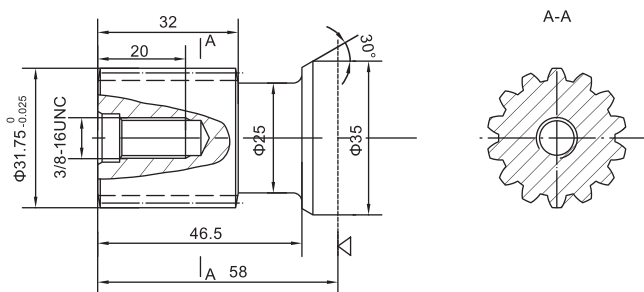
**K1: Ø31.75 involute splined shaft
14-DP12/24 a=30°**



**K2: Ø31.75 involute splined shaft
14-DP12/24 a=30°**



**K11: Ø31.75 involute splined shaft
14-DP12/24 a=30°**

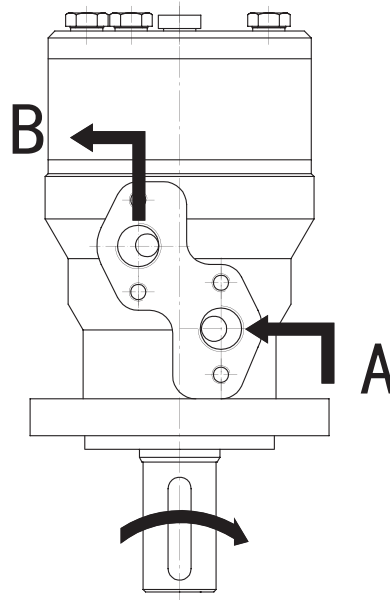


◁ : Motor mounting surface

PMH Series motor

Direction of shaft rotation: Standard

When facing shaft end of motor, shaft to rotate:
Clockwise when port "A" is pressurized,
Counter-clockwise when port "B" is pressurized.



PMH Ordering code

1		2	3	4	5		6		7
PMH	-					/		-	

1	Series
	Hydraulic motor with spool valve PMH

2	Displacement
	ml/r
	200
	250
	315
	400
	500

3	Output
	Ø32 Cylindrical shaft, parallel key 10x8x45 P1
	Ø31.75 Cylindrical shaft, parallel key 7.96x7.96x36 P2
	Ø25 Cylindrical shaft parallel key 8x7x32 P3
	Ø25 Cylindrical shaft parallel key 8x7x32 P4
	Ø31.75 cylindrical shaft parallel key 7.96x7.96x32 P5
	Ø32 Cylindrical shaft, parallel key 10x8x45 P6
	Ø35 Cylindrical shaft, parallel key 10x8x45 P7
	Ø25.4 Splined shaft, 6-25.32x21.47x6.25 H3
	Ø31.75 involute splined shaft 14-DP12/24 a=30° K1
	Ø31.75 involute splined shaft 14-DP12/24 a=30° K2
	Ø31.75 involute splined shaft 14-DP12/24 a=30° K11

4	Flange
	6-Ø13.5 Oval flange pilot Ø82.5x6 A IV

5	Ports
	G1/2 (15) - G1/4 (12) Y
	7/8-14 UNF (15) - 7/16-20 UNF (12) Y5
	NPTF 1/2 (15) - 7/16-20 UNF (12) Y8
	7/8-14 UNF (15) - 7/16-20 UNF (12) Y25

6	Special features
	Standard

7	Rotation direction
	Standard
	Opposite L

PMP Introduction



This series of motors is a compact and cost-effective design featuring a spool valve and Gerotor gear set. It offers a small footprint, high power density, and low weight.

PMP Characteristics

1. Advanced manufacturing equipment for the Gerotor gear set ensures a compact design, high efficiency, and long service life.
2. The shaft seal is designed to withstand high motor pressure, allowing operation in both parallel and series configurations.
3. An advanced structural design delivers high power density with reduced weight.

PMP Technical data

Type	Displacement ml/r	Max Pressure Drop			Max torque			Max speed	Max Flow	Max output power	Weight
		Continuous Mpa	Intermittent Mpa	Peak Mpa	Continuous Nm	Intermittent Nm	Peak Nm	Continuous r/min	Continuous L/min	Continuous Kw	Kg
PMP-50	52.9	14	17.5	22	97	125	149	755	40	6.5	5.6
PMP-80	79.3	14	17.5	22	148	189	222	750	60	10	5.7
PMP-100	98.2	14	17.5	22	183	238	276	610	60	10	5.9
PMP-125	120.9	14	17.5	22	229	292	340	490	60	10	6
PMP-160	158.7	14	17.5	22	295	382	445	375	60	10	6.2
PMP-200	196.4	14	17.5	22	364	470	532	305	60	10	6.4
PMP-250	241.8	12	14	20	369	444	568	245	60	8	6.6
PMP-315	317.3	10	12	15	404	501	555	185	60	7	6.9
PMP-400	392.9	8	10	13	416	531	596	150	60	5.7	7.4

Intermittent operation the permissible values may occur for max 10% of every minute,
Peak load: the permissible values may occur for max 1% of every minute.

PMP Performance data

PMP 50(52.9ml/r)

		Pressure (Mpa)				Max.cont.		Max.int.	
		3	6	8	10	12.5	14	16	17.5
Flow(L/min)	8	18	38	55	69	87	100	115	
		148	140	123	102	83	61	42	
	15	19	39	56	70	87	102	116	128
		277	264	251	242	233	219	202	188
	20	19	39	54	69	89	100	115	127
Max.cont.		370	359	348	337	328	320	301	282
	30	18	38	53	68	88	98	114	126
		556	541	529	516	509	500	487	461
	35	17	37	52	67	86	97	113	125
		649	629	619	608	601	595	578	559
Max.int.	40	16	36	50	66	85	96	111	123
		741	725	718	710	695	688	673	627
	50	13	31	47	59	81	94	104	115
		927	919	910	900	888	874	856	837
	60	9	25	42	50	76	90	98	106
		1122	1101	1094	1082	1075	1064	1042	1011

PMP 80(79.3ml/r)

		Pressure (Mpa)				Max.cont.		Max.int.	
		3	6	8	10	12.5	14	16	17.5
Flow(L/min)	8	33	60	81	103	133	148	172	
		99	91	79	67	56	42	32	
	15	36	61	82	104	133	149	173	192
		185	172	163	152	134	125	117	94
	20	34	62	83	105	134	150	174	192
Max.cont.		247	238	230	220	205	197	189	172
	30	33	60	82	104	133	149	172	190
		370	363	355	342	327	316	302	285
	35	32	59	80	102	131	148	170	189
		433	417	406	398	390	384	367	365
Max.int.	40	30	57	78	101	129	147	169	188
		494	484	478	471	461	453	443	411
	50	29	56	77	100	128	145	168	186
		617	604	597	590	578	571	558	519
	60	28	55	76	99	127	144	167	184
		741	726	718	710	700	686	673	624
	75	22	48	71	93	120	134	160	175
		926	906	896	887	867	857	838	779

PMP 100(98.2ml/r)

		Pressure (Mpa)				Max.cont.		Max.int.	
		3	6	8	10	12.5	14	16	17.5
Flow(L/min)	8	37	73	98	128	164	186		
		80	68	59	50	163	33		
	15	38	74	99	129	165	187	218	240
		150	139	129	117	102	96	87	69
	20	39	75	100	130	166	188	219	241
Max.cont.		200	189	180	171	159	150	136	119
	30	37	73	98	127	163	185	216	239
		299	286	279	270	259	250	234	219
	35	36	71	97	126	161	183	214	238
		349	338	333	329	318	309	299	281
Max.int.	40	35	70	96	124	160	182	213	236
		399	391	387	383	375	370	363	338
	50	34	69	95	123	159	181	211	235
		499	489	484	479	468	463	453	423
	60	33	68	94	122	158	180	210	233
		599	587	580	574	562	556	544	507
	75	27	61	86	111	149	168	198	202
		748	733	726	718	703	695	680	634

PMP 125(120.9ml/r)

		Pressure (Mpa)				Max.cont.		Max.int.	
		3	6	8	10	12.5	14	16	17.5
Flow(L/min)	8	44	90	123	158	205	231		
		65	61	51	44	36	30		
	15	45	91	124	159	206	232	265	294
		122	118	112	105	99	91	79	61
	20	46	90	125	160	206	233	266	295
Max.cont.		165	152	143	133	126	112	106	98
	30	45	88	123	158	204	230	264	293
		243	238	236	231	224	217	206	191
	35	43	86	121	156	202	229	263	292
		284	278	275	272	266	263	258	240
Max.int.	40	42	85	120	154	200	226	262	290
		342	323	314	311	304	301	294	274
	50	41	84	118	152	197	223	261	288
		405	397	393	389	380	376	368	343
	60	40	83	116	150	195	221	259	286
		486	476	470	465	465	452	441	412
	75	31	78	107	139	187	211	241	272
		608	596	589	583	571	564	552	515

PMP 160(158.7ml/r)

		Pressure (Mpa)				Max.cont.		Max.int.	
		3	6	8	10	12.5	14	16	17.5
Flow(L/min)	8	57	117	160	206	261			
		49	46	41	34	29			
	15	58	118	161	207	262	298	349	385
		93	84	79	72	64	58	50	41
	20	59	119	162	208	263	299	350	386
Max.cont.		123	118	115	111	104	99	93	82
	30	58	117	160	205	261	298	348	384
		185	181	177	173	168	165	159	148
	35	57	115	159	203	260	295	346	382
		216	211	209	207	202	200	196	183
Max.int.	40	55	114	156	201	259	293	344	380
		247	241	238	236	231	228	220	207
	50	53	111	154	199	258	292	342	378
		309	302	299	296	289	286	280	261
	60	52	109	152	197	256	290	340	376
		370	363	359	355	348	344	336	314
	75	43	101	143	190	249	282	322	358
		463	453	448	444	430	420	410	383

PMP 200(196.4ml/r)

		Pressure (Mpa)				Max.cont.		Max.int.	
		3	6	8	10	12.5	14	16	17.5
Flow(L/min)	8	69	140	193	248				
		40	33	29	25				
	15	70	141	194	249	324	366	428	
		75	70	64	58	50	41	32	
	20	71	142	195	250	325	367	428	472
Max.cont.		100	92	83	75	69	58	52	47
	30	70	141	193	248	323	366	426	471
		150	140	136	129	120	112	101	93
	35	69	140	191	247	321	364	425	470
		175	170	164	160	154	148	140	129
Max.int.	40	67	138	190	246	320	362	423	468
		199	194	191	188	183	179	171	159
	50	66	136	189	244	318	361	422	466
		249	244	241	239	234	230	226	211
	60	65	135	187	243	316	359	420	465
		299	293	290	287	281	278	255	238
	75	58	127	179	234	308	348	408	456
		374	366	362	358	351	347	339	317

(Torque) : 143Nm
(Speed) : 448r/min

□ Cont.
■ Int.

PMP Performance data

PMP 250(241.8ml/r)

		Pressure (Mpa)				Max.cont.	Max.int.
		3	6	8	10	12	14
Flow(L/min)	8	86 32	172 30	234 26			
	15	87 61	173 59	235 54	297 49	368 40	443 33
	20	88 81	174 78	236 73	298 68	369 62	444 56
	30	86 123	173 120	235 118	297 116	368 112	443 103
	35	85 142	171 138	234 132	296 125	366 117	442 108
Max.cont.	40	83 162	169 159	232 154	294 150	364 144	440 135
	50	82 203	167 198	230 195	293 193	362 191	438 186
	60	81 243	166 238	228 236	292 233	360 230	437 221
Max.int.	75	74 304	153 297	212 294	281 291	349 288	423 277

PMP 315(317.3ml/r)

		Pressure (Mpa)				Max.cont.	Max.int.
		3	5	7	9	10	12
Flow(L/min)	8	114 25	191 22	270 19			
	15	115 46	192 42	271 38	355 34	403 29	500 21
	20	116 62	193 59	272 55	356 51	404 45	501 40
	30	114 93	191 90	270 86	354 80	403 76	499 65
	35	112 108	189 105	268 103	352 101	400 100	497 95
Max.cont.	40	110 123	187 121	266 119	350 116	398 114	495 109
	50	108 154	184 151	264 148	348 144	396 142	493 137
	60	106 185	182 181	262 179	346 176	394 174	491 171
Max.int.	75	100 231	175 226	156 222	339 219	387 215	482 209

PMP 400(392.9ml/r)

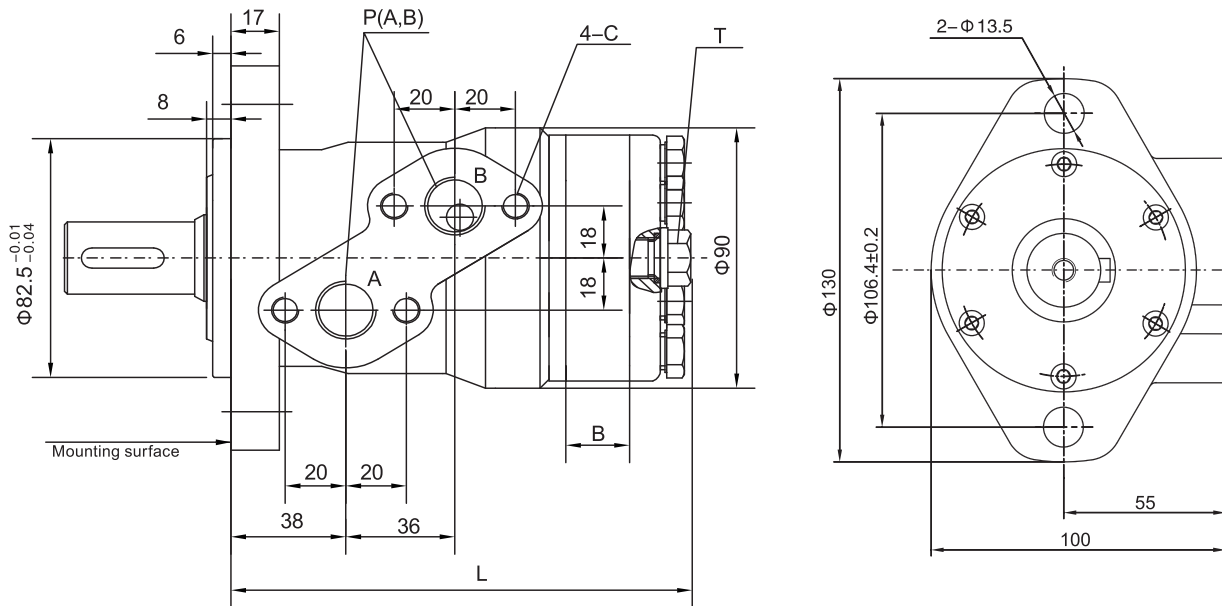
		Pressure (Mpa)				Max.cont.	Max.int.
		3	4	5	7	8	10
Flow(L/min)	8	155 20	204 18				
	15	156 37	205 34	262 31	366 27	428 24	544 19
	20	157 50	208 47	264 44	368 39	434 37	549 32
	30	152 75	204 72	258 69	362 66	424 64	540 60
	35	148 87	198 84	252 81	356 77	416 74	531 69
Max.cont.	40	142 100	193 97	246 94	348 90	406 88	523 84
	50	136 125	186 122	238 120	341 117	398 115	515 111
	60	131 150	180 148	231 146	333 142	390 140	506 137
Max.int.	75	123 187	168 183	215 179	312 172	371 169	492 162

(Torque) : 312Nm
(Speed) : 172r/min

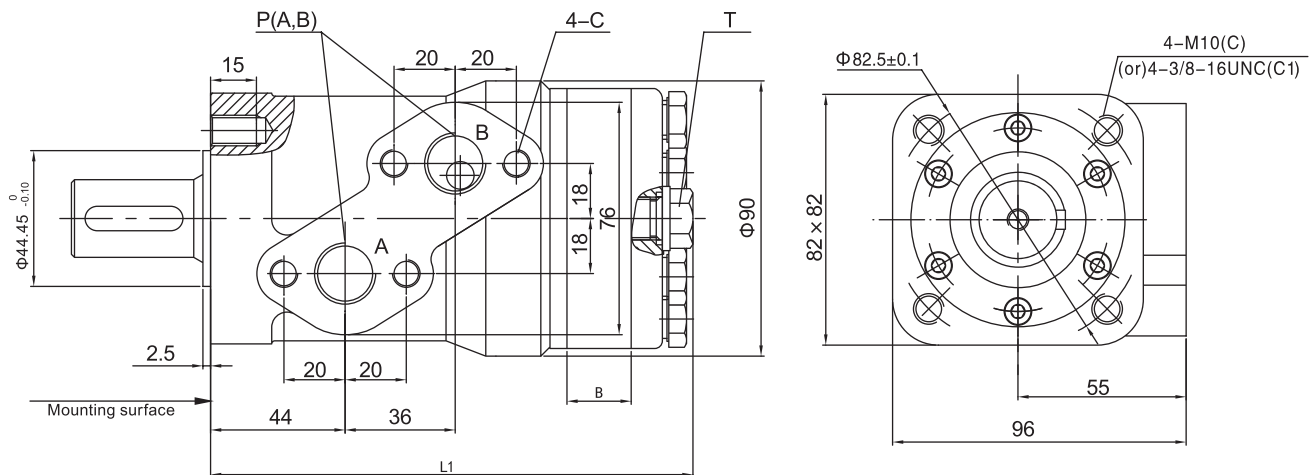
Cont.
Int.

PMP Installation

2-holes oval flange A2



Square flange C,C1



Note: C,C1 mounting are assembling to PMPH shaft.

Type	L mm	L1 mm	B mm
PMP-50	143.5	151.5	7
PMP-80	145	153	11
PMP-100	147	155	13
PMP-125	150	158	16
PMP-160	155	163	21
PMP-200	160	168	26
PMP-250	166	174	32
PMP-315	176	184	42
PMP-400	186	194	52

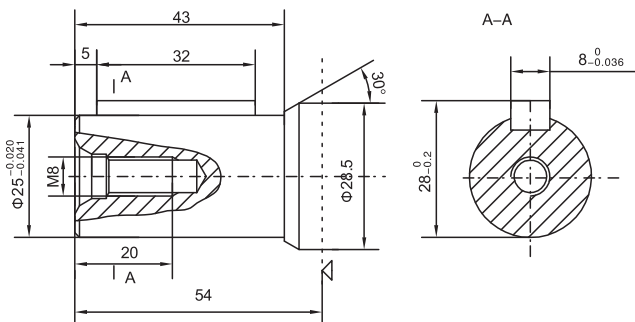
PMP Ports code

PORTS CODE	P (A, B) (deep mm)	C (deep mm)	T (deep mm)
Y	G1/2 (15)	M8 (10)	M14x1.5 (12)
Y1	M18x1.5 (15)	M8 (10)	M14x1.5 (12)
Y2	M22x1.5 (15)	M8 (10)	M14x1.5 (12)
Y4	ZG 3/8 (15)	M8 (10)	M14x1.5 (12)
Y5	7/8-14 UNF (15)	-	M14x1.5 (12)
Y7	ZG 1/2 (15)	M8 (10)	M14x1.5 (12)
Y8	NPT 1/2 (15)	M8 (10)	M14x1.5 (12)
Y9	NPTF 1/2 (15)	5/6-18 UNC (10)	7/16-20 UNF (12)
Y10	G1/2 (15)	M8 (10)	G1/4 (12)
Y15	7/8-14 UNF (15)	5/6-18UNC (10)	7/16-20 UNF (12)

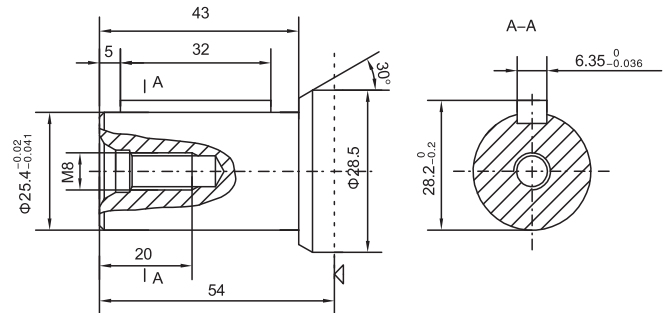
Note: P(A, B) Ports, C=Mounting thread, T=Drain connection

PMP Shaft version

**P1: Ø25 Cylindrical shaft,
parallel key 8x7x32**



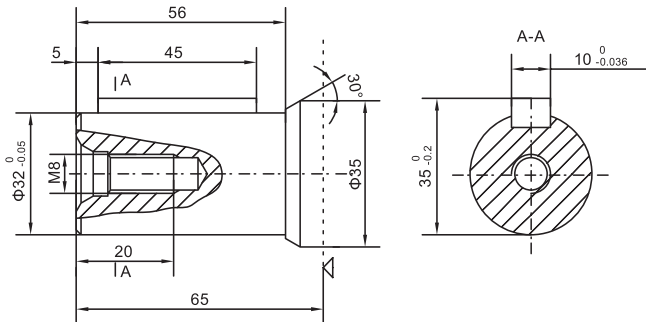
**P3: Ø25.4 Cylindrical shaft,
parallel key 6.35x6.35x32**



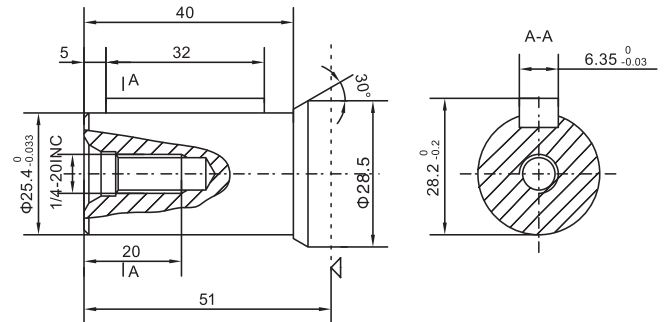
◁ : Motor mounting surface

PMP Shaft version

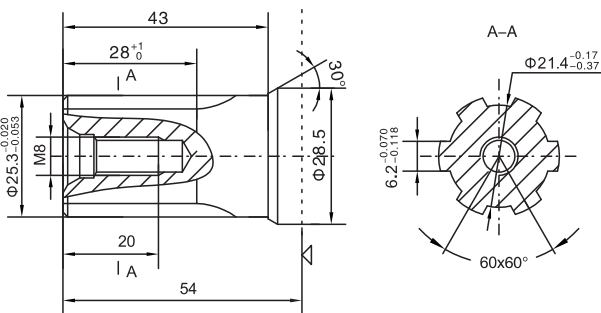
**P5: Ø32 Cylindrical shaft,
parallel key 10x8x45**



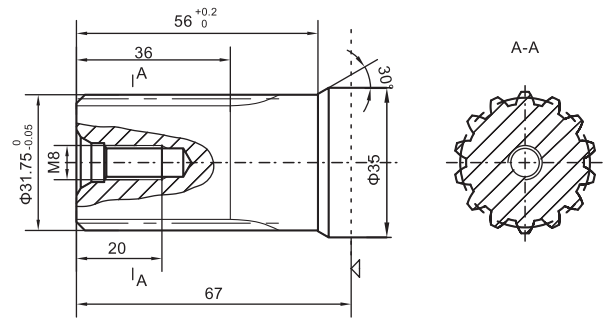
**P33: Ø25.4 Cylindrical shaft,
parallel key 6.35x6.35x32**



**H3: Ø25.3 Splined shaft,
6-25.3x21.4x6.2**



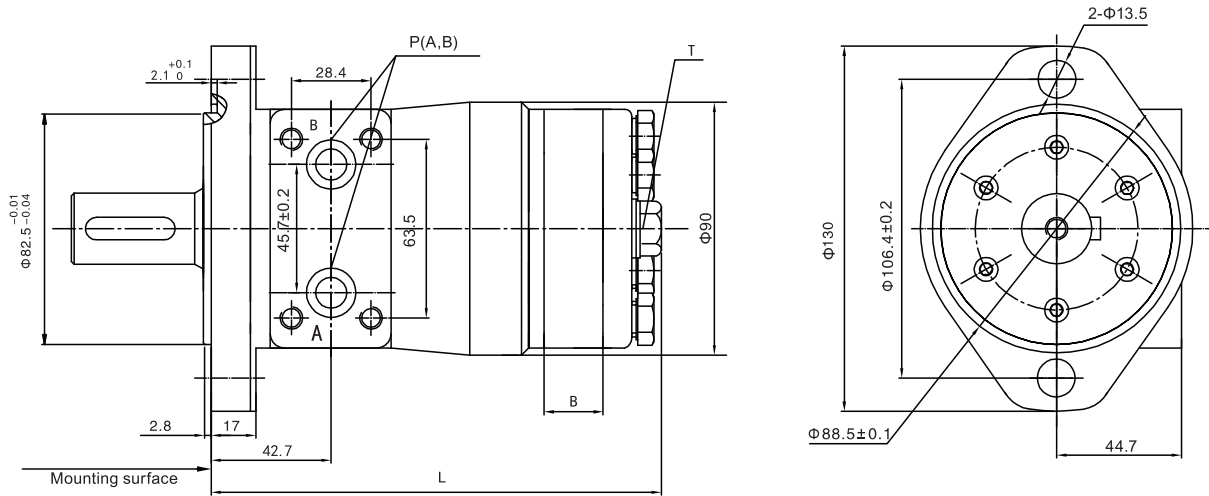
**K13: Ø31.75 involute splined shaft,
14-DP12/4 a=30°**



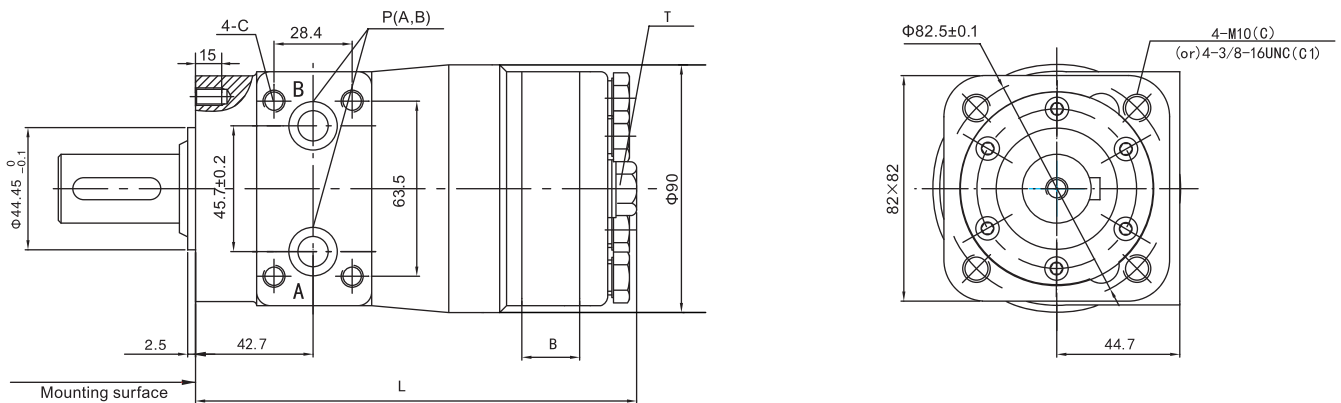
◁ : Motor mounting surface

PMPH Installation

2-holes oval flange A2



Square flange C,C1



Type	L mm	B mm
PMPH-50	151.5	7
PMPH-80	153	11
PMPH-100	155	13
PMPH-125	158	16
PMPH-160	163	21
PMPH-200	168	26
PMPH-250	174	32
PMPH-315	284	42
PMPH-400	194	52

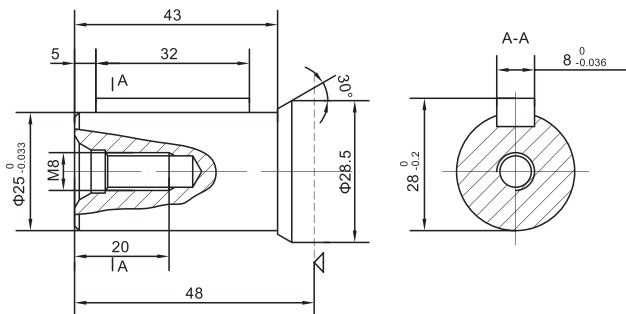
PMPH Ports code

PORTS CODE	P (A, B) (deep mm)	C (deep mm)	T (deep mm)
Y	G1/2 (15)	-	M14x1.5 (12)
Y5	7/8-14 UNF (15)	-	7/16-20 UNF (12)
Y7	ZG 1/2 (15)	-	G1/4 (12)
Y9	NPTF 1/2 (15)	-	7/16-20 UNF (12)
Y10	G1/2 (15)	-	G1/4 (12)
Y17	3/4-16 UNF (15)	-	7/16-20 UNF (12)
Y19	Ø11 (15)	5/6-18UNC (10)	7/16-20 UNF (12)
Y20	M18x1.5 (15)	M8 (10)	G1/4 (12)

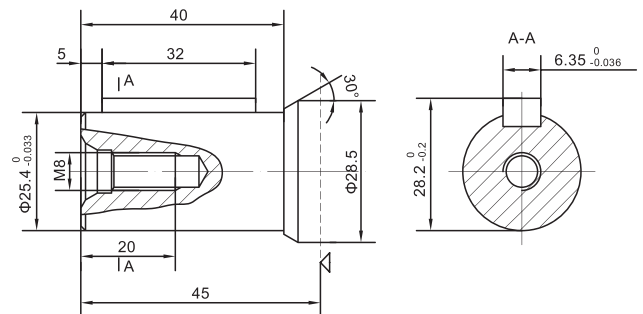
Note: P(A, B) Ports, C=Mounting thread, T=Drain connection

PMPH Shaft version

**P1: Ø25 Cylindrical shaft,
parallel key 8x7x32**



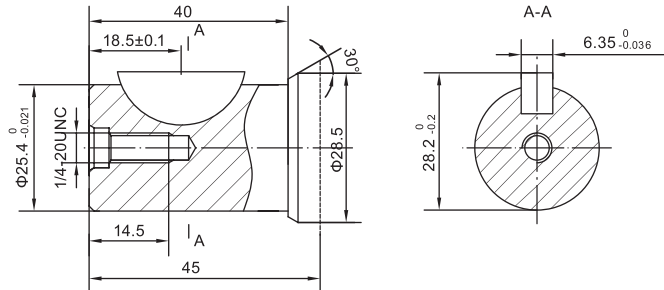
**P3: Ø25.4 Cylindrical shaft,
parallel key 6.35x6.35x32**



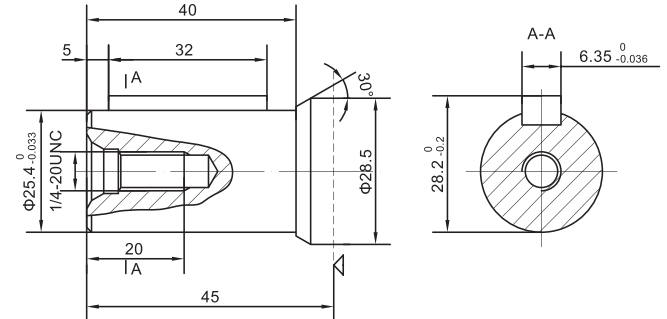
◁ : Motor mounting surface

PMPH Shaft version

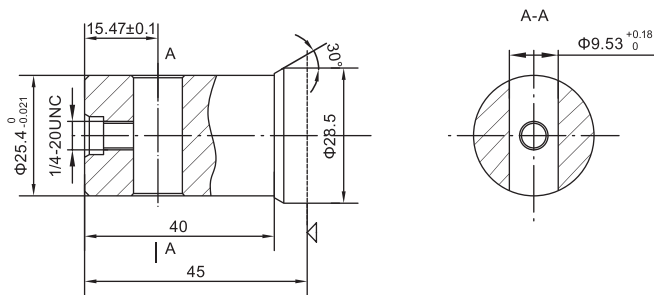
**P4: Ø25.4 Cylindrical shaft,
Woodruff key Ø25.4x6.35**



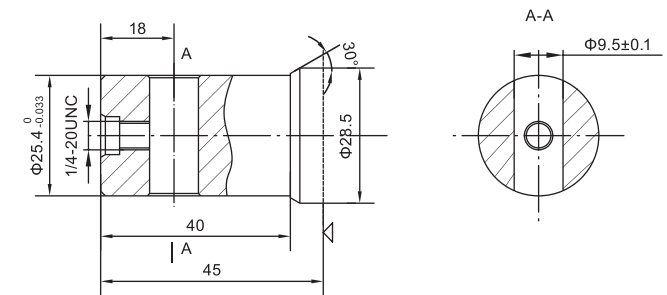
**P33: Ø25.4 Cylindrical shaft,
parallel key 6.35x6.35x32**



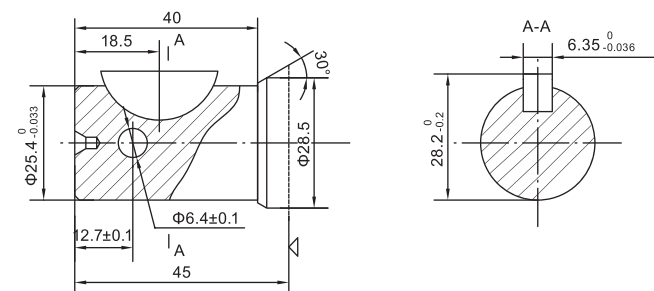
**P89: Ø25.4 Cylindrical shaft,
pin hole Ø9.53**



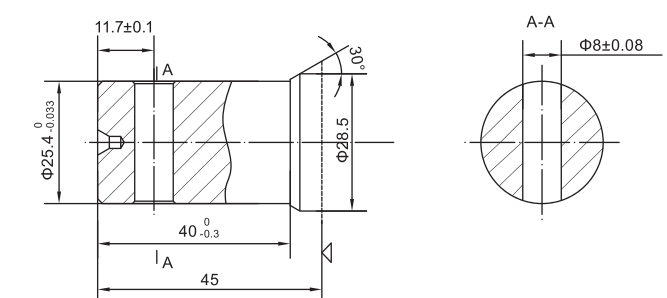
**P93: Ø25.4 Cylindrical shaft,
pin hole Ø9.5**



**P95: Ø25.4 Cylindrical shaft,
pin hole Ø6.4
Woodruff key Ø25.4x6.35**



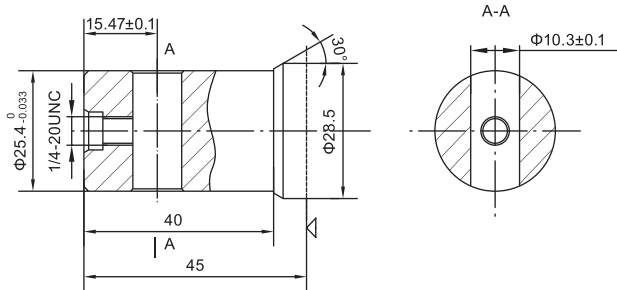
**P96: Ø25.4 Cylindrical shaft,
pin hole Ø8**



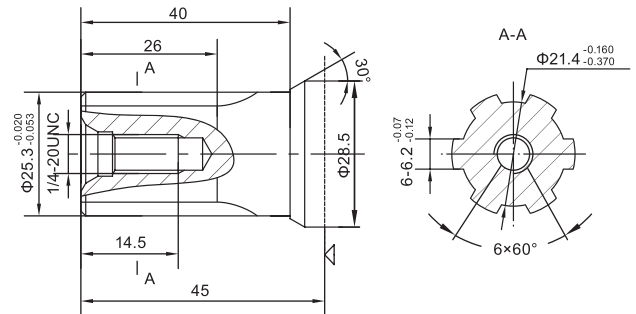
◁ : Motor mounting surface

PMPH Shaft version

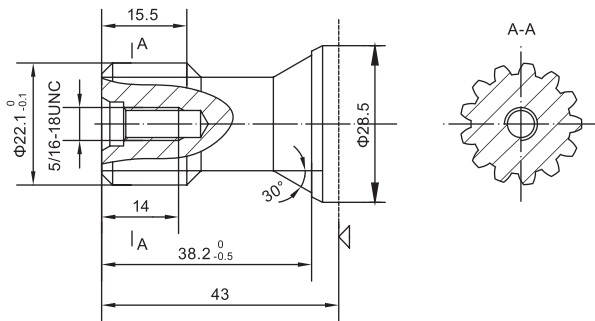
**P97: Ø25.4 Cylindrical shaft,
pin hole Ø10.3**



**H4: Ø25.3 Splined shaft,
6-25.3x21.4x6.2**



**K8: Ø22.1 involute splined shaft,
13-DP16/32**

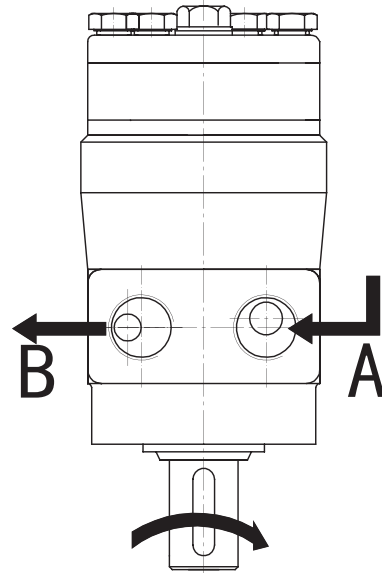
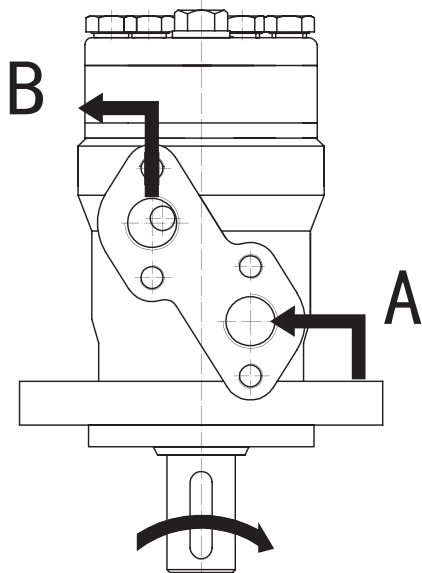


◁ : Motor mounting surface

PMP PMPH Series motor

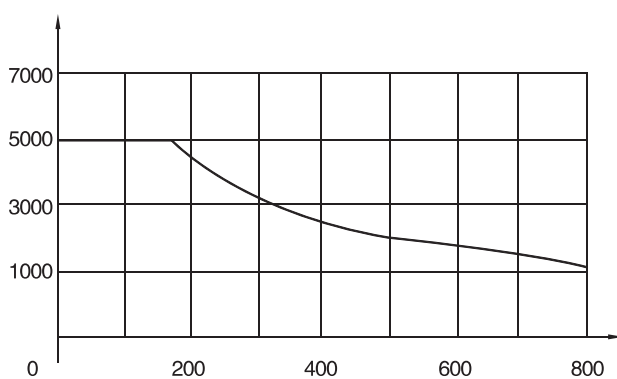
Direction of shaft rotation: Standard

When facing shaft end of motor, shaft to rotate:
Clockwise when port "A" is pressurized,
Counter-clockwise when port "B" is pressurized.

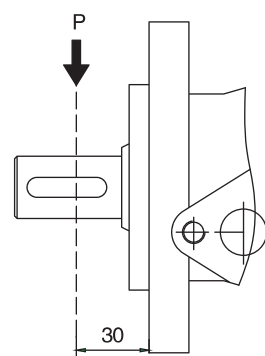


PMP PMPH Permissible shaft loads

P (N) Radial force



1500N
P
2000N
n(r/min)
Speed(r/min)



PMP PMPH Ordering code

1		2	3	4	5		6		7
PMP	-					/		-	

1	Series	
	Hydraulic motor with spool valve	PMP

2	Displacement	
ml/r		50
		80
		100
		125
		160
		200
		250
		315
		400

3	Output	
	Ø25 Cylindrical shaft, parallel key 8x7x32	P1
	Ø25.4 Cylindrical shaft parallel key 6.35x6.35x32	P3
	Ø32 Cylindrical shaft parallel key 10x8x45	P5
	Ø25.4 cylindrical shaft parallel key 6.35x6.35x32	P33
	Ø25.3 Splined shaft, 6-25.3x21.4x6.2	H3
	Ø25.3 Splined shaft, 6-25.3x21.4x6.2	H33
	Ø31.75 involute splined shaft, 14-DP12/4 a=30°	K13

4	Flange	
	2-Ø13.5 Oval flange pilot Ø82.5x8	A2
	4-M10 Square flange, pilot Ø44.45x2.5	C
	4-3/8-16UNC Square flange, pilot Ø44.45x2.5	C1

5	Ports	
	G1/2 (15) - M14x1.5 (12)	Y
	M18x1.5 (15) - M14x1.5 (12)	Y1
	M22x1.5 (15) - M14x1.5 (12)	Y2
	ZG3/8 (15) - M14x1.5 (12)	Y4
	7/8-14 UNF (15) - M14x1.5 (12)	Y5
	ZG 1/2 (15) - M14x1.5 (12)	Y7
	NPT 1/2 (15) - M14x1.5 (12)	Y8
	NPTF 1/2 (15) - 7/16-20UNF (12)	Y9
	G1/2 (15) - G1/4 (12)	Y10
	7/8-14 UNF (15) - 7/16-20 UNF (12)	Y15

6	Special features	
	Standard	
	With dustproof ring	T7
	With high pressure seals	T10

7	Rotation direction	
	Standard	
	Opposite	L

Note: C, C1 mounting are assembling to PMPH shaft.

PMP PMPH Ordering code

1		2	3	4	5		6		7
PMPH	-					/		-	

1	Series
	Hydraulic motor with spool valve PMPH

2	Displacement
	ml/r
	50
	80
	100
	125
	160
	200
	250
	315
	400

3	Output
	Ø25 Cylindrical shaft, parallel key 8x7x32 P1
	Ø25.4 Cylindrical shaft parallel key 6.35x6.35x32 P3
	Ø25.4 Cylindrical shaft, Woodruff key Ø25.4x6.35 P4
	Ø25.4 Cylindrical shaft, parallel key 6.35x6.35x32 P33
	Ø25.4 Cylindrical shaft, pin hole Ø9.53 P89
	Ø25.4 Cylindrical shaft, pin hole Ø9.5 P93
	Ø25.4 Cylindrical shaft, pin hole Ø6.4 , Woodruff key Ø25.4x6.35 P95
	Ø25.4 Cylindrical shaft, pin hole Ø8 P96
	Ø25.4 Cylindrical shaft, pin hole Ø10.3 P97
	Ø25.3 Splined shaft, 6-25.3x21.4x6.2 H4
	Ø22.1 involute splined shaft, 13-DP16/32 K8

4	Flange
	2-Ø13.5 Oval flange pilot Ø82.5x2.8 A2
	4-M10 Square flange, pilot Ø44.45x2.8 C
	4-3/8-16UNC Square flange, pilot Ø44.45x2.8 C1

5	Ports
	G1/2 (15) - M14x1.5 (12) Y
	7/8-14 UNF (15) - 7/16-20UNF (12) Y5
	ZG 1/2 (15) - G1/4 (12) Y7
	NPTF 1/2 (15) - 7/16-20UNF (12) Y9
	G1/2 (15) - G1/4 (12) Y10
	3/4-16UNF (15) - 7/16-20 UNF (12) Y17
	Ø11 (15) - 7/16-20UNF (12) Y19
	M18x1.5 (15) - G1/4 (12) Y20

6	Special features
	Standard
	No case drain T21

7	Rotation direction
	Standard
	Opposite L

PH Introduction



This series of motors features a ductile cast iron housing of adequate strength, making it suitable for light-load and intermittent operation applications. It is widely used in agriculture, forestry, plastics, machine tools, and mini-machinery.

PH Characteristics

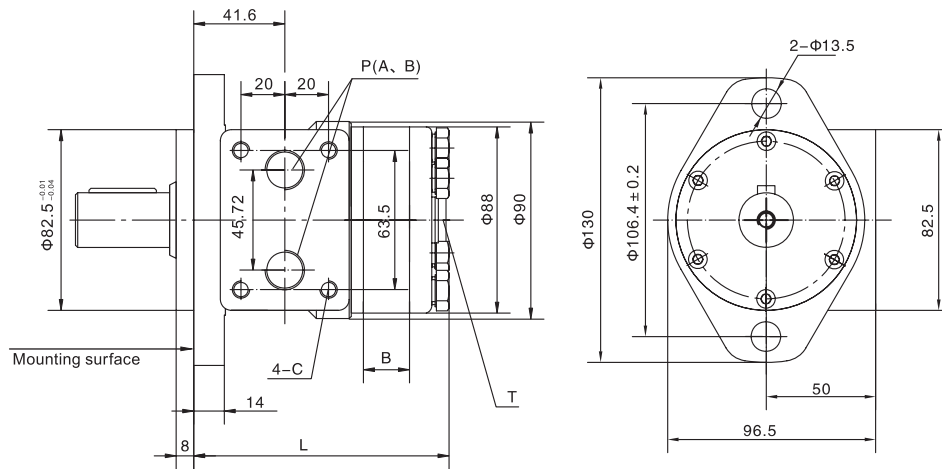
1. The axial oil distribution design provides a compact structure, high efficiency, and long service life.
2. The shaft seal is designed to withstand high motor pressure, allowing operation in both parallel and series configurations.

PH Technical data

Type	Displacement ml/r	Max Pressure Drop			Max torque			Max speed	Max Flow	Max output power
		Continuous Mpa	Intermittent Mpa	Peak Mpa	Continuous Nm	Intermittent Nm	Peak Nm	Continuous r/min	Continuous L/min	Continuous Kw
PH-50	49.3	10.5	14	18	65	90	115	810	40	4.5
PH-80	76.6	10.5	14	18	105	140	180	520	40	4.8
PH-100	95.8	10.5	14	18	130	175	225	415	40	4.8
PH-125	120.4	10.5	14	18	160	220	285	330	40	4.8
PH-160	153.2	10.5	14	18	205	280	365	260	40	4.8
PH-200	191.6	10.5	14	18	255	350	455	205	40	4.6
PH-250	240.8	9	11.5	15	275	360	475	165	40	4
PH-315	306.5	7	10.5	14	305	410	560	125	40	3.5
PH-400	383.1	7	9	11	335	429	550	100	40	3

Intermittent operation the permissible values may occur for max 10% of every minute,
Peak load: the permissible values may occur for max 1% of every minute.

PH Installation



Type	L mm	B mm
PH-50	107	9
PH-80	102	14
PH-100	115.5	17.5
PH-125	120	22
PH-160	126	28
PH-200	133	35
PH-250	142	44
PH-315	154	56
PH-400	168	70

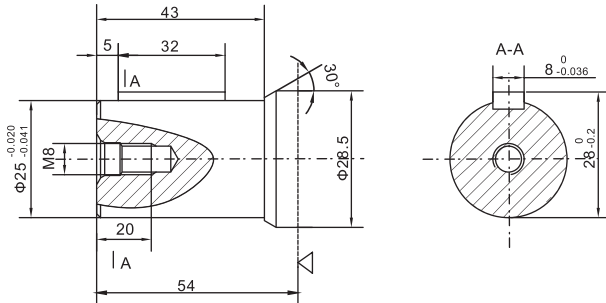
PH Ports code

PORTS CODE	P (A, B) (deep mm)	C (deep mm)	T (deep mm)
Y	G1/2 (15)	M8 (13)	M14x1.5 (12)
Y1	M18x1.5 (15)	M8 (13)	M14x1.5 (12)
Y2	M22x1.5 (15)	M8 (13)	M14x1.5 (12)
Y9	NPTF 1/2 (15)	5/16-18UNC (12)	7/16-20UNF (12)
Y10	G1/2 (15)	M8 (13)	G1/4 (12)
Y15	7/8-14 UNF (15)	5/16-18 UNC (13)	7/16-20-UNF (12)

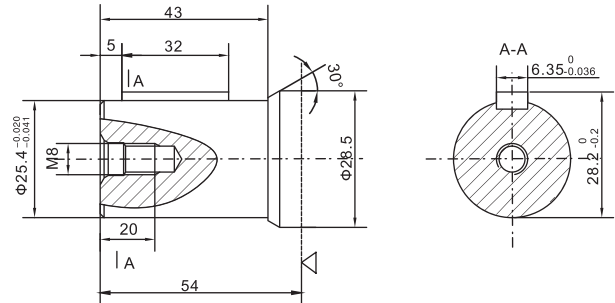
Note: P(A, B) Ports, C=Mounting thread, T=Drain connection

PH Shaft version

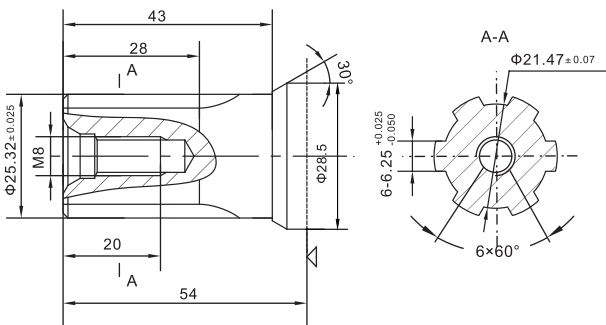
**P1: Ø25 Cylindrical shaft,
parallel key 8x7x32**



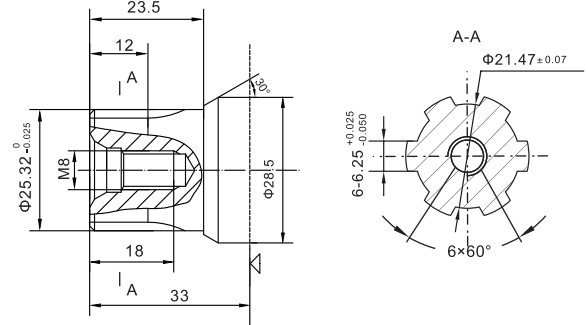
**P3: Ø25.4 Cylindrical shaft,
parallel key 6.35x6.35x32**



**H3: Ø25.3 splined shaft,
6-25.32x21.47x6.25**



**H5: Ø25.3 splined shaft,
6-25.32x21.47x6.25**



◁ : Motor mounting surface

PH Ordering code

1		2	3	4	5		6		7
PH	-					/		-	

1	Series	
	Hydraulic motor with spool valve	PH

2	Displacement	
ml/r		50
		80
		100
		125
		160
		200
		250
		315
		400

3	Output	
	Ø25 Cylindrical shaft, parallel key 8x7x32	P1
	Ø25.4 Cylindrical shaft parallel key 6.35x6.35x32	P3
	Ø25.3 Splined shaft, 6-25.32x21.47x6.25	H3
	Ø25.3 Splined shaft, 6-25.32x21.47x6.25	H5

4	Flange	
	2-Ø13.5 Oval flange pilot Ø82.5x8	A2

5	Ports	
	G1/2 (15) - M14x1.5 (12)	Y
	M18x1.5 (15) - M14x1.5 (12)	Y1
	M22x1.5 (15) - M14x1.5 (12)	Y2
	NPTF 1/2 (15) - 7/16-20UNF (12)	Y9
	G1/2 (15) - G1/4 (12)	Y10
	7/8-14 UNF (15) - 7/16-20 UNF (12)	Y15

6	Special features	
	Standard	

7	Rotation direction	
	Standard	
	Opposite	L

TMPH Introduction



The TMPH series motors are compact, cost-effective spool valve hydraulic motors designed for light-load and intermittent operation. They are widely used in agriculture, forestry, plastics, machine tools, and mining equipment. Typical applications include mould adjustment in injection moulding machines, sweepers, sawmills, and various work platforms.

TMPH Characteristics

1. The Geroler design provides low friction, high mechanical efficiency, and long service life.
2. High-pressure shaft seals allow operation in both parallel and series configurations.
3. Equipped with two internal check valves, eliminating the need for a case drain connection.
4. Delivers performance comparable to PMR series motors, with dimensions similar to PMP series motors.
5. The mounting flange is separate from the front housing, facilitating easy flange replacement.

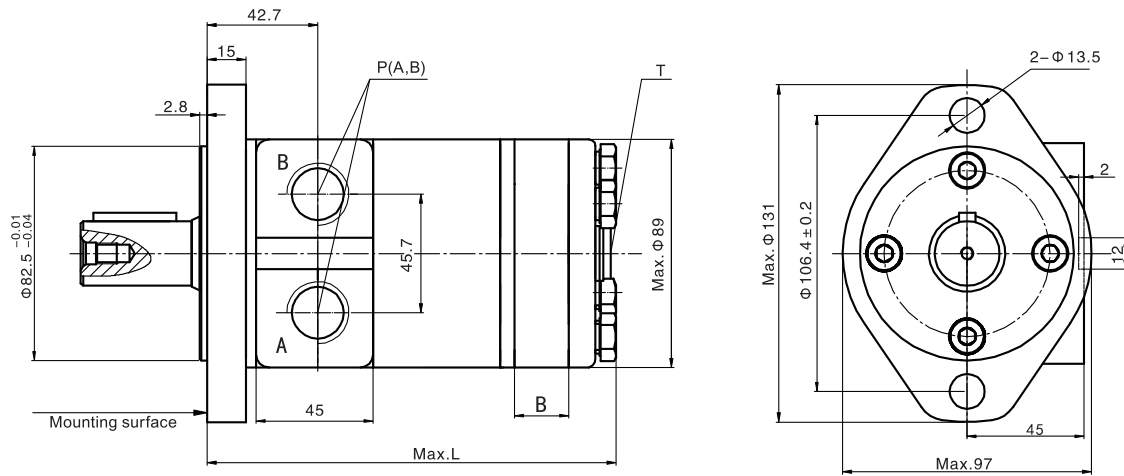
TMPH Technical data

Type	Displacement ml/r	Max Pressure Drop			Max torque			Max speed	Max Flow	Max output power
		Continuous Mpa	Intermittent Mpa	Peak Mpa	Continuous Nm	Intermittent Nm	Peak Nm	Continuous r/min	Continuous L/min	Continuous Kw
TMPH-50	49.3	14	17.5	20	90	115	130	810	40	6.4
TMPH-80	76.6	14	17.5	20	140	175	205	780	60	9.5
TMPH-100	95.8	14	17.5	20	175	220	255	625	60	9.5
TMPH-125	120.4	14	17.5	20	220	275	320	495	60	9.5
TMPH-160	153.2	14	17.5	20	280	355	410	390	60	9.5
TMPH-200	191.6	14	17.5	20	350	440	510	310	60	9.5
TMPH-250	240.8	11	14	16	350	445	515	245	60	7.4
TMPH-315	306.5	9	11	13	360	445	530	195	60	6
TMPH-400	383.1	7	9	11	350	445	555	155	60	4.8

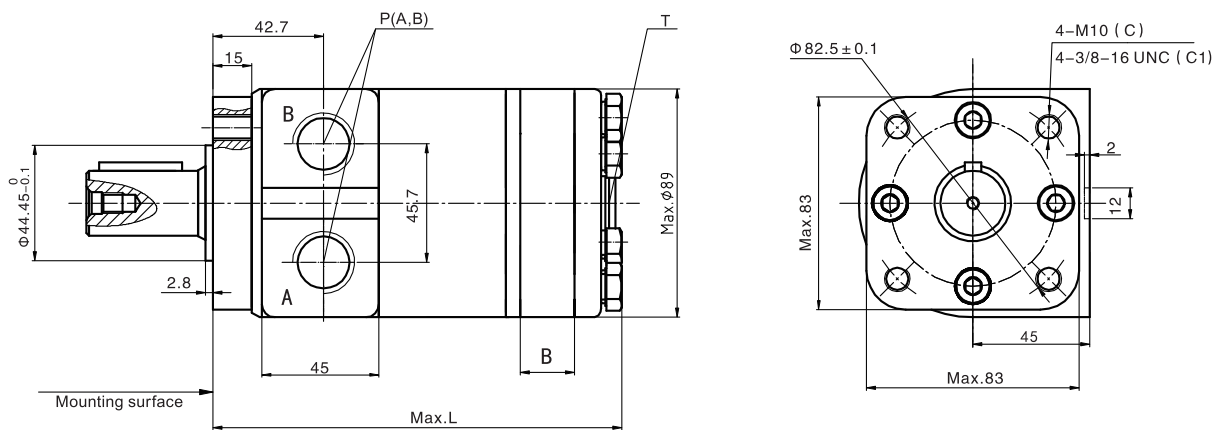
1. Intermittent operation the permissible values may occur for max 10% of every minute, Peak load: the permissible values may occur for max 1% of every minute.
2. To use under max speed & max pressure at the same time is not recommended.

TMPH Installation

2-Ø13.5 Hole oval flange A2



Square flange C, C1



Type	L mm	B mm
TMPH-50	148	9
TMPH-80	153	14
TMPH-100	156.5	17.5
TMPH-125	161	22
TMPH-160	167	28
TMPH-200	174	35
TMPH-250	183	44
TMPH-315	195	56
TMPH-400	209	70

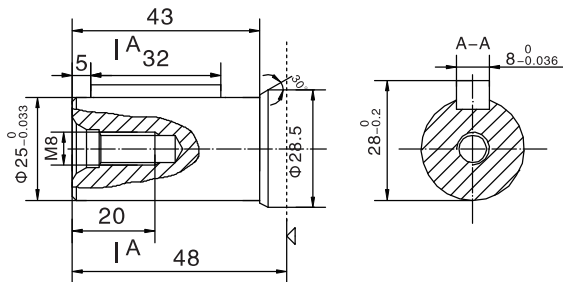
TMPH Ports code

PORTS CODE	P (A, B) (deep mm)	C (deep mm)	T (deep mm)
Y	G1/2 (15)	-	M14x1.5 (12)
Y7	ZG 1/2 (15)	-	G1/4 (12)
Y9	NPTF 1/2 (15)	-	7/16-20 UNF (12)
Y10	G1/2 (15)	-	G1/4 (12)
Y15	7/8-14UNF (15)	-	7/16-20 UNF (12)

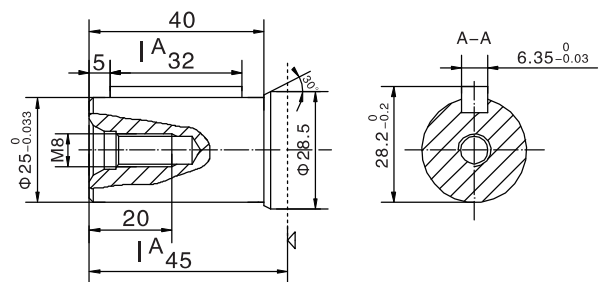
Note: P(A, B) Ports, C=Mounting thread, T=Drain connection

PMPH Shaft version

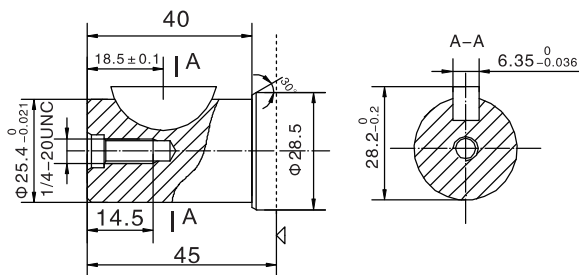
**P1: Ø25 Cylindrical shaft,
parallel key 8x7x32**



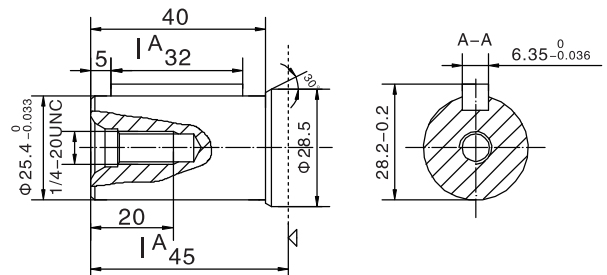
**P3: Ø25.4 Cylindrical shaft,
parallel key 6.35x6.35x32**



**P4: Ø25.4 Cylindrical shaft,
Woodruff Ø25.4x6.35**



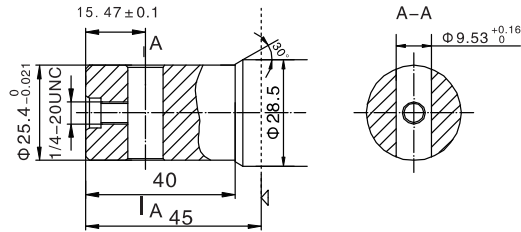
**P33: Ø25.4 Cylindrical shaft,
parallel key 6.35x6.35x32**



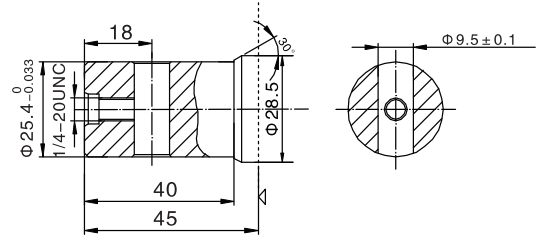
◁: Motor mounting surface

TMPH Shaft version

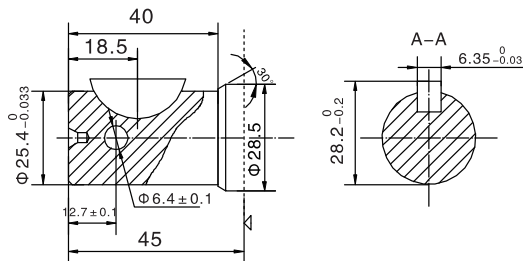
**P89: Ø25.4 Cylindrical shaft,
pin hole Ø9.53**



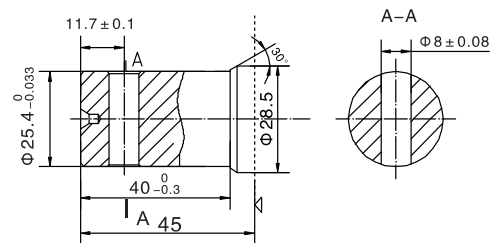
**P93: Ø25.4 Cylindrical shaft,
pin hole Ø9.5**



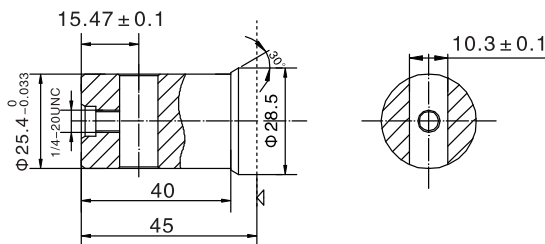
**P95: Ø25.4 Cylindrical shaft,
pin hole Ø6.4
woodruff key Ø25.4x6.35**



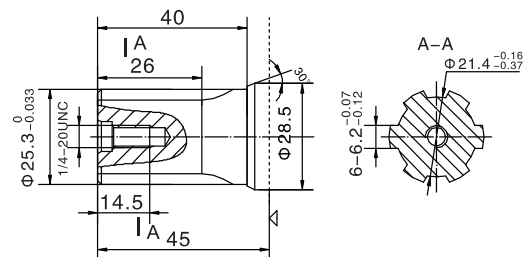
**P96: Ø25.4 Cylindrical shaft,
pin hole Ø8**



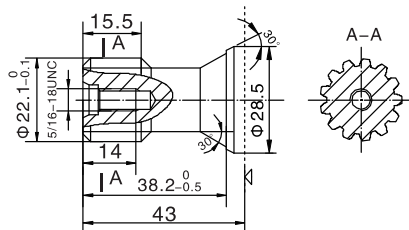
**P97: Ø25.4 Cylindrical shaft,
pin hole Ø10.3**



**H4: Ø25.3 Cylindrical shaft,
6-25.3x21.4x6.2**



**K8: Ø22.1 involute Cylindrical shaft,
13-DP 16/32**



◁: Motor mounting surface

TMPH Ordering code

1		2	3	4	5		6		7
TMPH	-					/		-	

1	Series
	Hydraulic motor with spool valve TMPH

2	Displacement
	ml/r
	50
	80
	100
	125
	160
	200
	250
	315
	400

3	Output
	Ø25 Cylindrical shaft, parallel key 8x7x32 P1
	Ø25.4 Cylindrical shaft, parallel key 6.35x6.35x32 P3
	Ø25.4 Cylindrical shaft, Woodruff Ø25.4x6.35 P4
	Ø25.4 Cylindrical shaft, parallel key 6.35x6.35x32 P33
	Ø25.4 Cylindrical shaft, pin hole Ø9.53 P89
	Ø25.4 Cylindrical shaft, pin hole Ø9.5 P93
	Ø25.4 Cylindrical shaft, pin hole Ø6.4 woodruff key Ø25.4x6.35 P95
	Ø25.4 Cylindrical shaft, pin hole Ø8 P96
	Ø25.4 Cylindrical shaft, pin hole Ø10.3 P97
	Ø25.3 Cylindrical shaft, 6-25.3x21.4x6.2 H4
	Ø22.1 involute Cylindrical shaft, 13-DP 16/32 K8

4	Flange
	2-Ø13.5 Oval flange pilot Ø82.5x8 A2
	4-M10 Squared flange, pilot Ø44.45x2.8 C
	4-3/8-16UNC Square flange, pilot Ø44.45x2.8 C1

5	Ports
	G1/2 (15) - M14x1.5 (12) Y
	ZG 1/2 (15) - G1/4 (12) Y7
	NPTF 1/2 (15) - 7/16-20 UNF (12) Y9
	G1/2 (15) - G1/4 (12) Y10
	7/8-14 UNF (15) - 7/16-20 UNF (12) Y15

6	Special features
	Standard
	No case drain T21
	Flange face is vertical ports T26

7	Rotation direction
	Standard
	Opposite L

Introduction

Features and applications

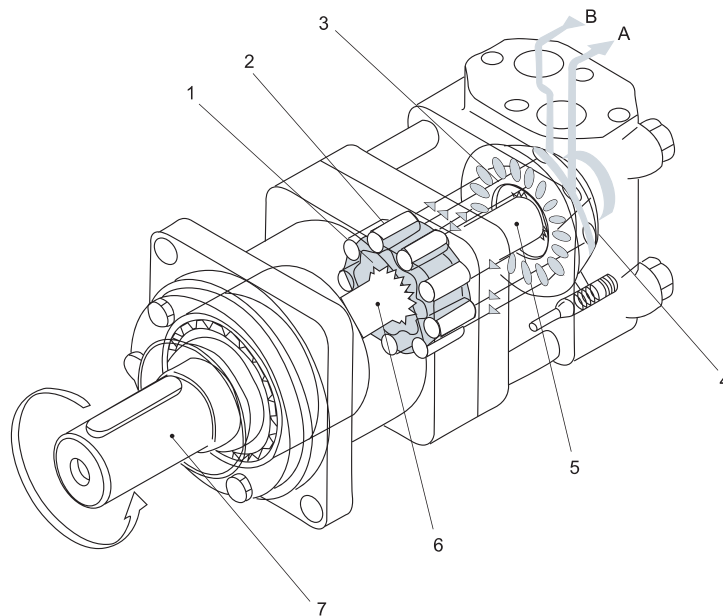


The PM hydraulic motor is a high-torque, low-speed hydraulic motor designed for high efficiency and long service life. It offers a wide speed range, high starting torque, and stable performance at higher speeds, while maintaining a compact and lightweight design. It can be directly coupled to working machinery and is suitable for a wide range of low-speed, heavy-duty applications.

PM hydraulic motors are widely used in agricultural machinery, the plastics industry, mining, and construction equipment.

Working principle

1. Orbital cam
2. Roll
3. Distributor
4. Auxiliary plate
5. Distributor shaft
6. Transmission shaft
7. Output shaft



As shown in the diagram, high-pressure oil enters the motor housing through the inlet and flows through the auxiliary plate, distributor, and the working chambers between the orbital cam and rollers. Under the action of the high-pressure oil, the orbital cam rotates from the high-pressure side toward the low-pressure side. The cam performs both rotation and revolution against the rollers, while the continuous oil distribution ensures smooth and continuous rotation of the output shaft.

The output speed can be regulated by controlling the inlet flow rate, and the direction of rotation can be reversed by changing the flow direction.

PM3Y Technical data

Type	Displacement ml/r	Max Pressure Drop			Max torque			Max speed	Max Flow	Max output power	Weight Kg
		Continuous Mpa	Intermittent Mpa	Peak Mpa	Continuous Nm	Intermittent Nm	Peak Nm	Continuous r/min	Continuous L/min	Continuous Kw	
PM3Y-80 PM3SY-80 PM3S3Y-80 PM3WY-80	80.5	20.5	27.5	29.5	226	293	306	805	65	16	9.8
PM3Y-100 PM3SY-100 PM3S3Y-100 PM3WY-100	100.5	20.5	27.5	29.5	282	365	383	745	75	18	10.0
PM3Y-125 PM3SY-125 PM3S3Y-125 PM3WY-125	126.3	20.5	27.5	29.5	355	459	481	590	75	18	10.3
PM3Y-160 PM3SY-160 PM3S3Y-160 PM3WY-160	160.8	20.5	26	28	451	559	588	465	75	18	10.7
PM3Y-200 PM3SY-200 PM3S3Y-200 PM3WY-200	200.9	20.5	25	27	564	672	708	370	75	18	11.1
PM3Y-250 PM3SY-250 PM3S3Y-250 PM3WY-250	252.6	20	25	26	684	845	891	295	75	18	11.6
PM3Y-315 PM3SY-315 PM3S3Y-315 PM3WY-315	321.5	20	24	26	870	1032	1091	230	75	17	12.3
PM3Y-400 PM3SY-400 PM3S3Y-400 PM3WY-400	104.9	15.5	19	21	813	1021	1141	185	75	11	13.2
PM3Y-500 PM3SY-500 PM3S3Y-500 PM3WY-500	476.5	12	14	16	728	903	1044	155	75	9	14.3

- Intermittent operation the permissible values may occur for max 10% of every minute, Peak load: the permissible values may occur for max 1% of every minute.
- To use under max speed & max pressure at the same time is not recommended.

PM3Y Performance data

PM3Y 80(80.5ml/r)

		Pressure(Mpa)						Max.cont.	Max.int.
		3.5	7	10.5	14	17.5	20.5	22.5	
Flow(L/min)	15	35	75	114	150	187	220	239	
		181	177	170	165	158	151	141	
	30	35	75	115	152	190	222	240	
		363	355	346	340	330	322	310	
	40	33	75	115	155	193	226	240	
Max.cont.		485	479	464	453	444	437	415	
	50	30	73	113	153	190	223	237	
		610	602	594	580	565	556	530	
	60	28	70	110	150	188	220	235	
		735	724	714	698	680	670	642	
Max.int.	65	27	68	108	148	186	215	233	
		801	790	775	760	742	727	704	
	80	23	66	104	140	176	205	213	
		988	975	955	938	915	897	870	

PM3Y 100(100.5ml/r)

		Pressure(Mpa)						Max.cont.	Max.int.
		3.5	7	10.5	14	17.5	20.5	22.5	
Flow(L/min)	15	44	94	142	187	233	275	298	
		145	142	136	132	127	121	113	
	30	42	93	144	190	237	278	300	
		291	284	277	272	264	258	248	
	40	41	92	144	194	241	282	300	
Max.cont.		388	384	372	363	356	350	332	
	50	37	91	141	191	237	278	296	
		489	482	476	465	453	445	425	
	60	35	87	137	187	235	273	293	
		589	580	572	559	545	537	514	
Max.int.	75	34	85	135	185	232	268	291	
		740	730	716	702	686	672	651	
	90	29	82	130	175	222	258	266	
		890	879	861	845	825	808	784	

PM3Y 125(126.3ml/r)

		Pressure(Mpa)						Max.cont.	Max.int.
		3.5	7	10.5	14	17.5	20.5	22.5	
Flow(L/min)	15	54	117	179	235	293	348	375	
		115	113	108	105	101	96	90	
	30	55	118	180	238	298	351	377	
		231	226	221	217	210	205	198	
	40	54	120	180	243	303	355	377	
Max.cont.		309	305	296	289	283	279	265	
	50	51	118	177	240	298	351	372	
		389	384	379	370	360	354	338	
	60	48	114	173	235	295	347	369	
		468	461	455	445	433	427	409	
Max.int.	75	42	109	169	232	292	342	366	
		589	581	570	559	546	535	518	
	90	38	103	163	220	279	327	334	
		708	699	685	673	656	643	624	

PM3Y 160(160.8ml/r)

		Pressure(Mpa)						Max.cont.	Max.int.
		3.5	7	10.5	14	17.5	20.5	22.5	
Flow(L/min)	15	70	147	228	300	374	444	477	
		91	89	85	83	79	76	71	
	30	72	150	230	304	380	447	479	
		182	178	173	170	165	161	155	
	40	74	151	230	310	386	451	479	
Max.cont.		243	240	232	227	222	219	208	
	50	71	147	226	306	380	447	473	
		305	301	297	290	283	278	265	
	60	68	143	220	300	376	442	469	
		368	362	357	349	340	335	321	
Max.int.	75	64	138	216	296	372	437	465	
		463	456	448	439	429	420	407	
	90	60	133	208	280	352	416	425	
		556	549	538	528	515	505	490	

(Torque) : 163Nm
(Speed) : 685r/min

Cont.
Int.

PM3Y Performance data

PM3Y 200(200.6ml/r)

		Pressure(Mpa)					Max.cont.	Max.int.
		3.5	7	10.5	14	17.5	20.5	22.5
Flow(L/min)	15	87 73	184 71	285 68	374 66	467 63	557 61	596 56
	30	89 145	187 142	287 139	379 136	474 132	560 129	599 124
	40	92 194	187 192	287 186	387 182	482 178	564 175	599 166
	50	88 244	182 241	282 238	382 232	474 226	560 223	591 212
	60	84 295	175 290	275 286	374 280	469 272	555 268	586 257
Max.cont.	75	77 370	170 365	270 358	369 351	464 343	550 336	581 325
Max.int.	90	68 445	165 440	260 430	349 423	434 412	510 404	532 392

PM3Y 250(252.6ml/r)

		Pressure(Mpa)					Max.cont.	Max.int.
		3.5	7	10.5	14	17.5	20	22.5
Flow(L/min)	15	114 58	234 56	358 54	469 53	584 50	377 48	742 45
	30	115 116	235 113	361 110	471 108	587 105	680 103	746 100
	40	115 155	235 153	355 148	473 144	591 141	684 139	751 136
	50	114 194	230 192	355 189	474 185	587 180	680 175	746 169
	60	112 234	225 231	352 228	471 224	583 219	675 214	741 208
Max.cont.	75	109 295	220 290	349 285	467 279	578 273	669 267	735 260
Max.int.	90	103 354	213 350	343 342	460 334	568 326	654 320	715 310

PM3Y 315(321.5ml/r)

		Pressure(Mpa)					Max.cont.	Max.int.
		3.5	7	10.5	14	17.5	20	22.5
Flow(L/min)	15	140 45	284 44	433 43	583 41	745 40	863 38	947 35
	30	140 91	288 89	437 87	586 85	748 83	866 81	951 78
	40	138 121	290 120	440 116	588 113	752 111	870 109	956 106
	50	136 153	291 151	439 149	587 145	748 141	866 139	951 136
	60	134 184	286 181	435 179	583 175	744 170	862 166	947 160
Max.cont.	75	131 231	280 228	431 224	580 220	738 214	856 210	939 204
Max.int.	90	125 278	272 275	421 269	570 264	718 258	826 253	899 243

PM3Y 400(401.9ml/r)

		Pressure(Mpa)					Max.cont.	Max.int.
		3.5	7	10.5	14	15.5	17.5	
Flow(L/min)	15	172 36	347 35	522 34	705 33	806 32	926 30	
	30	174 73	350 71	526 69	708 68	809 66	930 64	
	40	173 97	352 96	529 93	710 91	813 89	935 86	
	50	171 122	350 121	531 119	710 116	809 113	930 110	
	60	168 147	343 145	522 143	705 140	801 136	924 130	
Max.cont.	75	164 185	339 183	517 179	700 176	791 171	916 163	
Max.int.	90	160 223	325 220	503 215	680 211	766 206	886 196	

(Torque) : 503Nm
(Speed) : 215r/min

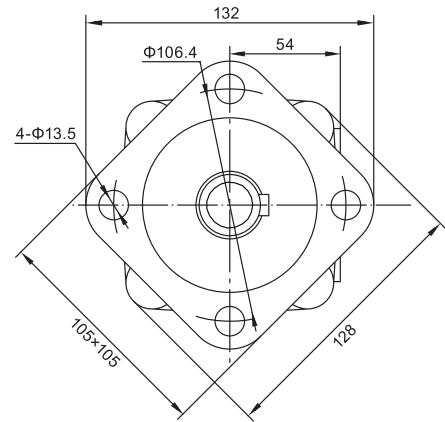
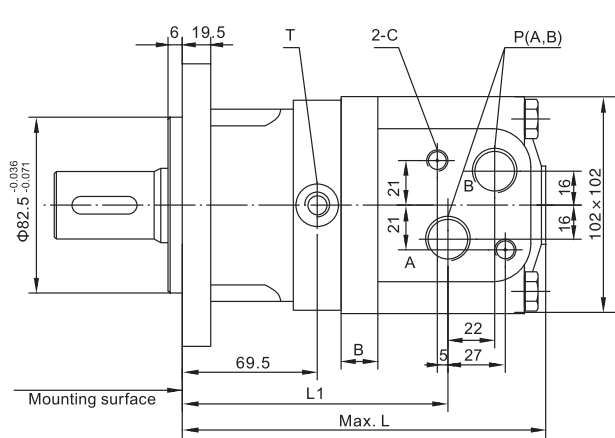
PM3Y 500(476.5ml/r)

		Pressure(Mpa)				Max.cont.	Max.int.
		3.5	7	10.5	12	14	
Flow(L/min)	15	180 31	403 30	607 29	721 28	816 27	
	30	183 61	407 60	613 58	724 57	824 56	
	40	185 82	409 81	617 78	728 77	832 75	
	50	184 103	406 102	616 100	724 98	833 95	
	60	182 124	403 122	609 121	719 118	819 115	
Max.cont.	75	180 156	401 154	606 151	712 148	815 145	
Max.int.	90	173 188	391 185	601 182	702 178	803 174	

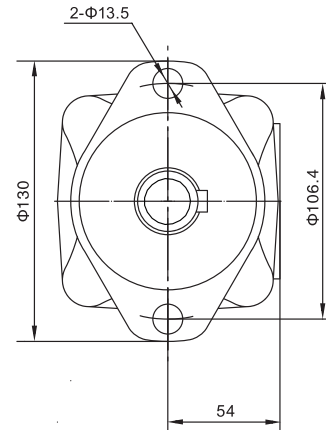
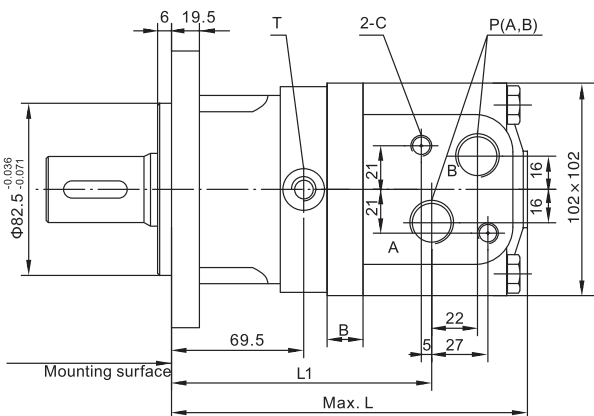
Cont.
Int.

PM3Y Installation

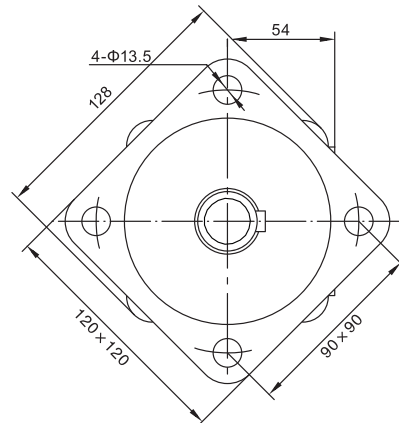
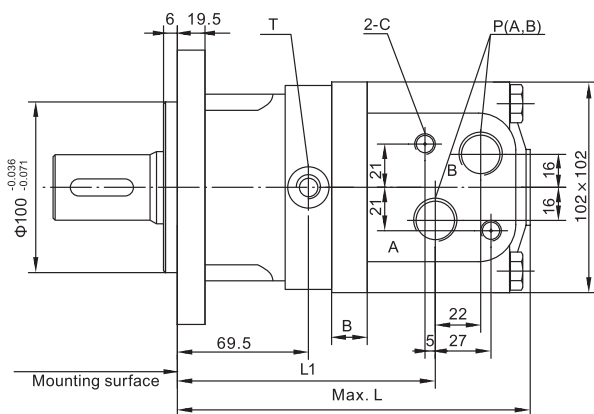
Square flange A



2-hole oval flange A2

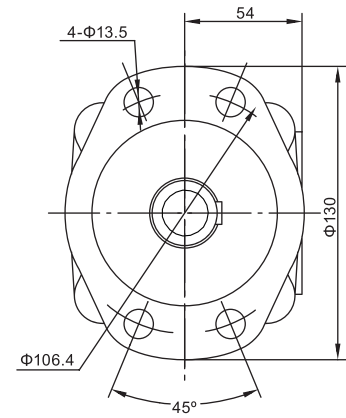
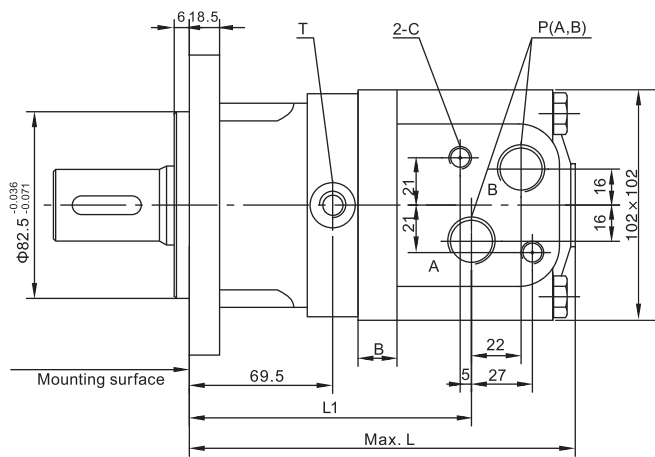


Square flange A2 III



PM3Y Installation

4-hole oval flange AIV



Type	L mm	L1 mm	B mm
PM3Y-80	170	125.5	11
PM3Y-100	173.5	129	14.5
PM3Y-125	178	133.5	19
PM3Y-160	184	139.5	25
PM3Y-200	191	146.5	32
PM3Y-250	200	155.5	41
PM3Y-315	212	167.5	53
PM3Y-400	226	181.5	67
PM3Y-500	239	194.5	80

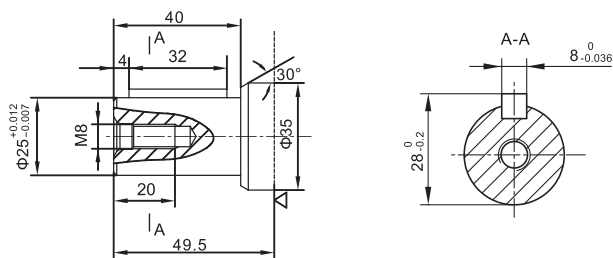
PM3Y Ports code

PORTS CODE	P (A, B) (deep mm)	C (deep mm)	T (deep mm)
Y	G1/2 (15)	M8 (13)	M14x1.5 (12)
Y1	M18x1.5 (15)	M8 (13)	M14x1.5 (12)
Y2	M22x1.5 (15)	M8 (13)	M14x1.5 (12)
Y9	NPTF 1/2 (15)	5/16-18UNC (12)	7/16-20UNF (12)
Y10	G1/2 (15)	M8 (13)	G1/4 (12)
Y15	7/8-14 UNF (15)	5/16-18 UNC (13)	7/16-20-UNF (12)

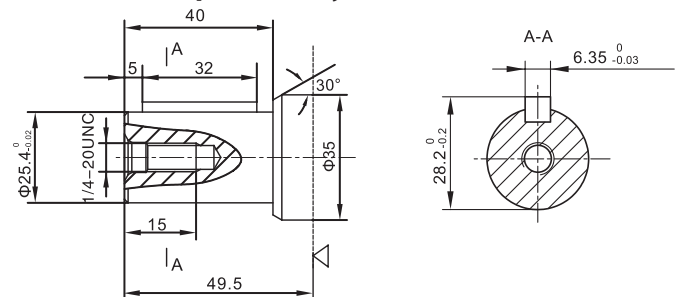
Note: P(A, B) Ports, C=Mounting thread, T=Drain connection

PM3Y Shaft version

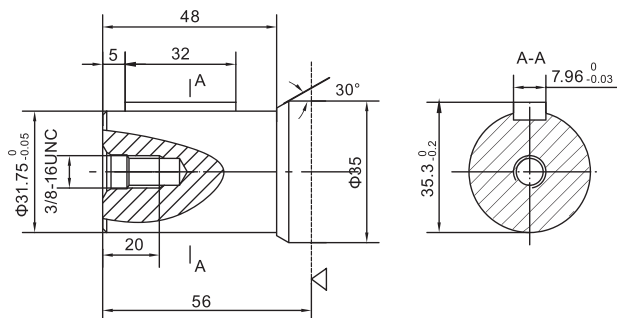
**P1: Ø25 Cylindrical shaft,
parallel key 8x7x32**



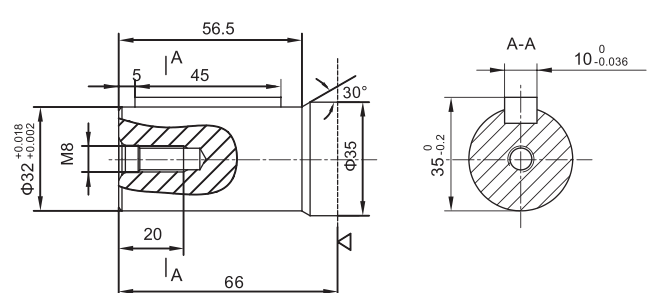
**P3: Ø25.4 Cylindrical shaft,
parallel key 6.35x6.35x32**



**P95: Ø31.75 Cylindrical shaft,
parallel key 7.96x7.96x32**



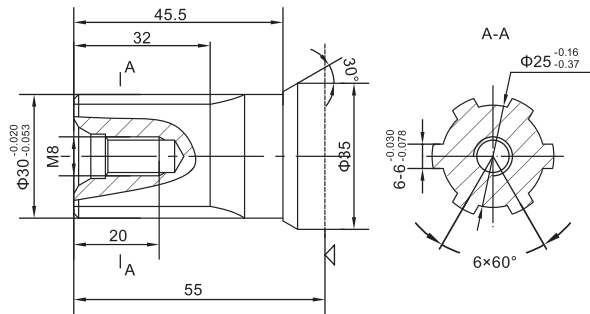
**P10: Ø32 Cylindrical shaft,
parallel key 10x8x45**



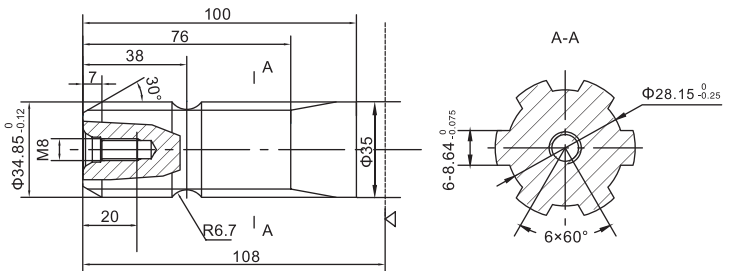
◁-- Motor mounting surface

PM3Y Shaft version

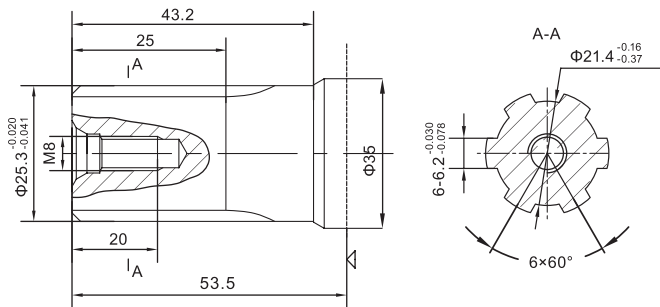
**H1: Ø30 Splined shaft,
6-30x25x6**



**H3: Ø34.85 splined shaft,
6-34.85x28.15x8.64**

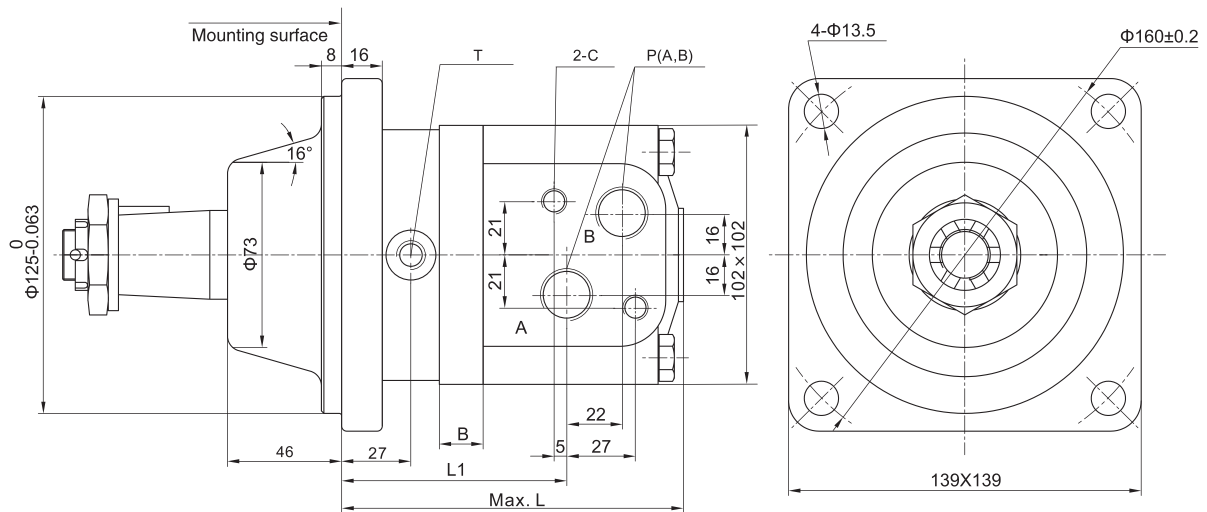


**H51: Ø25.3 splined shaft,
6-25.3x21.4x6.2**



◁-- Motor mounting surface

PM3WY Installation



Type	L mm	L1 mm	B mm
PM3WY-80	127.5	83	11
PM3WY-100	131	86.5	14.5
PM3WY-125	135.5	91	19
PM3WY-160	141.5	97	25
PM3WY-200	148.5	104	32
PM3WY-250	157.5	113	41
PM3WY-315	169.5	125	53
PM3WY-400	183.5	139	67
PM3WY-500	196.5	152	80

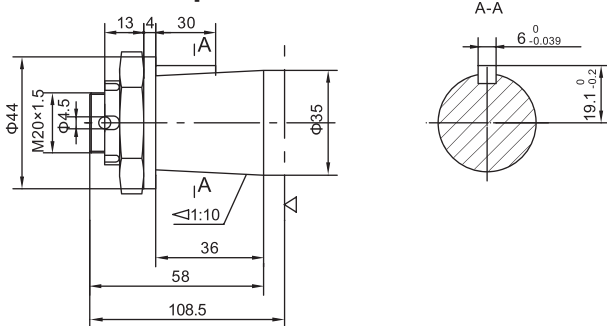
PM3WY Ports code

PORTS CODE	P (A, B) (deep mm)	C (deep mm)	T (deep mm)
Y	G1/2 (15)	M10 (12)	G1/4 (12)
Y15	7/8-14 UNF (15)	-	7/16-20-UNF (12)

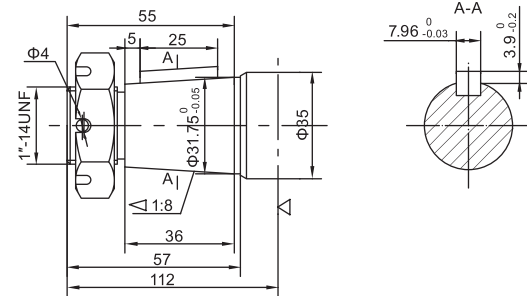
Note: P(A, B) Ports, C=Mounting thread, T=Drain connection

PM3WY Shaft version

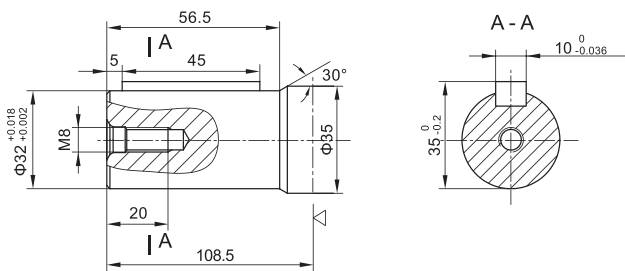
**Z: Ø35 tapered shaft,
taper 1:10
parallel 6x6x30**



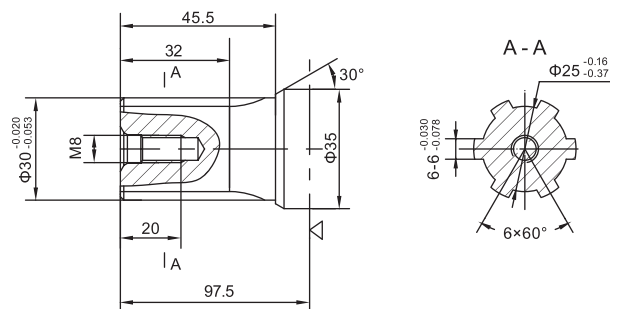
**Z2: Ø31.75 tapered shaft,
taper 1:8, parallel key
7.96x7.96x25**



**P10: Ø32 cylindrical shaft,
parallel key 10x8x45**

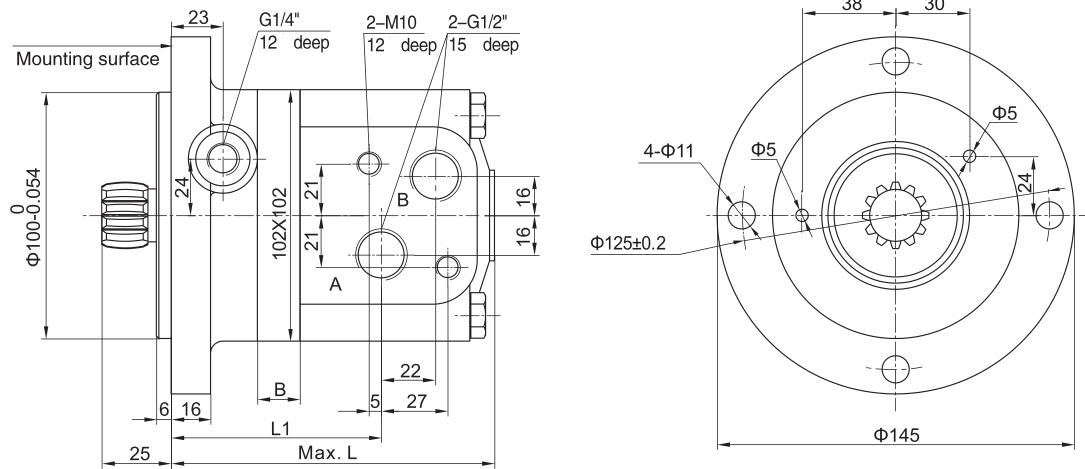


**H1: Ø30 splined shaft,
6-30x25x6**



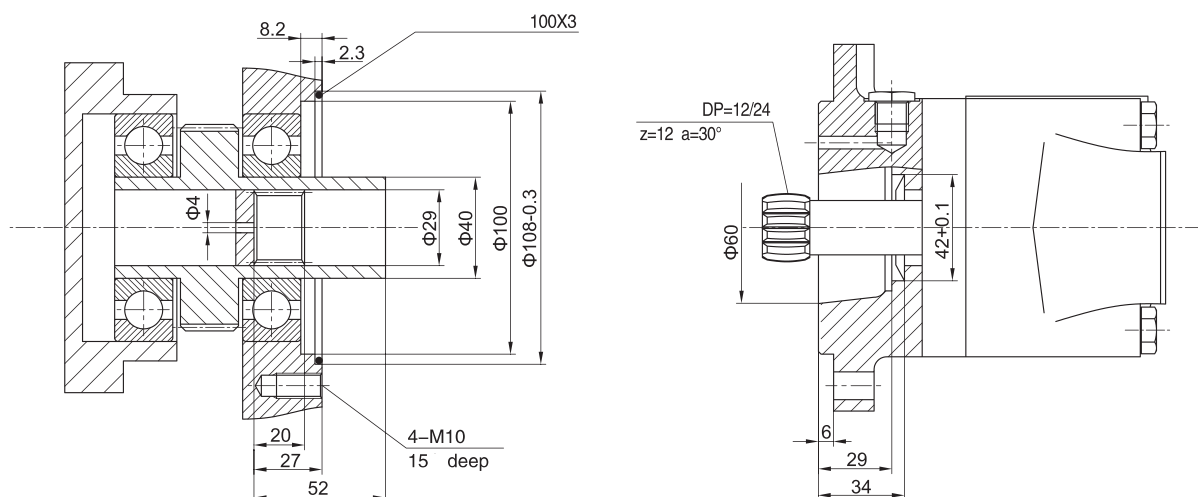
◁-- Motor mounting surface

PM3SY Installation

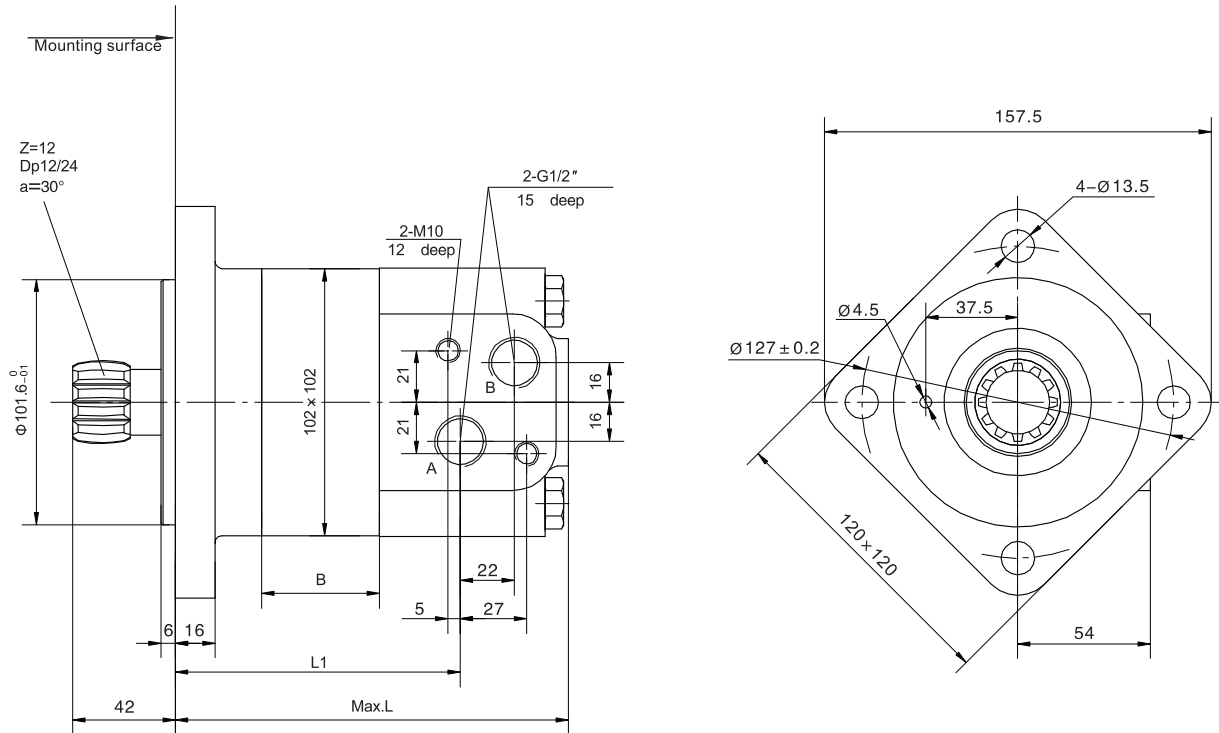


Type	L mm	L1 mm	B mm
PM3SY-80	124	79.5	11
PM3SY-100	127.5	83	14.5
PM3SY-125	132	87.5	19
PM3SY-160	138	93.5	25
PM3SY-200	145	100.5	32
PM3SY-250	154	109.5	41
PM3SY-315	166	121.5	53
PM3SY-400	180	135.5	67
PM3SY-500	193	148.5	80

PM3SY Dimensions of the attached component



PM3S3Y Installation

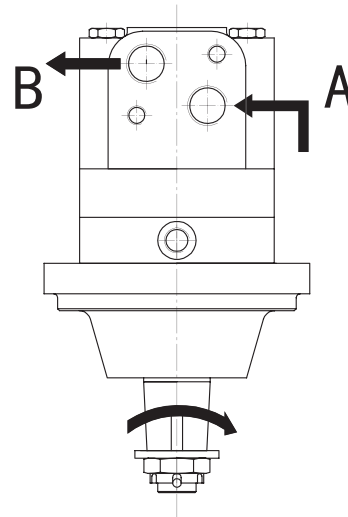
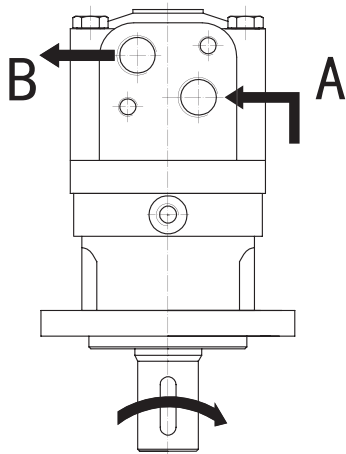


Type	L mm	L1 mm	B mm
PM3S3Y-80	124	79.5	11
PM3S3Y-100	127.5	83	14.5
PM3S3Y-125	132	87.5	19
PM3S3Y-160	138	93.5	25
PM3S3Y-200	145	100.5	32
PM3S3Y-250	154	109.5	41
PM3S3Y-315	166	121.5	53
PM3S3Y-400	180	135.5	67
PM3S3Y-500	193	148.5	80

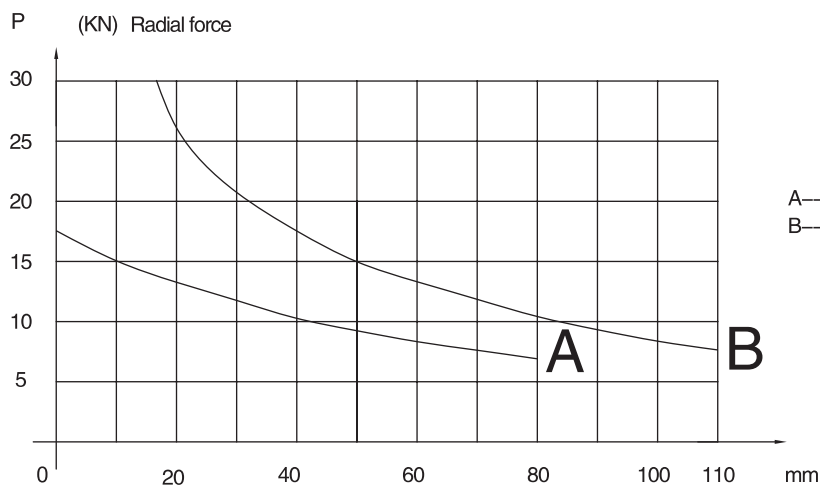
PM3Y, PM3WY, PM3SY Series motor

Direction of shaft rotation: Standard

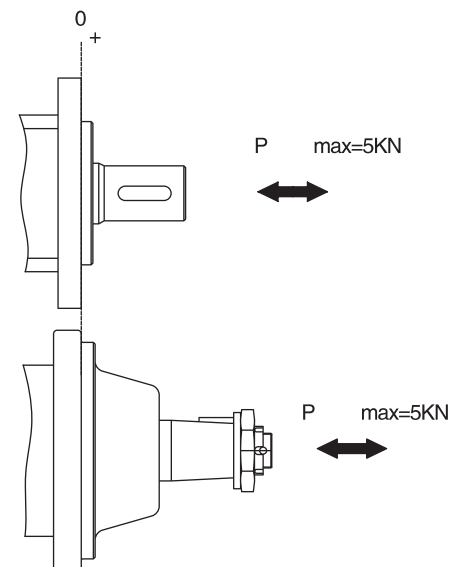
When facing shaft end of motor, shaft to rotate:
Clockwise when port "A" is pressurized,
Counter-clockwise port "B" is pressurized.



Permissible shaft loads



A—PM3Y
B—PM3WY



PM3Y Ordering code

1	2	3	4	5	6	7
PM3Y	-				/	-

1	Series
	Hydraulic motor with disk valve PM3Y

2	Displacement
	ml/r
	80
	100
	125
	160
	200
	250
	315
	400
	500

3	Output
	Ø25 Cylindrical shaft, parallel key 8x7x32 P1
	Ø25.4 Cylindrical shaft, parallel key 6.35x6.35x32 P3
	Ø31.75 Cylindrical shaft, parallel key 7.96X7.96X32 P15
	Ø32 Cylindrical shaft parallel key 10x8x45 P10
	Ø30 splined shaft 6-30x25x6 H1
	Ø34.85 splined shaft. 6-34.85x28.15x8.64 H3
	Ø25.3 splined shaft, 6-25.3x21.4x6.2 H51

4	Flange
	4-Ø13.5 square flange, pilot Ø82.5 A
	2-Ø13.5 Oval flange, pilot Ø82.5 A2
	4-Ø13.5 Square flange, pilot Ø100 A2 II
	4-Ø13.5 Oval flange, pilot Ø82.5 A IV

5	Ports
	G1/2 (15) - G1/4 (12) Y
	M18x1.5 (15) - M14x1.5 (12) Y1
	M22x1.5 (15) - M14x1.5 (12) Y2
	M20x1.5 (15) - M14x1.5 (12) Y3
	7/8-14 UNF (15) - 7/16-20 UNF (12) Y5
	NPT 1/2 (15) - G1/4 (12) Y8
	G1/2 (15) - G1/4 (12) Y10

6	Special features
	Standard

7	Rotation direction
	Standard
	Opposite L

PM3Y Ordering code

1		2	3	4	5		6		7
PM3WY	-					/		-	

1	Series	
	Hydraulic motor with disk valve	PM3WY

2	Displacement	
ml/r	80	
	100	
	125	
	160	
	200	
	250	
	315	
	400	
	500	

3	Output	
	Ø32 Cylindrical shaft parallel key 10x8x45	P10
	Ø30 splined shaft 6-30x25x6	H1
	Ø35 Tapered shaft, taper 1:10, parallel key 6x6x30	Z
	Ø31.75 Tapered shaft, taper 1:8, parallel key 7.96x7.96x25	Z2

4	Flange	
	4-Ø13.5 square flange, pilot Ø125	A

5	Ports	
	G1/2 (15) - M14x1.5 (12)	Y
	7/8-14 UNF (15) - 7/16-20 UNF (12)	Y5

6	Special features	
	Standard	

7	Rotation direction	
	Standard	
	Opposite	L

1		2		3
PM3SY	-		/	

1	Series	
	Hydraulic motor with disk valve	PM3SY

2	Displacement	
ml/r	80	
	100	
	125	
	160	
	200	
	250	
	315	
	400	
	500	

6	Special features	
	Standard	

1		2		3
PM3S3Y	-		/	

1	Series	
	Hydraulic motor with spool valve	PM3S3Y

2	Displacement	
ml/r	80	
	100	
	125	
	160	
	200	
	250	
	315	
	400	
	500	

6	Special features	
	Standard	

PM4 Technical data

Type	Displacement ml/r	Max Pressure Drop			Max torque			Max speed	Max Flow	Max output power	Weight
		Continuous Mpa	Intermittent Mpa	Peak Mpa	Continuous Nm	Intermittent Nm	Peak Nm	Continuous r/min	Continuous L/min	Continuous Kw	
PM4-160 PM4S-160 PM4W-160	158.8	20	24	28	450	559	663	625	100	20.1	20.3
PM4-200 PM4S-200 PM4W-200	200.8	20	24	28	561	714	818	495	100	25.2	20.8
PM4-250 PM4S-250 PM4W-250	252.2	20	24	28	710	883	1021	395	100	25.2	21.4
PM4-315 PM4S-315 PM4W-315	317.5	20	24	28	902	1143	1322	310	100	25.2	22.4
PM4-400 PM4S-400 PM4W-400	401.6	18	21	24	1008	1255	1431	245	100	22	23
PM4-500 PM4S-500 PM4W-500	535.3	16	18	21	1121	1377	1598	185	100	21	24

PM4Y Technical data

Type	Displacement ml/r	Max Pressure Drop			Max torque			Max speed	Max Flow	Max output power	Weight
		Continuous Mpa	Intermittent Mpa	Peak Mpa	Continuous Nm	Intermittent Nm	Peak Nm	Continuous r/min	Continuous L/min	Continuous Kw	
PM4Y-160	158.8	24	27	30	559	639	710	625	100	24.1	20.3
PM4Y-200	200.8	24	27	30	714	789	876	495	100	30	20.8
PM4Y-250	252.2	24	27	30	883	985	1093	395	100	30	21.4
PM4Y-315	317.5	23	26	29	1095	1227	1369	310	100	28.8	22.4
PM4Y-400	401.6	21	23	25	1255	1371	1490	245	100	25.3	23
PM4Y-500	535.3	18	20	23	1377	1521	1750	185	100	24.1	24

1. Intermittent operation the permissible values may occur for max 10% of every minute,
Peak load: the permissible values may occur for max 1% of every minute.

PM4 Performance data

PM4 160[158.8cm³/rev]
Pressure (Mpa)

		Max.cont. Max.int.						
		4	8	10	12	16	20	24
Flow(L/min)	10	85 61	169 60	219 59	264 57	347 55	429 51	514 45
	20	86 123	174 122	225 119	266 116	357 111	441 105	535 97
	40	87 254	173 251	226 248	266 241	366 235	452 228	550 216
	60	79 378	171 374	226 369	266 363	366 356	450 347	549 337
Max.cont.	80	75 502	166 499	220 495	265 488	364 480	447 472	544 457
	100	67 626	154 623	209 618	258 610	355 602	437 594	536 581
Max.int.	125	56 785	142 779	211 773	251 765	345 756	430 746	530 729

PM4 200[200.8cm³/rev]
Pressure (Mpa)

		Max.cont. Max.int.						
		4	8	10	12	16	20	24
Flow(L/min)	10	119 48	221 47	275 46	323 43	431 40	532 38	636 34
	20	120 97	227 96	283 94	330 92	445 89	547 86	661 77
	40	115 199	229 197	281 195	334 191	451 187	560 182	680 171
	60	111 306	225 301	280 298	334 296	454 288	560 282	682 269
Max.cont.	80	103 403	220 401	275 397	333 392	450 385	557 378	680 367
	100	94 503	216 510	272 496	327 492	447 485	551 477	676 470
Max.int.	125	80 627	198 623	262 619	316 614	436 607	538 600	662 584
	150	67 758	184 754	247 749	308 741	425 731	526 720	648 696

PM4 250[252.2cm³/rev]
Pressure (Mpa)

		Max.cont. Max.int.						
		4	8	10	12	16	20	24
Flow(L/min)	10	134 39	277 39	344 38	406 37	542 35	689 33	800 32
	20	139 78	287 77	353 76	419 74	563 72	708 69	828 64
	40	135 159	292 157	361 155	427 152	575 149	723 145	858 137
	60	128 242	285 241	361 238	428 234	574 228	705 223	861 211
Max.cont.	80	125 323	275 322	353 320	420 314	569 309	699 305	860 290
	100	123 404	274 402	344 399	414 395	565 389	695 380	853 366
Max.int.	125	113 505	252 502	330 498	402 492	551 485	682 478	838 463
	150	85 603	235 600	310 596	385 591	535 583	666 576	822 558

PM4 320[317.5cm³/rev]
Pressure (Mpa)

		Max.cont. Max.int.						
		4	8	10	12	16	20	24
Flow(L/min)	10	175 31	345 30	430 29	518 28	697 27	847 26	1011 24
	20	180 62	361 61	449 60	534 58	719 56	871 54	1054 52
	40	182 126	362 125	460 123	542 120	735 117	906 114	1092 109
	60	180 189	361 187	473 185	544 181	733 178	914 176	1096 166
Max.cont.	80	170 251	354 249	459 248	540 243	730 238	906 234	1095 224
	100	161 314	342 313	447 310	537 307	720 303	895 297	1086 284
Max.int.	125	140 391	321 389	427 386	519 382	708 378	874 373	1071 360
	150	113 471	303 469	412 466	501 462	677 457	849 444	1042 438

PM4 400[401.6cm³/rev]
Pressure (Mpa)

		Max.cont. Max.int.						
		3	6	9	12	15	18	21
Flow(L/min)	10	165 25	343 24	524 23	669 22	827 21	982 20	1130 19
	20	167 51	346 50	528 49	679 46	841 44	1001 42	1156 40
	40	165 99	346 98	530 96	685 93	859 90	1020 86	1181 82
	60	163 149	338 147	526 143	682 139	860 135	1024 131	1187 125
Max.cont.	80	155 199	330 197	517 194	672 190	853 186	1014 182	1181 176
	100	140 249	317 247	503 245	662 241	838 235	998 231	1171 225
Max.int.	125	126 311	289 309	490 307	643 303	816 298	977 294	1142 287
	150	118 375	273 373	475 369	623 365	797 357	954 350	1119 350

PM4 500[535.3cm³/rev]
Pressure (Mpa)

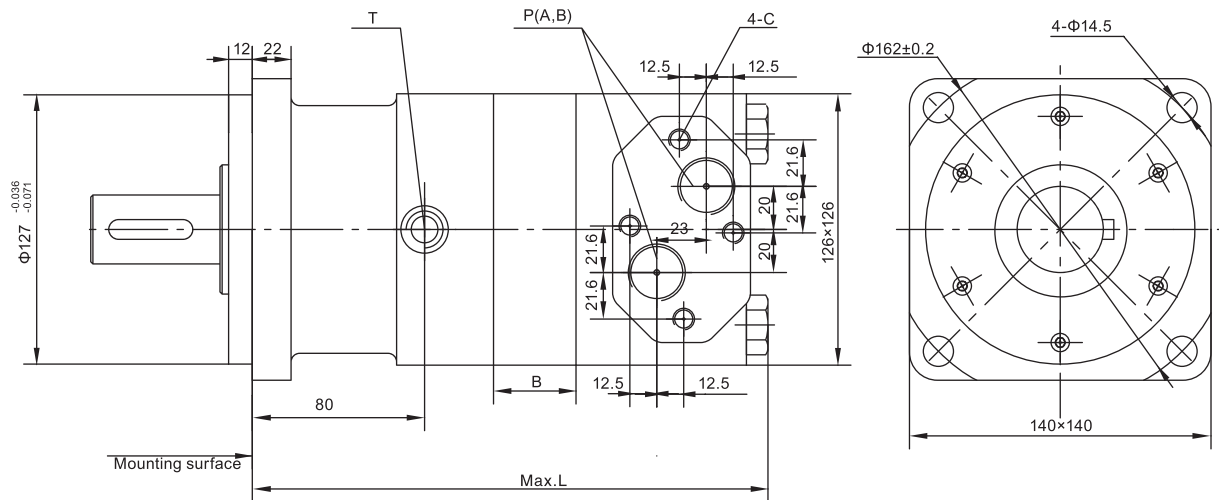
		Max.cont. Max.int.						
		3	6	9	12	14	16	18
Flow(L/min)	10	204 18	415 18	637 18	821 17	966 16	1098 15	1233 13
	20	213 37	427 36	656 35	845 34	984 33	1122 32	1267 30
	40	212 75	429 74	669 73	866 72	1007 70	1145 68	1308 64
	60	207 113	421 112	657 111	866 109	1001 107	1146 105	1296 101
Max.cont.	80	196 151	397 150	640 149	853 147	990 145	1145 143	1289 138
	100	179 189	387 188	626 187	829 185	978 183	1126 181	1272 177
Max.int.	125	168 237	366 236	590 235	807 233	942 231	1103 229	1244 225
	150	135 284	339 283	569 282	785 280	924 278	1074 276	1219 272

(Torque) : 797Nm
(Speed) : 361r/min

Cont.
Int.

PM4 Installation

Square flange A7



Type	L mm	L1 mm	B mm
PM4-160	138	93.5	25
PM4-200	145	100.5	32
PM4-250	154	109.5	41
PM4-320	166	121.5	53
PM4-400	180	135.5	67
PM4-500	193	148.5	80

PM4 Ports code

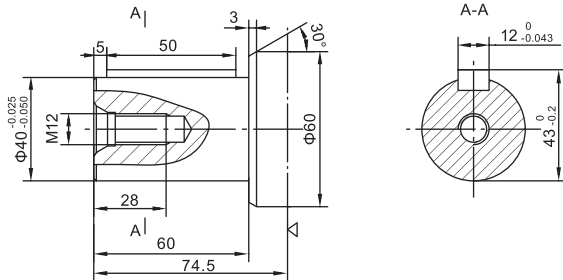
PORTS CODE	P (A, B) (deep mm)	C (deep mm)	T (deep mm)
Y	G3/4 (15)	M10 (12)	G1/4 (12)
Y3	M27x2 (15)	M12 (12)	M14x1.5 (12)
Y4	M22x1.5 (12)	M10 (12)	M14x1.5 (12)
Y8	7/8-14 UNF (15)	-	7/16-20 UNF (12)
Y10	1 1/16-12UN (15)	-	9/16-18 UNF (12)

Note: P(A, B) Ports, C=Mounting thread, T=Drain connection

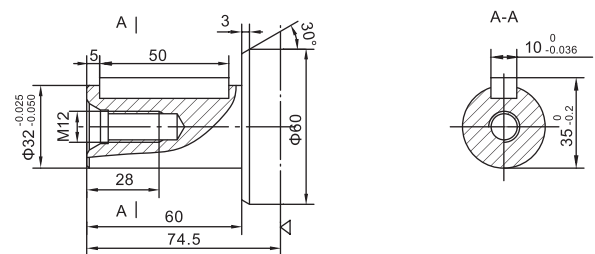
PM4 Shaft version

Only mach A, A1, A7 flange

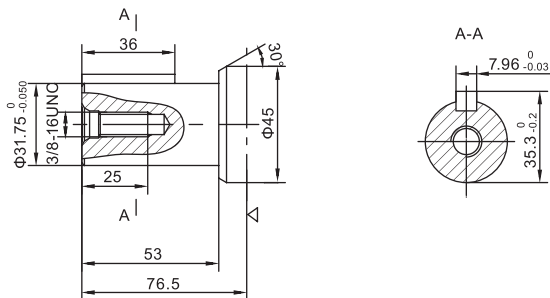
**P: Ø40 Cylindrical shaft,
parallel key 12x8x50**



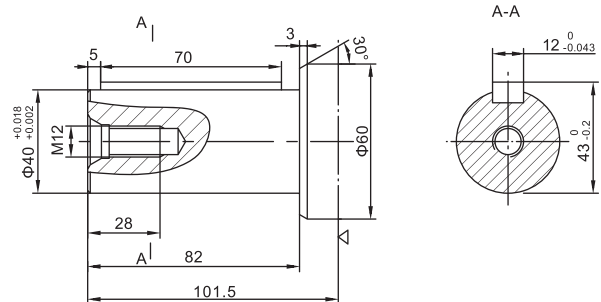
**P1: Ø32 Cylindrical shaft,
parallel key 10x8x50**



**P13: Ø31.75 Cylindrical shaft,
parallel key 7.96x7.96x36**



**H33: Ø40 cylindrical shaft,
parallel key 12x8x70**

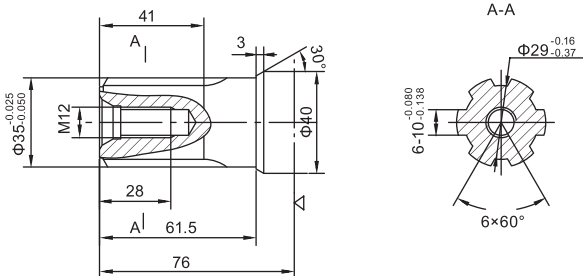


△ : Motor mounting surface

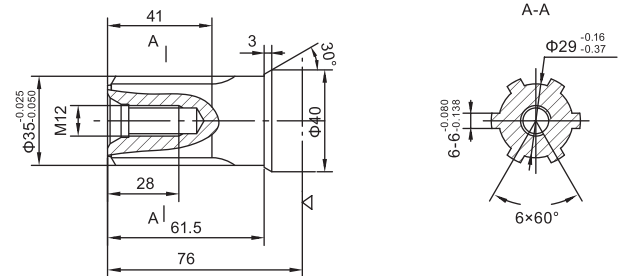
PM4 Shaft version

Only mach A, A1, A7 flange

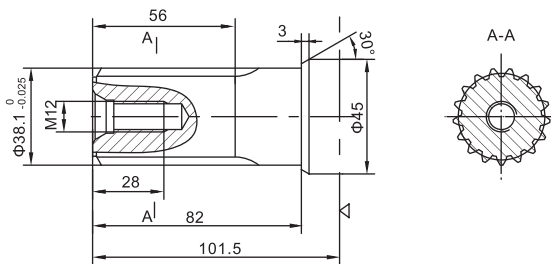
**H4: Ø35 splined shaft,
6-35x29x10**



**H5: Ø35 splined shaft,
6-35x29x6**



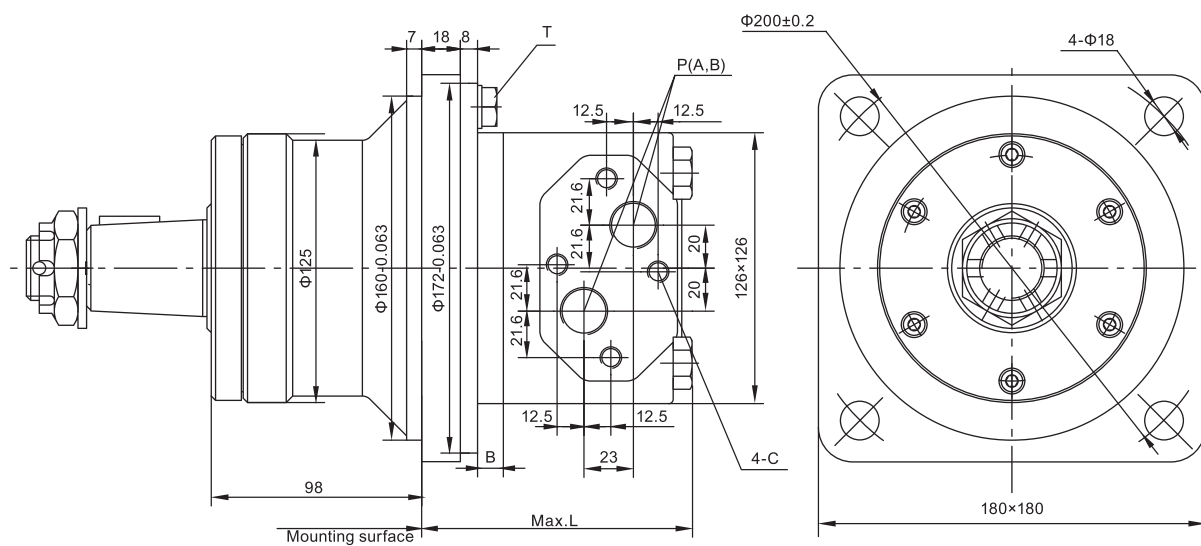
**K3: Ø38.1 involute splined shaft,
17-DP12/4 a=30°**



Note: Flange with A4 type, hydraulic motor shaft from the mounting surface to increase 12mm.

◁ : Motor mounting surface

PM4W Installation



Type	L mm	B mm
PM4W-160	131.5	12
PM4W-200	136	16.5
PM4W-250	142.5	22
PM4W-320	149.5	29
PM4W-400	158.5	38
PM4W-500	177	56.5

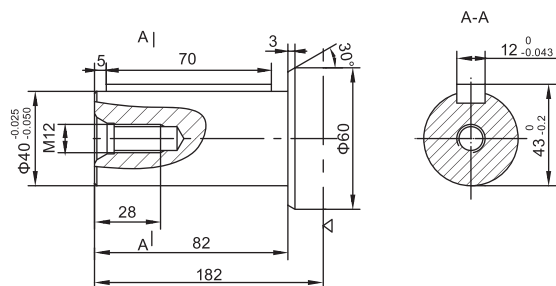
PM4W Ports code

PORTS CODE	P (A, B) (deep mm)	C (deep mm)	T (deep mm)
Y	G3/4 (15)	M10 (12)	G1/4 (12)

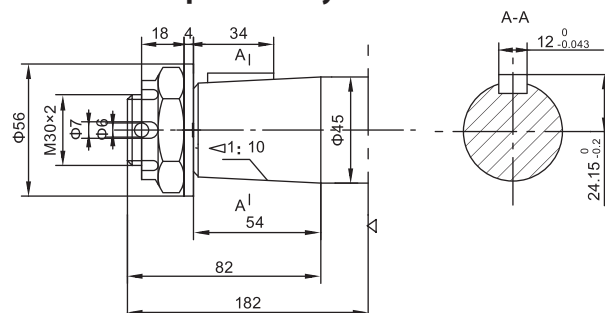
Note: P(A, B) Ports, C=Mounting thread, T=Drain connection

PM4W Shaft version

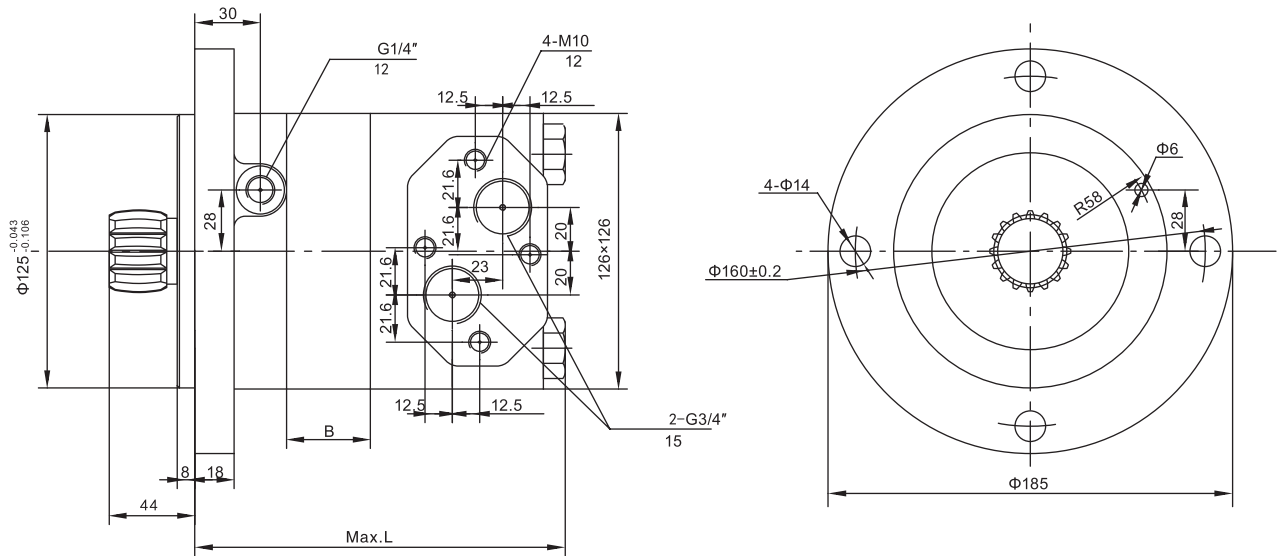
**P31: Ø40 Cylindrical shaft,
parallel key 12x8x70**



**Z2: Ø45 tapered shaft,
taper 1:10
parallel key 12x8x50**

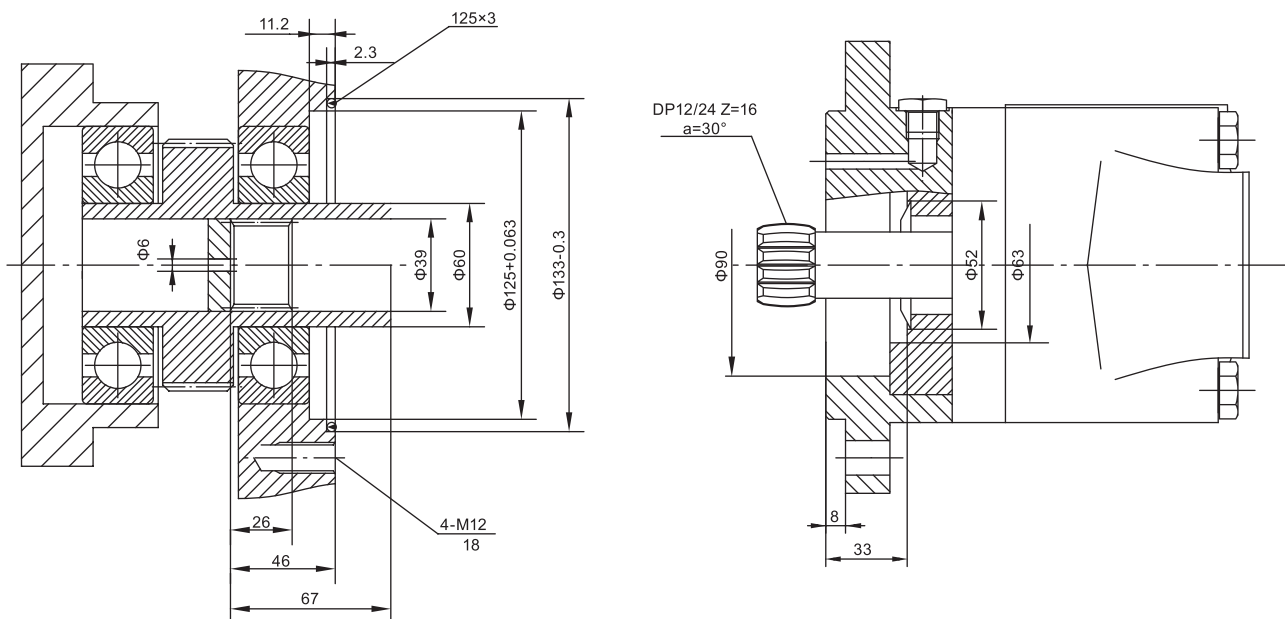


PM4S Installation



Type	L mm	B mm
PM4W-160		
PM4W-200		
PM4W-250		
PM4W-320		
PM4W-400		
PM4W-500		

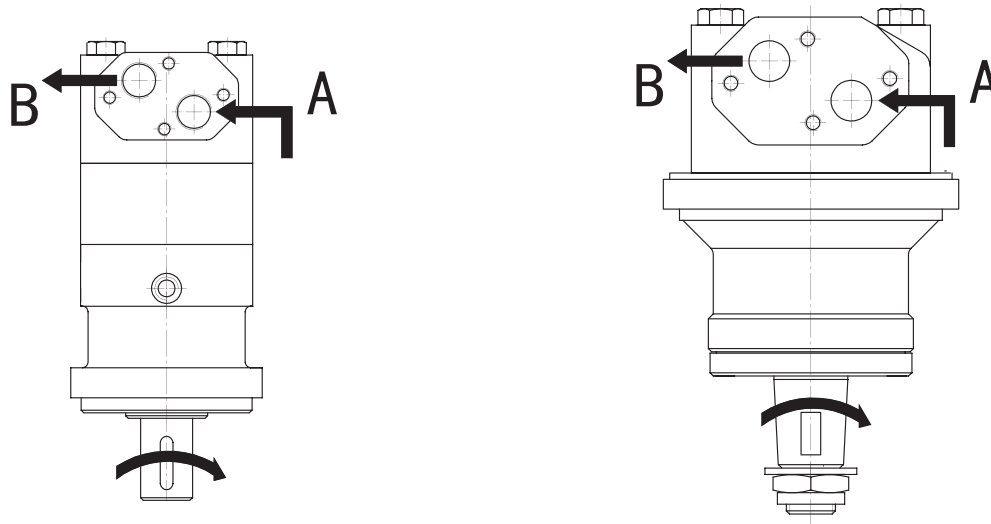
PM4S Shaft version



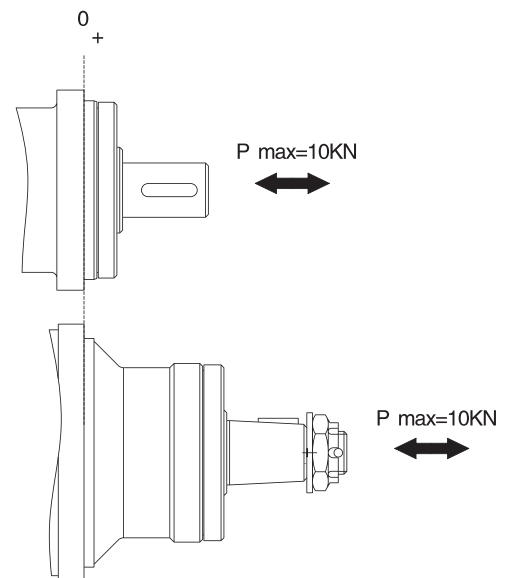
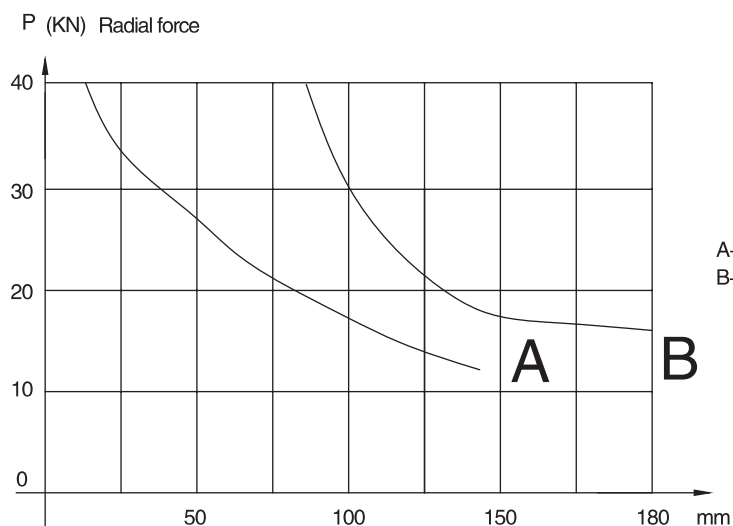
PM4S Installation

Direction of shaft rotation: Standard

When facing shaft end of motor, shaft to rotate:
Clockwise when port "A" is pressurized,
Counter-clockwise port "B" is pressurized.



Permissible shaft loads



PM4 Ordering code

1	2	3	4	5	6	7
PM4	-				/	-

1	Series
	Hydraulic motor with disk valve PM4

2	Displacement
	ml/r
	160
	200
	250
	320
	400
	500

3	Output
	Ø40 Cylindrical shaft, parallel key 12x8x70 P33
	Ø40 cylindrical shaft, parallel key 12x8x50 P
	Ø32 cylindrical shaft, parallel key 10x8x50 P1
	Ø31.75 Cylindrical shaft parallel key 7.96x7.96x36 P13
	Ø35 splined shaft, 6-35x29x10 H4
	Ø35 splined shaft 6-35x29x6 H5
	Ø38.1 involute splined shaft, 17-DP12/4 a=30° K3

4	Flange
	4-Ø14 oval flange, pilot Ø125 A
	4-Ø14 Oval flange, pilot Ø90 A1
	4-Ø14 Oval flange, pilot Ø125 A4
	4-Ø14.5 Oval flange, pilot Ø127 A7

5	Ports
	G3/4 (15) - G1/4 (12) Y
	M27x2 (12) - M14x1.5 (12) Y3
	M22x1.5 (15) - M14x1.5 (12) Y4
	7/8-14 UNF (15) - 7/16-20UNF (12) Y8
	1 1/16-12UN (15) - 9/16-18UNF (12) Y10

6	Special features
	Standard
	With dustproof ring T7

7	Rotation direction
	Standard
	Opposite L

PM4W Ordering code

1		2	3	4	5		6		7
PM4W	-					/		-	

1	Series	
	Hydraulic motor with disk valve	PM4W

2	Displacement	
ml/r		160
		200
		250
		320
		400
		500

3	Output	
	Ø40 Cylindrical shaft, parallel key 12x8x70	P31
	Ø45 Tapered shaft, taper 1:10, parallel key 12x8x28	Z2

4	Flange	
	Ø18 oval flange, pilot Ø160	A

5	Ports	
	G3/4 (15) - G1/4 (12)	Y

6	Special features	
	Standard	

7	Rotation direction	
	Standard	
	Opposite	L

PM4S Ordering code

1		2		3
PM4S	-		/	

1	Series	
	Hydraulic motor with disk valve	PM4S

2	Displacement	
ml/r		160
		200
		250
		320
		400
		500

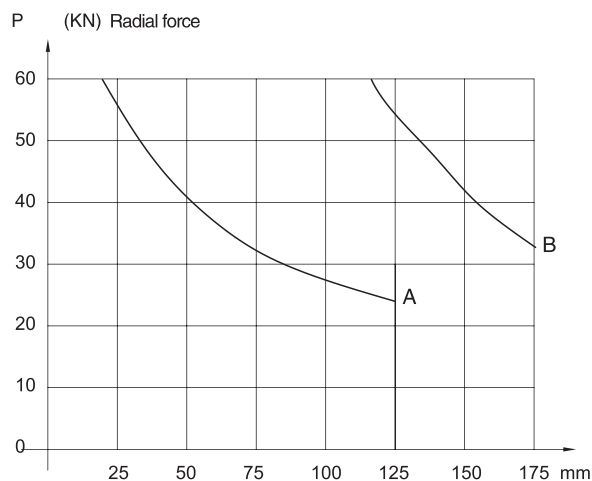
6	Special features	
	Standard	

PM5 Technical data

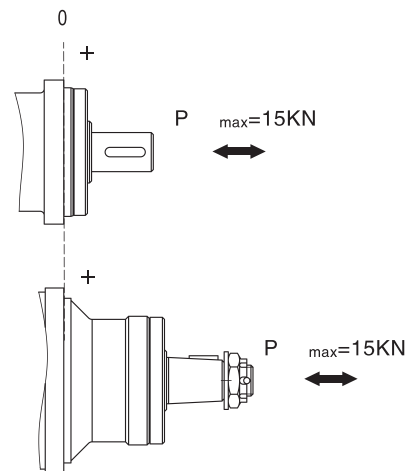
Type	Displacement ml/r	Max Pressure Drop			Max torque			Max speed	Max Flow	Max output power	Weight Kg
		Continuous Mpa	Intermittent Mpa	Peak Mpa	Continuous Nm	Intermittent Nm	Peak Nm	Continuous r/min	Continuous L/min	Continuous Kw	
PM5-315 PM5S-315 PM5W-315	314.9	20	24	28	873	1119	1293	475	150	32	30.7
PM5-400 PM5S-400 PM5W-400	399.7	20	24	28	1108	1440	1650	375	150	32	31.5
PM5-500 PM5S-500 PM5W-500	496.6	20	24	28	1385	1783	2060	300	150	32	32.4
PM5-630 PM5S-630 PM5W-630	617.8	18	21	24	1570	1951	2249	240	150	32	33.6
PM5-800 PM5S-800 PM5W-800	787.4	16	18	21	1773	2122	2481	190	150	32	35.2
PM5-985 PM5S-985 PM5W-985	969.1	14	16	18	1900	2133	2399	150	150	24	37.2

1. Intermittent operation the permissible values may occur for max 10% of every minute,
Peak load: the permissible values may occur for max 1% of every minute.

PM5 Permissible shaft loads



A--- PM5
B--- PM5W



PM5 Performance data

PM5 315[314.9ml/r]
Pressure (Mpa)

		Max.cont. Max.int.						
		3.5	7	10	14	18	20	24
Flow(L/min)	10	132 28	278 25	416 24	576 23	701 21	799 18	945 15
	20	145 58	297 57	440 56	601 55	744 54	846 51	1011 47
	50	141 153	295 152	439 150	618 148	770 145	884 141	1051 134
	75	135 233	287 231	433 228	607 223	771 219	888 214	1057 206
Max.cont.	100	129 311	281 309	427 307	601 304	765 299	885 294	1047 286
	125	116 389	270 387	418 385	592 382	755 378	870 372	1033 365
	150	108 471	260 469	411 467	581 462	745 455	856 447	1019 434
	160	101 503	253 501	406 497	575 493	737 487	846 478	1011 465
Max.int.	200	77 631	235 629	389 624	560 618	716 610	823 598	989 576

PM5 400[399.7ml/r]
Pressure (Mpa)

		Max.cont. Max.int.						
		3.5	7	10	14	18	20	24
Flow(L/min)	10	175 21	367 21	542 20	740 19	923 18	1050 17	1233 15
	20	187 46	380 46	563 45	778 44	964 42	1099 41	1284 39
	50	191 119	384 118	575 118	803 117	992 115	1131 113	1364 108
	75	186 183	376 181	569 178	799 174	995 171	1133 165	1366 159
Max.cont.	100	164 247	367 246	566 244	789 242	988 238	1130 234	1359 225
	125	159 310	357 308	556 305	778 302	974 296	1123 288	1348 281
	150	151 372	344 371	533 369	764 366	962 361	1111 351	1326 340
	175	136 436	330 434	528 431	748 427	944 422	1092 415	1314 407
Max.int.	200	113 498	316 496	511 492	735 485	924 477	1076 470	1294 460

PM5 500[496.6ml/r]
Pressure (Mpa)

		Max.cont. Max.int.						
		3.5	7	10	14	18	20	24
Flow(L/min)	10	232 18	448 18	667 17	919 17	1140 16	1296 14	1540 11
	20	235 38	480 37	707 37	961 35	1180 34	1335 33	1588 30
	50	230 97	479 96	726 95	982 94	1217 92	1388 89	1670 84
	75	223 146	477 145	720 143	987 141	1234 138	1413 133	1692 125
Max.cont.	100	218 197	470 195	717 193	983 190	1235 186	1410 181	1686 173
	125	211 247	463 246	711 244	971 241	1226 237	1399 233	1672 225
	150	193 300	445 299	693 296	966 293	1198 288	1369 282	1663 271
	175	174 350	427 349	681 347	955 343	1186 339	1347 334	1643 324
Max.int.	200	154 401	405 400	648 398	933 395	1167 390	1327 382	1626 370

PM5 630[617.8ml/r]
Pressure (Mpa)

		Max.cont. Max.int.						
		3.5	6	9	12	15	18	21
Flow(L/min)	10	260 15	484 14	753 14	1020 13	1175 13	1436 12	1654 11
	20	267 30	512 30	778 29	1021 29	1219 28	1490 26	1728 24
	50	268 78	514 78	805 77	1054 74	1264 73	1559 71	1813 67
	75	250 118	508 117	800 114	1038 112	1253 110	1557 107	1821 101
Max.cont.	100	245 157	499 156	794 154	1013 152	1251 149	1552 146	1822 140
	125	233 198	478 197	776 195	993 193	1238 191	1538 187	1808 181
	150	222 238	459 237	757 236	985 234	1233 232	1530 229	1787 221
	175	195 279	450 278	738 277	975 274	1205 270	1517 265	1769 260
Max.int.	200	169 320	435 320	696 318	944 316	1187 313	1493 306	1746 294

PM5 800[787.4ml/r]
Pressure (Mpa)

		Max.cont. Max.int.						
		2.5	5	8	10	13	16	18
Flow(L/min)	10	273 11	555 10	816 10	1076 9	1381 8	1683 8	1882 7
	20	277 23	561 22	831 22	1130 21	1431 20	1753 18	1960 16
	50	283 61	572 60	841 58	1142 57	1438 55	1760 53	1967 49
	75	264 93	570 92	840 91	1145 89	1440 85	1756 82	1962 78
Max.cont.	100	247 124	556 123	826 122	1121 120	1423 117	1737 113	1951 107
	125	238 156	526 155	810 153	1099 150	1403 145	1709 141	1942 135
	150	232 188	517 186	794 184	1083 181	1377 177	1685 172	1926 166
	175	211 251	495 249	780 247	1061 244	1354 241	1669 236	1903 229
Max.int.	200	194 302	460 301	752 300	1045 298	1339 293	1652 288	1807 282

PM5 985[969.1ml/r]
Pressure (Mpa)

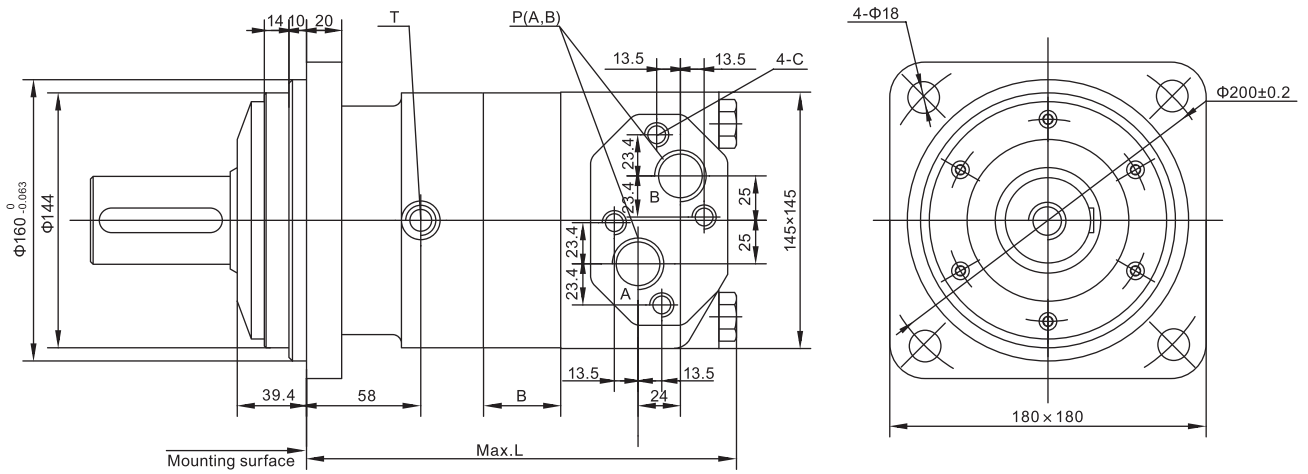
		Max.cont. Max.int.						
		2.5	5	7	10	14	16	
Flow(L/min)	10	305 9	627 9	951 9	1371 8	1936 7	2212 6	
	20	313 29	634 28	957 27	1380 26	1938 23	2222 21	
	50	319 48	641 47	971 46	1392 44	1973 42	2232 39	
	75	311 74	629 73	966 72	1395 69	1961 67	2228 64	
Max.cont.	100	303 100	621 99	962 97	1388 95	1952 92	2196 88	
	125	297 126	611 125	955 123	1379 120	1946 116	2177 112	
	150	272 152	589 151	941 149	1339 147	1922 143	2162 136	
	175	258 178	568 176	926 174	1310 170	1885 165	2114 158	
Max.int.	200	163 245	502 242	849 238	1240 234	1787 230	1991 223	

(Torque) : 1045Nm
(Speed) : 298r/min

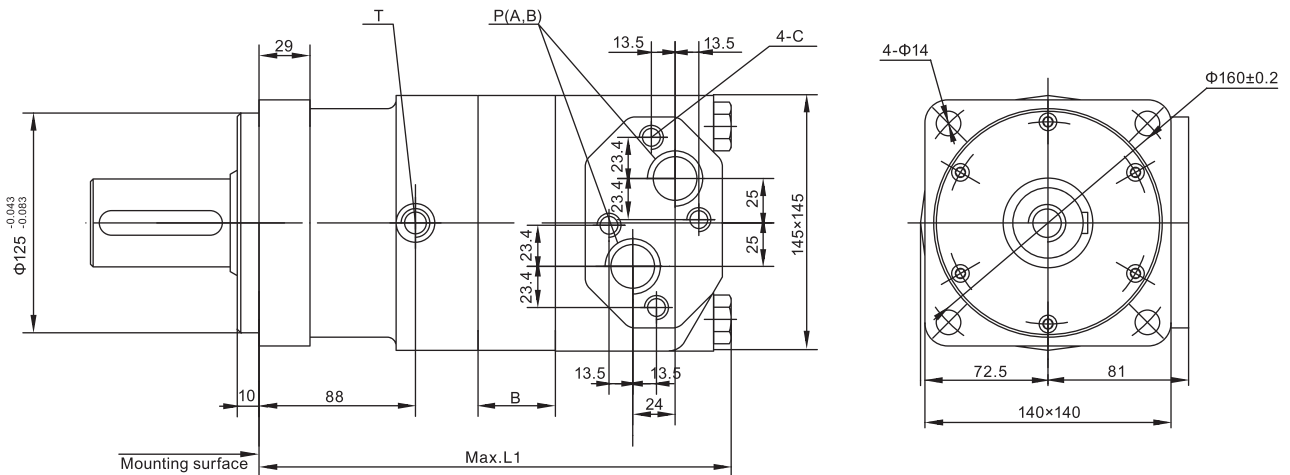
Cont.
Int.

PM5 Installation

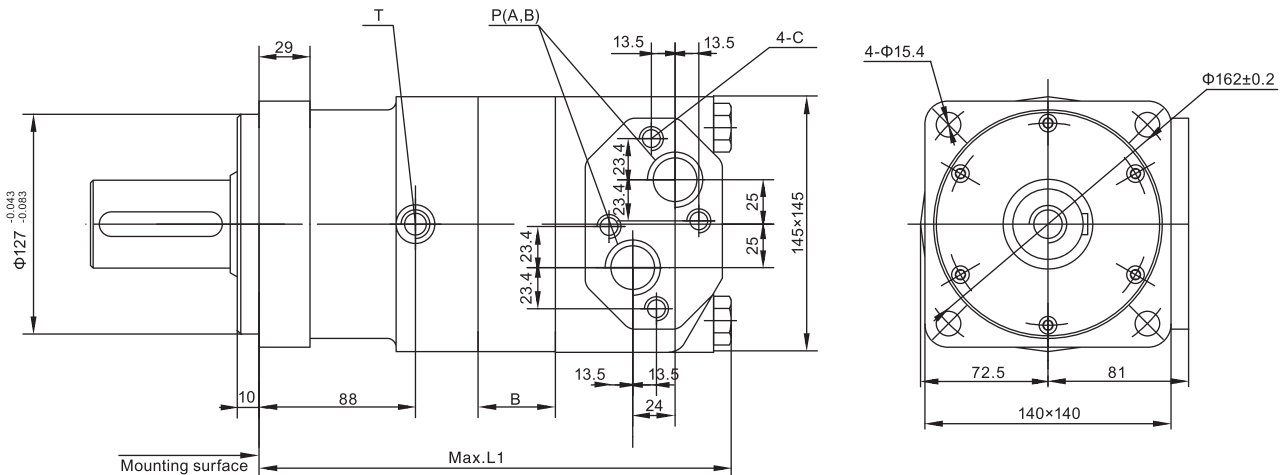
Square flange A



Square flange A1



Square flange A7



Type	L mm	L1 mm	B mm
PM5-160	216	246	19
PM5-200	223	253	26
PM5-250	231	261	34
PM5-320	241	271	44
PM5-400	255	285	58
PM5-500	270	300	73

PM5 Ports code

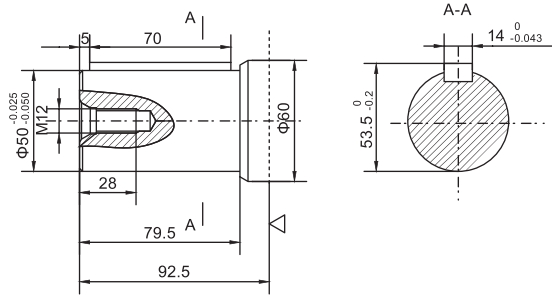
PORTS CODE	P (A, B) (deep mm)	C (deep mm)	T (deep mm)
Y	G1 (18)	M12 (12)	G1/4 (12)
Y1	G3/4 (18)	M12 (12)	G1/4 (12)
Y2	M33x2 (18)	M12 (12)	M14x1.5 (12)
Y3	M27x2 (18)	M12 (12)	M14x1.5 (12)
Y8	1 5/16-12 UN (18)	-	9/16-18UNF (12)

Note: P(A, B) Ports, C=Mounting thread, T=Drain connection

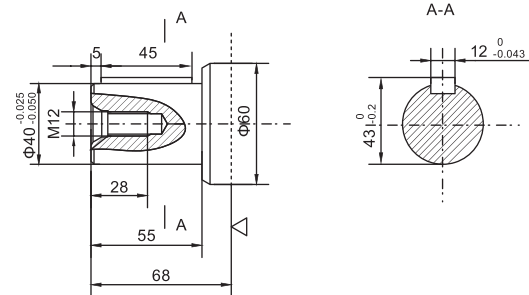
PM5 Shaft version

Only match A1, A7 flange

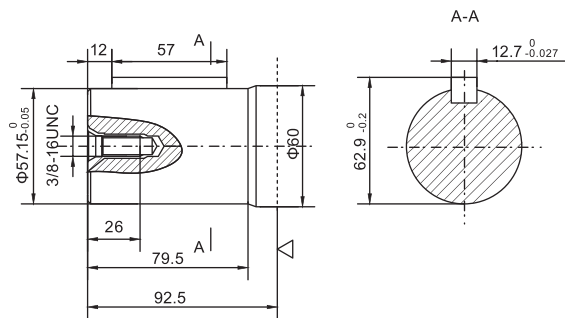
**P: Ø50 Cylindrical shaft,
14x9x70**



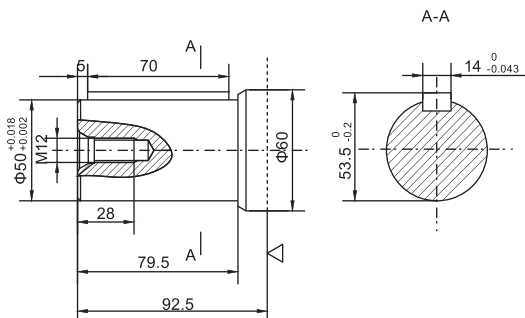
**P1: Ø40 cylindrical shaft,
12x8x45**



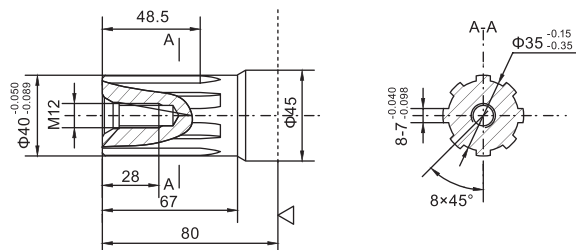
**H12: Ø57.15 cylindrical shaft,
12.7x12.7x57**



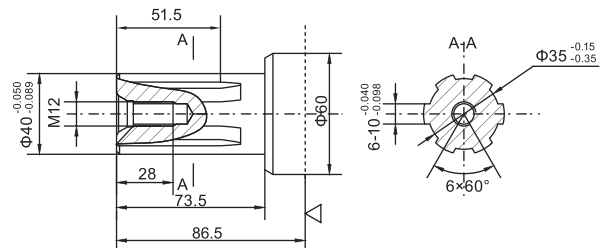
**P99: Ø50 cylindrical shaft,
14x9x70**



**H4: Ø40 splined shaft,
8-40x35x7**



**H5: Ø40 splined shaft,
6-40x35x10**

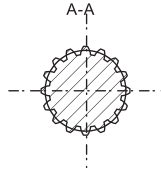
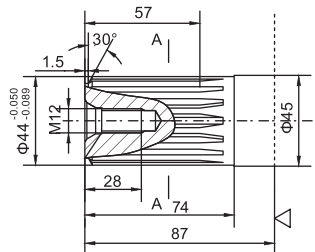


◁ : Motor mounting surface

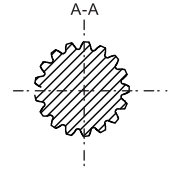
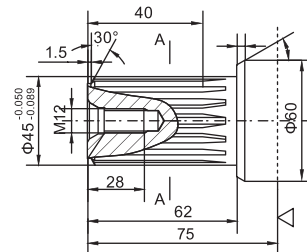
PM5 Shaft version

Only match A1, A7 flange

**K2: Ø44 involute splined shaft,
m2.5 z16 a=30°**



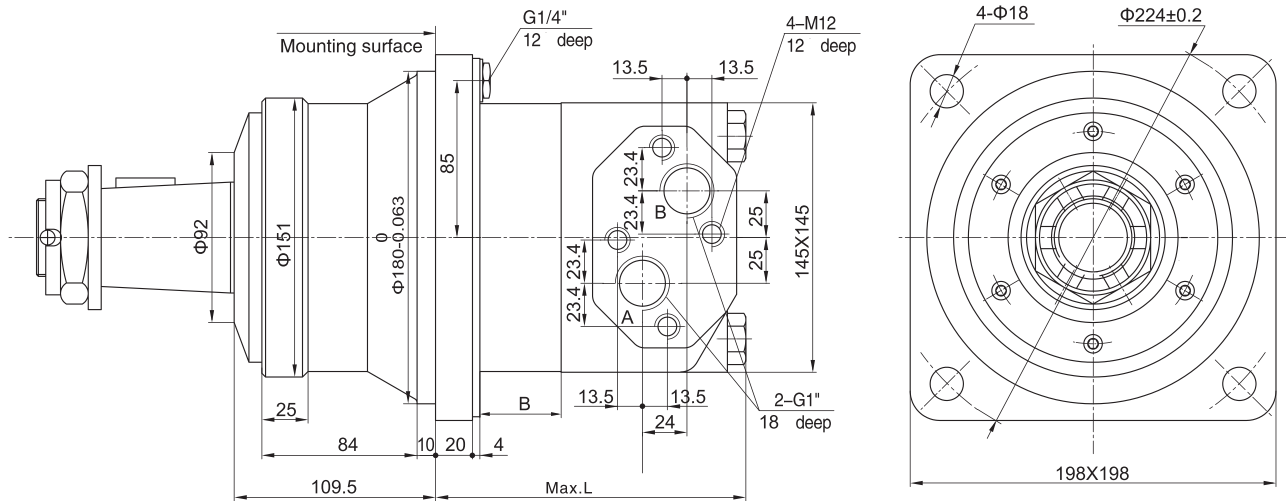
**K3: Ø45 involute splined shaft,
m2.5 z17 a=30°**



Note: Flange with A4 type, hydraulic motor shaft from the mounting surface to increase 30mm.

◁ : Motor mounting surface

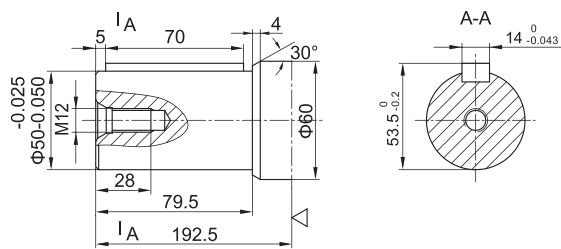
PM5W Installation



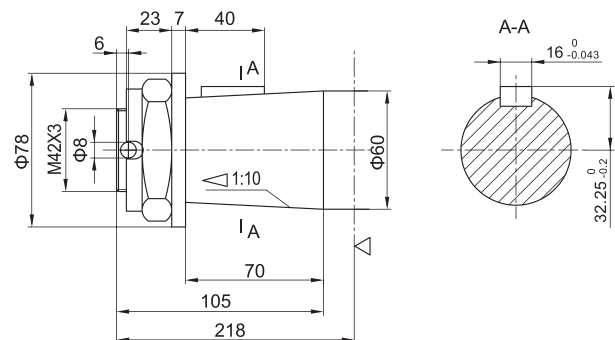
Type	L mm	B mm
PM5W-315	148	19
PM5W-400	155	26
PM5W-500	163	34
PM5W-630	174	44
PM5W-800	187	58
PM5W-985	202	73

PM5W Shaft version

**P: Ø50 Cylindrical shaft,
parallel key 14x9x70**

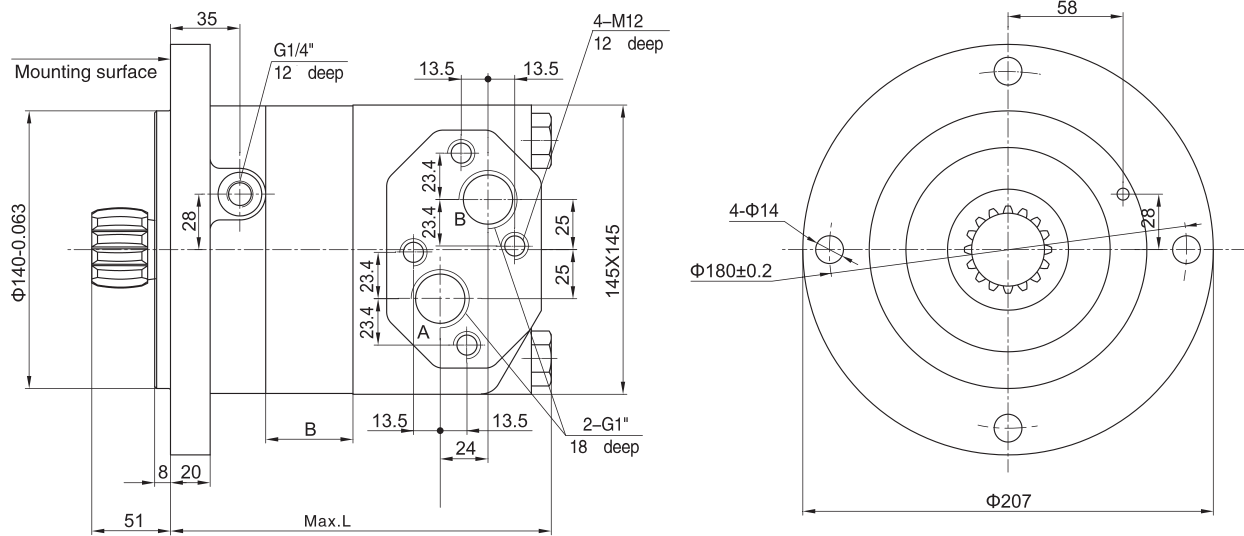


**Z: Ø60 Tapered shaft,
taper 1:10, parallel key 16x10x32**



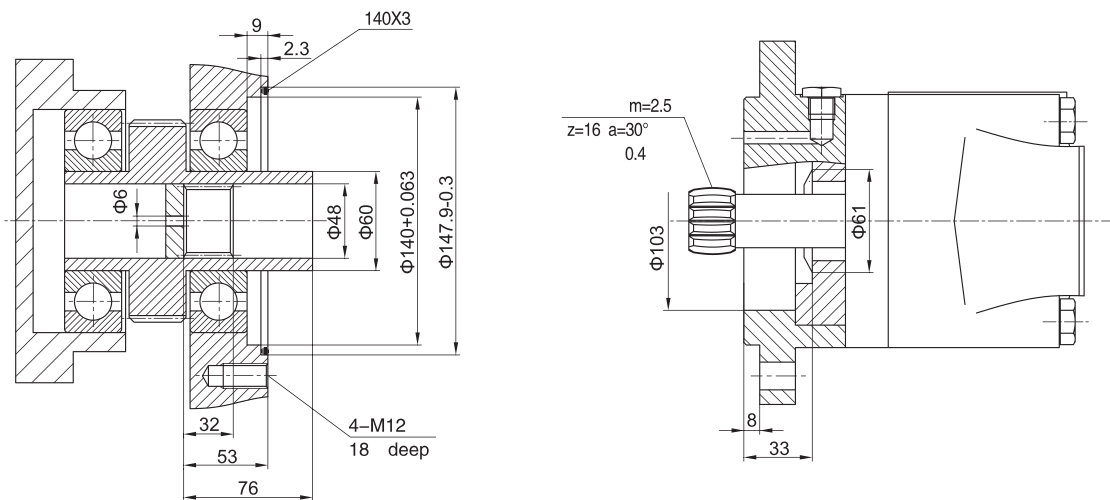
◁-- Motor mounting surface

PM5S Installation



Type	L mm	B mm
PM5S-315	170	19
PM5S-400	177	26
PM5S-500	185	34
PM5S-630	195	44
PM5S-800	209	58
PM5S-985	224	73

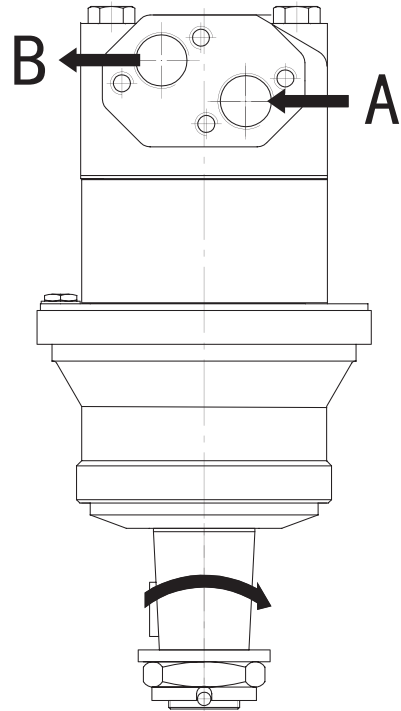
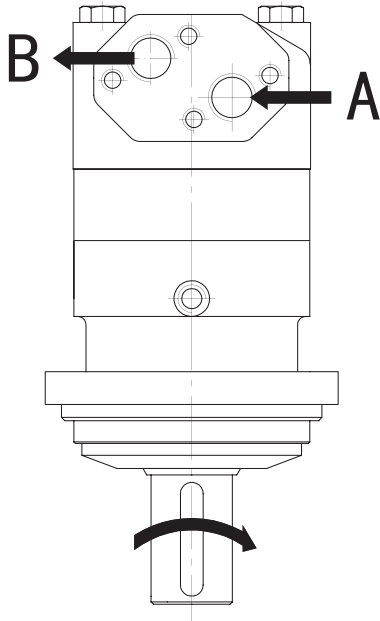
PM5S Shaft version



PM5, PM5W, PM5S Series motor

Direction of shaft rotation: Standard

When facing shaft end of motor, shaft to rotate:
Clockwise when port "A" is pressurized,
Counter-clockwise port "B" is pressurized.



PM5, PM5W, PM5S Ordering code

1	2	3	4	5	6	7
PM5	-				/	-

1	Series
	Hydraulic motor with disk valve PM5

2	Displacement
	ml/r
	315
	400
	500
	630
	800
	985

3	Output
	Ø50 Cylindrical shaft, parallel key 14x9x70 P
	Ø40 cylindrical shaft, parallel key 12x8x45 P1
	Ø57.15 cylindrical shaft, parallel key 12.7x12.7x57 P12
	Ø50 Cylindrical shaft parallel key 14x9x70 P99
	Ø40 splined shaft, 8-40x35x7 H4
	Ø40 splined shaft 6-40x35x10 H5
	Ø44 involute splined shaft, m2.5 z16 a=30° K2
	Ø45 involute splined shaft m2.5 z16 a=30° K3

4	Flange
	4-Ø18 square flange, pilot Ø160 A
	4-Ø14 square flange, pilot Ø125 A1
	4-Ø15.4 square flange, pilot Ø127 A7

5	Ports
	G1 (18) - G1/4 (12) Y
	G3/4 (18) - G1/4 (12) Y1
	M33x2 (18) - M14x1.5 (12) Y2
	M27x2 (18) M14x1.5 (12) Y3
	1 5/16-12 UNC - 9/16-18 UNF (12) Y8

6	Special features
	Standard

7	Rotation direction
	Standard
	Opposite L

PM5, PM5W, PM5S Ordering code

1		2	3	4	5		6		7
PM5W	-					/		-	

1	Series	
	Hydraulic motor with disk valve	PM5W

2	Displacement	
	ml/r	315
		400
		500
		630
		800
		985

3	Output	
	Ø50 Cylindrical shaft, parallel key 14x9x70	P
	Ø60 Tapered shaft taper 1:10 parallel key 16x10x32	Z

4	Flange	
	4-Ø18 square flange, pilot Ø180	A

5	Ports	
	G1 (18) - G1/4 (12)	Y

6	Special features	
	Standard	

7	Rotation direction	
	Standard	
	Opposite	L

PM5S Ordering code

1		2		3
PM5S	-		/	

1	Series	
	Hydraulic motor with disk valve	PM5S

2	Displacement	
	ml/r	315
		400
		500
		630
		800
		985

6	Special features	
	Standard	

PM6 Technical data

Type	Displacement ml/r	Max Pressure Drop			Max torque			Speed Range r/min	Max Flow Continuous L/min	Max output power Continuous Kw	Weight Kg
		Continuous	Intermittent	Peak	Continuous	Intermittent	Peak				
		Mpa	Mpa	Mpa	Nm	Nm	Nm				
PM6-800	759.6	16	18	21	1690	1903	2220	5-200	160	35	54
PM6-1000	949.5	16	18	21	2160	2379	2774	5-160	160	35	56
PM6-1250	1186.8	16	18	21	2650	2973	3469	5-130	160	35	58

1. Intermittent operation the permissible values may occur for max 10% of every minute,
Peak load: the permissible values may occur for max 1% of every minute.

PM6 Performance data

PM6 800[759.6ml/r]
Pressure (Mpa)

Max.cont. Max.int.

	3	5	7	10.5	12	14	16	18
10	233 13	490 13	683 12					
15	230 20	485 20	680 19	1005 17	1145 16	1340 15		
30	297 39	481 38	678 38	1003 37	1142 37	1336 36	1685 35	1921 32
45	295 58	479 58	675 57	1000 57	1140 56	1332 55	1680 54	
60	292 77	476 77	671 76	998 75	1138 75	1329 74	1699 74	
75	288 96	473 95	668 94	995 94	1135 93	1325 92	1695 91	
90	283 115	471 114	660 113	990 113	1132 112	1320 111	1690 110	
105	280 135	463 134	650 133	982 132	1120 130	1312 129		
120		451 153	635 152	968 151	1111 149	1300 147		
140		440 178	620 176	952 175	1101 173			
Max.cont.			612 198	932 197	1092 196			
Max.int.			913 241	1071 240	1071 238			

PM6 1000[949.5ml/r]
Pressure (Mpa)

Max.cont. Max.int.

	3	5	7	10.5	12	14	16	18
15	366 14	602 13	836 13	1250 12	1438 11			
30	364 31	600 31	834 30	1248 30	1432 29	1669 28		
45	362 46	598 45	832 45	1245 44	1428 43	1667 43		
60	360 62	595 61	830 61	1242 60	1420 59	1662 58	2012 57	2316 54
75	358 77	593 76	828 75	1240 74	1418 73	1658 72	2006 72	
90	354 93	590 92	826 92	1238 91	1415 90	1651 89	2003 88	
105	350 108	581 107	801 106	1221 105	1402 104	1648 103		
120		571 123	791 122	1210 121	1394 120	1432 119		
140		552 143	772 142	1196 140	1385 139	1425 138		
Max.cont.			761 163	1186 162	1368 161			
Max.int.			742 193	1165 192	1352 191			

(Torque) : 1165Nm
(Speed) : 192r/min

Cont.
Int.

PM6 Performance data

PM6 1250[1186.8ml/r
Pressure (Mpa)

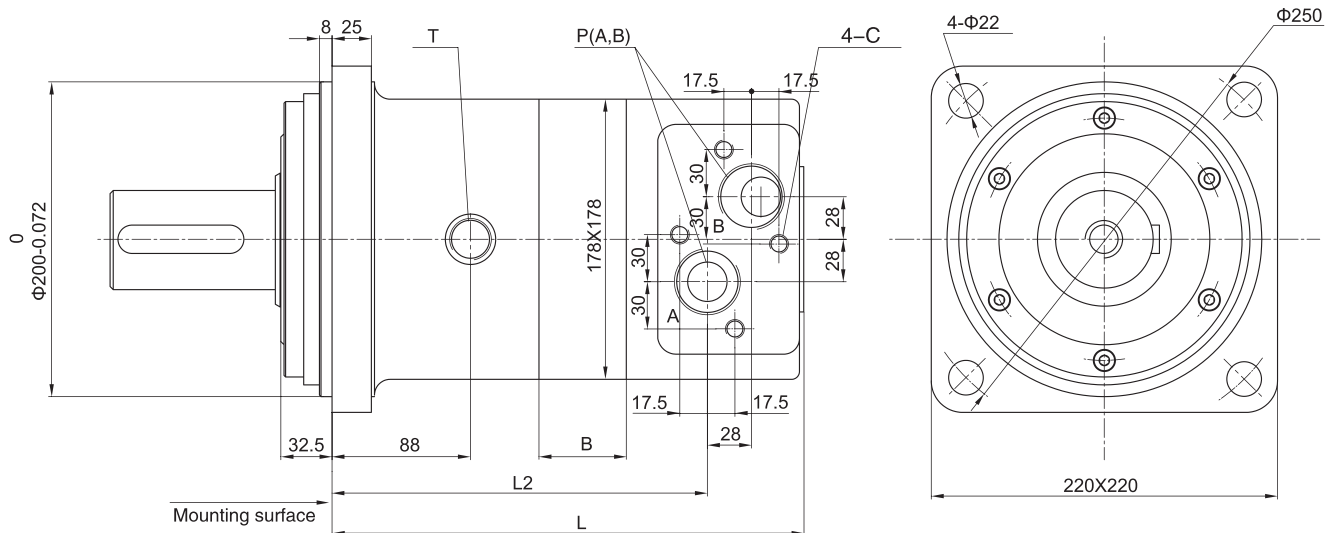
	3	5	7	10.5	12	14	16	18
30	468 25	770 24	1070 23	1602 22				
45	465 37	767 36	1068 35	1599 34	1826 33			
60	462 50	763 49	1065 48	1596 47	1822 45			
75	460 62	760 61	1062 60	1592 58	1818 57	2123 57	2654 56	2978 52
90	456 74	758 73	1060 72	1590 71	1816 70	2118 68	2652 67	2975 64
105	453 87	756 86	1058 85	1587 84	1814 82	2116 82	2650 81	2973 79
120		751 98	1050 97	1582 96	1802 95	2110 93	2641 92	2963 91
140		742 113	1041 112	1561 111	1792 109	2008 107		
Max.cont.			1032 129	1550 128	1782 127	1986 126		
Max.int.			1020 153	1532 152	1770 151			

(Torque) : 1532Nm
(Speed) : 152r/min

Cont.
Int.

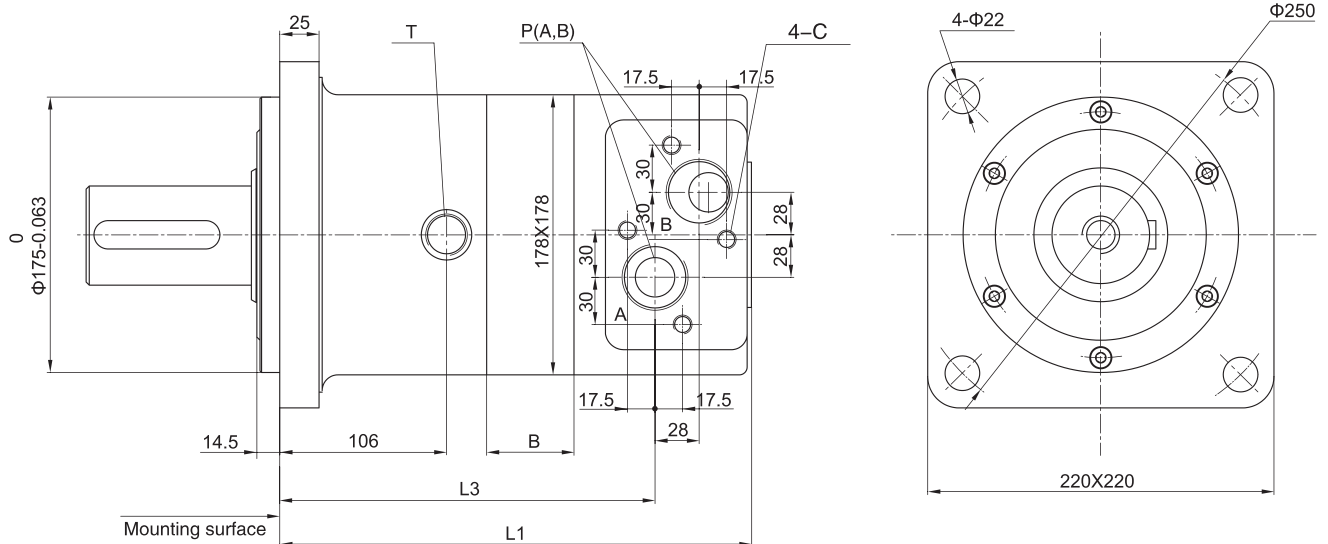
PM6 Installation

4-Ø22 Square flange A



PM6 Installation

4-Ø22 Square flange A1



Type	L mm	L1 mm	L2 mm	L3 mm	B mm
PM6-800	278	296	217	235	33
PM6-1000	288	306	227	245	43
PM6-1250	300	318	239	257	55.5

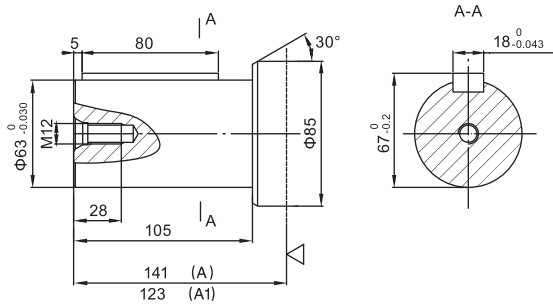
PM6 Ports code

PORTS CODE	P (A, B) (deep mm)	C (deep mm)	T (deep mm)
Y	G1-1/4 (20)	M12 (12)	G3/8" (12)
Y1	Ø36 (20)	M12 (12)	G3/8" (12)

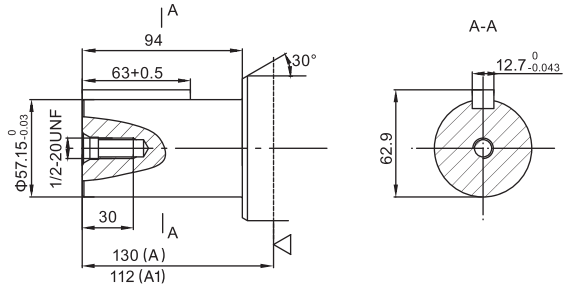
Note: P(A, B) Ports, C=Mounting thread, T=Drain connection

PM6 Shaft version

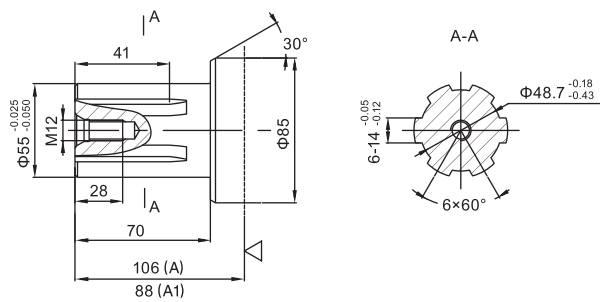
**P: Ø63 Cylindrical shaft,
parallel key 18x11x80**



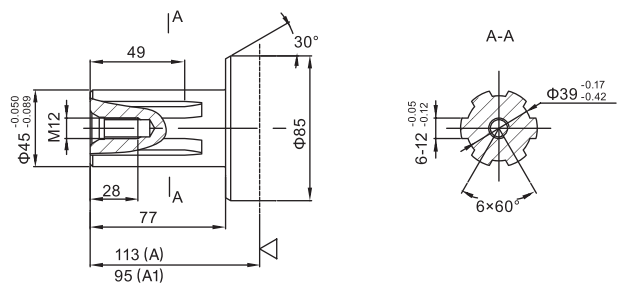
**P1: Ø57.15 cylindrical shaft,
parallel key C 12.7x11x63**



**P: Ø55 splined shaft,
6-55x48.7x14**



**P1: Ø45 splined shaft,
6-45x39x12**

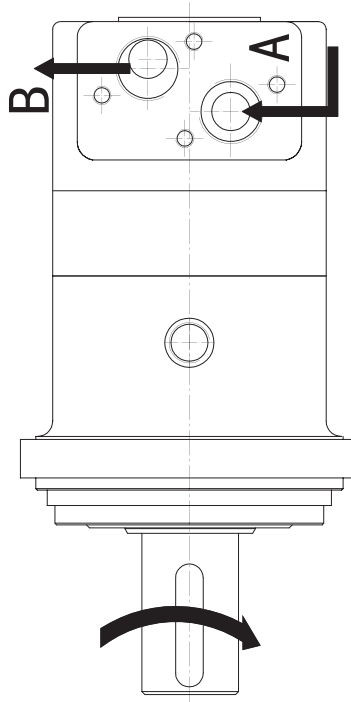


◁ : Motor mounting surface

PM6 Series motor

Direction of shaft rotation: Standard

When facing shaft end of motor, shaft to rotate:
Clockwise when port "A" is pressurized,
Counter-clockwise when port "B" is pressurized.



PM6 Ordering code

1		2	3	4	5		6		7
PM6	-					/		-	

1	Series	
	Hydraulic motor with disk valve	PM6

2	Displacement	
	ml/r	800
		1000
		1250

3	Output	
	Ø63 Cylindrical shaft, parallel key 18x11x80	P
	Ø57.15 cylindrical shaft parallel key C 12.7x11x63	P1
	Ø55 Splined shaft, 6-55x48.7x14	H1
	Ø45 Splined shaft, 6-45x39x12	H2

4	Flange	
	4-Ø22 square flange, pilot Ø200	A
	4-Ø22 square flange, pilot Ø175	A1

5	Ports	
	G1 1/4 (20) - G3/8" (12)	Y
	Ø36 (20) - G3/8" (12)	Y1

6	Special features	
	Standard	

7	Rotation direction	
	Standard	
	Opposite	L

Comparison

	PMP	PMR	PM3Y	PM3SY	PM4	PM4S	PM5	PM5S	PM6
Danfoss	OMP	OMR	OMS	OMSS	OMT	OMTS	OMV	OMVS	-
M+S	EPM	EPRM	EPMS	-	EPMT	-	EPMV	-	-

Usage and notice

1. Select the motor based on standard technical data.
2. The motor must be mounted concentrically with the driven component, and the supporting bracket must have sufficient rigidity.
3. Recommended operating oil temperature is 25–55°C, with a maximum of 65°C. Hydraulic oil with a kinematic viscosity of 25–70 mm²/s at 50°C is recommended. A 20 µm filter is advised. The oil must be kept clean, as contamination may severely damage the motor.
4. For PM4–6 models, a drain line should be connected from the drain port to the oil tank. For PMR, PMP, and PM3 models, back pressure should be below 0.7 MPa. If back pressure exceeds 1.0 MPa, a drain line to the oil tank is required.
5. If a non-standard motor is required, please contact our technical department.

Common unit and conversion

Unit of measurement	Formulas
N	1 N = 10 ⁻³ KN
kgf	1 kgf = 9.81 N
lbf	1 lbf = 4.45 N
bar	1 bar = 10 ⁵ Pa = 14.5 Psi
Pa	1 Pa = 1N/m ² = 10 ⁻⁶ Mpa
N · m	
kgf · m	1 kgf · m = 9.81 N·m

Formula

$$n = \frac{q_s}{V} \eta_v \quad (\text{r/min})$$

$$q_s \text{ --- L/min}$$

$$V \text{ --- L/r}$$

$$\eta_v \text{ ---}$$

$$T_s = \frac{\Delta p V}{2\pi} \eta_m \quad (\text{N} \cdot \text{m})$$

$$\Delta p \text{ --- MPa}$$

$$V \text{ --- ml/r}$$

$$\eta_m \text{ ---}$$

$$P_s = n \cdot T_s / 9550$$

Introduction

Features and applications

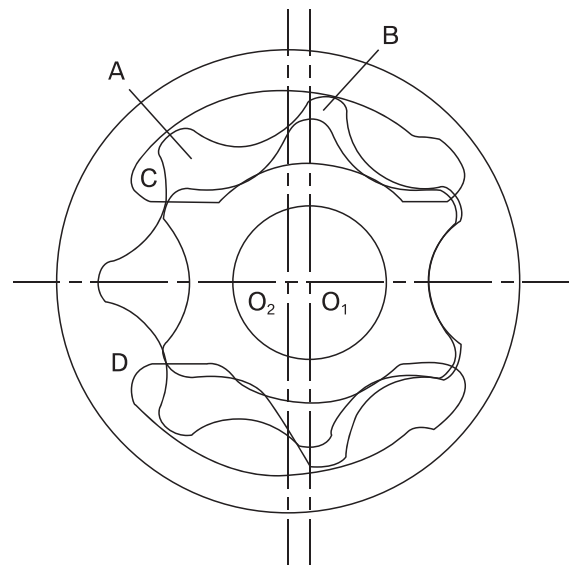


The cycloid rotor pump is a type of internal gear pump with a special tooth profile, also known as a cycloidal internal gear pump. It features a compact size, simple structure, stable operation, low noise, and excellent high-speed performance. It is widely used in hydraulic systems across industries such as chemical processing, machinery, food, and textiles.

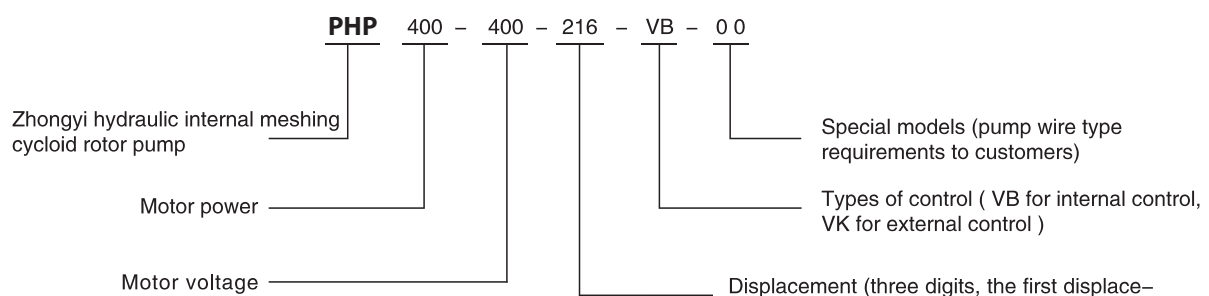
Characteristics

Compared with external involute gear pumps, cycloidal internal gear pumps offer a more compact structure, fewer components, lower noise, reduced flow pulsation, and good self-priming performance, making them suitable for high-speed applications.

Compared with involute gear pumps, they also provide larger displacement and a simpler overall design.



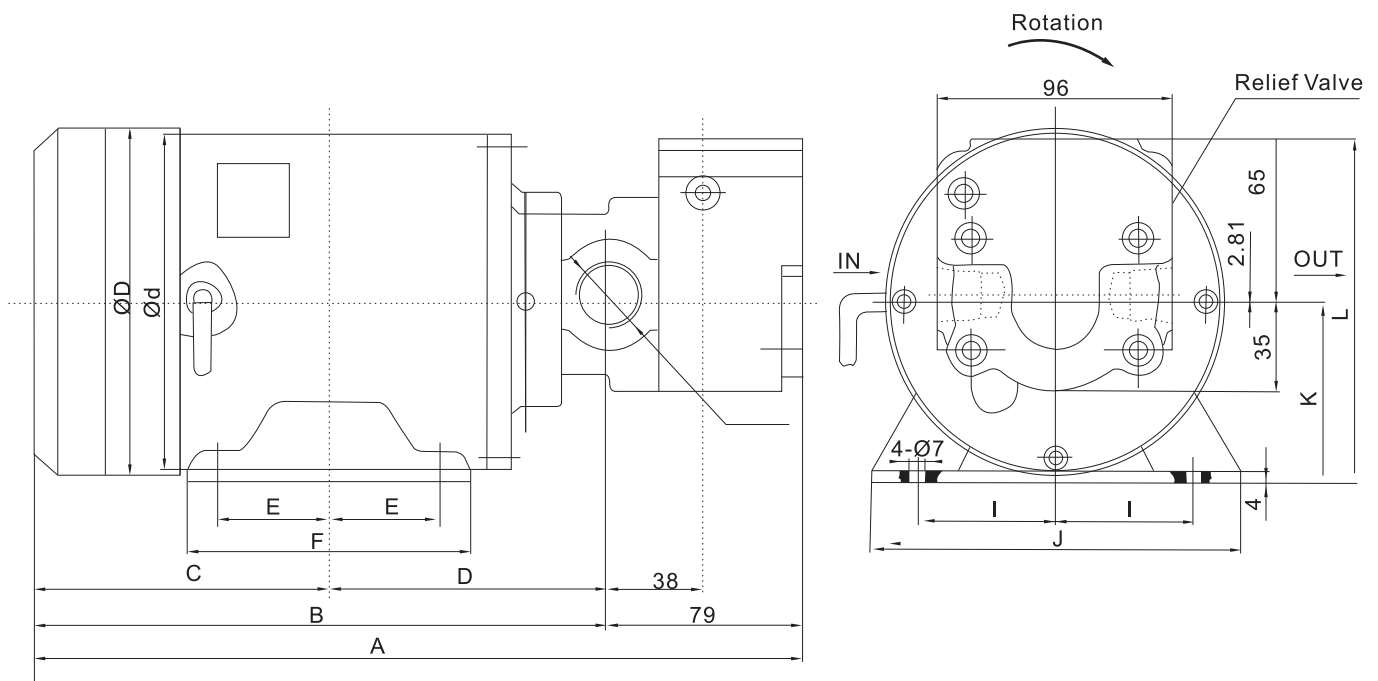
PHP Ordering code



PHP Technical data

Type	Displacement ml/r	Rotor thickness mm	Oil inlet and outlet Rc	1500min-1 Power		
				200W	400W	750W
				Working pressure / Mpa		
206	6	10	1/2	0.7	1.8	
208	8	14		0.5	1.3	
210	10	17		0.4	1.1	2.5
212	12	20	3/4		0.9	2.0
216	16	27			0.7	1.5
220	20	34				1.2

PHP Introduction



Type	A	B	C	D	E	F	I	J	K	L	Ød	ØD
200W	297	218.5	112.5	106	40	102	50	135	63	128	118	127
400W	312	233.5	120.5	113	45	115	56	150	71	136	134	140
750W	348	262	135	122	50	130	62.5	165	80	145	150	153

Introduction

Features and applications



The ZPMR series consists of PMR orbital hydraulic motors integrated with a multi-disc brake. They feature a shuttle valve and an internal hydraulic control system, offering a compact size, short radial dimension, low weight, and easy installation. They are widely used in construction machinery, marine equipment, cranes, mining machinery, ports, and the metallurgical industry.

Ordering code

		1	2	3	4		5
ZPMR	-					/	

1. Displacement

2. Output shaft

P1 = standard flat key

H1 = Standard spline key

3. Mounting Flange

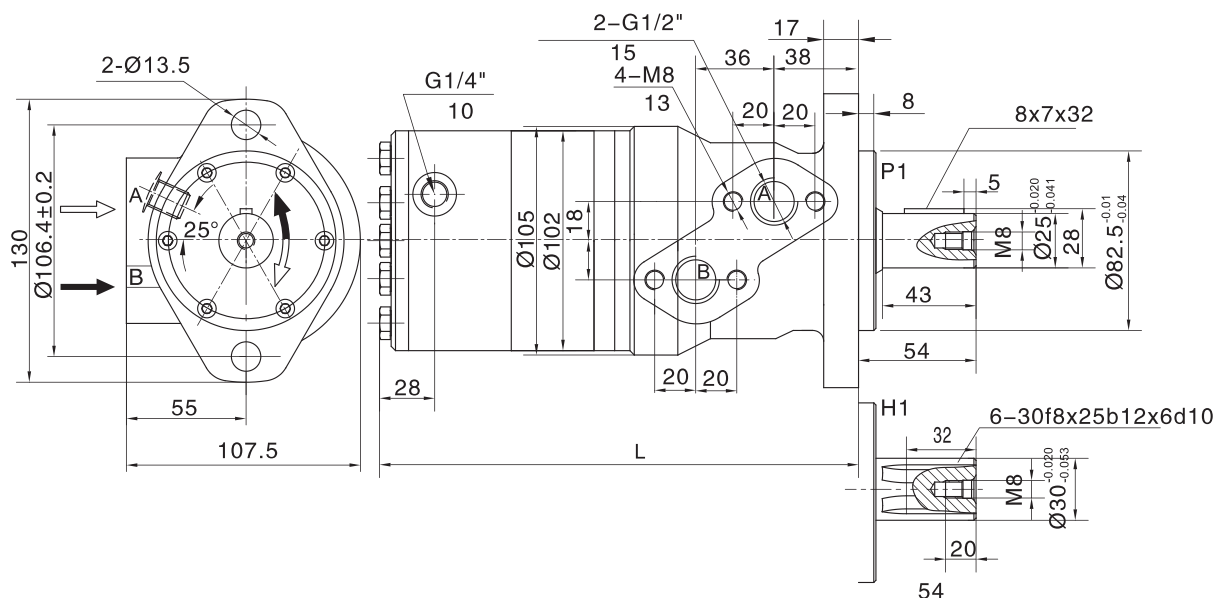
4. Ports

5. Special Features

Technical data

Type	Displacement	Max pressure	Max torque	Speed range	Releasing pressure	Static brake torque	Associated motor	Weight	Length (L)
	ml/r	Mpa	Nm	r/min	Mpa	Nm		kg	mm
ZPMR-80	80.5	14	152	20-500	1.3-1.7	250-300	PMR-80	12.3	240
ZPMR-100	100.5	14	194	20-450	1.3-1.7	250-300	PMR-100	12.5	244
ZPMR-125	126.3	14	237	20-400	1.3-1.7	250-300	PMR-125	12.8	248
ZPMR-160	160.8	14	310	20-300	2.6-3.2	450-500	PMR-160	13	254
ZPMR-200	200.9	14	369	20-250	2.6-3.2	450-500	PMR-200	13.5	261
ZPMR-250	252.6	11	380	15-200	2.6-3.2	450-500	PMR-250	14	270
ZPMR-315	321.5	9	380	15-160	2.6-3.2	450-500	PMR-315	14.5	282

ZPMR-80(80-315) P1 (H1) A II Y Installation



Introduction

Features and applications



The ZPMR/N hydraulic motor-brake consists of a PMR geroler motor combined with a multi-disc brake, equipped with a shuttle valve and a built-in hydraulic control circuit. It offers a simple structure, compact radial dimensions, and easy installation.

The brake operates as a point-braking system with six braking points distributed around a full rotation. After receiving a stop signal, the motor may continue rotating up to 60 degrees before braking is applied. It is not designed for abrupt stopping or precise positioning.

This system is widely used in injection moulding machines, transmission systems, and horizontal pulling applications.

Ordering code

		1	2	3	4		5
ZPMR	-					/N-	

1. Displacement

2. Output shaft

P1 = standard flat key

H1 = Standard spline key

3. Mounting Flange

4. Ports

5. Special Features

Technical data

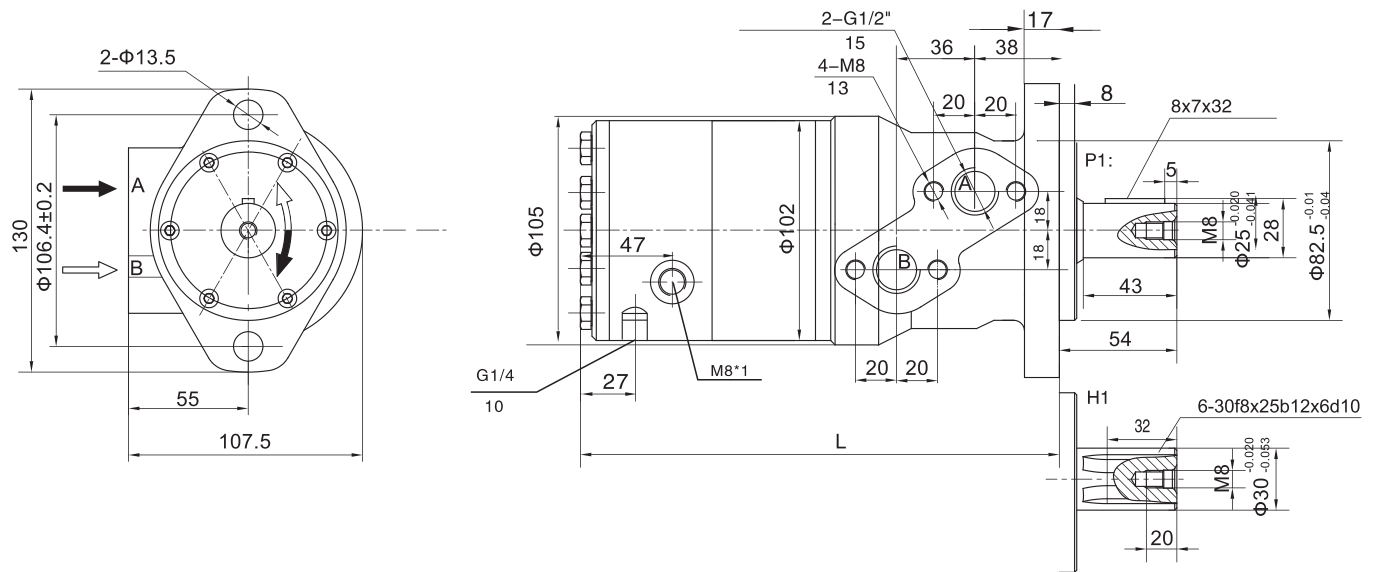
Type	Displacement ml/r	Max pressure Mpa	Max torque Nm	Speed range r/min	Braker		Associated motor	Length (L) mm	Weight kg
					Releasing pressure Mpa	Brake torque Nm			
ZPMR-80/N	80.5	14	152	60-500	2.4	450	PMR-80	187	9.4
ZPMR-100/N	100.5	14	194	50-480	2.4	450	PMR-100	190	9.5
ZPMR-125/N	126.3	14	237	40-380	2.4	450	PMR-125	195	9.8
ZPMR-160/N	160.8	14	310	30-300	2.4	450	PMR-160	201	10
ZPMR-200/N	200.9	14	369	25-240	2.4	450	PMR-200	208	10.5
ZPMR-250/N	252.6	11	380	20-195	2.4	450	PMR-250	217	11
ZPMR-315/N	321.5	9	380	15-150	2.4	450	PMR-315	229	11.5
ZPMR-400/N	401.9	7	380	10-130	2.4	450	PMR-400	243	13.5

Notice:

1. ZPMR/N Hydraulic Motor-Brake is only for static brake.

2. When the motor is braked: for the internal control motor, the input and out put line can not be pressured, otherwise it will not be braked; for external control motor, the control line can not be pressured, otherwise it will not be braked.

ZPMR (80-400) P1 (H1) A II Y/N Installation



Introduction



The ZPM series consists of PM orbital hydraulic motors integrated with a multi-disc friction brake. The brake is automatically released or engaged when the motor starts or stops, ensuring stable holding without requiring working pressure. The control inlet can also be connected to other control circuits to support various applications, making it suitable for high-system-pressure operating conditions.

Technical data

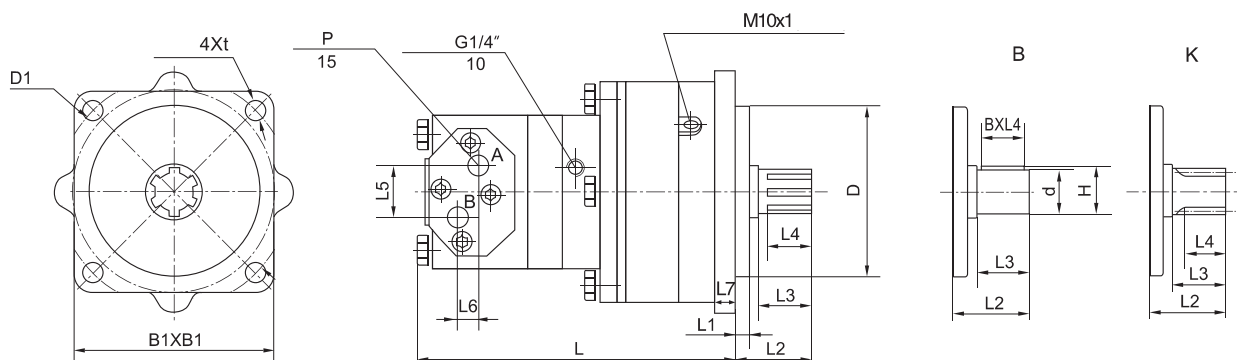
Type	Displacement ml/r	Max pressure Mpa	Max torque Nm	Speed range r/min	Braker		Associated motor	Weight kg
					Releasing pressure Mpa	Brake torque Nm		
ZPM3/80	80.5	16	156	15-620	2.6	245	PM3/80	18
ZPM3/100	100.5	16	193	15-500	2.6	245	PM3/100	18
ZPM3/125	126.3	16	243	15-400	2.6	245	PM3/125	18
ZPM4/160	158.8	16	307	15-500	2.6	590	PM4/160	37
ZPM4/200	200.8	16	387	12-400	2.6	824	PM4/200	37
ZPM4/250	252.2	16	513	12-320	2.6	824	PM4/250	37
ZPM4/320	317.5	16	613	10-250	2.6	824	PM4/320	37
ZPM4/400	401.6	12.5	685	10-200	2.6	824	PM4/400	38
ZPM5/400	399.7	16	770	10-250	2.6	824	PM5/400	46
ZPM5/500	496.6	16	960	10-200	2.6	1060	PM5/500	46
ZPM5/630	617.8	13	983	10-160	2.6	1060	PM5/630	46
ZPM5B/630	617.8	16	1250	30-200	3.0	1450	PM5B/630	55
ZPM5B/800	787.4	16	1600	30-150	3.0	1680	PM5B/800	55
ZPM6B/1250	1186.8	16	2250	20-110	3.6	2330	PM6B/1250	70

Ordering code

1	2	3	4	5	6	7
ZPMR		/	-	-	/	

- Orbital hydraulic motor with braker
- Series
- Displacement
- Installation dimension: F Vertical front flange
- Shat type: H Standard spline key
B Standard flat key
- Inner hydraulic control system (page. 122)
- Ports

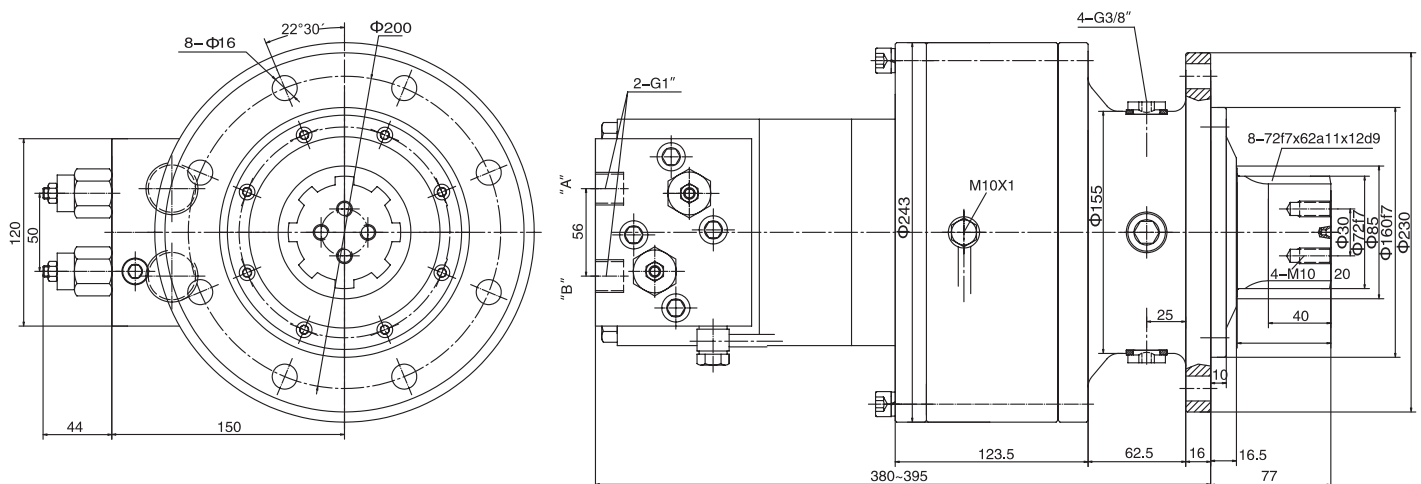
ZPM * / * F H K1Y Installation



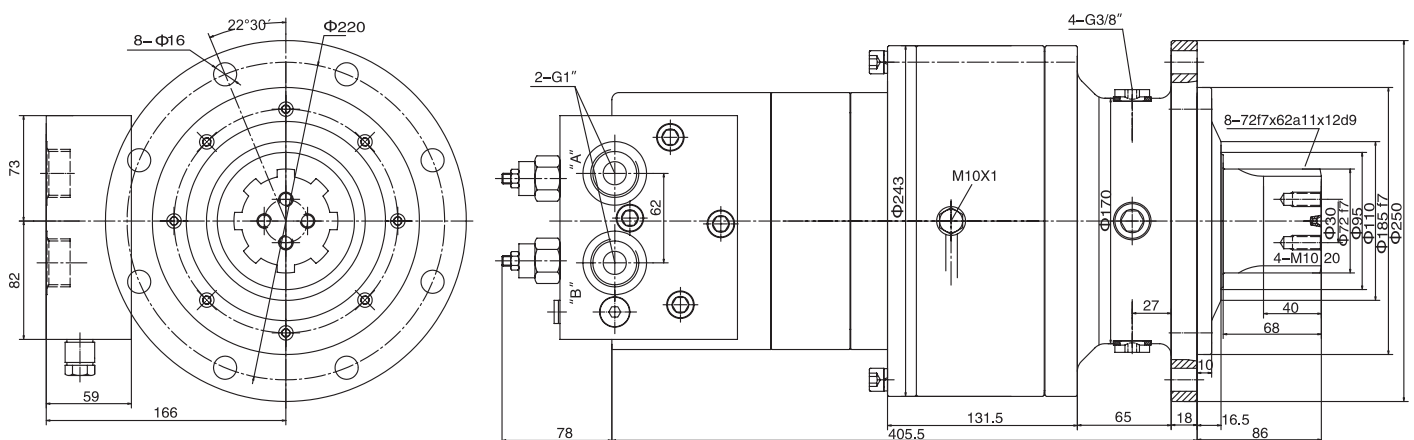
ZPM Dimensions

Type	Shape and junction				Flange and mounting face size						Output shaft size						
	L	L5	L6	P	D	D1	B1xB1	L1	nxt	L7	Type	d	L2	L3	L4	B	H
ZPM3/80-125	189-230	32	22	G1/2"	Ø100f7	Ø132	124	6.5	4xØ10.5	16	B	Ø32F7	62.5	54	45	10H9	35
											H	30f7	50	43.5	30	-	-
												6-30f7x25b12x6d10					
ZPM4/160-400	249-285	40	23	G3/4"	Ø125f7	Ø200	178	15	4Ø17	18.5	B	Ø40f7	75	58	50	12h9	43
											H	Ø38f7	75	58	40	-	-
												8-38f7x30b12x6d10					
ZPM5/400-630	270-300	50	24	G1"	Ø160f7	Ø200	178	16.5	4xØ17	19	B	Ø40f7	73.5	55	45	12h9	43
											H	Ø45f7	98	77.5	55	-	-
												6-45f7x38.2b12x12c10					
											K	Ext 17zx2.5mx30p					

ZPM5B/630-800-F-H-K3Y Installation



ZPM5B/1250-F-H-K3Y2 Installation



Introduction



The ZDM series hydraulic braking device is mainly composed of friction plates and high-strength springs. The brake is released by external working pressure, and its input power is prioritised through an orbital hydraulic motor. It features low noise, high reliability, a compact structure, and easy installation.

It is suitable for use in engineering machinery, material handling equipment, agricultural machinery, and similar applications.

Ordering code

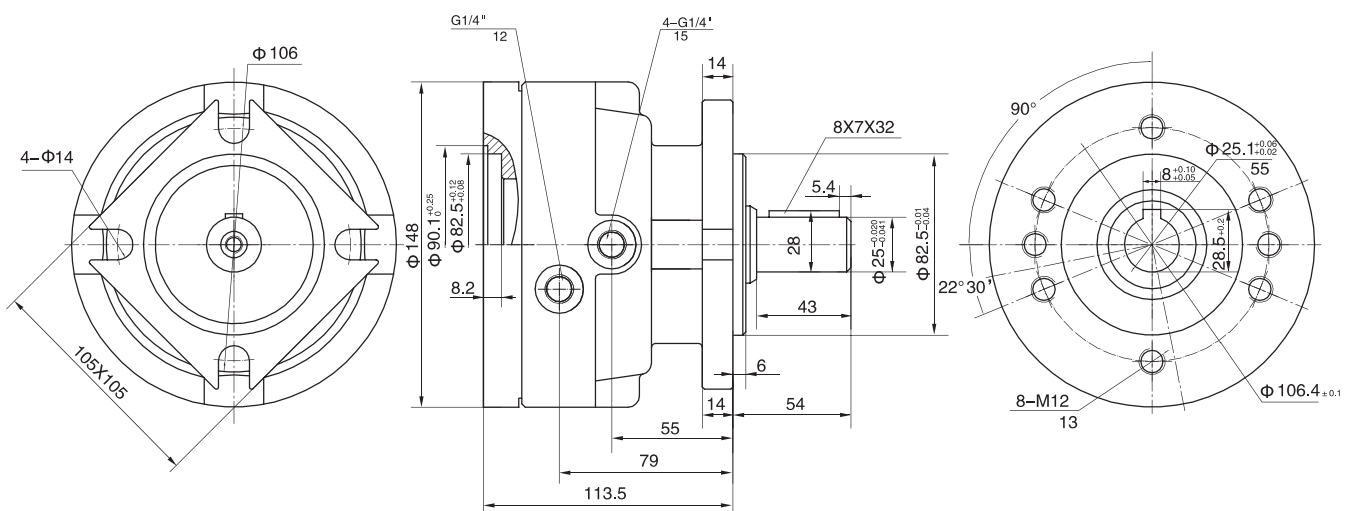
1		2		3		4		5		6
ZPM2	/	430	-	F	-	B	-	B	/	T

1. Product series
2. Brake torque
3. Mounting flange
4. Output shaft type
5. Input type
6. Special features

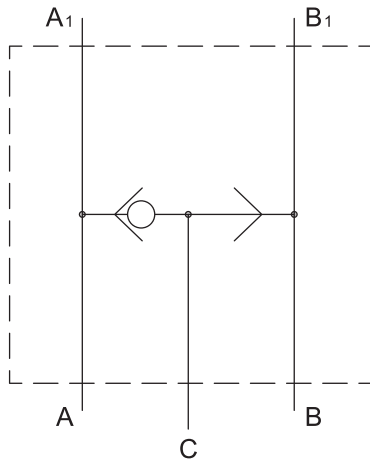
Technical data

Type	Static brake torque Nm	Releasing pressure Mpa	Max control pressure Mpa	Max oil drain pressure Mpa	Weight kg	Lubrication oil volume ml	Speed range r/min
ZPM2/430	410-450	2.2-2.7	20	0.05	9	50-100	0-800
ZPM2/230	210-230	2.2-2.7	20	0.05	9	50-100	0-800

ZPM2-430-F-B-B Installation



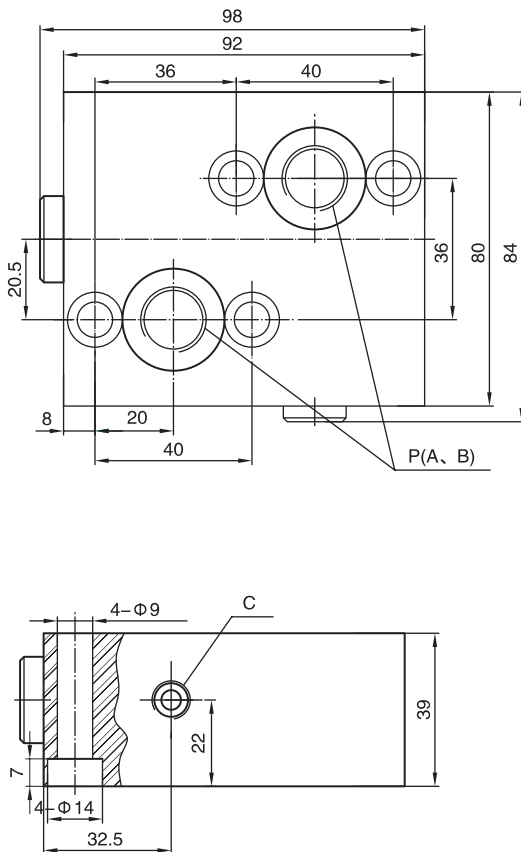
Switch valve



Specification

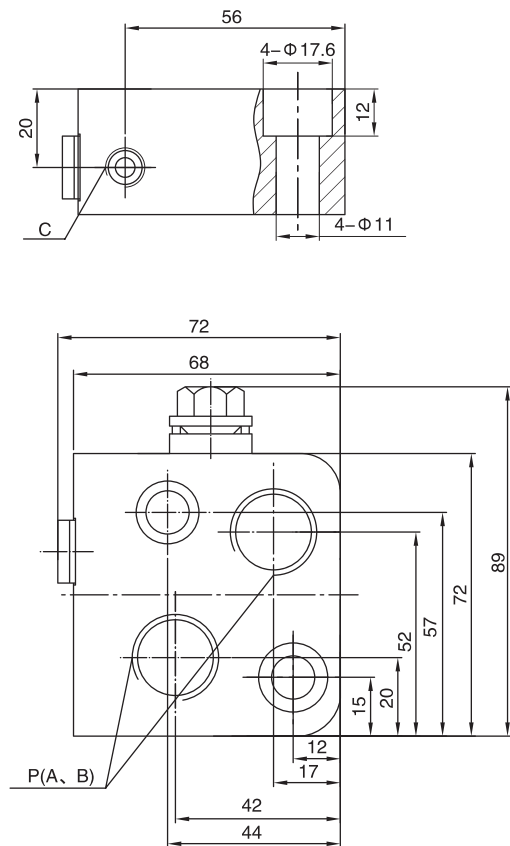
TYPE	Flow rate	Operating pressure
	L/min	Mpa
K1PMR	60	60
K1PM3	20	20

K1-PMR



Code	P (A, B) (deep mm)	C (deep)
Y4	G3/8 (15)	M10x1 (10)

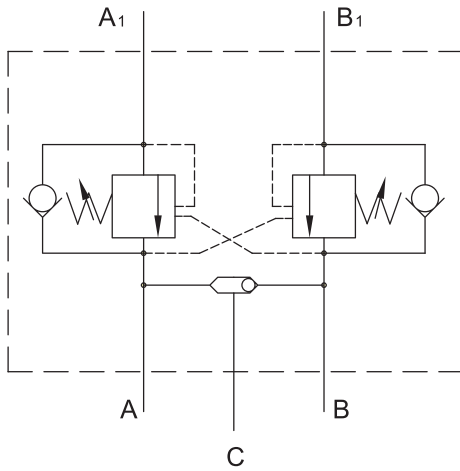
K1-PM3



Code	P (A, B) (deep mm)	C (deep mm)
Y	G1/2 (15)	M10x1 (10)
Y2	M22x1.5 (15)	M10x1 (10)

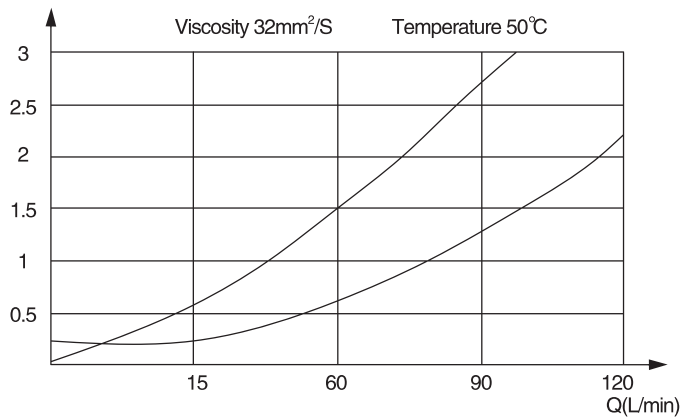
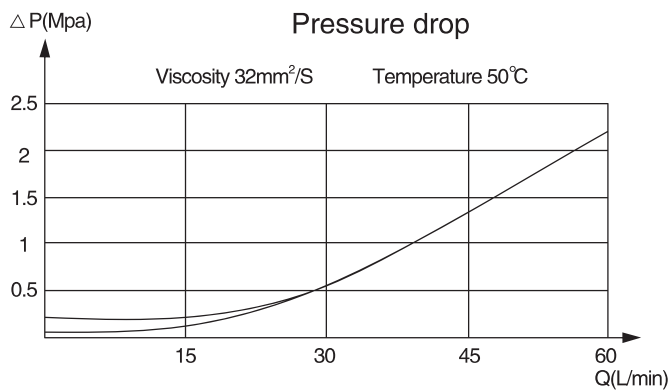
Note: The valve could also be used for PMP series motor.

Specification



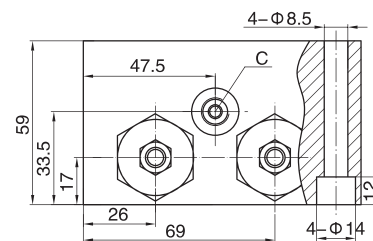
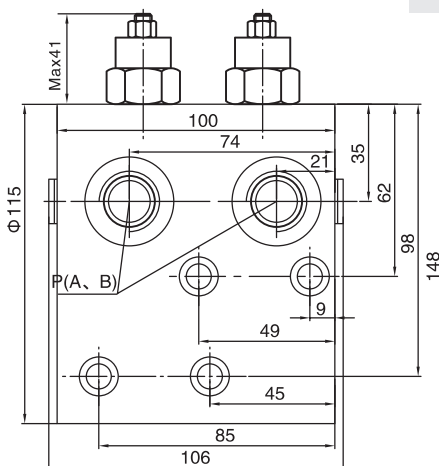
TYPE	Flow rate L/min	Pressure range Mpa	Range Pilot ratio
K3-PMR	60	14-35	4.5
K3-PM3	60	14-35	4.5
K3-PM4	60	14-35	4.5
K3-PM5	120	14-35	4.5

Pressure drop



Over center valve used to PMR Series motors

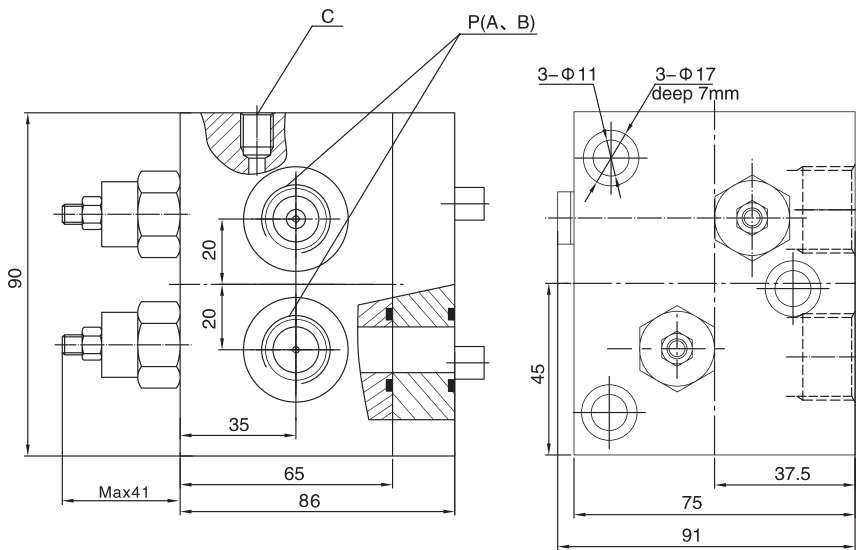
K3-PMR



Code	P (A, B) (deep mm)	C (deep mm)
Y	G1/2 (15)	M10x1 (10)

Over center valve used to PM3 Series motors

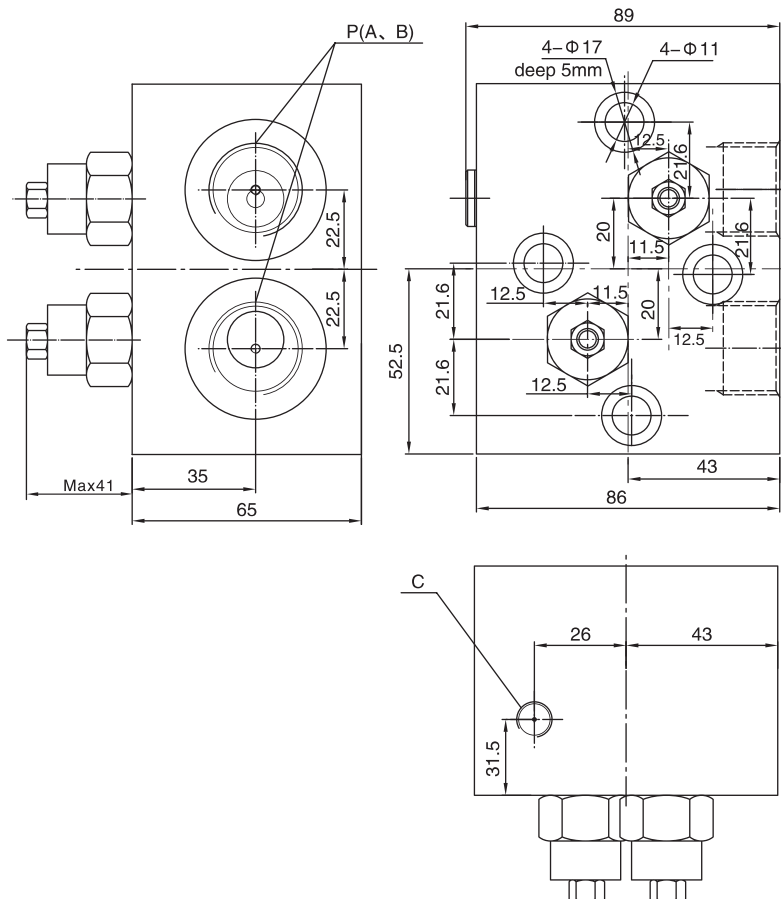
K3-PM3



Code	P (A, B) (deep mm)	C (deep mm)
Y	G1/2 (15)	M10x1 (10)
Y2	M22x1.5 (15)	M10x1 (10)

Over center valve used to PM4 Series motors

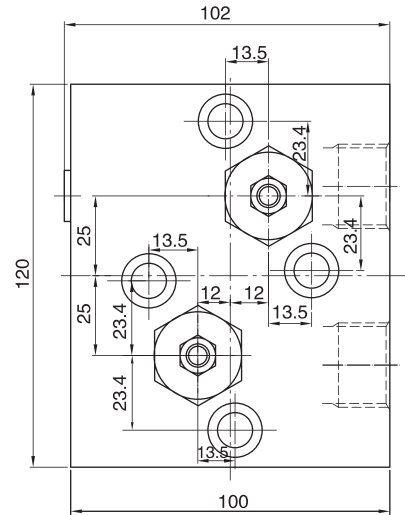
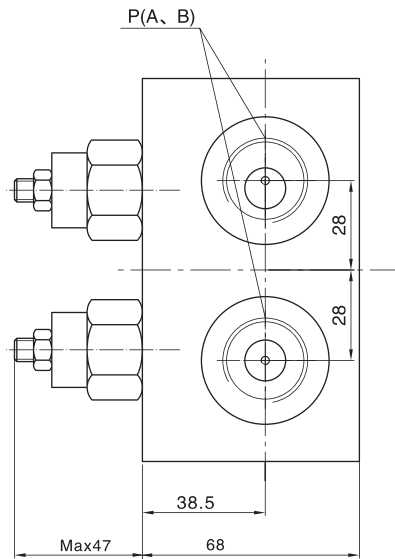
K3-PM4



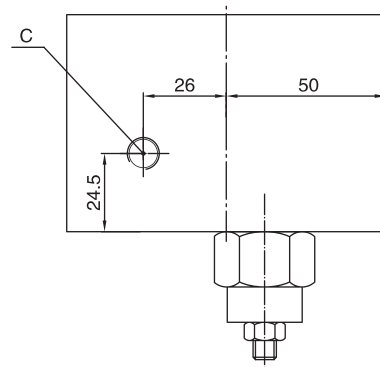
Code	P (A, B) (deep mm)	C (deep mm)
Y	G3/4 (15)	M10x1 (10)
Y4	M22x1.5 (15)	M10x1 (10)

Over center valve used to PM5Series motors

K3-PM5

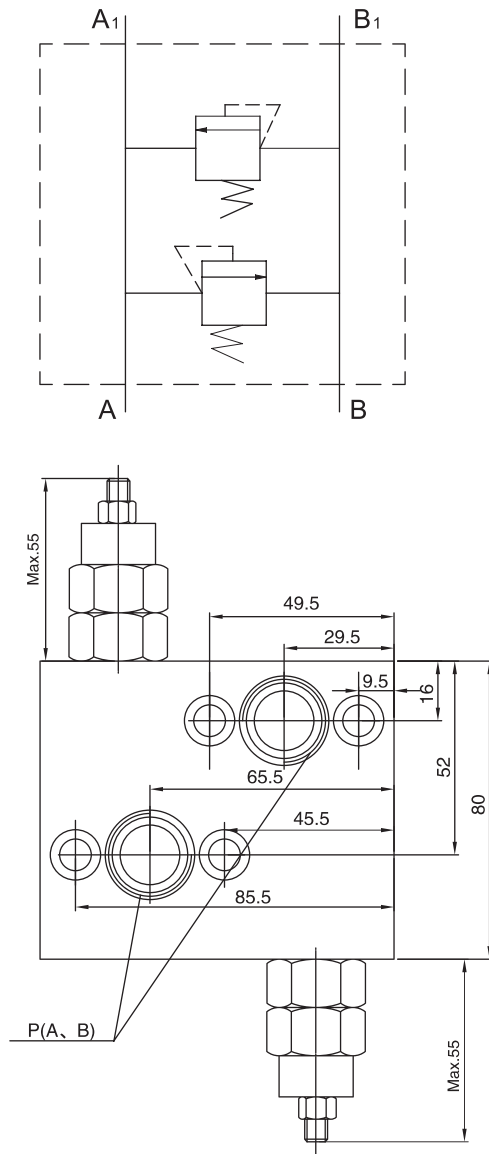


Code	P (A, B) (deep mm)	C (deep mm)
Y	G1 (18)	M10x1 (10)
Y1	G3/4 (18)	M10x1 (10)



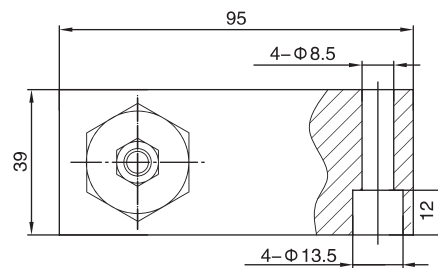
Relief valve used To PMR series motor

K6-PMR Dual crossover Relief valve type K6-PMR



Specification

TYPE	Flow rate L/min	Pressure range Mpa
K6-PMR	95	7-21

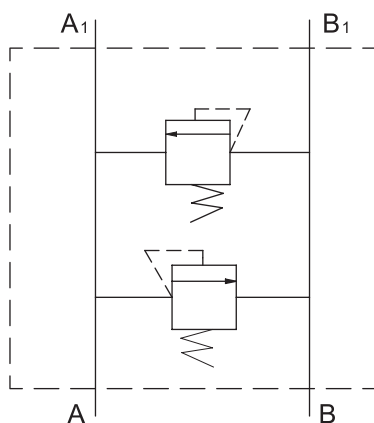


Code	P (A, B) (deep mm)
Y	G1/2 (15)
Y5	7/8-14UNF (15)

Note: The valve could also be used for PMP series motor.

Relief valve used To PM3 series motor

K6-PM3 Dual crossover Relief valve type K6-PM3



Specification

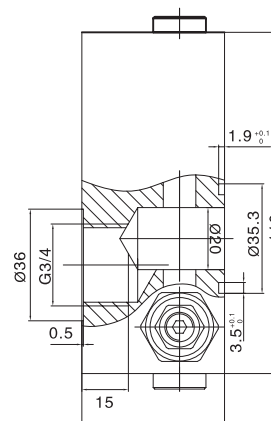
TYPE	Flow rate L/min	Pressure range Mpa
K6-PM3	95	7-21

Code	P (A, B) (deep mm)
Y	G1/2 (15)
Y5	7/8-14UNF (15)

TYPE	Flow rate L/min	Pressure range Mpa
K6-PM4	95	7-21

Technical drawing of the front view of a metal plate. The overall dimensions are 102mm in width and 95mm in height. The drawing includes the following dimensions and features:

- Overall Width:** 102
- Overall Height:** 95
- Top Edge:** A horizontal dimension of 52.6 from the left edge to the center of the top-left hole.
- Left Edge:** A vertical dimension of 26.1 from the top edge to the center of the top-left hole.
- Right Edge:** A vertical dimension of 56 from the top edge to the center of the top-right hole.
- Bottom Edge:** A vertical dimension of 75 from the bottom edge to the center of the top-right hole.
- Internal Dimensions:**
 - 31: Horizontal distance between the center of the top-left hole and the center of the top-right hole.
 - 35: Horizontal distance between the center of the top-right hole and the center of the bottom-right hole.
 - 54: Horizontal distance between the center of the top-right hole and the center of the bottom-left hole.
 - 79: Horizontal distance between the center of the top-right hole and the center of the bottom-right hole.
 - 49.4: Horizontal distance between the center of the top-left hole and the center of the bottom-left hole.
 - 75.9: Horizontal distance between the center of the top-left hole and the center of the bottom-right hole.
 - 92.6: Horizontal distance from the left edge to the center of the bottom-right hole.
- Holes:**
 - 4- $\varnothing 10.5$: Four holes with a diameter of 10.5mm, located at the top-left, top-right, bottom-left, and bottom-right positions.
 - 4- $\varnothing 17$: Four holes with a diameter of 17mm, located at the top-left, top-right, bottom-left, and bottom-right positions.
- Mounting Hardware:**
 - Top-left: A bolt and nut assembly.
 - Top-right: A bolt and nut assembly.
 - Bottom-left: A bolt and nut assembly.
 - Bottom-right: A bolt and nut assembly.
- Other Dimensions:**
 - Max.55: Maximum distance from the left edge to the center of the top-left hole.
 - Max.55: Maximum distance from the right edge to the center of the top-right hole.
 - 12: Distance from the center of the top-left hole to the center of the bottom-left hole.



Code	P (A, B) (deep mm)
Y	G3/4 (15)

Ordering code

1	2	3	4	5
	-		/	

Pos.1 Hydraulic control system code	Pos.2 With motor code	Pos.3 Switch valve		Pos.4		Pos.5
			Code	Ports (A,B) (deep)	Port C (deep)	Special features
K1	PMR	Sx	Y14	G3/8 (15)	M10x1 (10)	T (nothing: omit)
	PM3	(Different shuttle valves are marked with 1-9 numbers)	Y	G1/2 (15)	M10x1 (10)	
			Y2	M22x1.5 (15)		

1	2	3	4	5	6
	-			/	

Pos.1 Hydraulic control system code	Pos.2 With motor code	Pos.3 Overcenter valve	Pos.4 Switch valve		Pos.5 Ports (A,B) (deep)		Port C (deep)	Pos.6 Special features
K3	PMR	Px (Different shuttle valves are marked with 1-9 numbers)	Sx (Different shuttle valves are marked with 1-9 numbers)	Y	G1/2 (15)	M10x1 (10)	T (nothing: omit)	
	PM3			Y	G1/2 (15)	M10x1 (10)		
				Y2	M22x1.5 (15)	M10x1 (10)		
	PM4			Y	G3/4 (15)	M10x1 (10)		
				Y4	M22x1.5 (15)	M10x1 (10)		
	PM5			Y	G1" (18)	M10x1 (10)		
Y4		G3/4 (18)						

1	2	3	4	5	6
	-			/	

Pos.1 Hydraulic control system code	Pos.2 With motor code	Pos.3 Relief valve type	Pos.4 Switch Valve		Pos.5 Ports (A,B) (deep)		Port C (deep)	Pos.6 Special features
K6	PMR	Ax (Different relief valves are marked with 1-9 numbers)	Sx (Different shuttle valves are marked with 1-9 numbers)	Y	G1/2 (15)	M10x1 (10)	T (nothing: omit)	
	PM3			Y	G1/2 (15)	M10x1 (10)		
				Y5	7/8-14-UNF (15)	M10x1 (10)		
	PM4			Y	G3/4 (18)	M10x1 (10)		
				Y4	M22x1.5 (15)			

Note: If you can't find specification here, of if you have special requirement, please contact us.

8
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