

● AHR INTRODUCTION



This series of motor, with its shell made of ductile cast iron of adequate intensity, can be applied to situations with less load and interval operation, widely for agriculture, forestry, plastics, machine tools and minimal machine, such as the mould height adjustment of the injection molding machine, the cleaner, the sawmill the the worktable etc.

● AHR CHARACTERISTICS

1. The output shaft, with the deep groove ball bearing, can bear certain axial force and radial force.
2. With the axial oil distribution structure, it is of smaller size and less weight.
3. With two inner check valves, no drain connection.
4. With cycloid group with the roller, it has a small friction and high mechanical efficiency.

● AHR TECHNICAL DATA

TYPE	AHR	AHR	AHR	AHR	AHR	AHR	AHR	AHR	AHR	
	AHRW AHRW AHRE	AHRW AHRW AHRE	AHRW AHRW AHRE	AHRW AHRW AHRE	AHRW AHRW AHRE	AHRW AHRW AHRE	AHRW AHRW AHRE	AHRW AHRW AHRE	AHRW AHRW AHRE	
	50	80	100	125	160	200	250	315	400	
Displacement (ml/r)	51.7	80.5	100.5	126.3	160.8	200.9	252.6	321.5	401.9	
Max Pressure Drop (MPa)	cont	14	14	14	14	14	14	11	9	7
	int	17.5	17.5	17.5	17.5	17.5	17.5	14	11	9
	peak	20	20	20	20	20	20	16	13	11
Max torque (Nm)	cont	93	152	194	237	310	369	380	380	380
	int	118	189	236	296	378	450	470	470	470
	peak	135	216	270	338	433	509	540	540	540
Max speed (cont.) (r/min)	770	745	595	475	370	295	235	185	150	
Max Flow (cont.) (L/min)	40	60	60	60	60	60	60	60	60	
Max Output Power	7	10	10	10	10	8	6	5	4	
Weight (Kg)	6.5	6.9	7.0	7.3	7.5	8.0	8.5	9.0	11	

• AHR TECHNICAL DATA

TYPE	AHRY 50	AHRY 80	AHRY 100	AHRY 125	AHRY 160	AHRY 200	AHRY 250	AHRY 315	AHRY 400
Displacement (ml/r)	51.7	80.5	100.5	126.3	160.8	200.9	252.6	321.5	401.9
cont	17.5	17.5	17.5	17.5	17.5	17.5	14	12	10
Max Pressure Drop (MPa)	int	20	20	20	20	20	19	16	14
	peak	22	22	22	22	22	20	18	15
Max torque (Nm)	cont	110	189	236	296	378	450	470	500
	int	135	216	270	338	433	486	540	573
peak	144	225	281	353	450	511	579	614	710
Max speed (cont.) (r/min)	770	745	595	475	370	295	235	185	150
Max Flow (cont.) (L/min)	40	60	60	60	60	60	60	60	60
Max Output Power	7.5	12	12	12	12	11	9.5	7.5	6.5
Weigt (Kg)	6.9	7.3	7.4	7.7	7.9	8.4	8.9	9.4	11.4

• AHR PERFORMANCE DATA

		AHR 50[51.7ml/r]								AHR 80[80.5ml/r]							
		Pressure (Mpa)								Pressure (Mpa)							
		Max.cont.				Max.int.				Max.cont.				Max.int.			
		5	7	9	10	12	14	16	17.5	5	7	9	10	12	14	16	17.5
Flow(L/min)	5	34	44	58	65	75	88			48	58	84	106	129			
	10	94	85	77	77	72	50			61	58	52	46	40	145	170	
	15	34	48	62	72	87	100	108	122	54	76	100	109	131	152	174	193
	20	188	179	167	163	154	137	119	98	243	239	231	219	206	192	176	152
	30	34	46	60	68	82	95	109	125	50	72	96	104	128	148	172	191
Max.cont.	40	379	377	367	363	348	332	304	272	362	358	356	350	349	335	325	300
	45	32	43	59	66	79	94	107	121	45	70	95	104	125	146	171	188
	50	578	571	563	556	544	533	502	467	484	480	478	476	470	468	440	438
	Max.int.	30	40	57	65	78	91	105	120	41	68	91	101	122	145	168	186
		762	760	755	752	740	726	702	672	610	608	606	603	600	598	550	520
Max.int.	45	29	39	56	64	77	89	104	120	35	65	88	96	120	142	164	182
		858	855	851	847	837	817	798	772	726	723	720	718	710	700	698	680
	50	25	36	52	59	72	84	98	113	30	58	81	93	114	136	158	175
	952	942	927	908	882	854	834	803	845	834	820	802	789	767	754	730	
									19	48	76	88	108	132	151	168	
									910	895	881	867	852	830	806	787	

• AHR PERFORMANCE DATA

AHR 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	
Max.cont.	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.int.	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
Max.cont.	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

AHR 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	
Max.cont.	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.int.	40	77 312	111 311	147 307	168 300	196 300	218 284	250 270	288 252
	50	62 391	105 388	143 384	165 380	195 372	223 362	254 346	287 330
Max.cont.	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

AHR 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	
Max.cont.	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.int.	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
Max.cont.	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

AHR 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	
Max.cont.	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.int.	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
Max.cont.	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

Torque : 150Nm
Speed : 450r/min

Cont.
Int.

• AHR PERFORMANCE DATA

AHR 250[252.6ml/r]
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	
Max.cont.	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

AHR 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

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AHR 400[401.9ml/r]
Pressure (Mpa) Max.cont. Max.int.

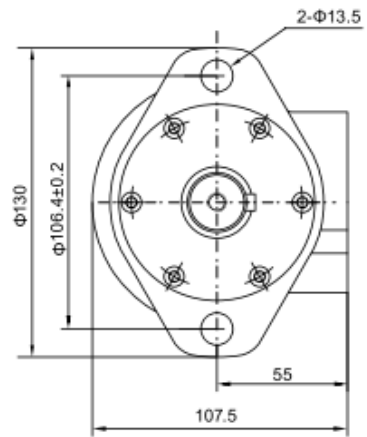
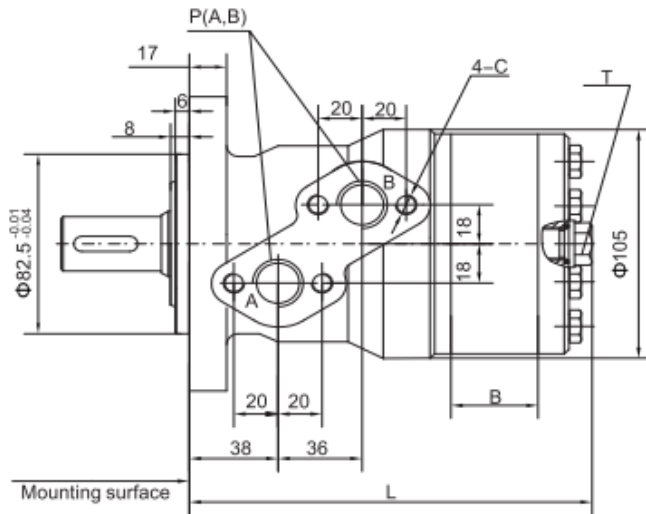
	3	4	6	7	8	9	
Flow(L/min)	5	152 12					
	10	154 24	205 21	308 18	349 17		
	20	150 49	201 48	302 47	340 46	392 44 441 41	
	30	146 73	198 74	296 73	331 72	387 70 438 67	
	40	140 98	191 97	290 96	321 95	381 94 421 92	
Max.cont.	50	132 122	182 121	281 118	315 115	376 112 402 110	
	60	128 146	176 145	272 143	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

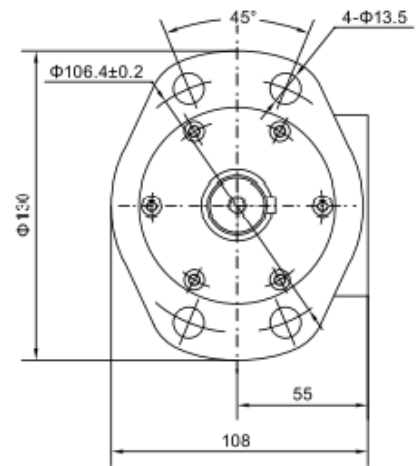
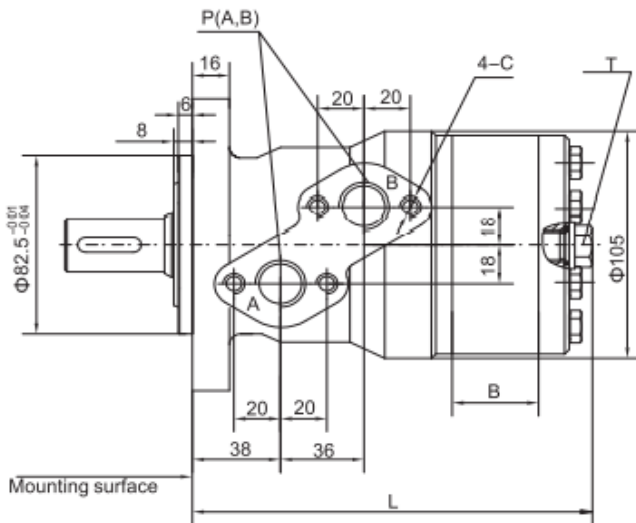
☐ Cont.
■ Int.

- AHR, AHRE Installation

2-hole oval flange A II

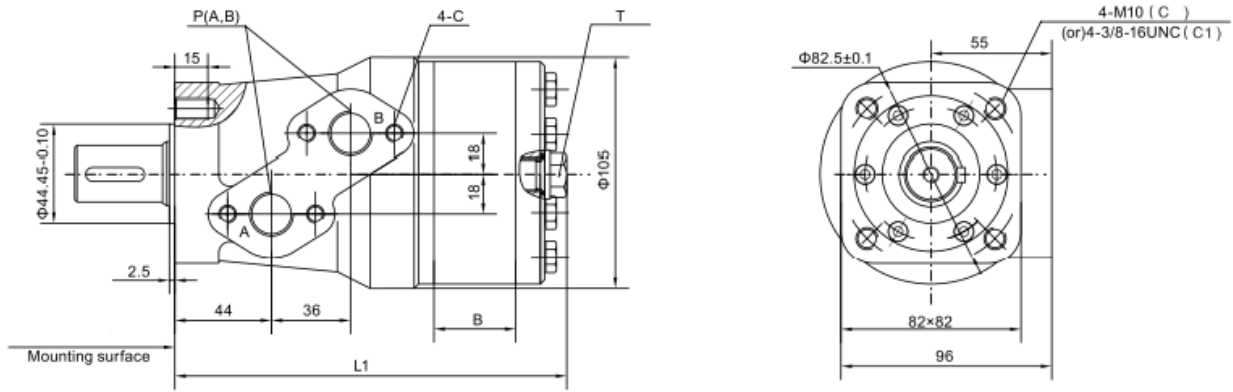


4-hole oval flange A IV

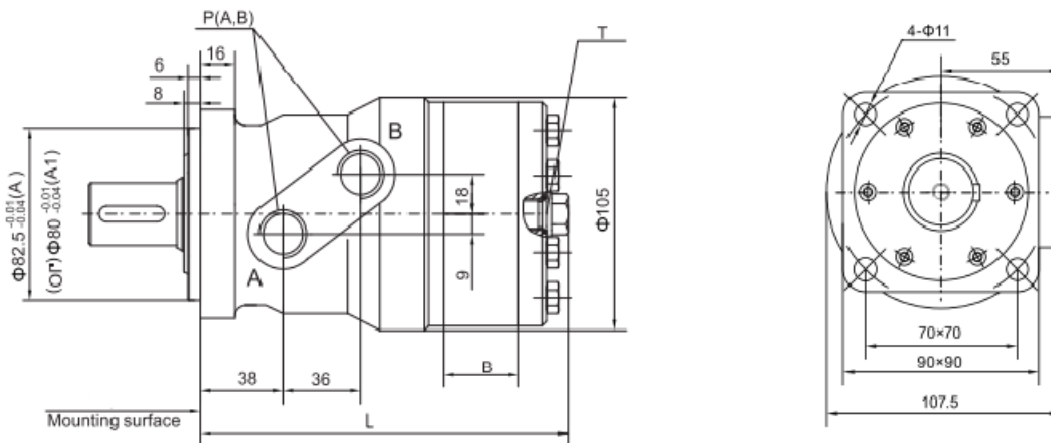


- AHR, AHRE Installation

Square flange C C1

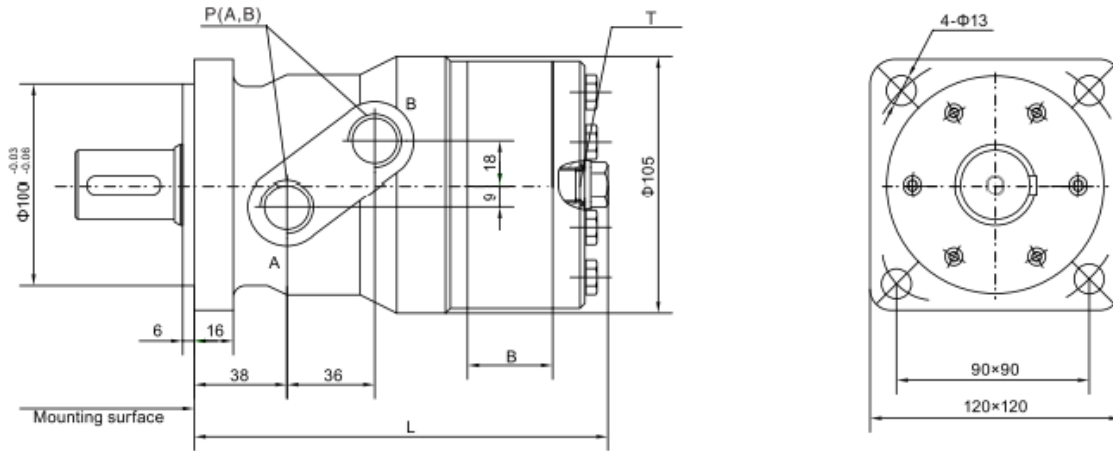


Square flange A A1



- AHR,AHRE Installation

Square flange A2 III



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

- BMRY Installation

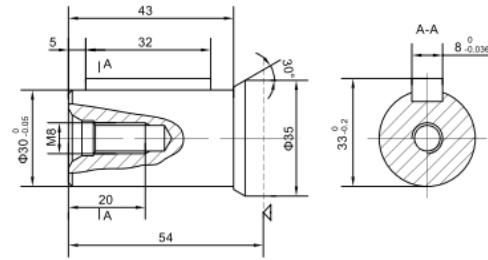
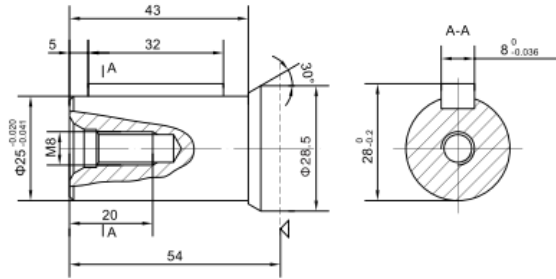
TYPE	AHRY-50	AHRY-80	AHRY-100	AHRY-125	AHRY-160	AHRY-200	AHRY-250	AHRY-315	AHRY-400
L	150	155	158.5	163	169	176	185	197	211
L1	158	163	166.5	171	177	184	193	205	219
B	9	14	17.5	22	28	35	44	56	70

● AHR PORTS CODE

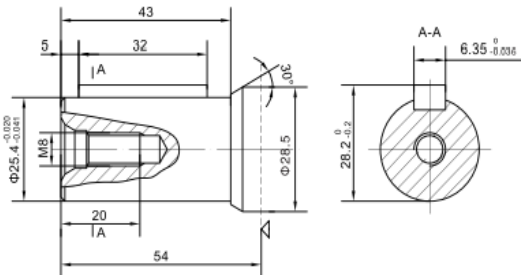
Code	Ports	P(A,B)(deep)	C (deep)	T (deep)
Y		G1/2 (15)	M8 (13)	M14 x 1.5 (12)
Y1		M18 x 1.5 (15)	M8 (13)	M14 x 1.5 (12)
Y2		M22 x 1.5 (15)	M8 (13)	M14 x 1.5 (12)
Y4		ZG3/8 (15)	M8 (13)	M14 x 1.5 (12)
Y5		7/8-14UNF (15)	—	M14 x 1.5 (12)
Y7		ZG1/2 (15)	M8 (13)	M14 x 1.5 (12)
Y8		NPT1/2 (15)	M8 (13)	M14 x 1.5 (12)
Y9		NPTF1/2 (15)	5/16-18UNC (13)	7/16-20UNF (12)
Y10		G1/2 (15)	M8 (13)	G1/4 (12)
Y15		7/8-14UNF (15)	5/16-18UNC (13)	7/16-20UNF (12)

● AHR – SHAFT VERSION

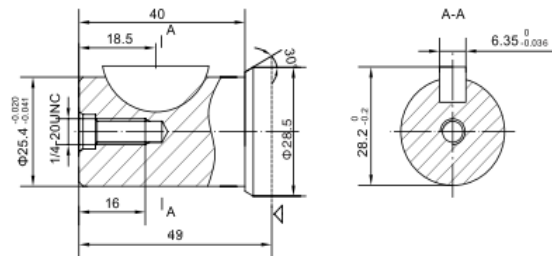
P1 Ø25 Cylindrical shaft, parallel key 8 x 7 x 32 P2 Ø30 Cylindrical shaft, parallel key 8 x 7 x 32



P3 Ø25.4 Cylindrical shaft, parallel
key 6.35 x 6.35 x 32



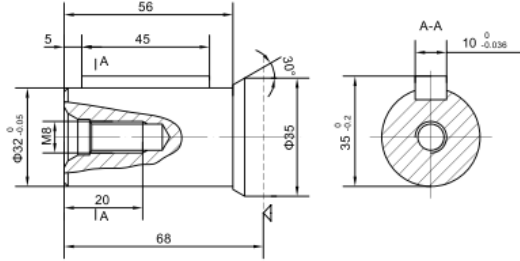
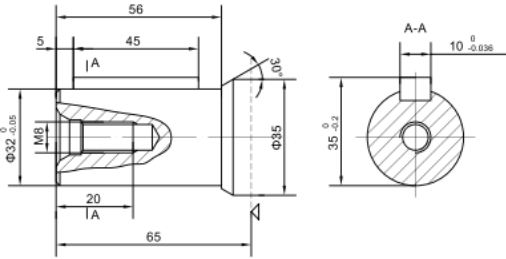
P4 Ø25.4 Cylindrical shaft, Woodruff
key Ø25.4 x 6.35



• AHR – SHAFT VERSION

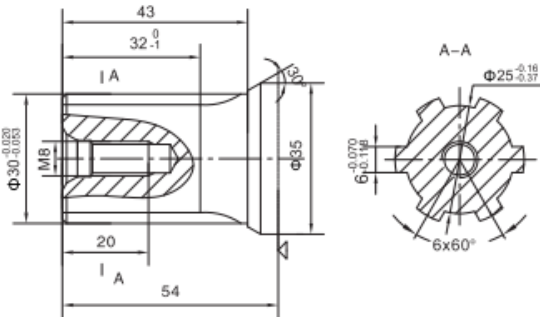
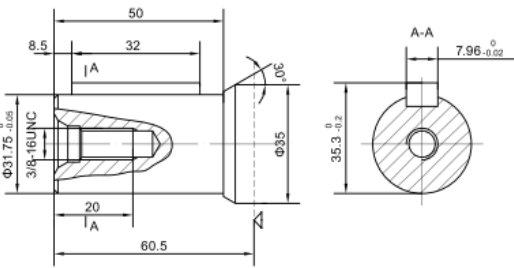
P5 Ø32 Cylindrical shaft, parallel key 10 x 8 x 45

P52 Ø32 Cylindrical shaft, parallel key 10 x 8 x 45



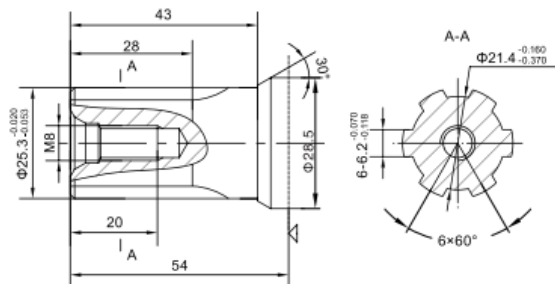
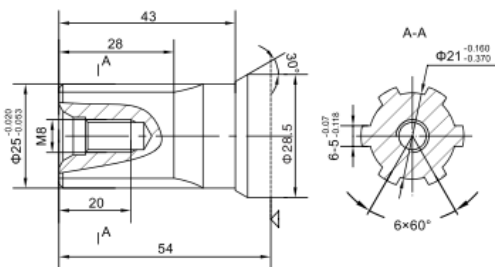
P6 Ø31.75 Cylindrical shaft, parallel key 7.96 x 7.96 x32

H1 Ø30 Splined shaft. 6-30 x 25 x 6



H2 Ø25 Splined shaft. 6-25 x 21 x 5

H3 Ø25.3 Splined shaft. 6-25.3 x 21.4 x 6.2



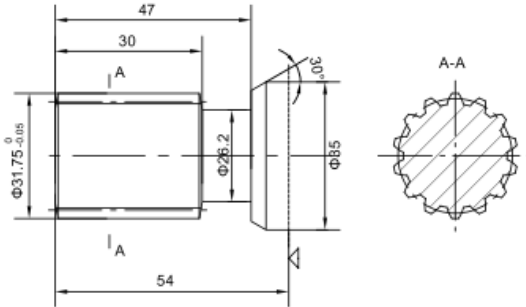
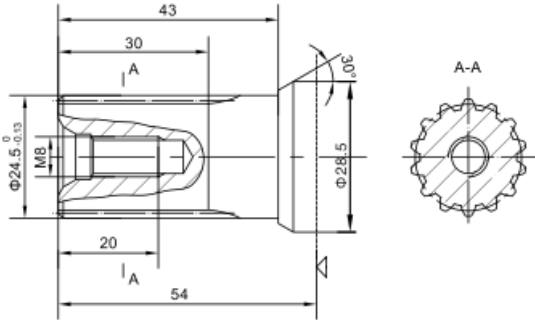
- AHR – SHAFT VERSION

K4 Ø24.5 involute splined shaft B25 x 22 DIN5482

K10 Ø31.75 involute splined shaft 14-DP12/24

m : 1.6 Z : 14

a = 30°

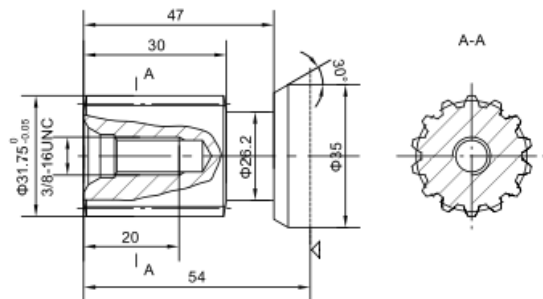
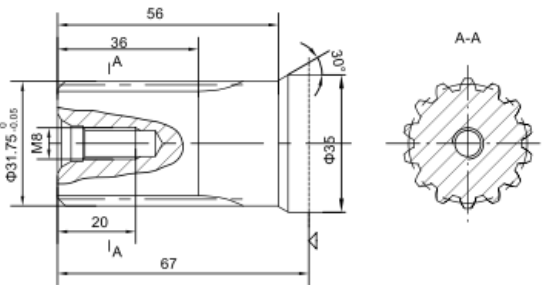


K13 Ø31.75 involute splined shaft 14-DP12/24

K14 Ø31.75 involute splined shaft 14-DP12/24

a = 30°

a = 30°



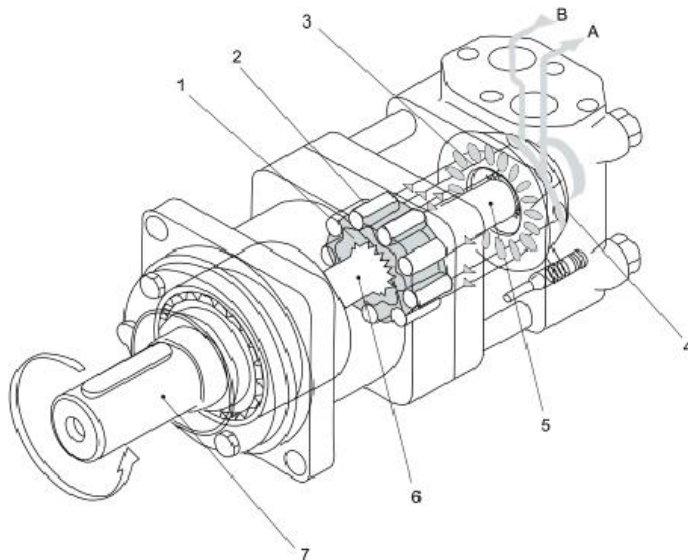
NOTE: AHRE series motors don't include the following output shafts: P2, P5, P52, P6, H1, K4, K10, K13, K14

- INTRODUCTION

AH hydraulic is one type of high torque low speed hydraulic motors, with high efficiency and long life. AH motor has a wide speed range, high starting torque and rotating stable at high speed compact and light, it can be connected to working machine directly, adapted to all kinds of low speed heavy load facilities.



AH hydraulic motors are widely applied in agriculture machinery, fishing machinery, plastic industry, mining, and construction machinery



Shown as the drawing, high pressure oil goes into the motor's housing through the inlet, passing the auxiliary plate, distributor, then the working space between the orbit cam and rolls. Pressed by the high pressure oil, orbit cam rotates from the high pressure side to the low pressure side. The orbit cam makes rotation and revolution against the rolls, at the same time, high pressure oil is distributed continuously, thus, the output shaft can also rotate continuously.

The output speed can be controlled by adjusting the inlet flow capability of the motor, and the rotating direction can be changed by exchanging the flow direction.

• AH3Y TECHNICAL DATA

TYPE	AH3Y-80 AH3SY-80 AH3S3Y-80 AH3WY-80	AH3Y-100 AH3SY-100 AH3S3Y-100 AH3WY-100	AH3Y-125 AH3SY-125 AH3S3Y-125 AH3WY-125	AH3Y-160 AH3SY-160 AH3S3Y-160 AH3WY-160	AH3Y-200 AH3SY-200 AH3S3Y-200 AH3WY-200	AH3Y-250 AH3SY-250 AH3S3Y-250 AH3WY-250	AH3Y-315 AH3SY-315 AH3S3Y-315 AH3WY-315	AH3Y-400 AH3SY-400 AH3S3Y-400 AH3WY-400	AH3Y-500 AH3SY-500 AH3S3Y-500 AH3WY-500
Displacement (ml/r)	80.5	100.5	126.3	160.8	200.9	252.6	321.5	401.9	476.5
Max Pressure Drop (MPa)	cont	20.5	20.5	20.5	20.5	20	20	15.5	12
	int	27.5	27.5	27.5	26	25	24	19	14
	peak	29.5	29.5	29.5	28	27	27	21	16
Max torque (Nm)	cont	226	282	355	451	564	684	813	728
	int	293	365	459	559	672	845	1021	903
Max torque (Nm)	peak	306	383	481	588	708	891	1141	1044
	cont.	805	745	590	465	370	295	230	185
Max speed (cont.) (r/min)	805	745	590	465	370	295	230	185	155
Max Flow (cont.) (L/min)	65	75	75	75	75	75	75	75	75
Max Output Power(cont) (Kw)	16	18	18	18	18	18	17	11	9
Weight (kg)	9.8	10.0	10.3	10.7	11.1	11.6	12.3	13.2	14.3

• AH3Y PERFORMANCE DATA

AH3Y 80(80.5ml/r)
Pressure(Mpa)

		3.5	7	10.5	14	17.5	20.5	22.5
Flow(L/min)	15	35 181	75 177	114 170	150 165	187 158	220 151	239 141
	30	35 363	75 355	115 346	152 340	190 330	222 322	240 310
Max.cont.	40	33 485	75 479	115 464	155 453	193 444	226 437	240 415
	50	30 610	73 602	113 594	153 580	190 565	223 556	237 530
Max.int.	60	28 735	70 724	110 714	150 698	188 680	220 670	235 642
	65	27 801	68 790	108 775	148 760	186 742	215 727	233 704
	80	23 968	66 975	104 955	140 938	176 915	205 897	213 870

AH3Y 100(100.5ml/r)
Pressure(Mpa)

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

AH3Y 125(126.3ml/r)
Pressure(Mpa)

		3.5	7	10.5	14	17.5	20.5	22.5
Flow(L/min)	15	54 115	117 113	179 108	235 105	293 101	348 96	375 90
	30	55 231	118 226	180 221	238 217	298 210	351 205	377 198
Max.cont.	40	54 309	120 305	180 296	243 289	303 283	355 279	377 265
	50	51 389	118 384	177 379	240 370	298 360	351 354	372 338
Max.int.	60	48 468	114 461	173 455	235 445	295 433	347 427	369 409
	75	42 589	109 581	169 570	232 559	292 546	342 535	366 518
	90	38 706	103 699	163 685	220 673	279 656	327 643	334 624

AH3Y 160(160.8ml/r)
Pressure(Mpa)

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

Torque : 163Nm
Speed : 685r/min

Cont.
Int.

• AH3Y PERFORMANCE DATA

AH3Y 200(200.6ml/r)
Pressure(Mpa)

		3.5	7	10.5	14	17.5	20.5	22.5
		Max.cont.					Max.int.	
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
Max.cont.	60	84 295	175 290	275 266	374 260	469 272	555 268	586 257
	75	77 370	170 365	270 358	369 351	464 343	550 336	581 325
	Max.int.	68 445	165 440	260 430	349 423	434 412	510 404	532 392

AH3Y 250(252.6ml/r)
Pressure(Mpa)

		3.5	7	10.5	14	17.5	20	22.5
		Max.cont.					Max.int.	
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
Max.cont.	60	112 234	225 231	352 228	471 224	583 219	675 214	741 208
	75	109 295	220 290	349 285	467 279	578 273	669 267	735 260
	Max.int.	103 354	213 350	343 342	460 334	568 326	654 320	715 310

AH3Y 315(321.5ml/r)
Pressure(Mpa)

		3.5	7	10.5	14	17.5	20	22.5
		Max.cont.					Max.int.	
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
Max.cont.	60	134 184	286 181	435 179	583 175	744 170	862 166	947 160
	75	131 231	280 228	431 224	580 220	738 214	856 210	939 204
	Max.int.	125 278	272 275	421 269	570 264	718 258	826 253	899 243

AH3Y 400(401.9ml/r)
Pressure(Mpa)

		3.5	7	10.5	14	15.5	17.5	
		Max.cont.					Max.int.	
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	
Max.cont.	60	168 147	343 145	522 143	705 140	801 136	924 130	
	75	164 185	339 183	517 179	700 176	791 171	916 163	
	Max.int.	160 223	325 220	503 215	680 211	766 206	886 196	

Torque : 503Nm
Speed : 215r/min

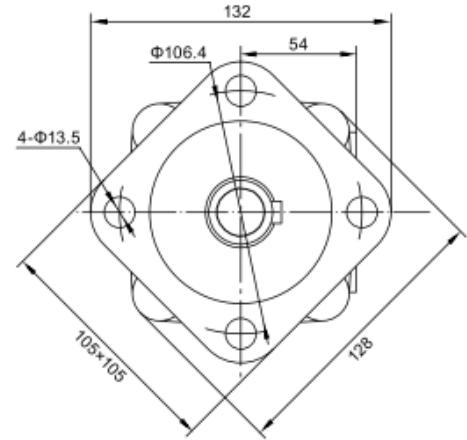
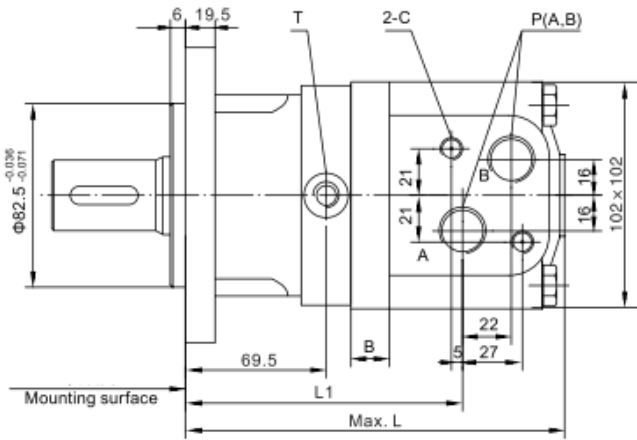
AH3Y 500(476.5ml/r)
Pressure(Mpa)

		3.5	7	10.5	12	14
		Max.cont.			Max.int.	
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
Max.cont.	60	182 124	403 122	609 121	719 118	819 115
	75	180 156	401 154	606 151	712 148	815 145
	Max.int.	173 188	391 185	601 182	702 178	803 174

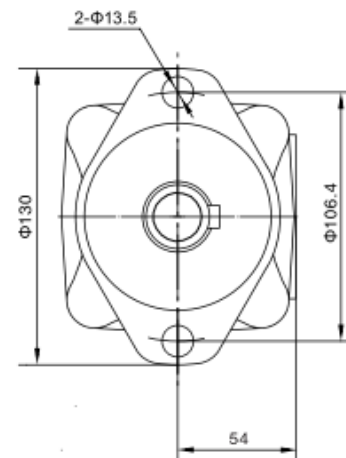
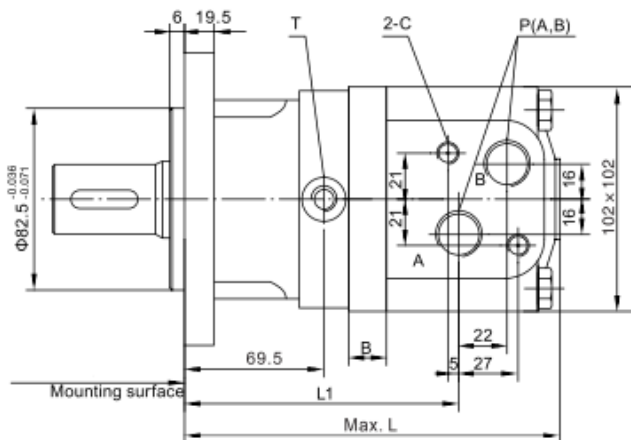
Cont.
Int.

- AH3Y Installation

Square flange A

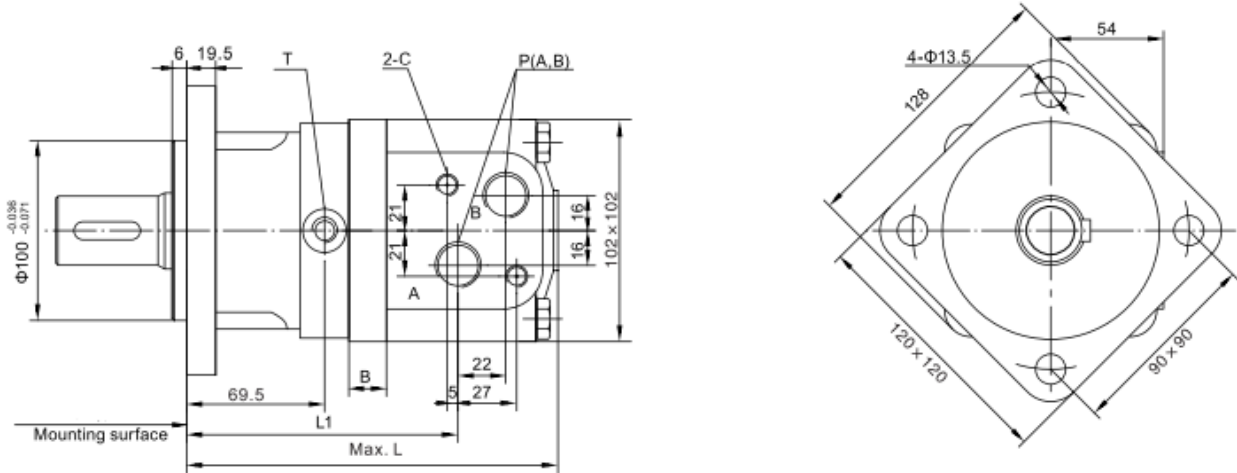


2 - hole oval flange All

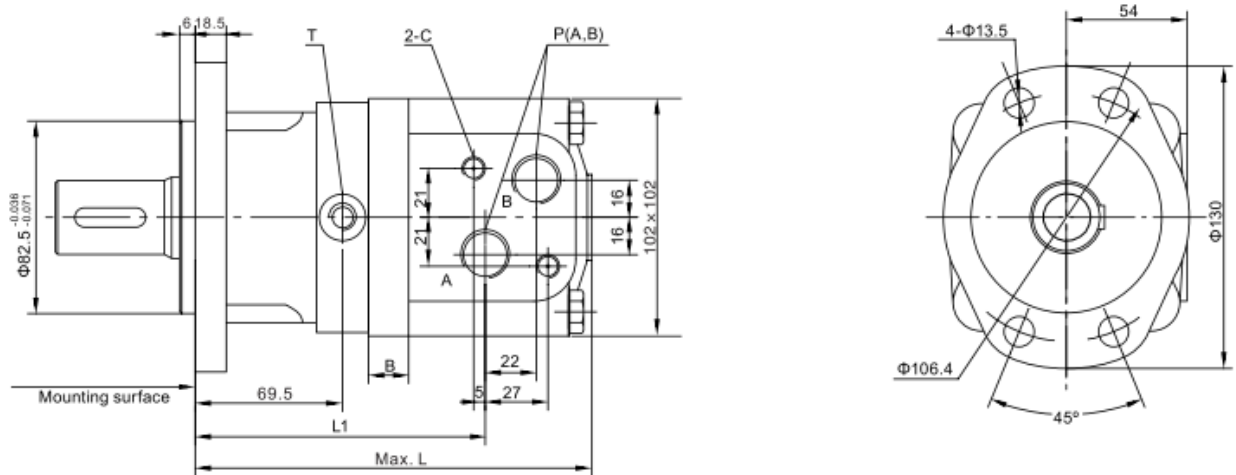


- AH3Y Installation

Square flange A2III



4 - hole oval flange AIV



Type	AH3Y-80	AH3Y-100	AH3Y-125	AH3Y-160	AH3Y-200	AH3Y-250	AH3Y-315	AH3Y-400	AH3Y-500
L	170	173.5	178	184	191	200	212	226	239
L1	125.5	129	133.5	139.5	146.5	155.5	167.5	181.5	194.5
B	11	14.5	19	25	32	41	53	67	80

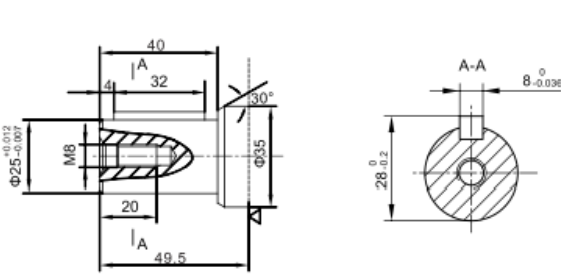
• AH3Y PORTS CODE

Code \ Ports	P(A,B)(deep)	C (deep)	T (deep)
Y	G1/2 (15)	M10 (12)	G1/4 (12)
Y1	M18 x 1.5 (15)	M10 (12)	M14 x 1.5 (12)
Y2	M22 x 1.5 (15)	M10 (12)	M14 x 1.5 (12)
Y3	M20 x 15 (15)	M10 (12)	M14 x 1.5 (12)
Y5	7/8-14UNF (15)	—	7/16-20 UNF (12)
Y8	NPT1/2 (15)	M10 (12)	G1/4 (12)
Y10	G1/2 (15)	—	G1/4 (12)

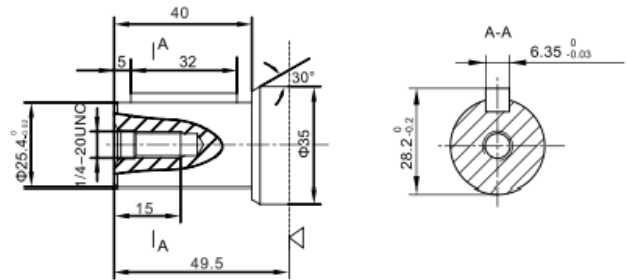
P (A,B) --Ports, C--Mouting Thread (—Indicates no this thread) , T –Drain connettion

• AH3Y SHAFT VERSION

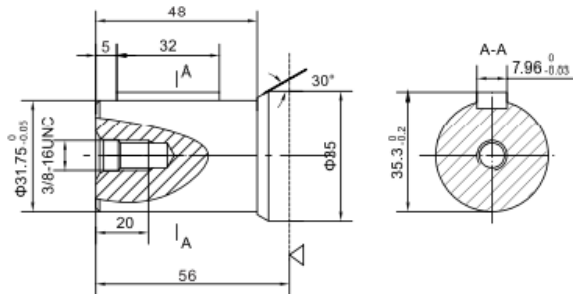
P1: $\Phi 25$ Cylindrical shaft, parallel key $8 \times 7 \times 32$



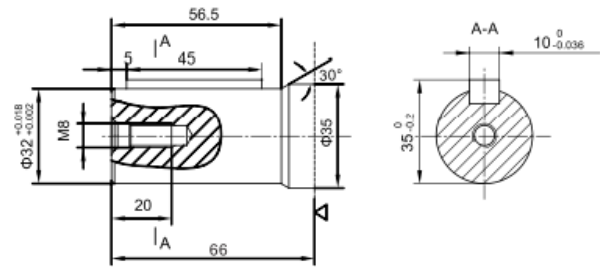
P3: $\Phi 25.4$ Cylindrical shaft, parallel key $6.35 \times 6.35 \times 32$



P5: $\Phi 31.75$ Cylindrical shaft, parallel key $7.96 \times 7.96 \times 32$



P10: $\Phi 32$ Cylindrical shaft, parallel key $10 \times 8 \times 45$

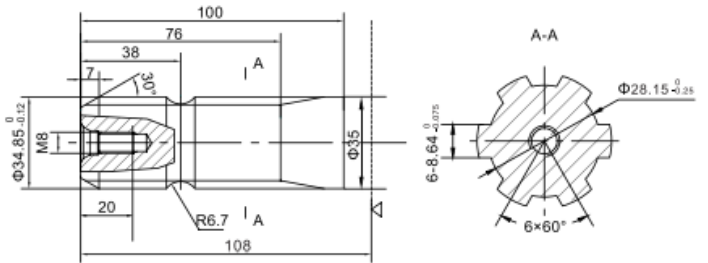
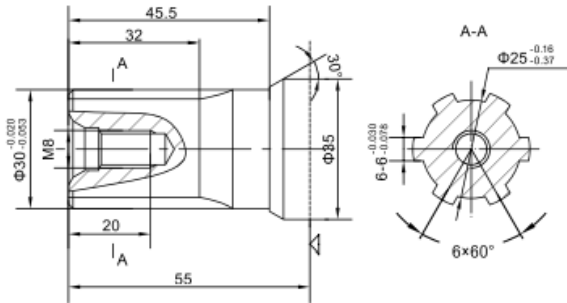


◁ -- Motor mounting surface

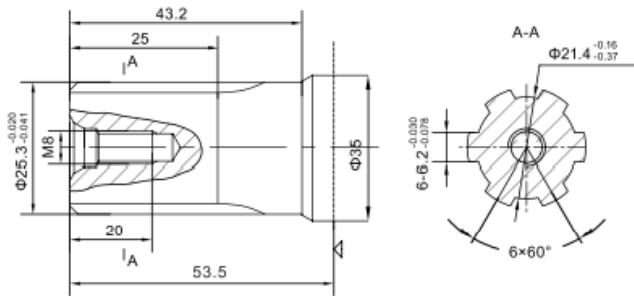
● AH3Y SHAFT VERSION

H1: $\Phi 30$ Splined shaft, 6-30 \times 25 \times 6

H3: $\Phi 34.85$ Splined shaft, 6-34.85 \times 28.15 \times 8.64



H51: $\Phi 25.3$ Splined shaft, 6-25.3 \times 21.4 \times 6.2



◁-- Motor mounting surface

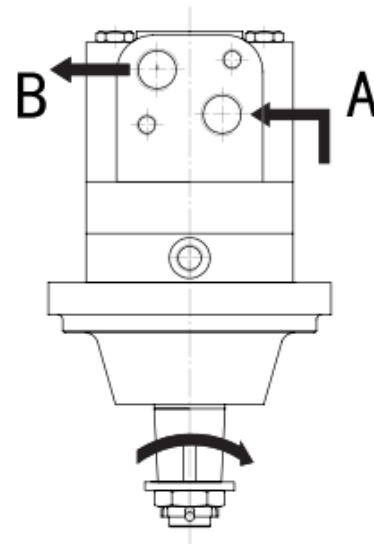
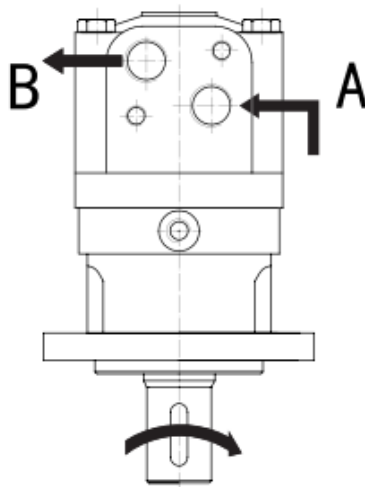
- AH3Y Series Motor

Direction of shaft rotation : Standard

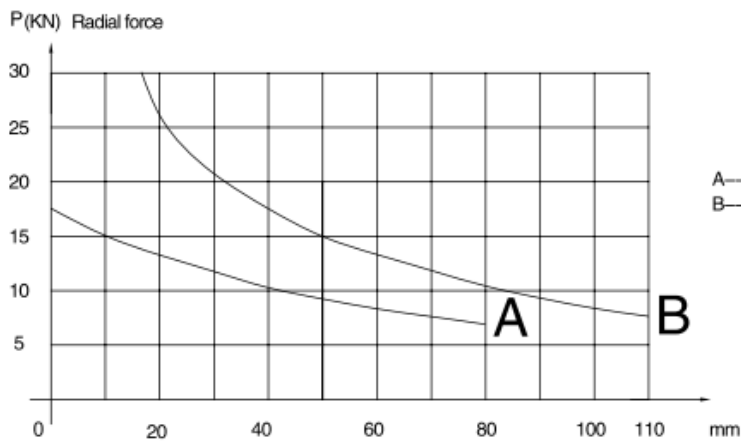
When facing shaft end of motor, shaft to rotate

Clockwise when port "A" is pressurized

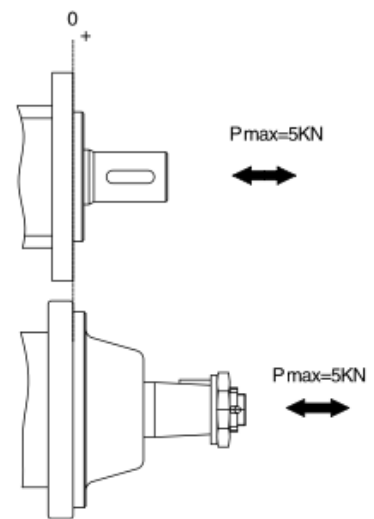
Counter-clockwise port "B" is pressurize



- PERMISSIBLE SHAFT LOADS



A—AH3Y
B—AH3WY



● AH3Y ORDERING CODE

1	2	3	4	5	6	7
AH3Y	-			/	-	

Pos.1	2	3		4		5		6		7					
Series	Disp	Output		Flange		Code	Ports		Special features		Rotation direction				
							Ports (deep)	Drain ports T(deep)							
AH3Y	80	P1	Ø25 Cylindrical shaft, parallel key 8 x 7 x 32		A	4-Ø13.5 square flange, pilot Ø82.5	Y	G1/2 (15)	G1/2 (12)	Omit	Standard	Omit	Standard		
	100	P3	Ø25.4 Cylindrical shaft, parallel key 6.35 x 6.35 x 32		All	2-Ø13.5 oval flang, pilot Ø82.5	Y1	M18 x 1.5 (15)	M14 x 1.5 (12)						
	125	P5	Ø31.75 Cylindrical shaft, parallel key 7.96 x 7.96 x 32				Y2	M22 x 1.5 (15)	M14 x 1.5 (12)						
	160	P10	Ø32 Cylindrical shaft, parallel key 10 x 8 x 45		A2 III	4-Ø13.5 square flange, pilot Ø100	Y3	M20 x 1.5 (15)	M14 x 1.5 (12)						
	200						H1	Ø30 Splined shaft. 6-30 x 25 x 6						A IV	4-Ø13.5 square flange, pilot Ø82.5
	250	H3	Ø34.85 Splined shaft. 6-34.85 x 28.15 x 8.64		Y8	NPT1/2 (15)	G1/4(12)								
	315	K4	Ø25.3 splined shaft, . 6-25.3 x 24.1 x 6.2		Y10	G1/2 (15)	G1/4(12)								
	400														
500															

- AH4 TECHNICAL DATA

TYPE	AH4-160 AH4S-160 AH4W-160	AH4-200 AH4S-200 AH4W-200	AH4-250 AH4S-250 AH4W-250	AH4-320 AH4S-320 AH4W-320	AH4-400 AH4S-400 AH4W-400	AH4-500 AH4S-500 AH4W-500
Displacement(ml/r)	158.8	200.8	252.2	317.5	401.6	535.3
cont.	20	20	20	20	18	16
Max Pressure. Drop (MPa)	int. 24	24	24	24	21	18
peak.	28	28	28	28	24	21
cont.	450	561	710	902	1008	1121
Max. Torque (N.m)	int. 559	714	883	1143	1255	1377
peak.	663	818	1021	1322	1431	1598
Max Speed (cont.) (r/min)	625	495	395	310	245	185
Max Flow (cont.) (L/min)	100	100	100	100	100	100
Max Output. Power (cont.) (Kw)	20.1	25.2	25.2	25.2	22	21
Weight	20.3	20.8	21.4	22.4	23	24

• AH4 PERFORMANCE DATA

AH4 160[158.8cm³/rev]

Pressure (Mpa)		Max.cont. Max.int.						
		4	8	10	12	16	20	24

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

AH4 200[200.8cm³/rev]

Pressure (Mpa)		Max.cont. Max.int.						
		4	8	10	12	16	20	24

10	Flow(L/win)	119	221	275	323	431	532	636
		48	47	46	43	40	38	34
20	Flow(L/win)	120	227	283	330	445	547	661
		97	96	94	92	89	86	77
40	Flow(L/win)	115	229	281	334	451	560	680
		199	197	195	191	187	182	171
60	Flow(L/win)	111	225	280	334	454	560	682
		306	301	298	296	288	282	269
80	Flow(L/win)	103	220	275	333	450	557	680
		403	401	397	392	385	378	367
Max.cont. 100	Flow(L/win)	94	216	272	327	447	551	676
		503	500	496	492	485	477	470
Max.int. 125	Flow(L/win)	80	198	262	316	436	538	662
		627	623	619	614	607	600	584
150	Flow(L/win)	67	184	247	308	425	526	648
		758	754	749	741	731	720	696

AH4 250[252.2cm³/rev]

Pressure (Mpa)		Max.cont. Max.int.						
		4	8	10	12	16	20	24

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

AH4 320[317.5cm³/rev]

Pressure (Mpa)		Max.cont. Max.int.						
		4	8	10	12	16	20	24

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

AH4 400[401.6cm³/rev]

Pressure (Mpa)		Max.cont. Max.int.						
		3	6	9	12	15	18	21

10	Flow(L/min)	165	343	524	669	827	982	1130
		25	24	23	22	21	20	19
20	Flow(L/min)	167	346	528	679	841	1001	1156
		51	50	49	46	44	42	40
40	Flow(L/min)	165	346	530	685	859	1020	1181
		99	98	96	93	90	86	82
60	Flow(L/min)	163	338	526	682	860	1024	1187
		149	147	143	139	135	131	125
80	Flow(L/min)	155	330	517	672	853	1014	1181
		199	197	194	190	186	182	176
Max.cont. 100	Flow(L/min)	140	317	503	662	838	998	1171
		249	247	245	241	235	231	225
Max.int. 125	Flow(L/min)	126	289	490	643	816	977	1142
		311	309	307	303	298	294	287
150	Flow(L/min)	118	273	475	623	797	954	1119
		375	373	369	365	361	357	350

AH4 500[535.3cm³/rev]

Pressure (Mpa)		Max.cont. Max.int.						
		3	6	9	12	14	16	18

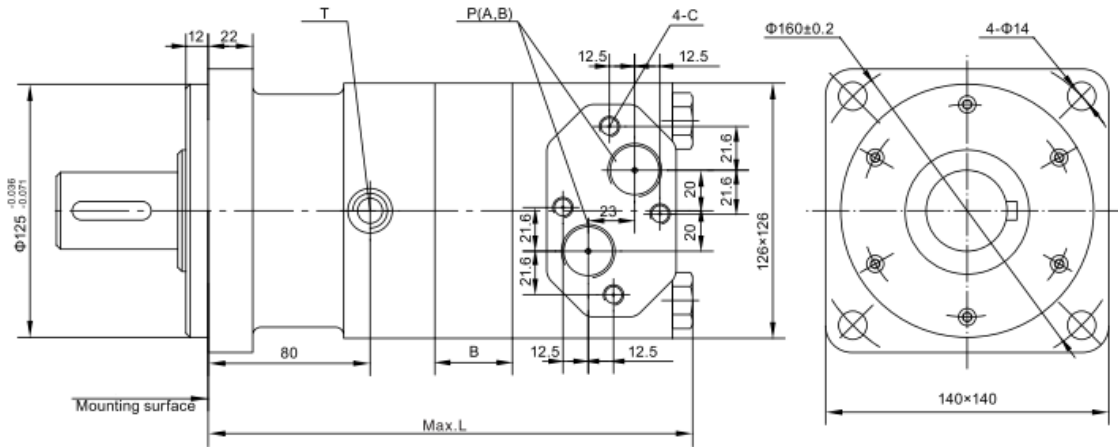
10	Flow(L/min)	204	415	637	821	966	1098	1233
		18	18	18	17	16	15	13
20	Flow(L/min)	213	427	656	845	984	1122	1267
		37	36	35	34	33	32	30
40	Flow(L/min)	212	429	669	866	1007	1145	1308
		75	74	73	72	70	68	64
60	Flow(L/min)	207	421	657	866	1001	1146	1296
		113	112	111	109	107	105	101
80	Flow(L/min)	196	397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

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

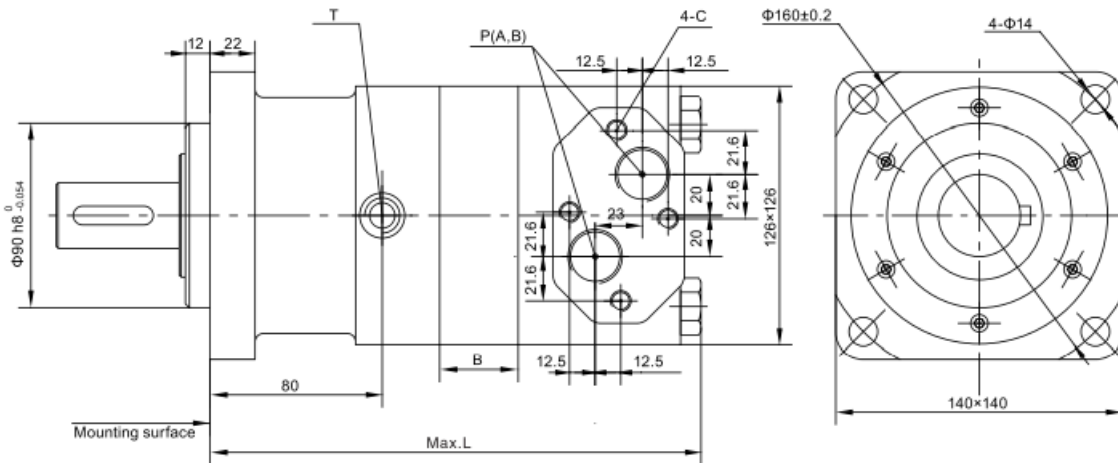
Cont.
Int.

- AH4 Installation

Square flange A

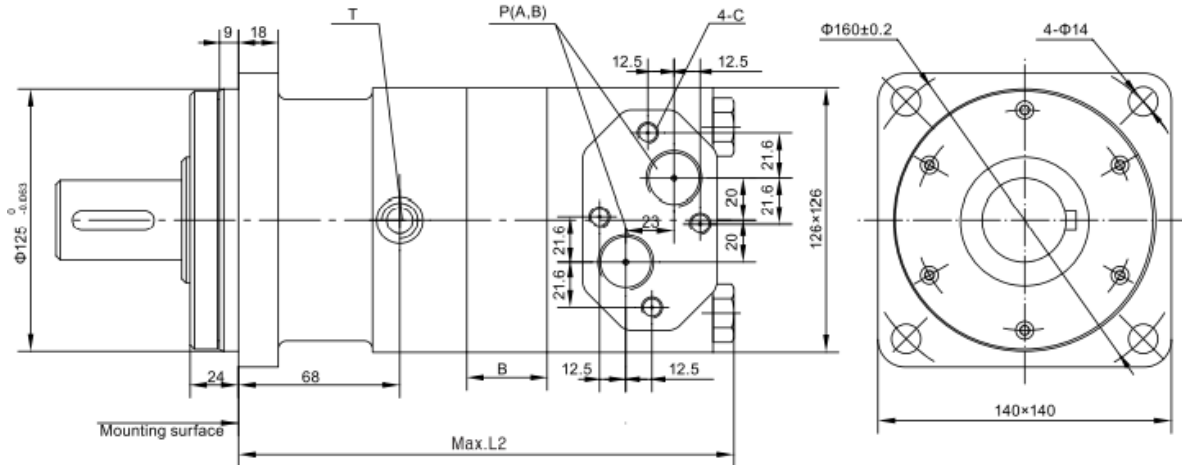


Square flange A1

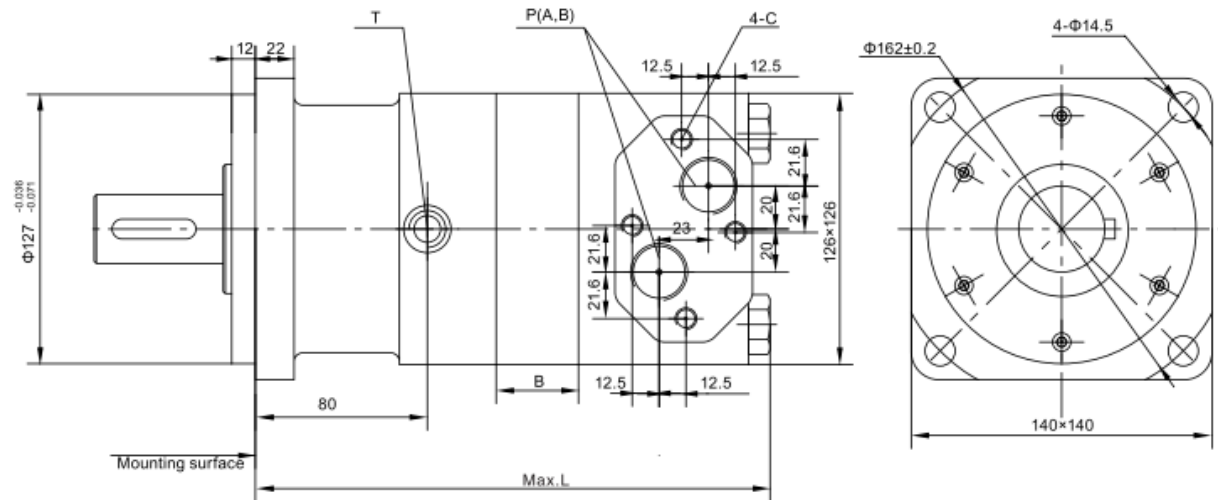


• AH4 Installation

Square flange A4



Square flange A7



Type	AH4-160	AH4-200	AH4-250	AH4-320	AH4-400	AH4-500
L	217.5	222	227.5	234.5	243.5	262
B	12	16.5	22	29	38	56.5
L2	205.5	210	215.5	222.5	231.5	250

• AH4 PORTS CODE

Code	Ports	P(A,B)(deep)	C (deep)	T (deep)
Y		G3/4 (15)	M10 (12)	G1/4 (12)
Y3		M27 x 2 (15)	M10 (12)	M14 x 1.5 (12)
Y4		M22 x 1.5 (15)	M10 (12)	M14 x 1.5 (12)
Y8		7/8-14UNF (15)	—	7/16-20UNF (12)
Y10		1 1/16-12UN (15)	—	9/16-28UNF (12)

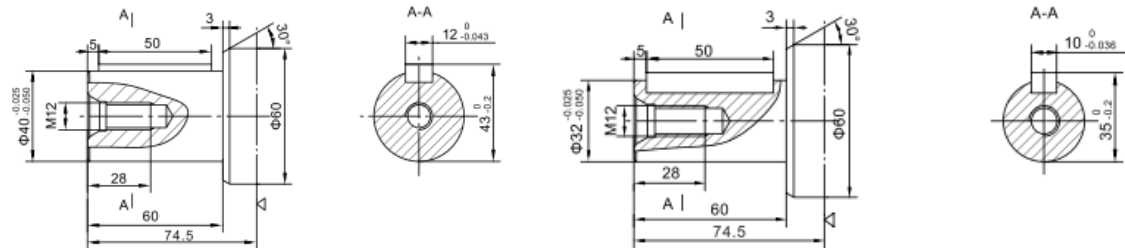
P (A,B) --Ports, C--Mouting Thread (—Indicates no this thread) , T –Drain connettion

• AH4 SHAFT VERSION

Only match A, A1, A7 flange

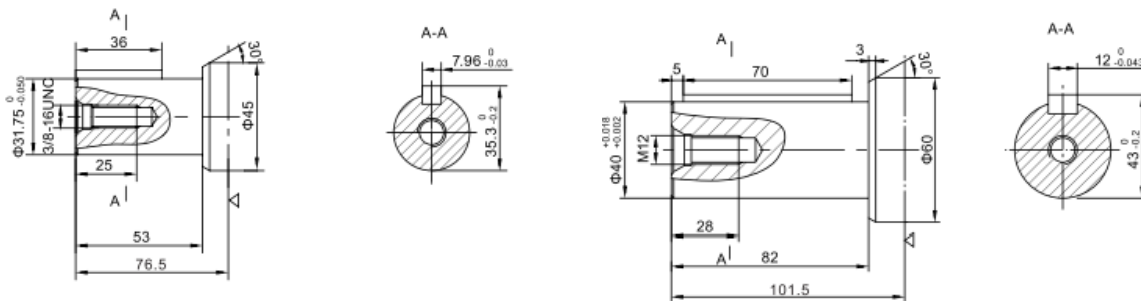
P: Ø40 Cylindrical shaft, parallel key 12 x 8 x 50

P1: Ø32 Cylindrical shaft, parallel key 10 x 8 x 50



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

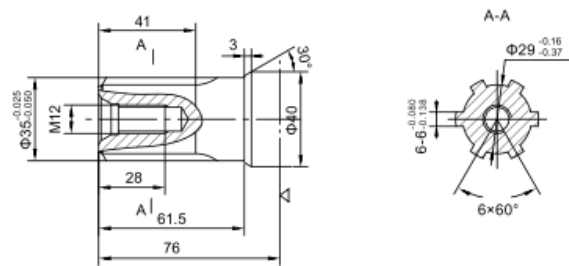
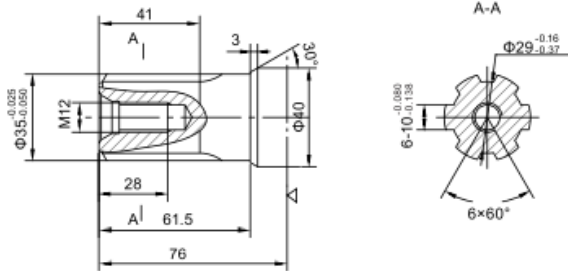
P33: Ø40 Cylindrical shaft, parallel key 12x8x70



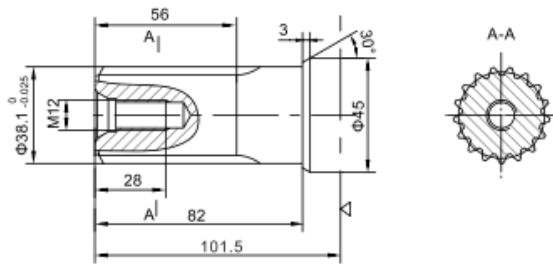
● AH4 SHAFT VERSION

H4: Ø35 Splined shaft, 6-35 x 29 x 10

H5: Ø35 Splined shaft, 6-35 x 29 x 6



K3: Ø38.1 involute splined shaft 17-DP12/24 a = 30°



Note: Flange with A4 tyle, hydraulic motor shaft from the mouting surface to increase 12mm

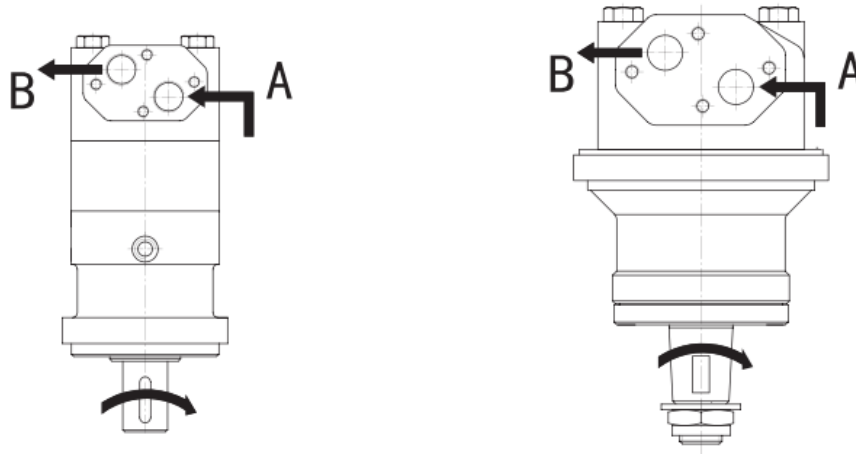
- AH4 SERIES MOTOR

Direction of shaft rotation : Standard

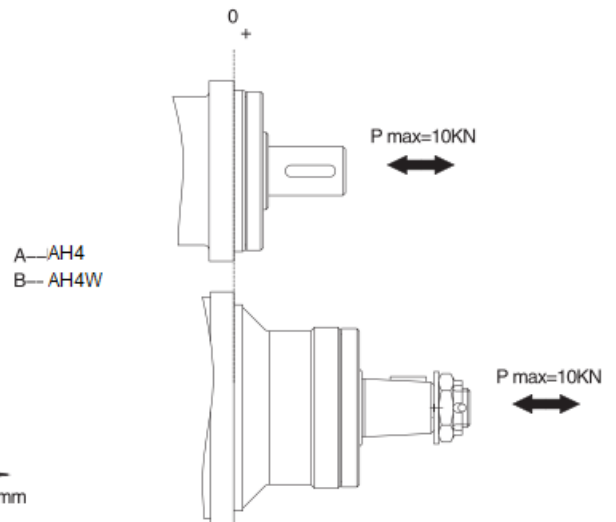
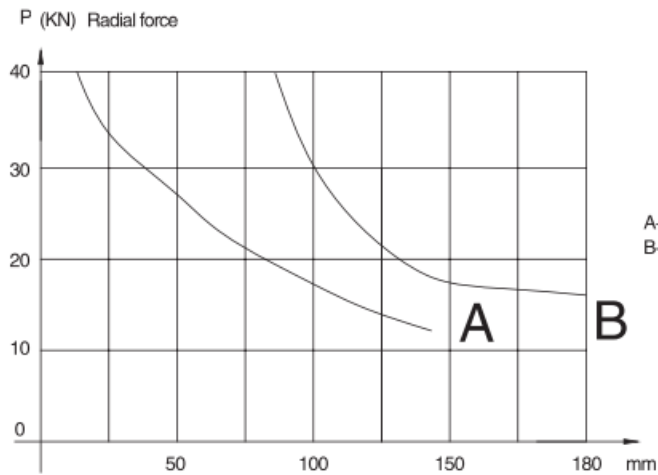
When facing shaft end of motor, shaft to rotate

Clockwise when port "A" is pressurized

Counter-clockwise port "B" is pressurized



- PERMISSIBLE SHAFT LOADS



- AH5 TECHNICAL DATA

TYPE	AH5-315 AH5S-315 AH5W-315	AH5-400 AH5S-400 AH5W-400	AH5-500 AH5S-500 AH5W-500	AH5-630 AH5S-630 AH5W-630	AH5-800 AH5S-800 AH5W-800	AH5-985 AH5S-985 AH5W-985
Displacement(ml/r)	314.9	399.7	496.6	617.8	787.4	969.1
cont.	20	20	20	20	18	14
Max Pressure. Drop (MPa)	24	24	24	21	18	16
int.	24	24	24	21	18	16
peak.	28	28	28	24	21	18
cont.	873	1108	1385	1570	1773	1900
Max. Torque (N.m)	1119	1440	1783	1951	2122	2133
int.	1119	1440	1783	1951	2122	2133
peak.	1293	1650	2060	2249	2481	2399
Max Speed (cont.) (r/min)	475	375	300	240	190	150
Max Flow (cont.) (L/min)	150	150	150	150	150	150
Max Output. Power (cont.) (Kw)	32	32	32	32	32	24
Weight	30.7	31.5	32.4	33.6	35.2	37.2

● AH5 PERFORMANCE DATA

AH5 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
Flow(L/min)	50	141 153	295 152	439 150	618 148	770 145	884 141	1051 134
	75	135 233	287 233	433 228	607 223	771 219	888 214	1057 206
Flow(L/min)	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
Max.cont.	150	108 471	260 469	411 467	581 462	745 455	856 447	1019 434
Max.int.	160	101 503	253 501	406 497	575 493	737 487	846 478	1011 465
	200	77 631	235 629	389 624	560 618	716 610	823 598	989 576

AH5 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
Flow(L/min)	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
Flow(L/min)	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
Max.cont.	150	151 372	344 371	533 369	764 366	962 361	1111 351	1326 340
Max.int.	175	136 436	330 434	528 431	748 427	944 422	1092 415	1314 407
	200	113 498	316 496	511 492	735 485	924 477	1076 470	1294 460

AH5 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
Flow(L/min)	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
Flow(L/min)	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
Max.cont.	150	193 300	445 299	693 296	966 293	1198 288	1369 282	1663 271
Max.int.	175	174 350	427 349	681 347	955 343	1186 339	1347 334	1643 324
	200	154 401	405 400	648 398	933 395	1167 390	1327 382	1626 370

AH5630[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
Flow(L/min)	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
Flow(L/min)	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
Max.cont.	150	222 238	459 237	757 236	985 234	1233 232	1530 229	1787 221
Max.int.	175	195 279	450 278	738 277	975 274	1205 270	1517 265	1769 260
	200	169 320	435 320	696 318	944 316	1187 313	1493 306	1746 294

AH5 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
Flow(L/min)	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
Flow(L/min)	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
Max.cont.	150	232 188	517 186	794 184	1083 181	1377 177	1685 172	1926 166
Max.int.	175	211 251	495 249	780 247	1061 244	1354 241	1669 236	1903 229
	200	194 302	460 301	752 300	1045 298	1339 293	1652 288	1807 282

AH5 985[969.1ml/r]
Pressure (Mpa)

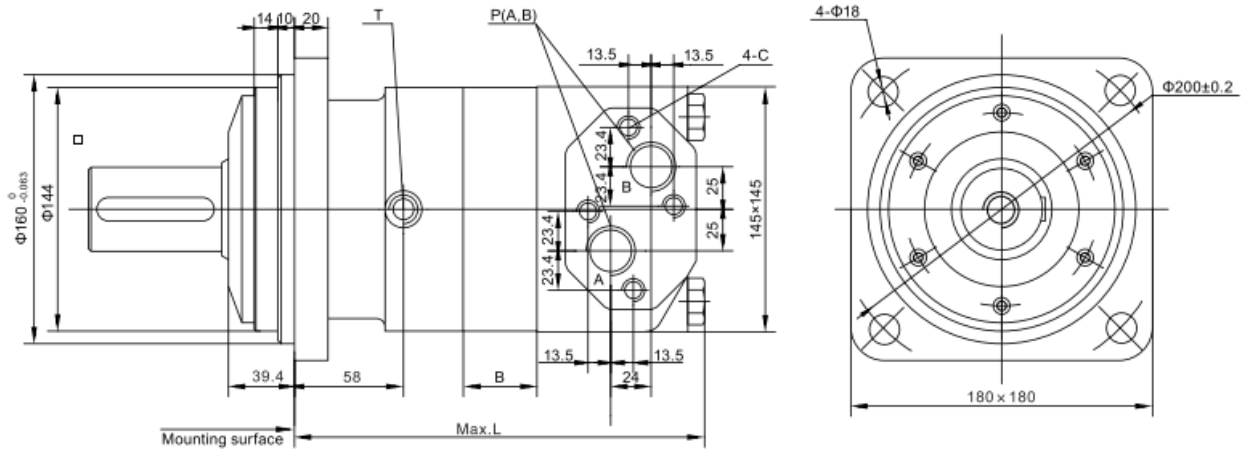
		Max.cont. Max.int.					
		2.5	5	7	10	14	16
Flow(L/min)	10	305 9	627 9	951 9	1371 8	1936 7	2212 6
	20	313 29	634 28	957 27	1380 26	1938 23	2222 21
Flow(L/min)	50	319 48	641 47	971 46	1392 44	1973 42	2232 39
	75	311 74	629 73	966 72	1395 69	1961 67	2228 64
Flow(L/min)	100	303 100	621 99	962 97	1388 95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

Torque : 1045Nm
Speed : 298r/min

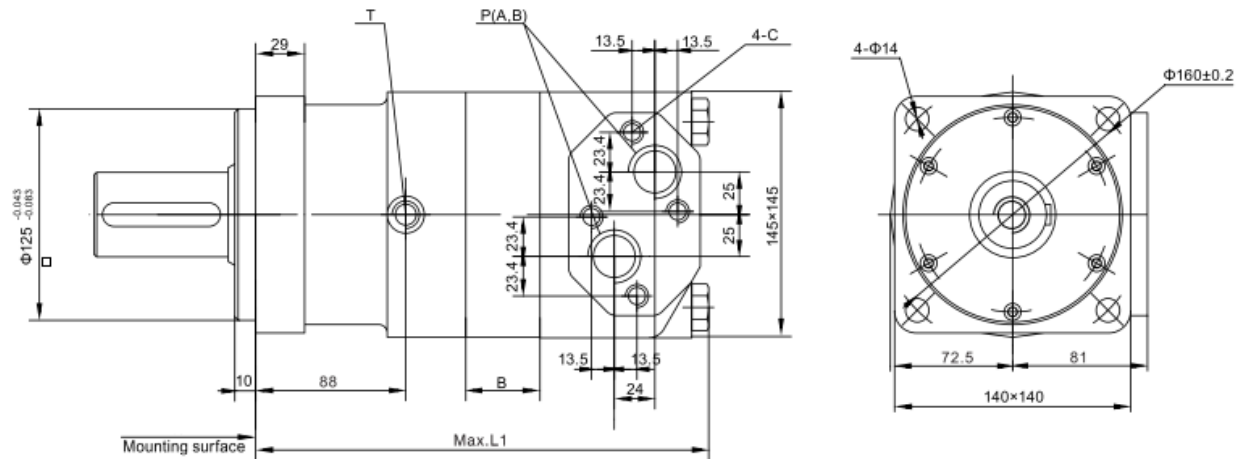
□ Cont.
■ Int.

- AH5 Installation

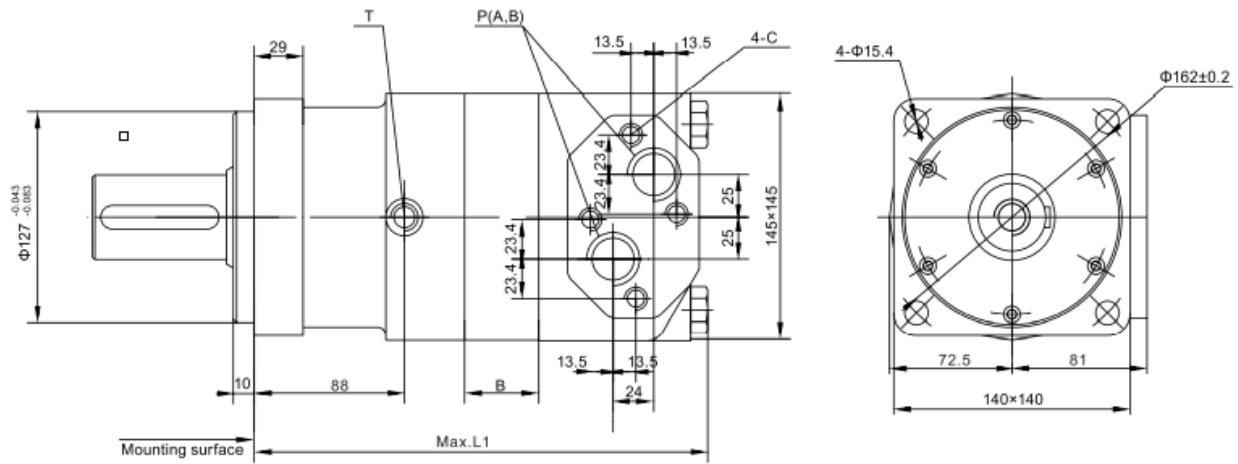
Square flange A



Square flange A1



Square flange A7



Type	AH5-315	AH5-400	AH5-500	AH5-630	AH5-800	AH5-985
L	216	223	231	241	255	270
B	246	253	261	271	285	300
L2	19	26	34	44	58	73

- AH5 PORTS CODE

Code	Ports	P(A,B)(deep)	C (deep)	T (deep)
Y		G1 (18)	M12 (12)	G1/4 (12)
Y1		G3/4 (18)	M12 (12)	G1/4 (12)
Y2		M33 x 2 (18)	M12 (12)	M14 x 1.5 (12)
Y8		M27 x 2 (18)	M12 (12)	M14 x 1.5 (12)
Y10		1 5/16-12UN (18)	—	9/16-18UNF (12)

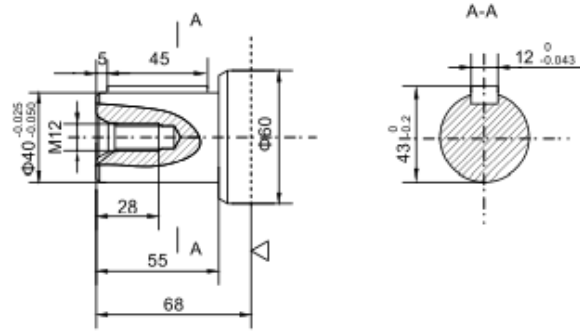
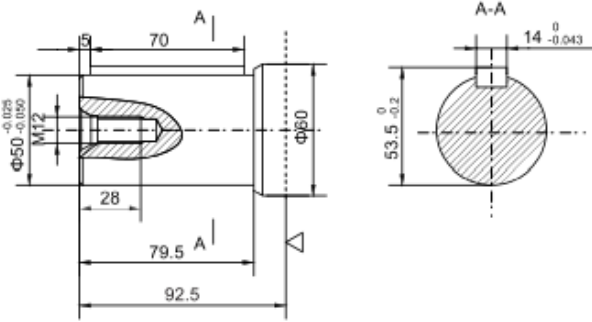
P (A,B) --Ports, C--Mouting Thread (—Indicates no this thread) , T –Drain connetion

• AH5 SHAFT VERSION

Only match A, A1, A7 flange

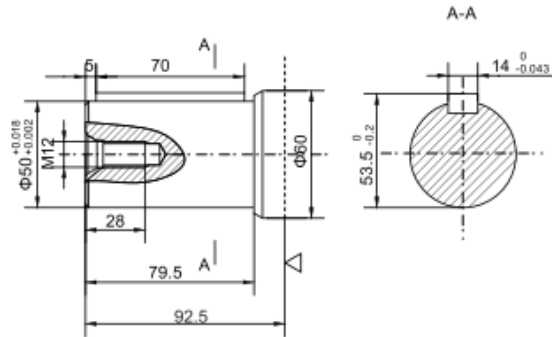
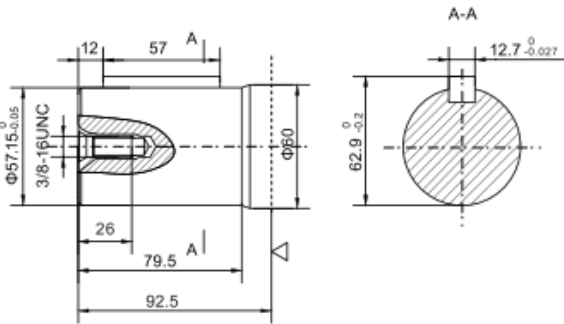
P: Ø50 Cylindrical shaft, parallel key 14 x 9 x 70
45

P1: Ø40 Cylindrical shaft, parallel key 12 x 8 x 45



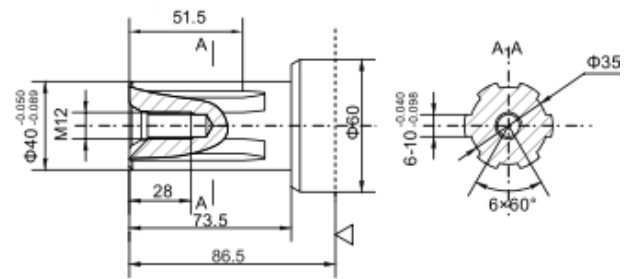
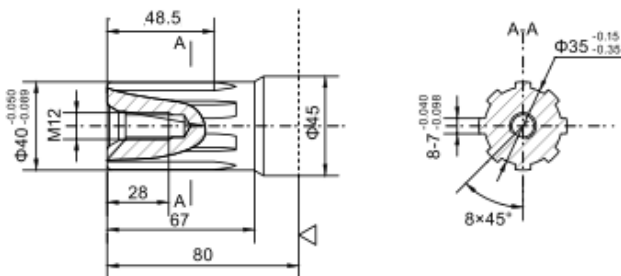
P12: Ø57.15 Cylindrical shaft, parallel
key 12.7x12.7x57

P99: Ø50 Cylindrical shaft, parallel
key 14x9x70



H4: Ø40 Splined shaft, 8-40 x 35 x 7

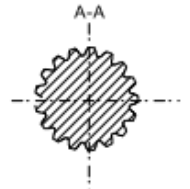
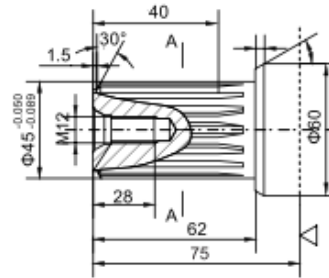
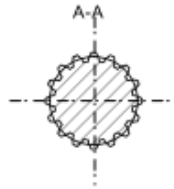
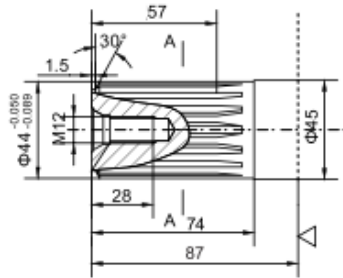
H4: Ø40 Splined shaft, 8-40 x 35 x 7



- AH5 SHAFT VERSION

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

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



Note: Flange with A4 tyle, hydraulic motor shaft from the mouting surface to increase 30mm

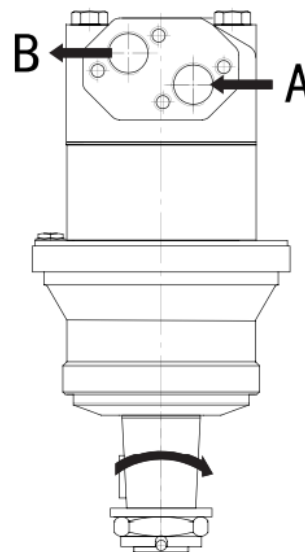
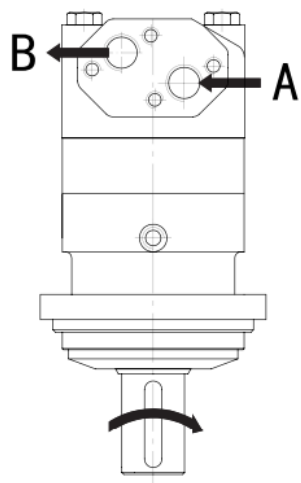
- AH5 SERIES MOTOR

Direction of shaft riation : Standard

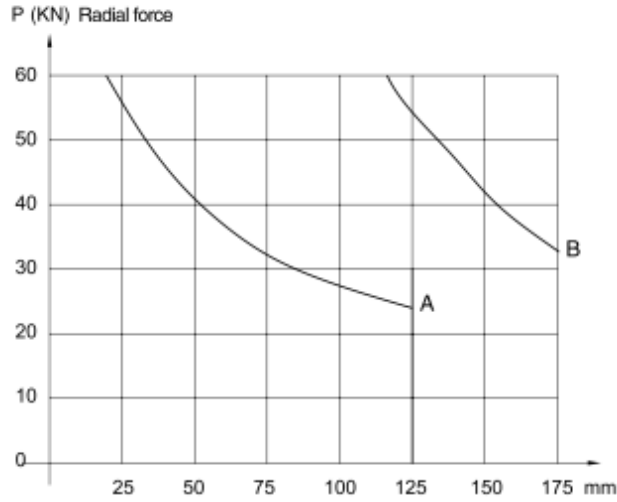
When facing shaft end of motor, shaft to rotate

Clockwise when port "A" is pressurized

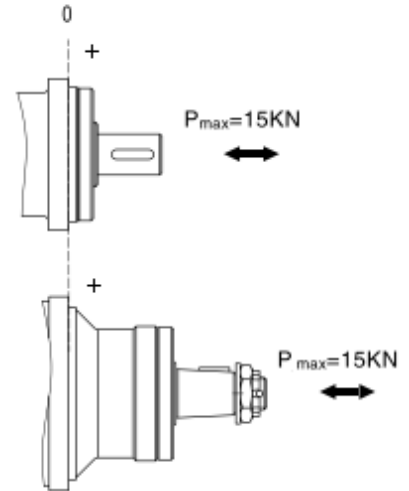
Counter-clockwise port "B" is pressurized



● PERMISSIBLE SHAFT LOADS



A---AH5
B--- AH5W



● AH5 ORDERING CODE

1	2	3	4	5	6	7
AH5	-			/		-

Pos.1	2	3		4		5		6		7		
Series	Disp	Output		Flange		Code	Ports		Special features		Rotation direction	
							Ports (deep)	Drain ports T(deep)				
AH5	160	P	Ø50 Cylindrical shaft, parallel key 14 x 9 x 70	A	4-Ø18 square flange, pilot Ø160	Y	G1 (18)	G1/4 (12)	Omit	Standard	Omit	Standard
	200	P1	Ø40 Cylindrical shaft, parallel key 12 x 8 x 50			Y1	G3/4 (18)	G1/4 (12)				
		P12	Ø57.15 Cylindrical shaft, parallel key 12.7 x 12.7 x 57			Y2	M33 x 2(18)	M14 x 1.5(12)				
	250	P99	Ø50 Cylindrical shaft, parallel key 14 x 9 x 70	A1	4-Ø14 square flange, pilot Ø125	Y3	M27 x 2(18)	M14 x 1.5(12)	L	Opposite		
	315	H4	Ø40 Splined shaft, 8-40 x 35 x 7			Y8	1 5/16-12UN(18)	9/16-18UNF(12)				
		H5	Ø40 Splined shaft, 6-40 x 35 x 10									
		400	K2	Ø44 involute Splined shaft, m2.5 z16, a=30°	A7	4-Ø15.4 square flange, pilot Ø127						
	500	K3	Ø45 involute Splined shaft, m2.5 z17, a=30°									