



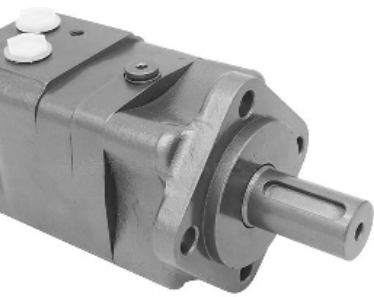
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# Orbit Motors

## Technical Catalogue





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## OTMM Orbit Hydraulic Motor With Spool Valve

## 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 to agriculture, forestry, plastics, machine tools and minmachines etc.

## CHARACTERISTICS

1. With the axial oil distribution structure, it is of smaller, high efficiency and long life.
2. Shaft seal can bear high pressure of motor of which can be used in parallel or in series.

## TECHNICAL DATA

Type		OTMM-8	OTMM-12.5	OTMM-20	OTMM-32	OTMM-40	OTMM-50
Displacement.(ml/r)		8.2	12.9	19.9	31.6	39.8	50.3
Max.Pressure. Drop (Mpa)	cont.	10	10	10	10	9	7
	int.	14	14	14	14	14	14
	peak.	20	20	20	16	16	16
Max.torque (Nm)	cont.	11	16	25	40	45	46
	int.	15	23	35	57	70	88
	peak.	21	33	51	64	82	100
Speed.Range(cont.)(r/min)		1950	1550	1005	630	500	395
Max.Flow(cont.)(L/min)		16	20	20	20	20	20
Max.Output.Power(cont.)		1.8	2.4	2.4	2.4	2.2	1.8
Weight(Kg)		1.9	2	2.1	2.2	2.3	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.

## OTMM Orbit Hydraulic Motor With Spool Valve

**PERFORMANCE DATA**

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

OTMM12.5(12.9ml/r)

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

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

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

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

OTMM50(50.3ml/r)

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

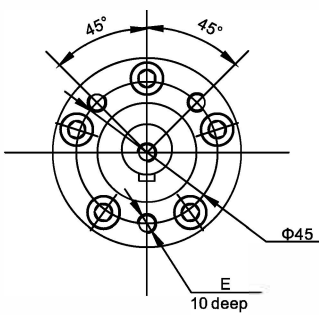
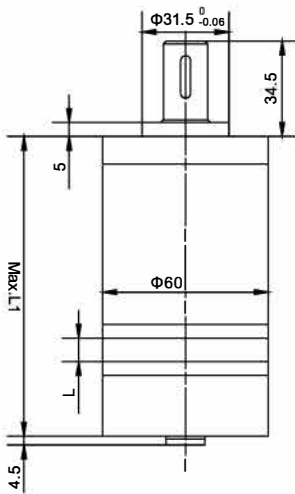
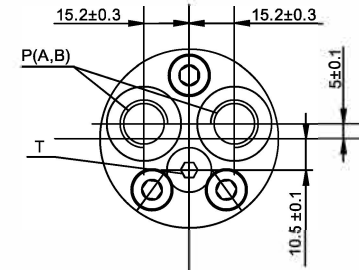
( Torque ) : 44Nm  
 ( Speed ) : 600r/min

□ Cont.  
 ■ Int.

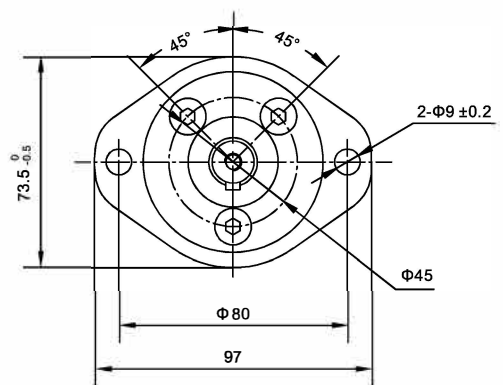
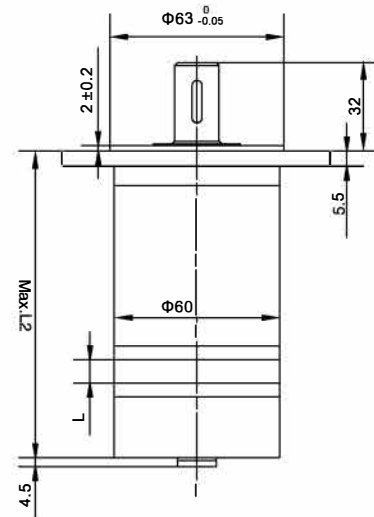
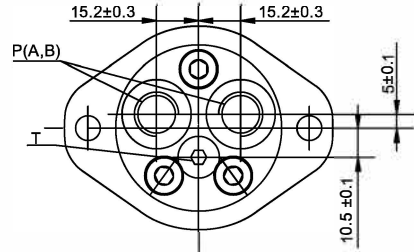
**OTMM Installation**

Y\* ( End port Y\* )

Flange C,C1

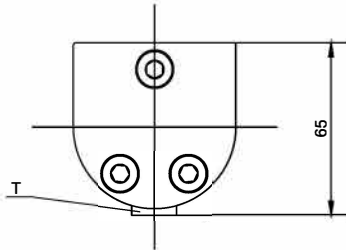
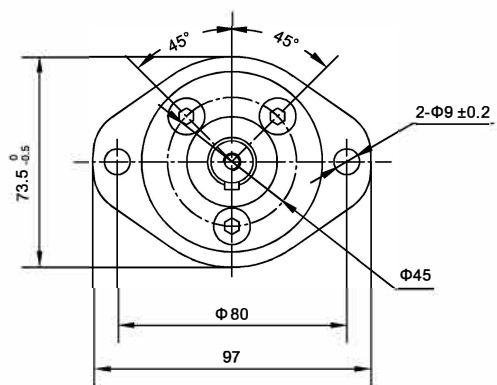
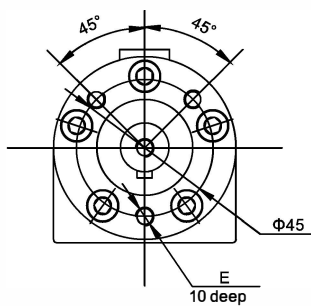
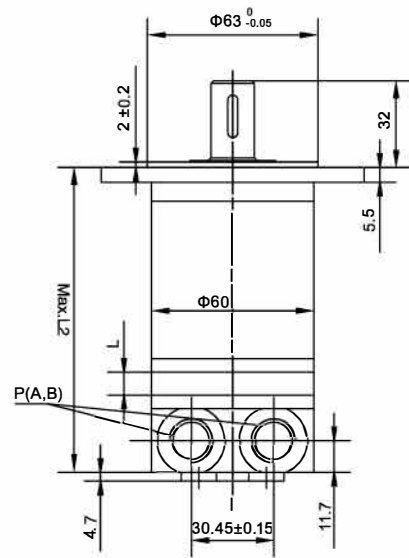
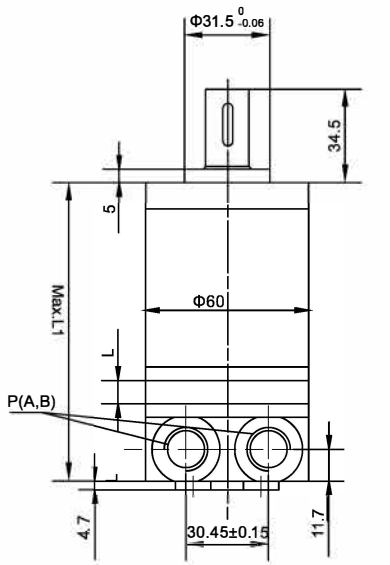
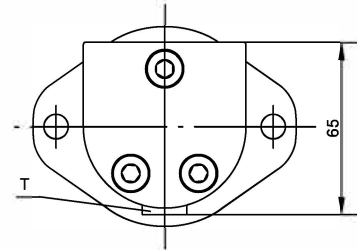


All 2-hole oval flange All



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

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

**OTMM Installation**
**S\* ( Side port S\* )**
**Flange C,C1**

**All 2-hole oval flange All**


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

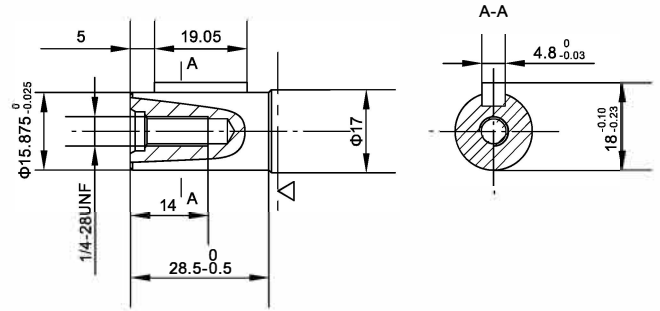
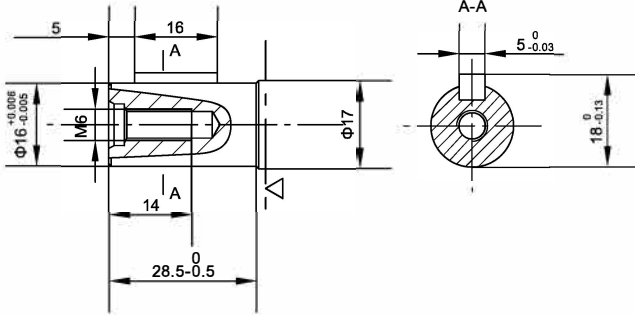
Type	OTMM-8	OTMM-12.5	OTMM-20	OTMM-32	OTMM-40	OTMM-50
L	3.5	5.5	8.5	13.5	17	21.5
L1	106	108	111	116	119.5	124
L2	108.5	110.5	113.5	118.5	122	126.5

OTMM Orbit Hydraulic Motor With Spool Valve

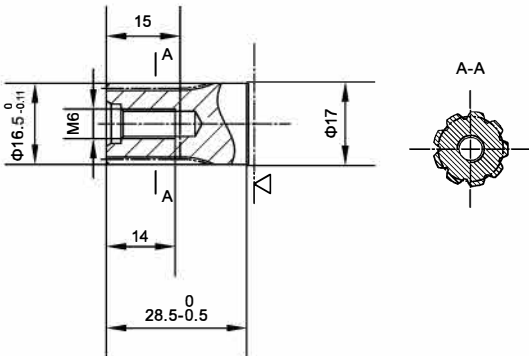
■ **SHAFT VERSION**

P1:  $\Phi 16$  Cylindrical shaft, parallel key  $5 \times 5 \times 16$

P2:  $\Phi 15.875$  Cylindrical shaft, parallel key  $4.8 \times 4.8 \times 19.05$



K1:  $\Phi 16.5$  involute splined shaft B17  $\times$  14 DIN5482

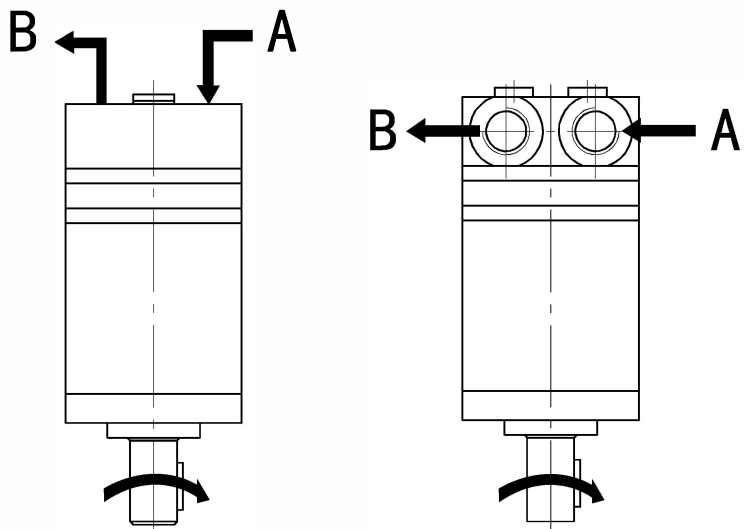


: Motor mounting surface

■ **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 port "B" is pressurized.



## OTMM Orbit Hydraulic Motor With Spool Valve

**ORDERING CODE**

1	2	3	4	5	6	7
OTMM	—				/	—

Pos.1	2	3		4		
Series	Disp	Output		Flange		
OTMM	8 12.5 20 32 40 50	P1	Φ 16 Cylindrical shaft, parallel key 5 × 5 × 16		C	3-M6 Flange, pilot Φ 31.5
		P2	Φ 15.875 Cylindrical shaft, parallel key 4.8 × 4.8 × 19.05		C1	3-1/4-28UNF Flange, pilot Φ 31.5
		K1	Φ 16.5 involute splined shaft, B17 × 14 DIN5482		A II	2-Φ 9 Oval flange, pilot Φ 63

5		6		7		
Code	Ports		Special features		Rotation direction	
	Ports(A,B)(deep)	Drain port T(deep)				
	(End port Y★)		Omit	Standard	Omit	Standard
Y1	G3/8(12),G1/8(8)					
Y2	9/16-18UNF(12),3/8-24UNF(8)					
	S★(Side port S★)		L	Opposite		
S1	G3/8(12),G1/8(8)					
S2	9/16-18UNF(12),3/8-24UNF(8)					



## OTMR Orbit Hydraulic Motor With Spool Valve

### OTMR 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 to agriculture, forestry, plastics, machine tools and min machines, such as the mould height adjustment of the injection molding machine, the cleaner, the sawmill the worktable etc.

### OTMR 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.

### OTMR TECHNICAL DATA

Type	OTMR OTMRW OTMRS OTMRE 50	OTMR OTMRW OTMRS OTMRE 80	OTMR OTMRW OTMRS OTMRE 100	OTMR OTMRW OTMRS OTMRE 125	OTMR OTMRW OTMRS OTMRE 160	OTMR OTMRW OTMRS OTMRE 200	OTMR OTMRW OTMRS OTMRE 250	OTMR OTMRW OTMRS OTMRE 315	OTMR OTMRW OTMRS OTMRE 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(cont.)(Kw)	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	

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.

**OTMR Orbit Hydraulic Motor With Spool Valve**
**OTMRY TECHNICAL DATA**

Type		OTMRY 50	OTMRY 80	OTMRY 100	OTMRY 125	OTMRY 160	OTMRY 200	OTMRY 250	OTMRY 315	OTMRY 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.	17.5	17.5	17.5	17.5	17.5	17.5	14	12	10
	int.	20	20	20	20	20	19	16	14	12
	peak.	22	22	22	22	22	20	18	15	14
Max.torque (Nm)	cont.	110	189	236	296	378	450	470	485	500
	int.	135	216	270	338	433	486	540	573	614
	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(cont.) (Kw)		7.5	12	12	12	12	11	9.5	7.5	6.5
Weight(Kg)		6.9	7.3	7.4	7.7	7.9	8.4	8.9	9.4	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.

**OTMR PERFORMANCE DATA**

OTMR 50[51.7ml/r] Pressure (Mpa)									OTMR 80[80.5ml/r] Pressure (Mpa)									
													Max.cont.		Max.int.			
									5	7	9	10	12	14	16	17.5		
Flow(L/min)	5	34	44	58	65	75	88		5	48	58	84	106	129				
		<b>94</b>	<b>85</b>	<b>77</b>	<b>77</b>	<b>72</b>	<b>50</b>		10	<b>61</b>	<b>58</b>	<b>52</b>	<b>46</b>	<b>40</b>				
	10	35	45	61	68	79	94	107	119	20	50	74	96	106	126	145	170	
		<b>188</b>	<b>179</b>	<b>167</b>	<b>163</b>	<b>154</b>	<b>137</b>	<b>119</b>	<b>98</b>	30	<b>122</b>	<b>116</b>	<b>112</b>	<b>108</b>	<b>106</b>	<b>99</b>	<b>60</b>	
	15	34	48	62	72	87	100	108	122	40	54	76	100	109	131	152	174	193
Max.cont.	20	34	46	60	68	82	95	109	125	50	<b>243</b>	<b>239</b>	<b>231</b>	<b>219</b>	<b>206</b>	<b>192</b>	<b>176</b>	<b>152</b>
		<b>379</b>	<b>377</b>	<b>367</b>	<b>363</b>	<b>348</b>	<b>332</b>	<b>304</b>	<b>272</b>	60	50	72	96	104	128	148	172	191
	30	32	43	59	66	79	94	107	121	70	<b>362</b>	<b>358</b>	<b>356</b>	<b>350</b>	<b>349</b>	<b>335</b>	<b>325</b>	<b>300</b>
		<b>578</b>	<b>571</b>	<b>563</b>	<b>556</b>	<b>544</b>	<b>533</b>	<b>502</b>	<b>467</b>	Max.cont.	45	70	95	104	125	146	171	188
	40	30	40	57	65	78	91	105	120	50	<b>484</b>	<b>480</b>	<b>478</b>	<b>476</b>	<b>470</b>	<b>468</b>	<b>440</b>	<b>438</b>
Max.int.	45	29	39	56	64	77	89	104	120	60	41	68	91	101	122	145	168	186
		<b>858</b>	<b>855</b>	<b>851</b>	<b>847</b>	<b>837</b>	<b>817</b>	<b>798</b>	<b>772</b>	70	<b>610</b>	<b>608</b>	<b>606</b>	<b>603</b>	<b>600</b>	<b>598</b>	<b>550</b>	<b>520</b>
	50	25	36	52	59	72	84	98	113	Max.int.	35	65	88	96	120	142	164	182
	<b>952</b>	<b>942</b>	<b>927</b>	<b>908</b>	<b>882</b>	<b>854</b>	<b>834</b>	<b>803</b>	75	<b>726</b>	<b>723</b>	<b>720</b>	<b>718</b>	<b>710</b>	<b>700</b>	<b>698</b>	<b>680</b>	
									Max.int.	30	58	81	93	114	136	158	175	
									75	<b>845</b>	<b>834</b>	<b>820</b>	<b>802</b>	<b>789</b>	<b>767</b>	<b>754</b>	<b>730</b>	
										19	48	76	88	108	132	151	168	
										<b>910</b>	<b>895</b>	<b>881</b>	<b>867</b>	<b>852</b>	<b>830</b>	<b>806</b>	<b>787</b>	

## OTMR Orbit Hydraulic Motor With Spool Valve

**OTMR PERFORMANCE DATA**

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

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

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

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

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

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

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

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

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

□ Cont.  
 ■ Int.

## OTMR Orbit Hydraulic Motor With Spool Valve

**OTMR PERFORMANCE DATA**

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

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

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

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

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

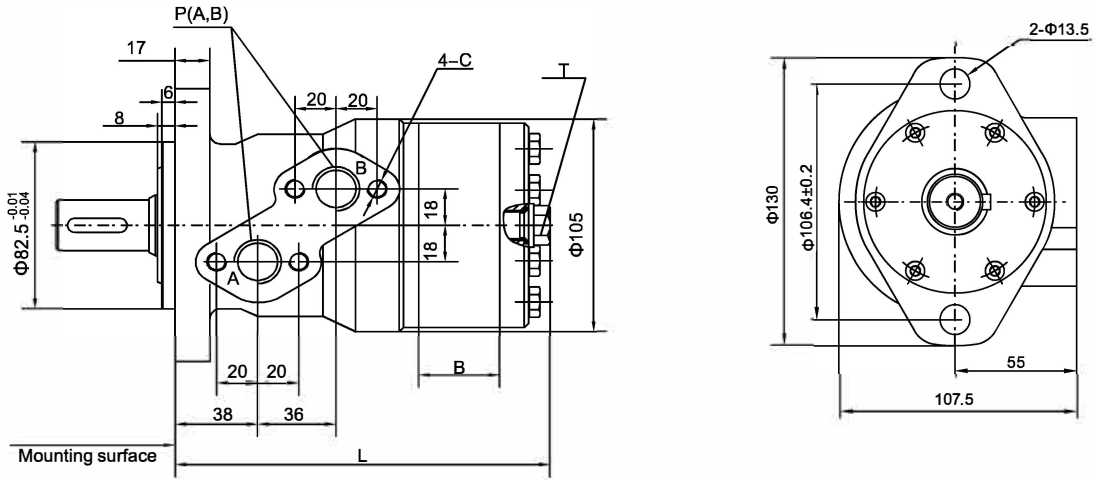
		Max.cont.				Max.int.	
		3	4	6	7	8	9
Flow(L/min)	5	152 <b>12</b>					
	10	154 <b>24</b>	205 <b>21</b>	308 <b>18</b>	349 <b>17</b>		
	20	150 <b>49</b>	201 <b>48</b>	302 <b>47</b>	340 <b>46</b>	392 <b>44</b>	441 <b>41</b>
	30	146 <b>73</b>	198 <b>74</b>	296 <b>73</b>	331 <b>72</b>	387 <b>70</b>	438 <b>67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

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

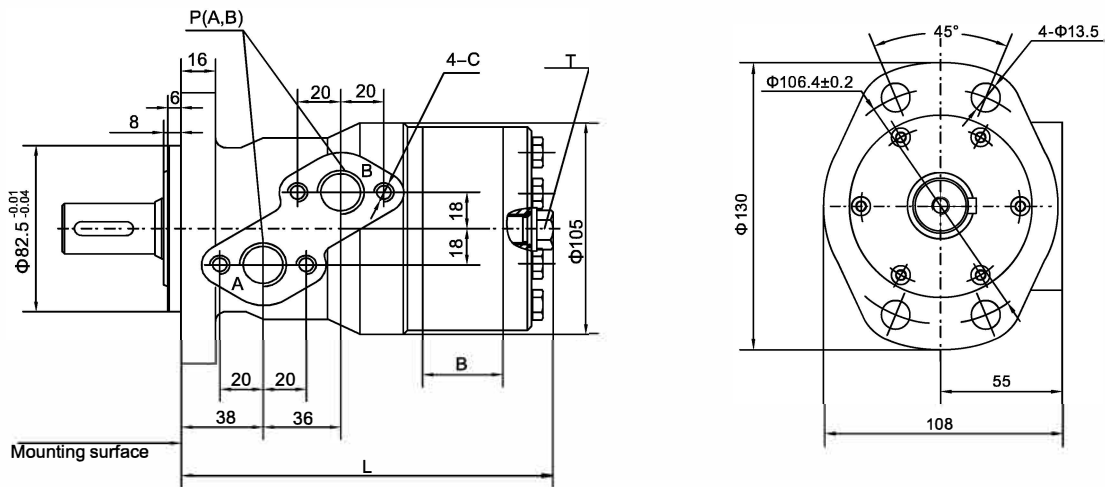
□ Cont.  
■ Int.

■ OTMR, OTMRE Installation

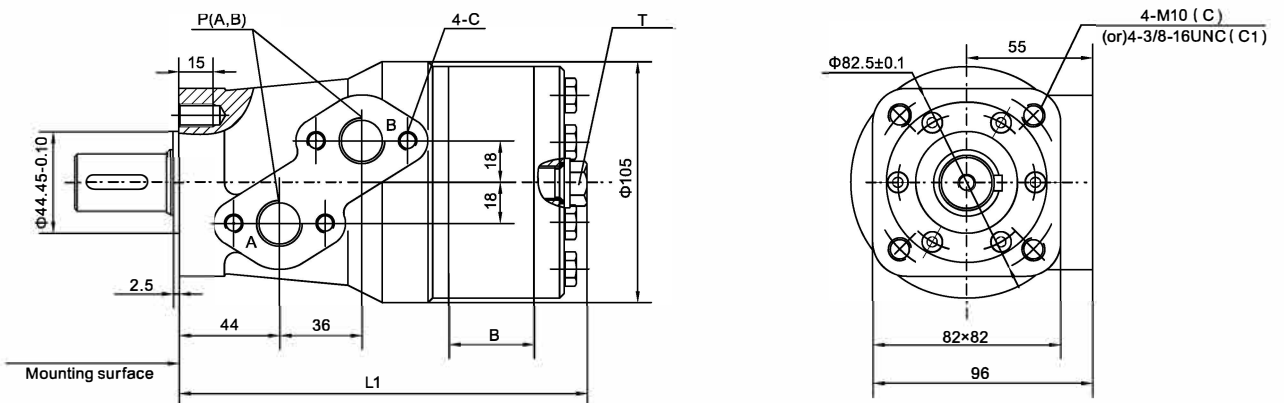
2-hole oval flange A II



4-hole oval flange A IV

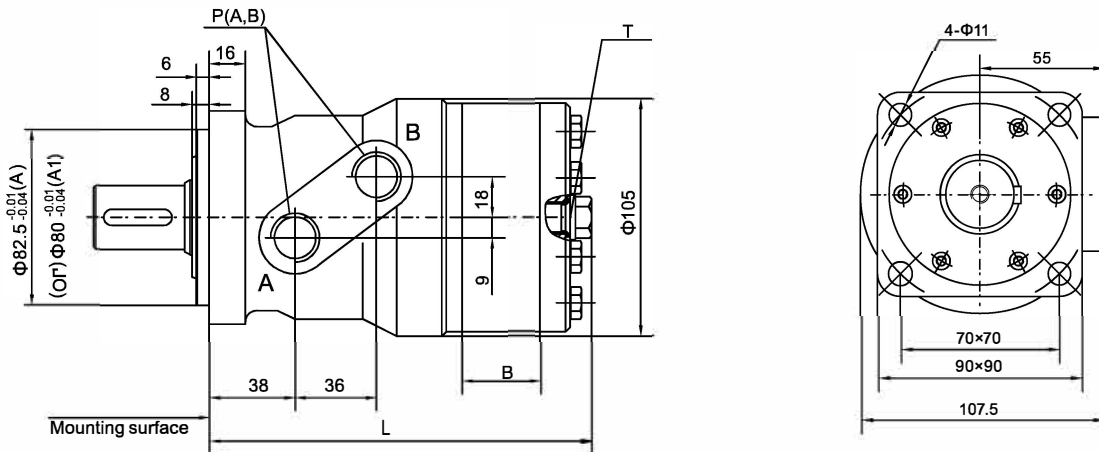
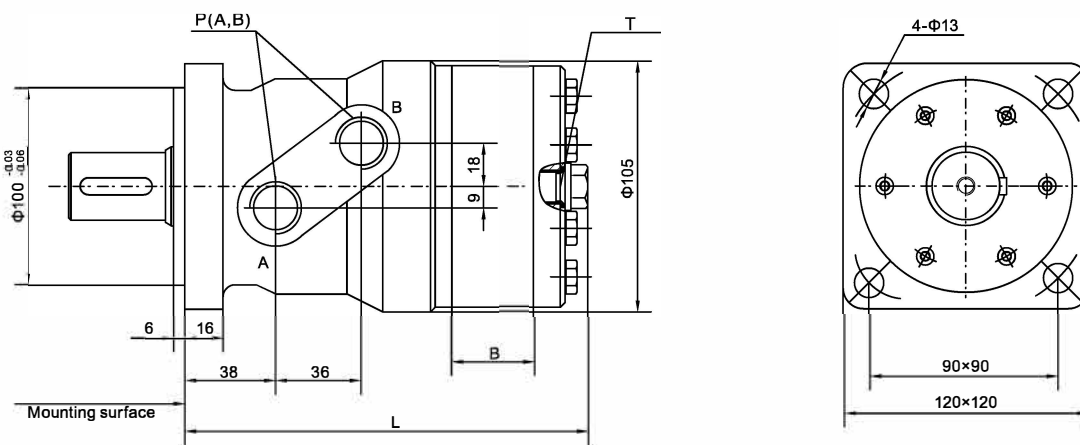


Square flange C, C1



Note: C, C1 mounting are assembling to BMRS shaft

## OTMR Orbit Hydraulic Motor With Spool Valve

**OTMR, OTMRE Installation**
**Square flange A, A 1**

**Square flange A2 III**


Type	OTMR - 50	OTMR - 80	OTMR - 100	OTMR - 125	OTMR - 160	OTMR - 200	OTMR-250	OTMR-315	OTMR-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

**OTMRY Installtion**

Type	OTMRY - 50	OTMRY - 80	OTMRY - 100	OTMRY - 125	OTMRY - 160	OTMRY - 200	OTMRY-250	OTMRY-315	OTMRY-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



## OTMR Orbit Hydraulic Motor With Spool Valve

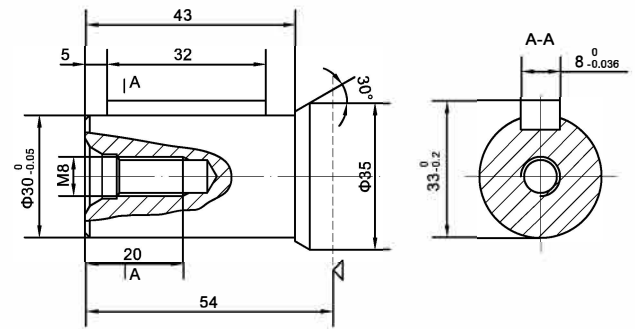
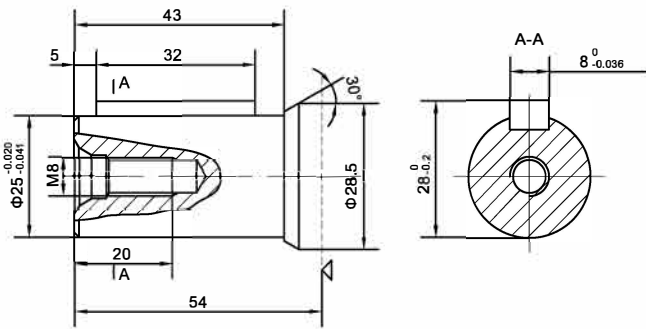
**OTMR, TMRE PORTS CODE**

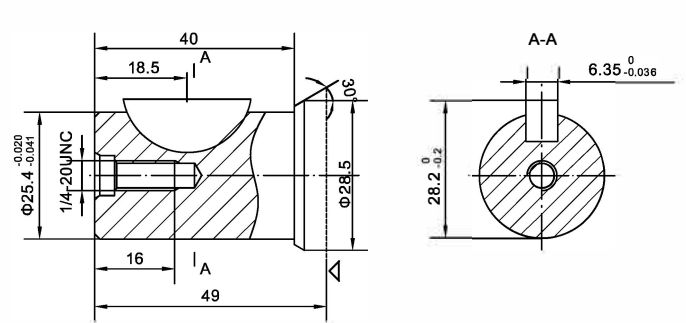
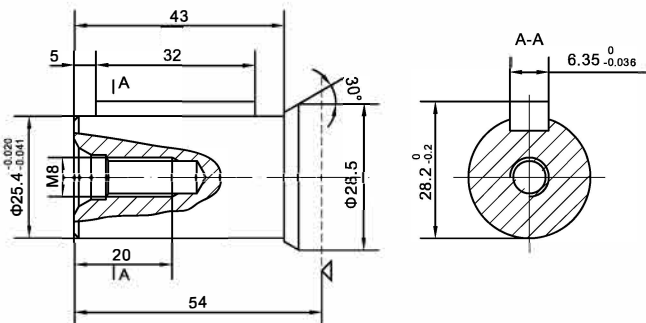
Code	Ports	P(A, B) (deep)	C (deep)	T (deep)
Y		G1/2 (15)	M8 (13)	M14 × 1.5 (12)
Y1		M18 × 1.5 (15)	M8 (13)	M14 × 1.5 (12)
Y2		M22 × 1.5 (15)	M8 (13)	M14 × 1.5 (12)
Y4		ZG3/8 (15)	M8 (13)	M14 × 1.5 (12)
Y5		7/8–14UNF (15)	—	M14 × 1.5 (12)
Y7		ZG1/2 (15)	M8 (13)	M14 × 1.5 (12)
Y8		NPT1/2 (15)	M8 (13)	M14 × 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)

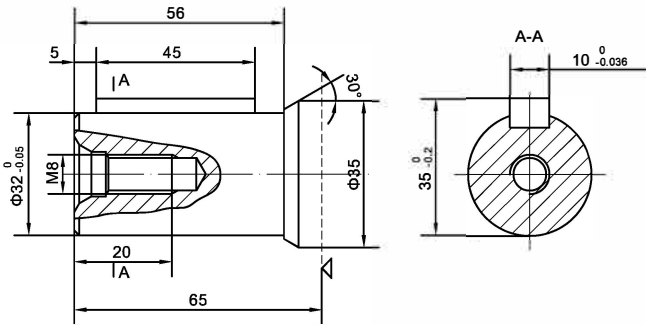
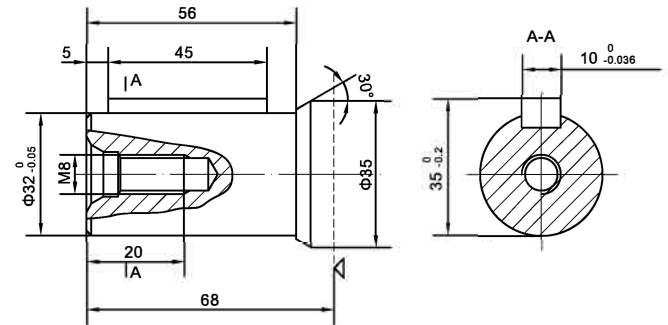
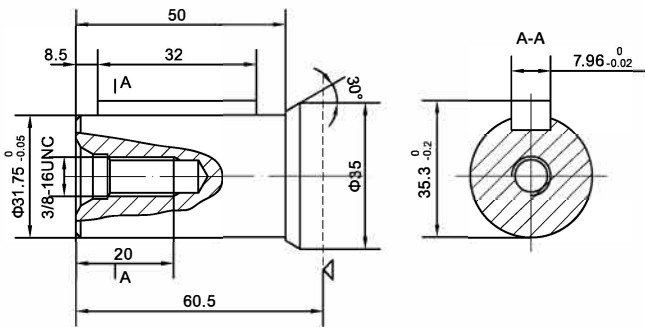
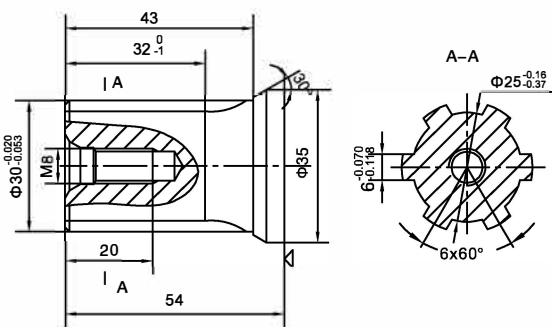
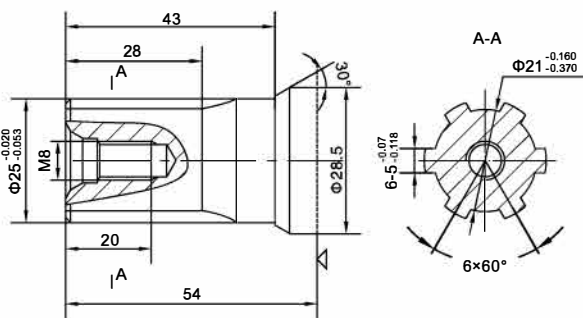
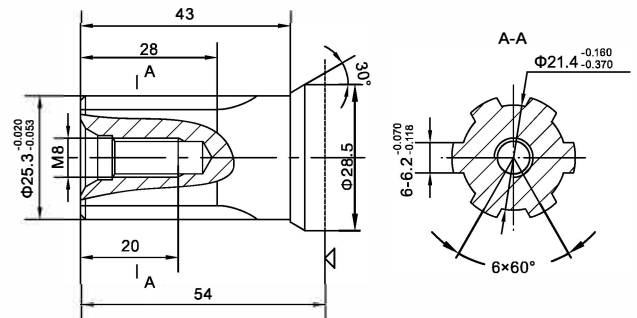
Note: P(A, B)—Ports, C—Mounting Thread ( —Indicates no this thread ), T—Drain connection

**OTMR, OTMRE — SHAFT VERSION**

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

 P2:  $\Phi 30$  Cylindrical shaft, parallel key  $8 \times 7 \times 32$ 

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

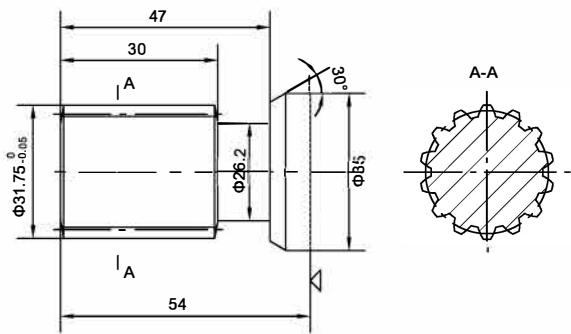
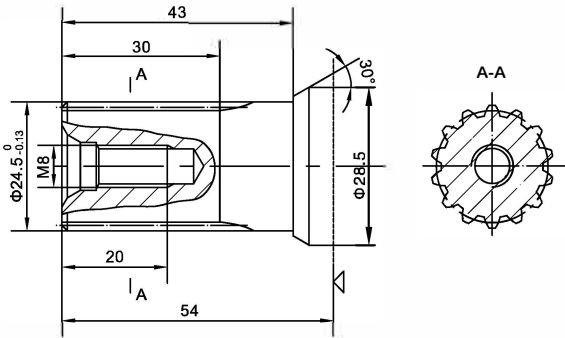
 P4:  $\Phi 25.4$  Cylindrical shaft, Woodruff key  $\Phi 25.4 \times 6.35$ 

 : Motor mounting surface

**■ OTMR, OTMRE — SHAFT VERSION**
**P5:  $\Phi 32$  Cylindrical shaft, parallel key  $10 \times 8 \times 45$** 

**P52:  $\Phi 32$  Cylindrical shaft, parallel key  $10 \times 8 \times 45$** 

**P6:  $\Phi 31.75$  Cylindrical shaft, parallel key  $7.96 \times 7.96 \times 32$** 

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

**H2:  $\Phi 25$  Splined shaft, 6-25  $\times 21 \times 5$** 

**H3:  $\Phi 25.3$  Splined shaft, 6-25.3  $\times 21.4 \times 6.2$** 

 : Motor mounting surface

■ OTMR, TMRE — SHAFT VERSION

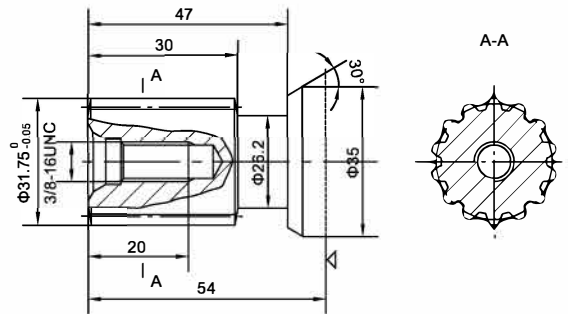
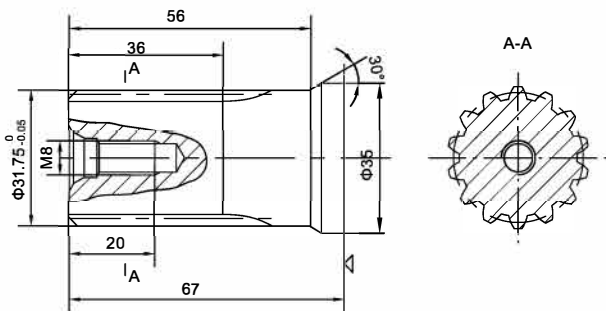
K4:  $\Phi 24.5$  involute splined shaft B25 x 22 DIN5482 m: 1.6 Z:14

K10:  $\Phi 31.75$  involute splined shaft 14-DP12/24  $\alpha=30^\circ$




K13:  $\Phi 31.75$  involute splined shaft 14-DP12/24  $\alpha=30^\circ$

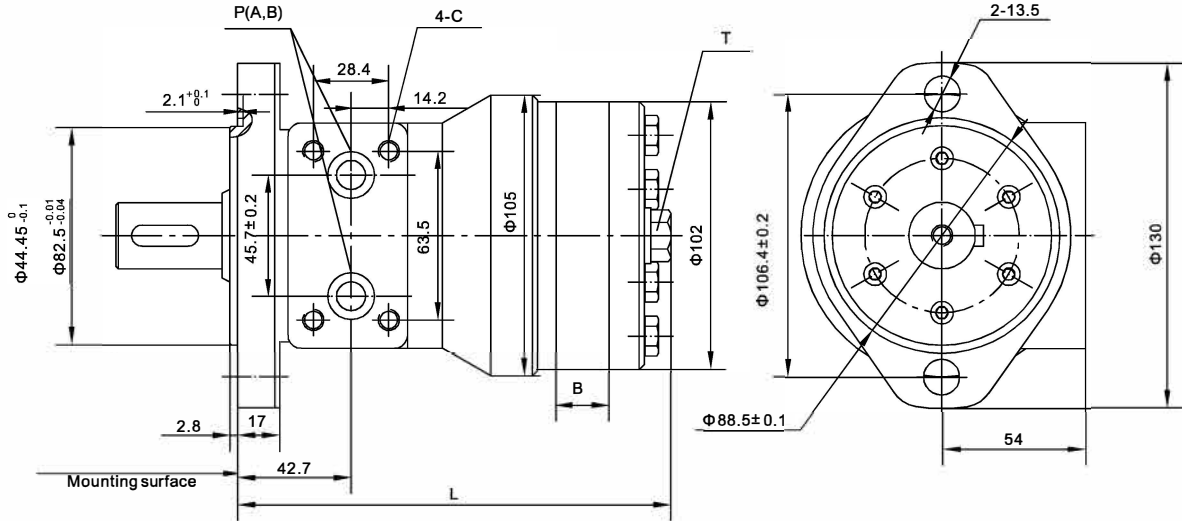
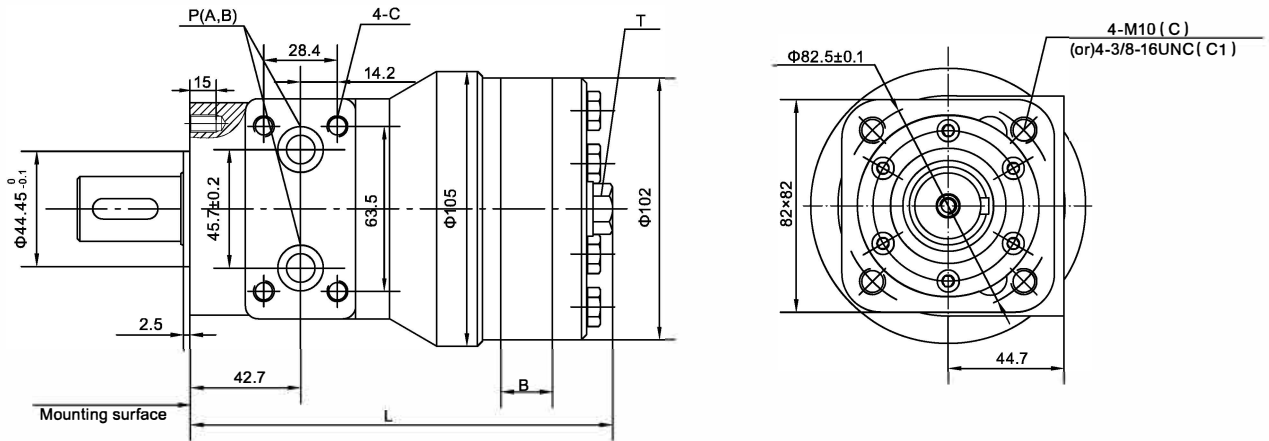
K14:  $\Phi 31.75$  involute splined shaft 14-DP12/24  $\alpha=30^\circ$



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

 : Motor mounting surface

## OTMRS Orbit Hydraulic Motor With Spool Valve

**OTMRS Installation**
**2-hole oval flange A II**

**C,C1 Square flange**


Type	OTMRS-50	OTMRS-60	OTMRS-100	OTMRS-125	OTMRS-160	OTMRS-200	OTMRS-250	OTMRS-315	OTMRS-400
L	151	156	159.5	164	170	177	186	198	212
B	9	14	17.5	22	28	35	44	56	70

OTMRS Orbit Hydraulic Motor With Spool Valve

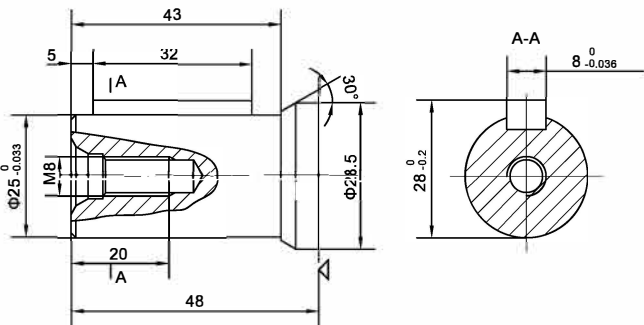
■ OTMRS PORTS CODE

Code	Ports	P(A, B)(deep)	C ( deep )	T ( deep )
Y		G1/2 (15)	—	M14 × 1.5(12)
Y5		7/8–14UNF(15)	—	7/16–20UNF(12)
Y7		ZG1/2(15)	—	G1/4(12)
Y9		NPTF1/2(15)	—	7/16–20UNF(12)
Y10		G1/2(15)	—	G1/4(12)
Y17		3/4–16UNF(15)	—	7/16–20UNF(12)
Y19		Φ11(15)	5/16–18UNC(13)	7/16–20UNF(12)
Y20		M18 × 1.5(15)	M8 (13)	G1/4(12)

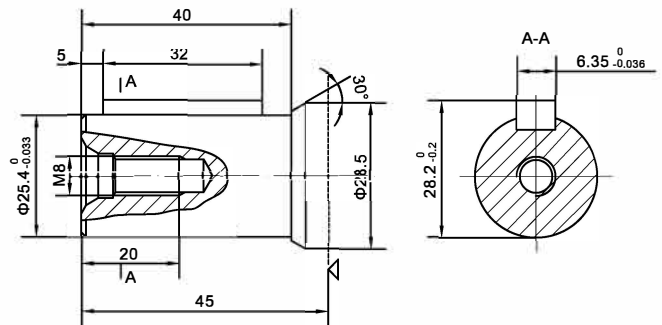
P(A, B)—Ports, C—Mounting Thread ( —Indicates no this thread ), T—Drain connettion

■ OTMRS SHAFT VERSION

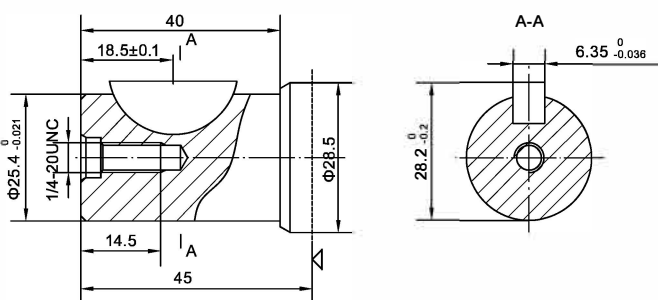
P1: Φ25 Cylindrical shaft, parallel key8 × 7 × 32



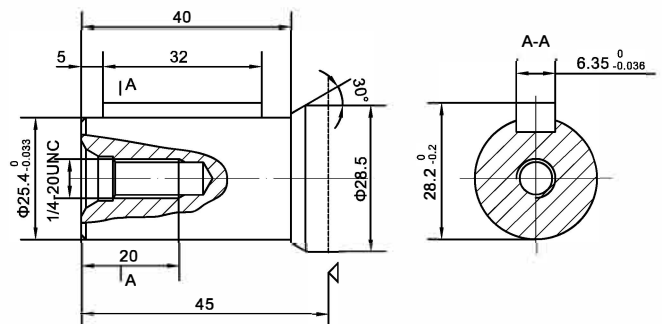
P3: Φ25.4 Cylindrical shaft, parallel key6.35 × 6.35 × 32



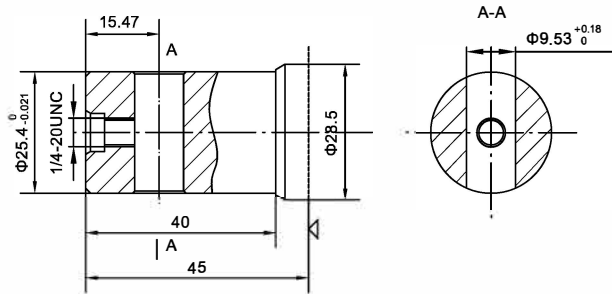
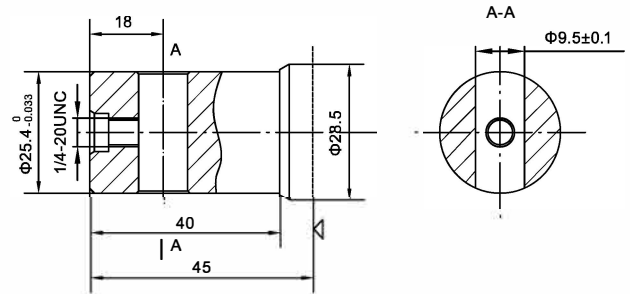
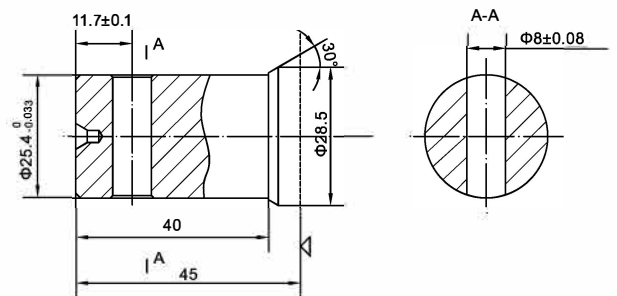
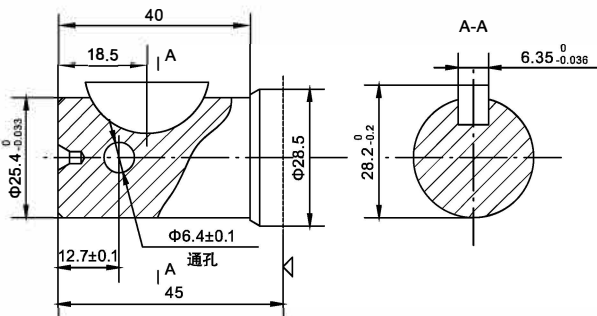
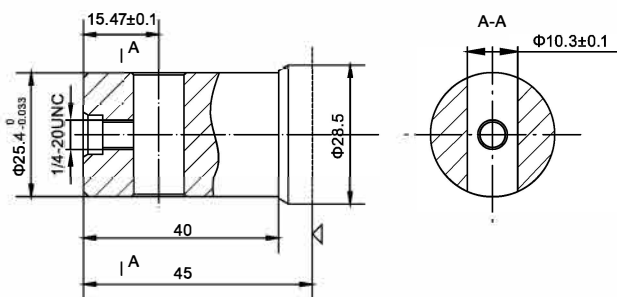
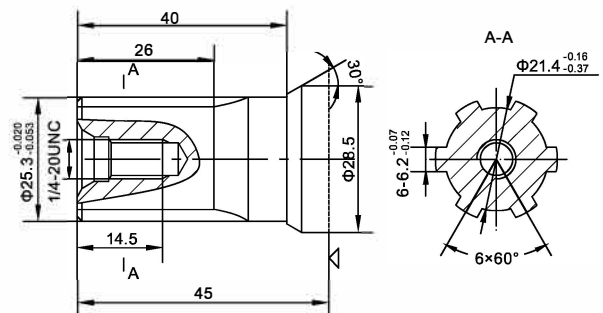

P4: Φ25.4 Cylindrical shaft, Woodruff key Φ25.4 × 6.35



P33: Φ25.4 Cylindrical shaft, parallel key6.35 × 6.35 × 32



◁ : Motor mounting surface

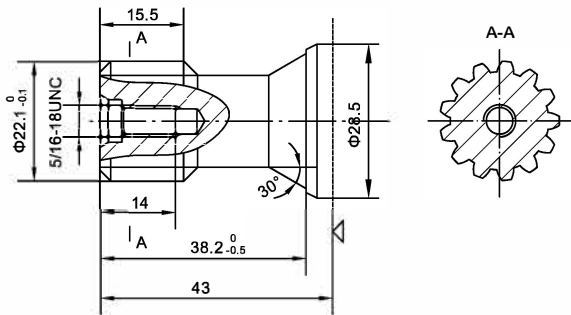
**OTMRS SHAFT VERSION**
**P89:  $\Phi 25.4$  Cylindrical shaft pin hole  $\Phi 9.53$** 

**P93:  $\Phi 25.4$  Cylindrical shaft pin hole  $\Phi 9.5$** 

**P95:  $\Phi 25.4$  Cylindrical shaft pin hole  $\Phi 6.4$ , Woodruff key  $\Phi 25.4 \times 6.35$  P96:  $\Phi 25.4$  Cylindrical shaft pin hole  $\Phi 8$** 

**P97:  $\Phi 25.4$  Cylindrical shaft pin hole  $\Phi 10.3$** 

**H4:  $\Phi 25.3$  Splined shaft, 6-25.3 x 21.4 x 6.2**

 : Motor mounting surface




OTMRS Orbit Hydraulic Motor With Spool Valve

■ OTMRS SHAFT VERSION

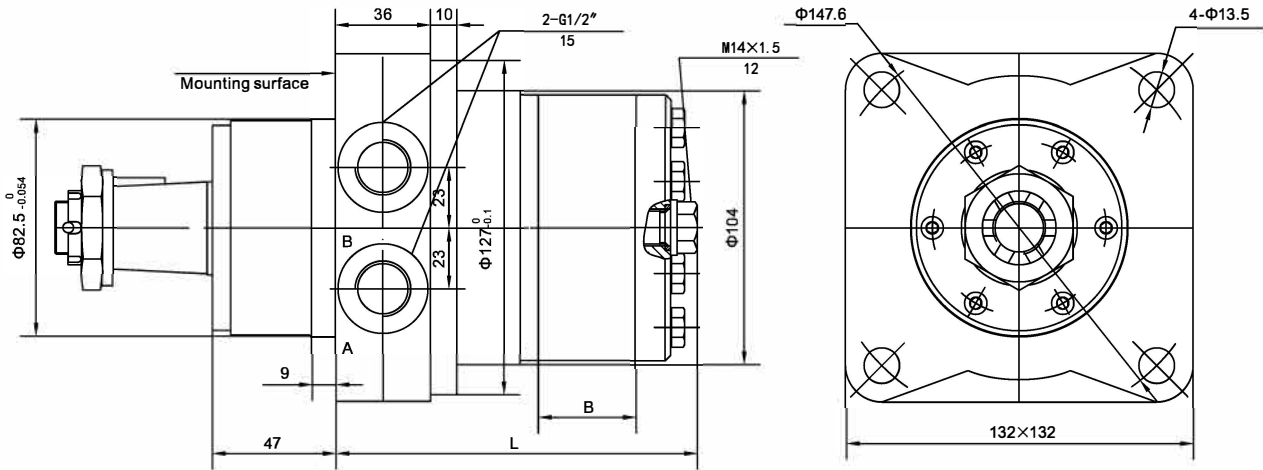
K8:  $\Phi 22.1$  involute splined shaft, 13-DP16/32



 : Motor mounting surface

## OTMRW Orbit Hydraulic Motor With Spoor Valve

### OTMRW Installation



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

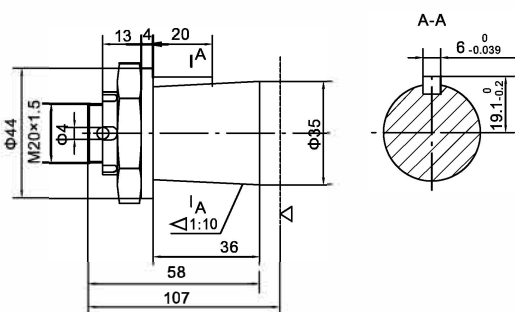
### OTMRW PORTS CODE

Code	Ports	P(A, B)(deep)	C ( deep )	T ( deep )
Y		G1/2 (15)	—	M14 x 1.5(12)

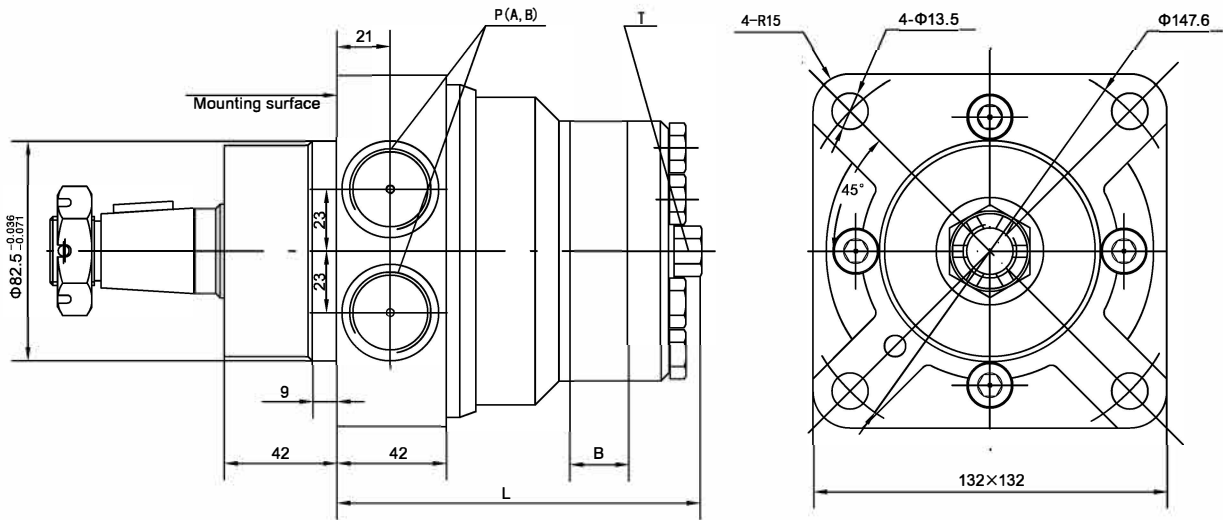
P(A, B)—Ports, C—Mounting Thread ( —Indicates no this thread ), T—Drain connection

### OTMRW

Z:  $\Phi 35$  Tapered shaft, taper1:10, parallel key B6 x 6 x 20



◁ : Motor mounting surface

**OTMRW Orbit Hydraulic Motor With Spool Valve**
**OTMRW1 Installation**


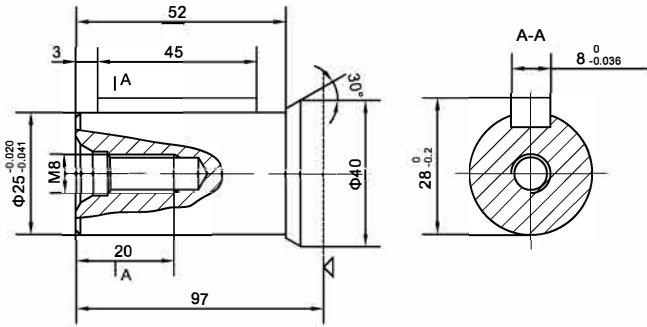
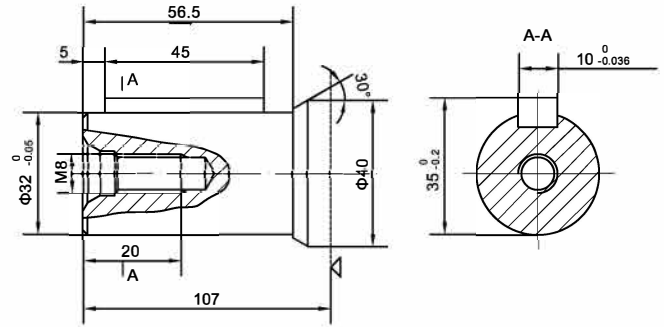
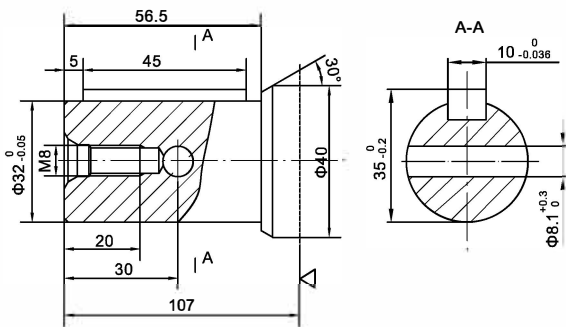
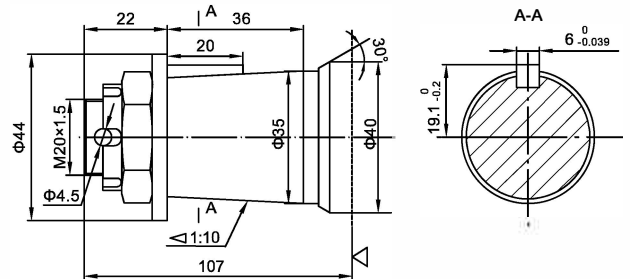
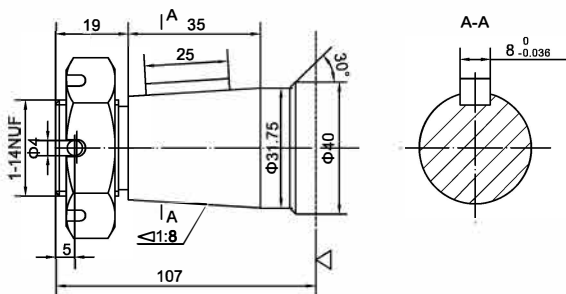

Type	OTMRW1-50	OTMRW1-80	OTMRW1-100	OTMRW1-125	OTMRW1-160	OTMRW1-200	OTMRW1-250	OTMRW1-315	OTMRW1-400
L	125	130	134	138	144	151	160	172	186
B	9	14	17.5	22	28	35	44	56	70

**OTMRW1 PORTS CODE**

Code	Ports	P(A, B)(deep)	C ( deep )	T ( deep )
Y		G1/2 (15)	—	M14 × 1.5(12)
Y5		7/8-14UNF(15)	—	M14 × 1.5(12)
Y10		G1/2 (15)	—	G1/4 (12)

P(A, B)—Ports, C—Mounting Thread ( —Indicates no this thread ) , T—Drain connection

## OTMRW1 Orbit Hydraulic Motor With Spool Valve

**OTMRW1 SHAFT VERSION**
**P1:  $\Phi 25$  Cylindrical shaft, Parallel key  $8 \times 7 \times 45$** 

**P5:  $\Phi 32$  Cylindrical shaft, parallel key  $10 \times 8 \times 45$** 

**P6:  $\Phi 32$  Cylindrical shaft, Cylindrical shaft pin hole  $\Phi 8.1$ , parallel key  $10 \times 8 \times 45$** 

**Z:  $\Phi 35$  Tapered shaft, taper 1:10, parallel key  $B6 \times 6 \times 20$** 

**Z1:  $\Phi 31.75$  Tapered shaft, taper 1:8, parallel key  $8 \times 7 \times 25$** 

 : Motor mounting surface

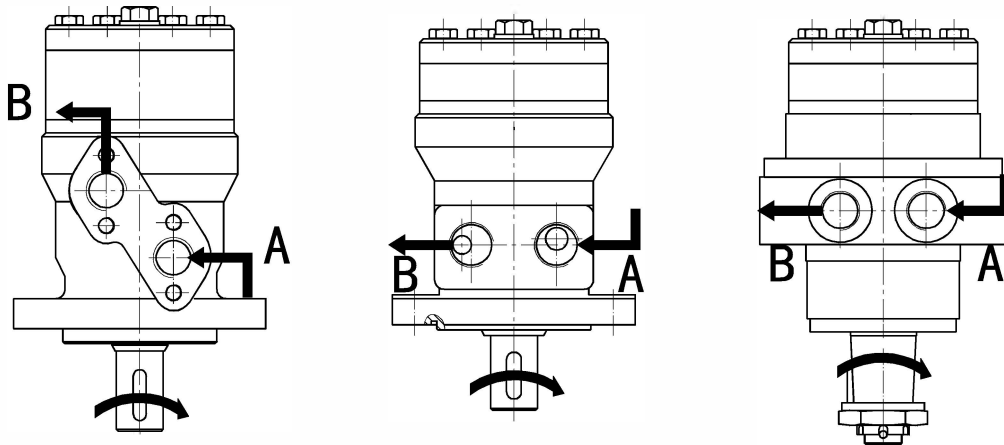
■ OTMR, OTMRS, OTMRW Series Motor

Direction of shaft rotation: Standard

When facing shaft end of motor, shaft to rotate:

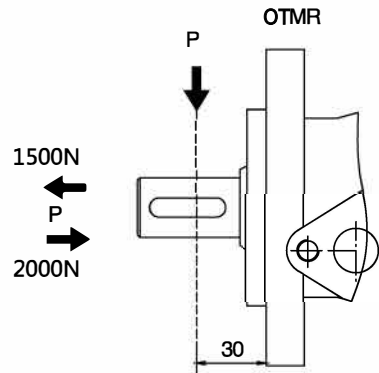
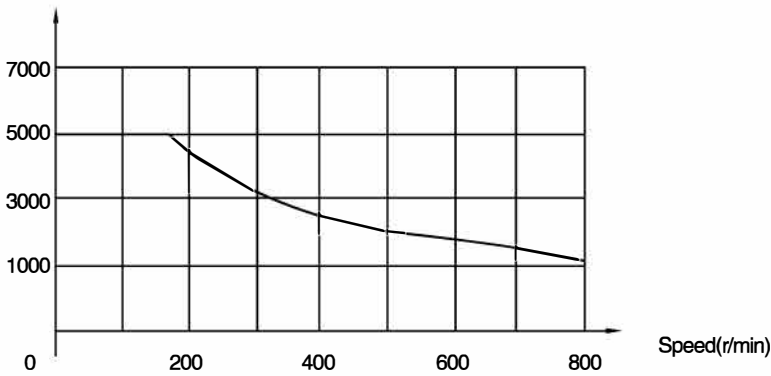
Clockwise when port "A" is pressurized.

Counter-clockwise when port "B" is pressurized.

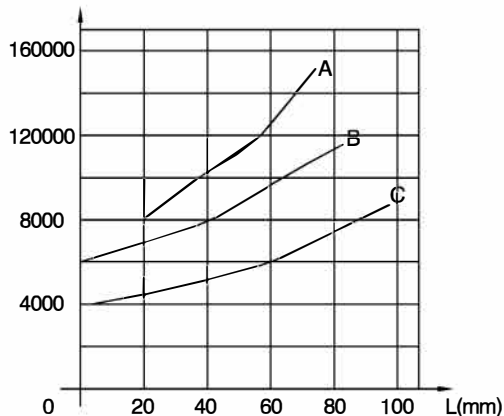


■ OTMR, OTMRW PERMISSIBLE SHAFT LOADS

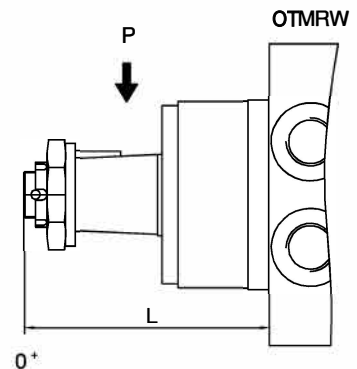
P (N) Radial force



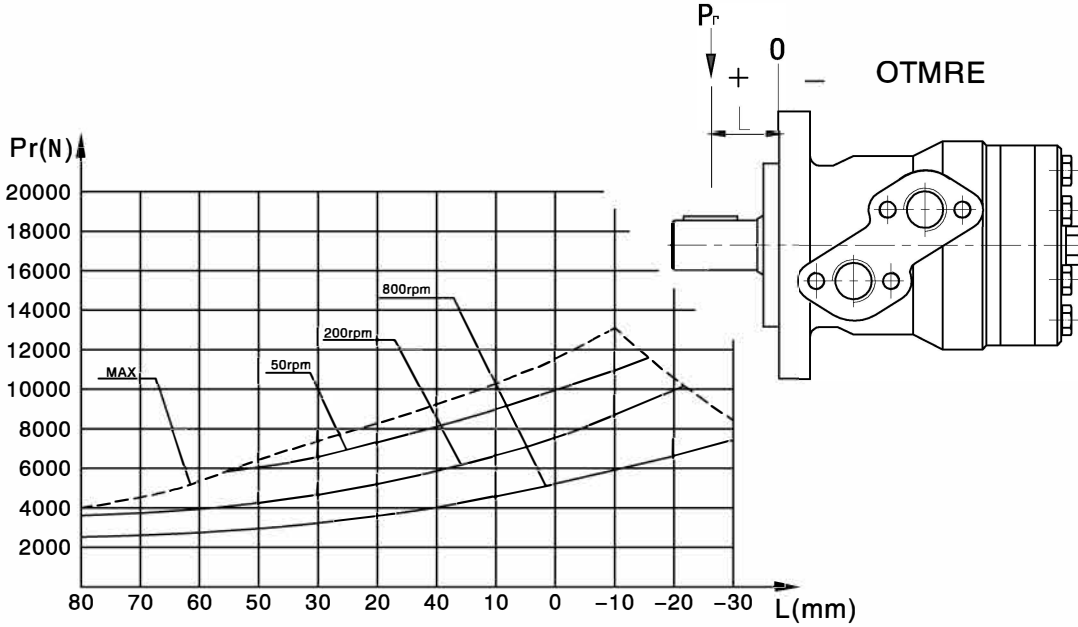
P (N) Radial force



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



■ OTMRE PERMISSIBLE SHAFT LOADS





**■ OTMR, OTMRE, OTMRS, OTMRW ORDERING CODE**

1	2	3	4	5	6	7
OTMR/ OTMRE	—				/	—

Pos.1	2	3		4		
Series	Disp	Output		Flange		
OTMR/ OTMRE	50	P1	Φ25 Cylindrical shaft, parallel key 8 × 7 × 32		A II	2-Φ 13.5 Oval flange, pilot Φ 82.5 × 6
		P2	Φ30 Cylindrical shaft, parallel key 8 × 7 × 32			
	80	P3	Φ25.4 Cylindrical shaft, parallel key 6.35 × 6.35 × 32		A IV	4-Φ 13.5 Oval flange, pilot Φ 82.5 × 6
		P4	Φ25.4 Cylindrical shaft, Woodruff key Φ 25.4 × 6.35			
	100	P5	Φ32 Cylindrical shaft, parallel key 10 × 8 × 45		C	4-M10 Square flange, pilot Φ 44.45 × 2.5
		P52	Φ32 Cylindrical shaft, parallel key 10 × 8 × 45			
	125	P6	Φ31.75 Cylindrical shaft, parallel key 7.96 × 7.96 × 32		C1	4-3/8-16UNC Square flange, pilot Φ 44.45 × 2.5
		H1	Φ30 Splined shaft, 6-30 × 25 × 6			
	160	H2	Φ25 Splined shaft, 6-25 × 21 × 5		A	4-Φ 11 Square flange, pilot Φ 82.5 × 6
		H3	Φ25.3 Splined shaft, 6-25.3 × 21.4 × 6.2			
	200	K4	Φ24.5 involute splined shaft, B25 × 22 DIN5482		A1	4-Φ 11 Square flange, pilot Φ 80 × 6
		K10	Φ31.75 involute splined shaft, 14-DP12/24 a=30°			
	250	K13	Φ31.75 involute splined shaft, 14-DP12/24 a=30°		A2 III	4-Φ 13 Square flange, pilot Φ 100 × 6
		K14	Φ31.75 involute splined shaft, 14-DP12/24 a=30°			
	315	Z1	Φ28.56 Tapered shaft, taper 1:10, parallel key 5 × 5 × 14			
400						

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

5			6		7	
Code	Ports		Special features		Rotation direction	
	Ports(A,B)(deep)	Drain port T(deep)				
Y	G1/2(15)	M14 × 1.5(12)				
Y1	M18 × 1.5(15)	M14 × 1.5(12)				
Y2	M22 × 1.5(15)	M14 × 1.5(12)				
Y4	ZG3/8(15)	M14 × 1.5(12)	Omit	Standard	Omit	Standard
Y5	7/8–14UNF(15)	M14 × 1.5(12)	T7	With dustproof ring	L	Opposite
Y7	ZG1/2(15)	M14 × 1.5(12)	T10	With high pressure seals		
Y8	NPT1/2(15)	M14 × 1.5(12)				
Y9	NPTF1/2(15)	7/16–20UNF(12)				
Y10	G1/2(15)	G1/4(12)				
Y15	7/8–14UNF(15)	7/16–20UNF(12)				

**■ OTMR, OTMRS, OTMRW ORDERING CODE**

1	2	3	4	5	6	7
OTMRS	—				/	—

Pos.1	2	3		4		
Series	Disp	Output		Flange		
OTMRS	50	P1	Φ25 Cylindrical shaft, parallel key 8 × 7 × 32		A II	2- Φ 13.5 Oval flange, pilot Φ 82.5 × 2.8
	80	P3	Φ25.4 Cylindrical shaft, parallel key 6.35 × 6.35 × 32			
		P4	Φ25.4 Cylindrical shaft, Woodruff key Φ 25.4 × 6.35			
	100	P33	Φ25.4 Cylindrical shaft, parallel key 6.35 × 6.35 × 32		C	4-M10 Square flange, pilot Φ 44.45 × 2.8
	125	P89	Φ 25.4 Cylindrical shaft pin hole Φ 9.53			
	160	P93	Φ 25.4 Cylindrical shaft pin hole Φ 9.5			
	200	P95	Φ 25.4 Cylindrical shaft pin hole Φ 6.4, Woodruff key Φ 25.4 × 6.35			
		P96	Φ 25.4 Cylindrical shaft pin hole Φ 8			
	250	P97	Φ 25.4 Cylindrical shaft pin hole Φ 10.3		C1	4-3/8-16UNC Square flange, pilot Φ 44.45 × 2.8
	315	H4	Φ 25.3 Splined shaft, 6-25.3 × 21.4 × 6.2			
	400	K8	Φ 22.1 involute splined shaft, 13-DP16/32			

5			6		7	
Code	Ports		Special features		Rotation direction	
	Ports(A,B)(deep)	Drain port T(deep)				
Y	G1/2(15)	M14 × 1.5(12)				
Y5	7/8–14UNF(15)	7/16–20UNF(12)				
Y7	ZG1/2(15)	G1/4(12)	Omit	Standard	Omit	Standard
Y9	NPTF1/2(15)	7/16–20UNF(12)	T21	No case drain	L	Opposite
Y10	G1/2(15)	G1/4(12)				
Y17	3/4–16UNF(15)	7/16–20UNF(12)				
Y19	Φ 11(15)	7/16–20UNF(12)				
Y20	M18 × 1.5(15)	G1/4(12)				

## OTMR, OTMRS, OTMRW Series Mortor

## ■ OTMR, OTMRS, OTMRW ORDERING CODE

1	2	3	4	5	6	7
OTMRW	—				/	—

Pos.1	2	3		4
Series	Disp	Output		Flange
OTMRW	50 80 100 125 160 250 315 400 200	Z	Φ35 Tapered shaft, taper1:10, parallel key B6 × 6 × 20	A 4- Φ13.5 Square flange, pilot Φ82.5 × 9

5		6		7		
Code	Ports		Special features		Rotation direction	
	Ports(A,B)(deep)	Drain port T(deep)				
Y	G1/2(15)	M14 × 1.5(12)	Omit	Standard	Omit	Standard Opposite

1	2	3	4	5	6	7
OTMRW1	—				/	—

Pos.1	2	3		4		
Series	Disp	Output		Flange		
OTMRW1	50	P1	Φ25 Cylindrical shaft, parallel key 8 × 7 × 45		A	4- Φ 13.5 Square flange, pilot Φ 82.5 × 9
	80	P5	Φ32 Cylindrical shaft, parallel key 10 × 8 × 45			
	100		Φ32 Cylindrical shaft, Cylindrical shaft pin hole Φ8.1, parallel key 10 × 8 × 45			
	125	P6	Φ32 Cylindrical shaft, Cylindrical shaft pin hole Φ8.1, parallel key 10 × 8 × 45			
	160		Φ35 Tapered shaft, taper 1:10, parallel key B6 × 6 × 20			
	200		Φ31.75 Tapered shaft, taper 1:8, parallel key 8 × 7 × 25			
	250	Z	Φ35 Tapered shaft, taper 1:10, parallel key B6 × 6 × 20			
	315	Z1	Φ35 Tapered shaft, taper 1:10, parallel key B6 × 6 × 20			
400	Φ31.75 Tapered shaft, taper 1:8, parallel key 8 × 7 × 25					

5			6		7	
Code	Ports		Special features		Rotation direction	
	Ports(A,B)(deep)	Drain port T(deep)				
Y	G1/2(15)	M14 × 1.5(12)	Omit	Standard	Omit	Standard
Y5	7/8-14UNF(15)	M14 × 1.5(12)				
Y10	G1/2(15)	G1/4(12)				

## OTS Orbit Hydraulic Motor With Spool Valve

### ■ OTS INTRODUCTION



This series of motor is with spool valve design, with the advanced geroler gear set and ductile iron of adequate intensity. It can be applied to the situation with less load and interval operation, and widely to agricultural machines, forestry machinery, plastic injection machinery, mining machines, metal working machines, conveyors etc.

### ■ OTS CHARACTERISTICS

- 1、 Compact volume, easy installation, especially for limited space working condition.
- 2、 Using geroler gear set design, with the function of low friction, low starting pressure, high efficiency, smooth working and longer working life.
- 3、 Spool valve design with less side and weight.
- 4、 With two inner check valves, drain line can be closed.
- 5、 With high pressure seal, the motor can be used in parallel or in series.

### ■ OTS TECHNICAL DATA

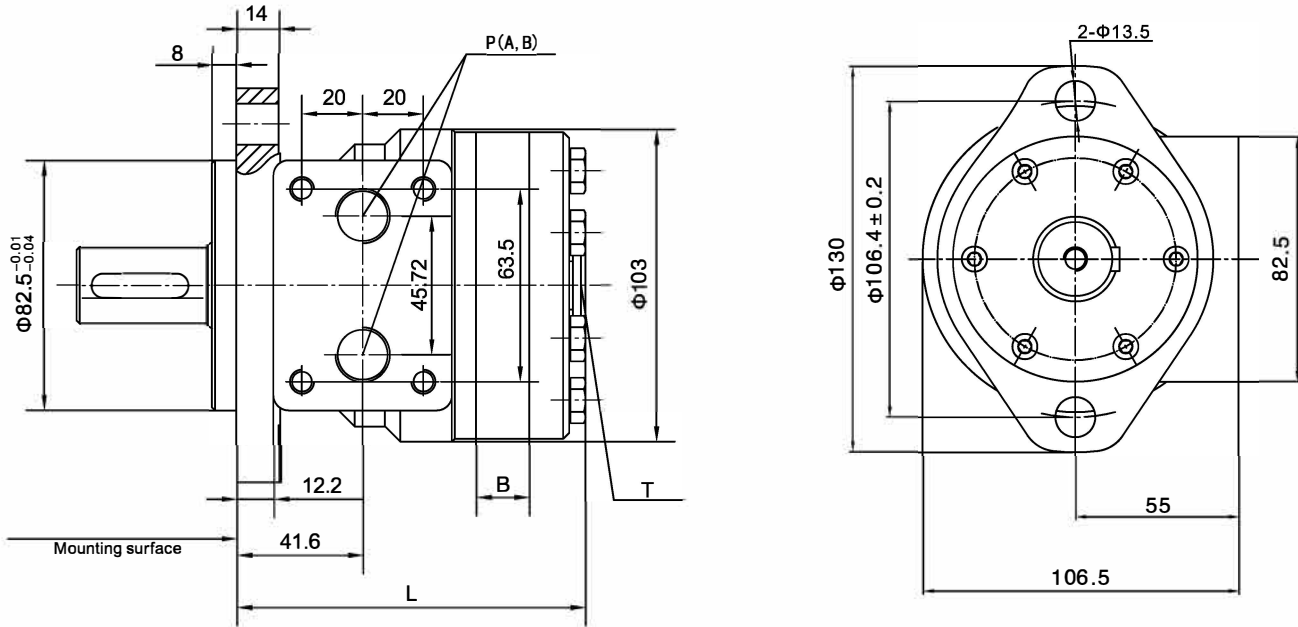
TYPE		OTS-50	OTS-80	OTS-100	OTS-125	OTS-160	OTS-200	OTS-250	OTS-315	OTS-400
Displacement(ml/r)		51.7	80.5	100.5	126.3	160.8	200.9	252.6	321.5	401.9
Max.Pressure.Drop (Mpa)	cont.	14	14	14	14	14	12.5	11	9	7
	int.	17.5	17.5	17.5	17.5	17.5	15.5	14	11	9
	peak.	20	20	20	20	20	18	16	13	11
Max.torque (N.m)	cont.	93	152	194	237	310	320	380	380	380
	int.	118	189	236	296	378	398	470	470	470
	peak.	135	216	270	338	433	460	540	540	540
Max.Speed(cont.)(r/min)		770	745	595	475	370	295	235	185	150
Max.Flow(L/min )		40	60	60	60	60	60	60	60	60
Max.Output.Power(cont.)(Kw)		7	10	10	10	10	7	6	5	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

## OTS Orbit Hydraulic Motor With Spool Valve

### ■ OTS INSTALLATION

2- $\phi$ 13.5hole oval flange AII



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

### ■ OTS Ports Code

Code	Ports	P ( A , B ) ( deep )	C ( deep )	T ( deep )
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		NPTF1/2 ( 15 )	5/6-18UNC ( 13 )	7/16-20UNF ( 12 )
Y10		G1/2 ( 15 )	M8 ( 13 )	G1/4 ( 12 )
Y15		7/8-14UNF ( 15 )	5/6-18UNC ( 13 )	7/16-20UNF ( 12 )

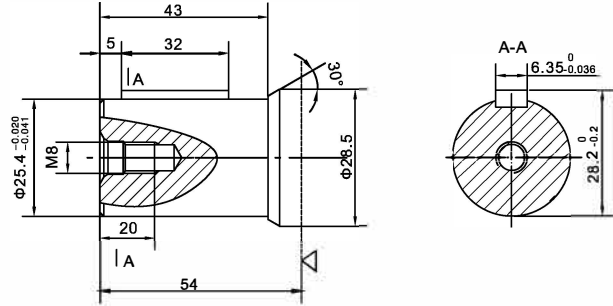
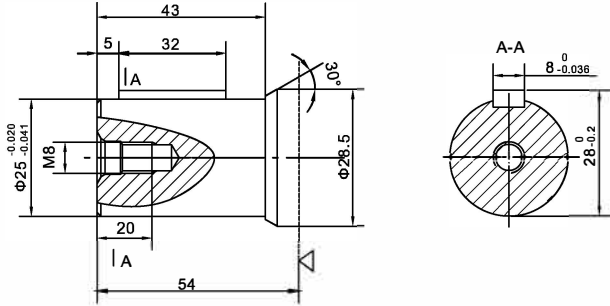
Note:P(A, B)—Ports, C—Mounting Thread ( —Indicates no this thread ) , T—Drain connettion

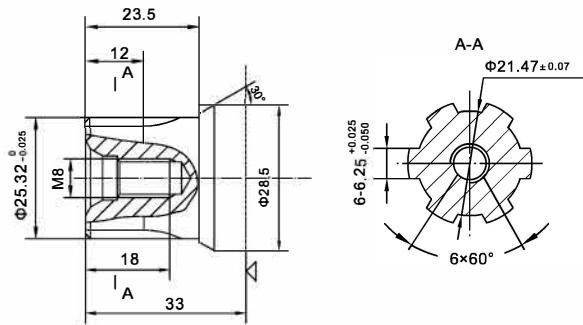
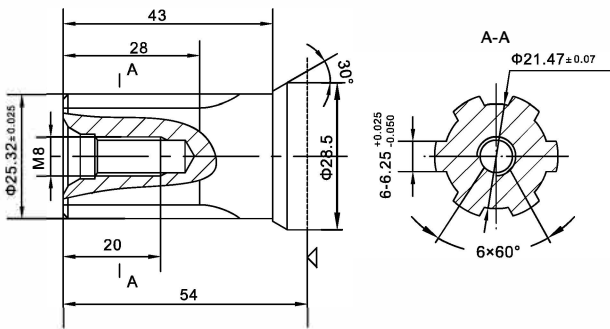


## OTS Orbit Hydraulic Motor With Spool Valve

**■ OTS SHAFT VERSION**

 P1:  $\Phi 25$  Cylindrical shaft, parallel key 8x7x32

 P3:  $\Phi 25.4$  Cylindrical shaft, parallel key 6.35x6.35x32

 H3:  $\Phi 25.3$  Splined shaft, 6-25.32x21.47x6.25

 H5:  $\Phi 25.3$  Splined shaft, 6-25.32x21.47x6.25

 : Motor mounting surface

**OTS Orbit Hydraulic Motor With Spool Valve**
**■ OTS**

1	2	3	4	5	6	7
OTS	—				/	—

Pos.1	2	3		4	
Series	Disp	Output Shaft		Flange	
OTS	50	P1	Φ 25Cylindrical shaft, parallel key 8x7x32	A II	2-Φ13.5 Oval flange polit Φ82.5x8
	80				
	100	P3	Φ 25.4 Cylindrical shaft, parallel key 6.35x6.35x32		
	125				
	160	H3	Φ25.3Splined shaft, 6-25.32x21.47x6.25		
200	H5	Φ25.3Splined shaft, 6-25.32x21.47x6.25			
250					
315					
400					

5			6		7	
Code	Ports		Special features		Rotation direction	
	Ports(A,B)(deep)	Drain port T(deep)				
Y	G1/2 ( 15 )	M14x1.5 ( 12 )	Omit	Standard	Omit	Standard
Y1	M18x1.5 ( 15 )	M14x1.5 ( 12 )				
Y2	M22x1.5 ( 15 )	M14x1.5 ( 12 )				
Y9	NPTF1/2 ( 15 )	7/16-20UNF ( 12 )			L	Opposite
Y10	G1/2 ( 15 )	G1/4 ( 12 )				
Y15	7/8-14UNF ( 15 )	7/16-20UNF ( 12 )				

## OTMH Orbit Hydraulic Motor With Spool Valve

### OTMH 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 to agriculture, forestry, plastics, machine tools and min machines, such as the mould height adjustment of the injection molding machine, the cleaner, the sawmill the worktable etc.

### OTMH 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.

### OTMH TECHNICAL DATA

TYPE		OTMH-200	OTMH-250	OTMH-315	OTMH-400	OTMH-500
Displacement(ml/r)		203	253.7	318.9	405.9	471.1
Max.Pressure.Drop (Mpa)	cont.	16	16	15	14	12
	int.	19	19	18	17	15
	peak.	22	22	21	20	18
Max.torque (N.m)	cont.	425	530	610	825	720
	int.	510	635	750	900	910
	peak.	590	735	875	1055	1090
Max. Cont. Speed (r/min)		365	295	235	180	155
Max.Flow(cont.)(L/min)		75	75	75	75	75
Max.Output.Power(cont.)(Kw)		13.8	13.8	12.5	11.5	9.8
Weight(kg)		10.5	11	11.5	12.5	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

## OTMH Orbit Hydraulic Motor With Spool Valve

**OTMH PERFORMANCE DATA**

OTMH 200(203ml/r)

Pressure (Mpa) Max.cont. Max.int.

	3.5	7	10.5	14	16	19
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Flow(L/min)	Pressure (Mpa)					
	3.5	7	10.5	14	16	19
5	91 <b>25</b>	192 <b>24</b>	284 <b>23</b>			
10	92 <b>48</b>	191 <b>47</b>	282 <b>48</b>	344 <b>44</b>	440 <b>42</b>	520 <b>38</b>
20	90 <b>96</b>	188 <b>95</b>	280 <b>94</b>	342 <b>92</b>	438 <b>90</b>	516 <b>88</b>
30	88 <b>144</b>	181 <b>143</b>	278 <b>139</b>	388 <b>130</b>	435 <b>114</b>	511 <b>101</b>
40	86 <b>193</b>	172 <b>192</b>	270 <b>191</b>	384 <b>188</b>	432 <b>186</b>	506 <b>171</b>
50	83 <b>241</b>	168 <b>240</b>	264 <b>238</b>	380 <b>234</b>	428 <b>230</b>	498 <b>228</b>
60	80 <b>290</b>	156 <b>289</b>	258 <b>287</b>	375 <b>284</b>	420 <b>271</b>	492 <b>264</b>
70	75 <b>334</b>	149 <b>333</b>	249 <b>331</b>	362 <b>329</b>	419 <b>324</b>	489 <b>320</b>
Max.cont.	69 <b>362</b>	132 <b>360</b>	240 <b>359</b>	351 <b>358</b>	408 <b>351</b>	478 <b>342</b>
80	53 <b>382</b>	124 <b>381</b>	231 <b>380</b>	338 <b>374</b>	395 <b>385</b>	453 <b>360</b>
Max.int.	41 <b>434</b>	119 <b>433</b>	228 <b>431</b>	324 <b>429</b>	387 <b>418</b>	446 <b>411</b>

OTMH 250(253.7ml/r)

Pressure (Mpa) Max.cont. Max.int.

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

OTMH 315(318.9ml/r)

Pressure (Mpa) Max.cont. Max.int.

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

OTMH 400(405.9ml/r)

Pressure (Mpa) Max.cont. Max.int.

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

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

OTMH500(471.1ml/r)

Pressure (Mpa) Max.cont. Max.int.

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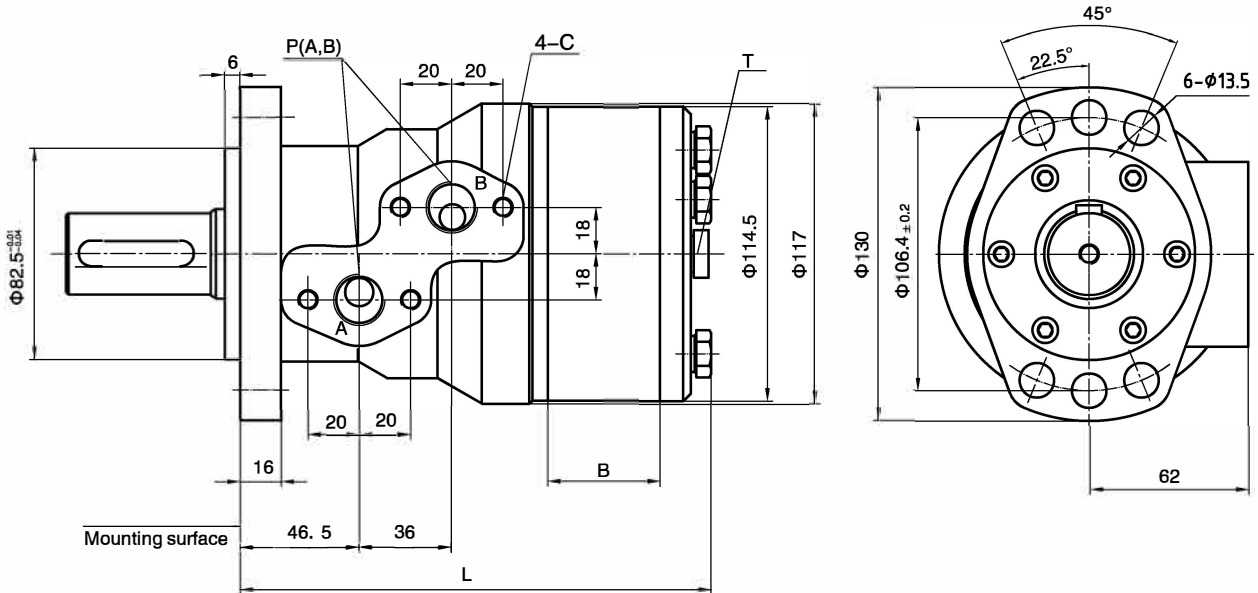
Flow(L/min)	Pressure (Mpa)					
	2.5	4	6	8.5	12	15
10	153 <b>21</b>	249 <b>20</b>				
20	152 <b>42</b>	242 <b>41</b>	370 <b>40</b>	650 <b>34</b>	755 <b>29</b>	940 <b>23</b>
30	150 <b>62</b>	236 <b>61</b>	361 <b>60</b>	645 <b>55</b>	742 <b>49</b>	931 <b>45</b>
40	147 <b>82</b>	230 <b>81</b>	352 <b>80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

	Cont.
	Int.

## OTMH Orbit Hydraulic Motor With Spool Valve

**OTMH Installation**

## 6-hole oval flange AIV



TYPE	OTMH-200	OTMH-250	OTMH-315	OTMH-400	OTMH-500
L	168	175	184	196	205
B	28	35	44	56	65

**OTMH PORTS CODE**

Code	Ports	P(A, B)(deep)	C ( deep )	T ( deep )
Y		G1/2 (15)	M8 (13)	G1/4 (12)
Y5		7/8-14UNF (15)	3/8-16UNC (13)	7/16-20UNF (12)
Y8		NPT1/2 (15)	5/16-18UNC (13)	7/16-20UNF (12)
Y25		7/8-14UNF (15)	M8 (13)	7/16-20UNF (12)

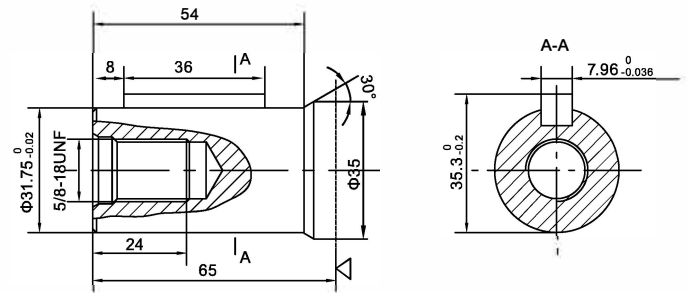
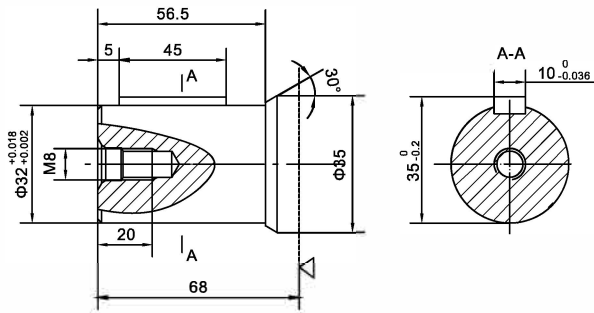
Note: P(A, B)---Ports, C---Mounting Thread ( —Indicates no this thread ) , T---Drain connettion

OTMH Orbit Hydraulic Motor With Spool Valve

■ OTMH SHAFT VERSION

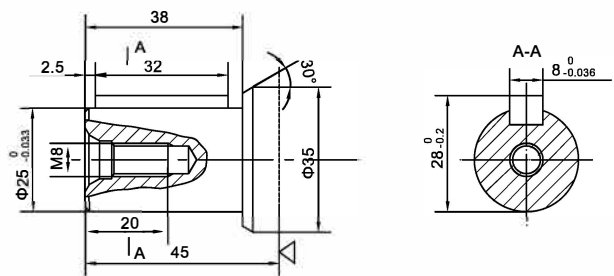
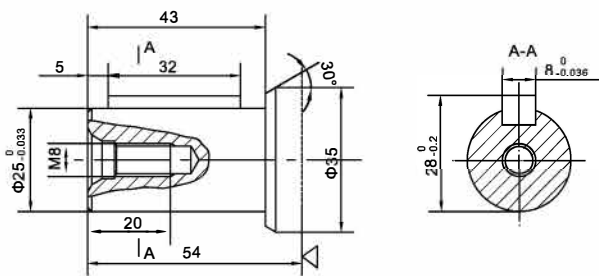
P1:  $\Phi 32$  Cylindrical shaft, parallel key  $10 \times 8 \times 45$

P2:  $\Phi 31.75$  Cylindrical shaft, parallel key  $7.96 \times 7.96 \times 36$

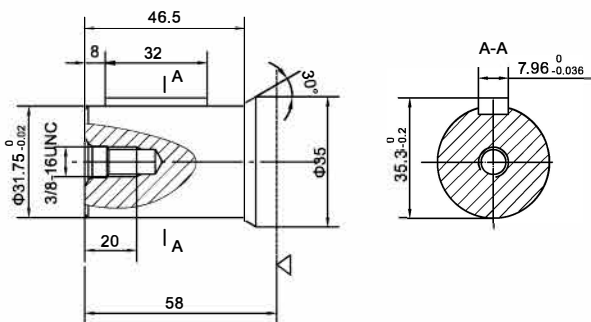



P3:  $\Phi 25$  Cylindrical shaft, parallel key  $8 \times 7 \times 32$

P4:  $\Phi 25$  Cylindrical shaft, parallel key  $8 \times 7 \times 32$



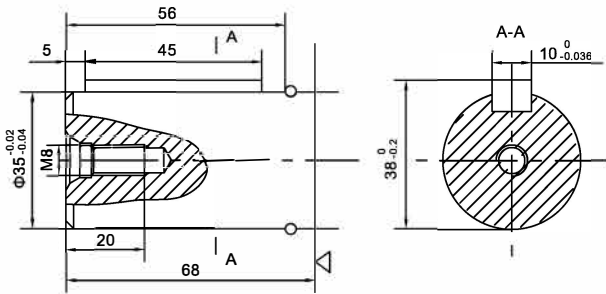
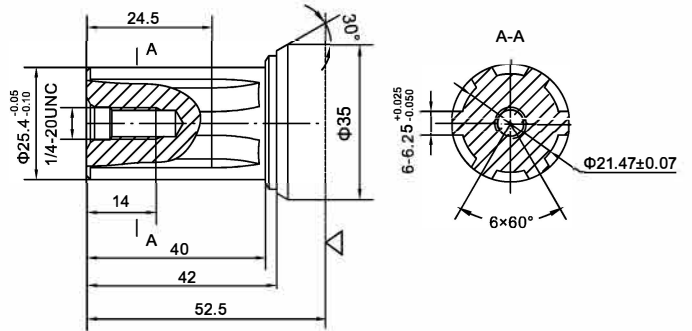
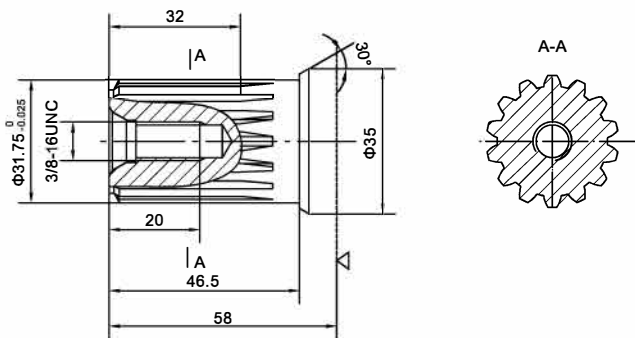
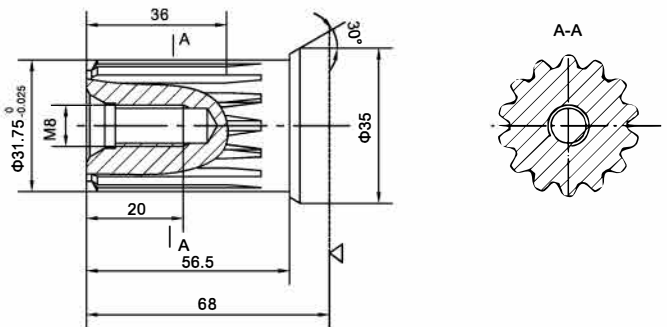
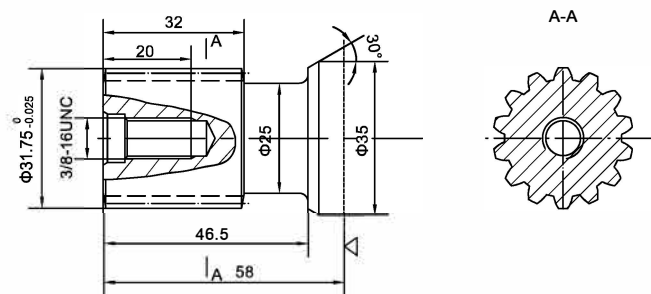

P5:  $\Phi 31.75$  Cylindrical shaft, parallel key  $7.96 \times 7.96 \times 32$



 : Motor mounting surface

## OTMH Orbit Hydraulic Motor With Spool Valve

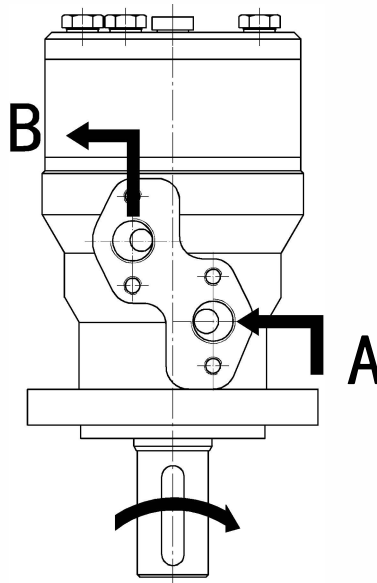
**OTMH SHAFT VERSION**

 P7:  $\Phi 35$  Cylindrical shaft, parallel key  $10 \times 8 \times 45$ 

 H3:  $\Phi 25.4$  Splined shaft, 6-25.4  $\times$  21.47  $\times$  6.25

 K1:  $\Phi 31.75$  involute splined shaft 14-DP12/24  $a=30^\circ$ 

 K2:  $\Phi 31.75$  involute splined shaft 14-DP12/24  $a=30^\circ$ 

 K11:  $\Phi 31.75$  involute splined shaft 14-DP12/24  $a=30^\circ$ 

 : Motor mounting surface

■ OTMH 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.





## OTMH Orbit Hydraulic Motor With Spool Valve

## ■ OTMH ORDERING CODE

1	2	3	4	5	6	7
OTMH	—				/	—

Pos.1	2	3		4			
Series	Disp	Output		Flange			
OTMH	200	P1	Φ32 Cylindrical shaft, parallel key10 × 8 × 45		AIV	6-Φ 13.5 Oval flange, pilot Φ 82.5 × 6	
		P2	Φ31.75 Cylindrical shaft, parallel key7.96 × 7.96 × 36				
		P3	Φ25 Cylindrical shaft, parallel key8 × 7 × 32				
	250	P4	Φ25 Cylindrical shaft, parallel key8 × 7 × 32				
		P5	Φ31.75 Cylindrical shaft, parallel key7.96 × 7.96 × 32				
	315	P6	Φ32 Cylindrical shaft, parallel key10 × 8 × 45				
		P7	Φ35 Cylindrical shaft, parallel key10 × 8 × 45				
	400	H3	Φ 25.4 Splined shaft, 6-25.4 × 21.47 × 6.25				
		500	K1	Φ31.75 involute splined shaft, 14-DP12/24 a=30°			
			K2	Φ31.75 involute splined shaft, 14-DP12/24 a=30°			
			K11	Φ31.75 involute splined shaft, 14-DP12/24 a=30°			

5			6		7	
Code	Ports		Special features		Rotation direction	
	Ports(A,B)(deep)	Drain port T(deep)				
Y	G1/2(15)	G1/4(12)	Omit	Standard	Omit	Standard
Y5	7/8-14UNF(15)	7/16-20UNF(12)				
Y8	NPTF1/2(15)	7/16-20UNF(12)			L	Opposite
Y25	7/8-14UNF(15)	7/16-20UNF(12)				

## OTMP Orbit Hydraulic Motor With Spool Valve

### INTRODUCTION



This series of motor are small volume,economical type,which is designed with Spool Valve,which adapt the gerotor gear set design and provide compact volume,high power and low weight.

### CHARACTERISTICS

- 1 Advanced manufacturing devices for the Gerotor gear set, which provide small volume, high efficiency and long life.
- 2 Shaft seal can bear high pressure of motor of which can be used in parallel or in series.
- 3 Advanced construction design,high power and low weight.

### OTMP TECHNICAL DATA

TYPE		OTMP 50	OTMP 80	ØTMP 100	OTMP 125	OTMP 160	OTMP 200	OTMP 250	OTMP 315	OTMP 400
Displacement(ml/r)		52.9	79.3	98.2	120.9	158.7	196.4	241.8	317.3	392.9
Max.Pressure.Drop (Mpa)	cont.	14	14	14	14	14	14	12	10	8
	int.	17.5	17.5	17.5	17.5	17.5	17.5	14	12	10
	peak.	22	22	22	22	22	22	20	15	13
Max.torque (N.m)	cont.	97	148	183	229	295	364	369	404	416
	int.	125	189	238	292	382	470	444	501	531
	peak.	149	222	276	340	445	532	568	555	596
Max.Speed(cont.)(r/min)		755	750	610	490	375	305	245	185	150
Max.Flow(cont.)(L/min)		40	60	60	60	60	60	60	60	60
Max.Output.Power(cont.)(Kw)		6.5	10	10	10	10	10	8	7	5.7
Weight (kg)		5.6	5.7	5.9	6	6.2	6.4	6.6	6.9	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

OTMP Orbit Hydraulic Motor With Spool Valve

OTMP PERFORMANCE DATA

OTMP 50(52.9ml/r)

		Pressure (Mpa)							
		3	6	8	10	12.5	14	16	17.5
Flow(L/min)	8	18	38	55	69	87	100	115	
	15	19	39	56	70	87	102	116	128
Max.cont.	20	277	264	251	242	233	219	202	188
	30	19	39	54	69	89	100	115	127
Max.int.	35	370	359	348	337	328	320	301	282
	40	18	38	53	68	88	98	114	126
	45	556	541	529	516	509	500	487	461
	50	17	37	52	67	86	97	113	125
	55	649	629	619	608	601	595	578	559
	60	16	36	50	66	85	96	111	123
	65	741	725	718	710	695	688	673	627
	70	13	31	47	59	81	94	104	115
Max.int.	75	927	919	910	900	888	874	856	837
	80	9	25	42	50	76	90	98	106
	85	1122	1101	1094	1082	1075	1064	1042	1011

OTMP 80(79.3ml/r)

		Pressure (Mpa)							
		3	6	8	10	12.5	14	16	17.5
Flow(L/min)	8	33	60	81	103	133	148	172	
	15	99	91	79	67	56	42	32	
Max.cont.	20	36	61	82	104	133	149	173	192
	30	185	172	163	152	134	125	117	94
Max.int.	35	34	62	83	105	134	150	174	192
	40	247	238	230	220	205	197	189	172
	45	33	60	82	104	133	149	172	190
	50	370	363	355	342	327	316	302	285
	55	32	59	80	102	131	148	170	189
	60	433	417	406	398	390	384	367	365
	65	30	57	78	101	129	147	169	188
	70	494	484	478	471	461	453	443	411
	75	29	56	77	100	128	145	168	186
	80	617	604	597	590	578	571	558	519
Max.int.	85	28	55	76	99	127	144	167	184
	90	741	726	718	710	700	686	673	624
	95	22	48	71	93	120	134	160	175
	100	926	906	896	887	867	857	838	779

OTMP 100(98.2ml/r)

		Pressure (Mpa)							
		3	6	8	10	12.5	14	16	17.5
Flow(L/min)	8	37	73	98	128	164	186		
	15	80	68	59	50	163	33		
Max.cont.	20	38	74	99	129	165	187	218	240
	30	150	139	129	117	102	96	87	69
Max.int.	35	39	75	100	130	166	188	219	241
	40	200	189	180	171	159	150	136	119
	45	37	73	98	127	163	185	216	239
	50	299	286	279	270	259	250	234	219
	55	36	71	97	126	161	183	214	238
	60	349	338	333	329	318	309	299	281
	65	35	70	96	124	160	182	213	236
	70	399	391	387	383	375	370	363	338
	75	34	69	95	123	159	181	211	235
	80	499	489	484	479	468	463	453	423
Max.int.	85	33	68	94	122	158	180	210	233
	90	599	587	580	574	562	556	544	507
	95	27	61	86	111	149	168	198	202
	100	748	733	726	718	703	695	680	634

OTMP 125(120.9ml/r)

		Pressure (Mpa)							
		3	6	8	10	12.5	14	16	17.5
Flow(L/min)	8	44	90	123	158	205	231		
	15	65	61	51	44	36	30		
Max.cont.	20	45	91	124	159	206	232	265	294
	30	122	118	112	105	99	91	79	61
Max.int.	35	46	90	125	160	206	233	266	295
	40	165	152	143	133	126	112	106	98
	45	45	88	123	158	204	230	264	293
	50	243	238	236	231	224	217	206	191
	55	43	86	121	156	202	229	263	292
	60	284	278	275	272	266	263	258	240
	65	42	85	120	154	200	226	262	290
	70	342	323	314	311	304	301	294	274
	75	41	84	118	152	197	223	261	288
	80	405	397	393	389	380	376	368	343
Max.int.	85	40	83	116	150	195	221	259	286
	90	486	476	470	465	465	452	441	412
	95	31	78	107	139	187	211	241	272
	100	608	596	589	583	571	564	552	515

OTMP 160(158.7ml/r)

		Pressure (Mpa)							
		3	6	8	10	12.5	14	16	17.5
Flow(L/min)	8	57	117	160	206	261			
	15	49	46	41	34	29			
Max.cont.	20	58	118	161	207	262	298	349	385
	30	93	84	79	72	64	58	50	41
Max.int.	35	59	119	162	208	263	299	350	386
	40	123	118	115	111	104	99	93	82
	45	58	117	160	205	261	298	348	384
	50	185	181	177	173	168	165	159	148
	55	57	115	159	203	260	295	346	382
	60	216	211	209	207	202	200	196	183
	65	55	114	156	201	259	293	344	380
	70	247	241	238	236	231	228	220	207
	75	53	111	154	199	258	292	342	378
	80	309	302	299	296	289	286	280	261
Max.int.	85	52	109	152	197	256	290	340	376
	90	370	363	359	355	348	344	336	314
	95	43	101	143	190	249	282	322	358
	100	463	453	448	444	430	420	410	383

OTMP 200(196.4ml/r)

		Pressure (Mpa)							
		3	6	8	10	12.5	14	16	17.5
Flow(L/min)	8	69	140	193	248				
	15	40	33	29	25				
Max.cont.	20	70	141	194	249	324	366	428	
	30	75	70	64	58	50	41	32	
Max.int.	35	71	142	195	250	325	367	428	472
	40	100	92	83	75	69	58	52	47
	45	70	141	193	248	323	366	426	471
	50	150	140	136	129	120	112	101	93
	55	69	140	191	247	321	364	425	470
	60	175	170	164	160	154	148	140	129
	65	67	138	190	246	320	362	423	468
	70	199	194	191	188	183	179	171	159
	75	66	136	189	244	318	361	422	466
	80	249	244	241	239	234	230	226	211
Max.int.	85	65	135	187	243	316	359	420	465
	90	299	293	290	287	281	278	255	238
	95	58	127	179	234	308	348	408	456
	100	374	366	362	358	351	347	339	317

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

□ Cont.  
■ Int.

## OTMP Orbit Hydraulic Motor With Spool Valve

**OTMP PERFORMANCE DATA**
**OTMP 250(241.8ml/r)**
**Pressure (Mpa)**

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

**OTMP 315(317.3ml/r)**
**Pressure (Mpa)**

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

**OTMP 400(392.9ml/r)**
**Pressure (Mpa)**

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

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

□ Cont.  
 ■ Int.



## OTMP Orbit Hydraulic Motor With Spool Valve

**OTMP PORTS CODE**

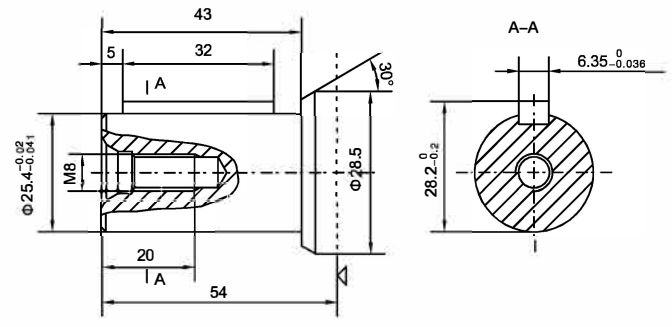
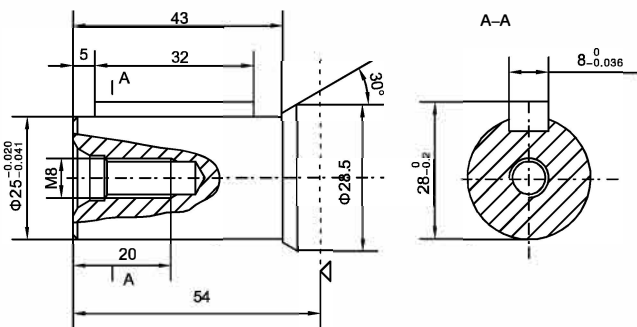
Code	Ports	P(A, B)(deep)	C ( deep )	T ( deep )
Y		G1/2 (15)	M8 (10)	M14 × 1.5 (12)
Y1		M18 × 1.5 (15)	M8 (10)	M14 × 1.5 (12)
Y2		M22 × 1.5 (15)	M8 (10)	M14 × 1.5 (12)
Y4		ZG3/8 (15)	M8 (10)	M14 × 1.5 (12)
Y5		7/8-14UNF (15)	—	M14 × 1.5 (12)
Y7		ZG1/2 (15)	M8 (10)	M14 × 1.5 (12)
Y8		NPT1/2 (15)	M8 (10)	M14 × 1.5 (12)
Y9		NPTF1/2 (15)	5/16-18 UNC(10)	7/16-20UNF(12)
Y10		G1/2 (15)	M8 (10)	G1/4 (12)
Y15		7/8-14UNF (15)	5/16-18UNC (10)	7/16-20UNF (12)

Note:P(A, B)—Ports, C—Mounting Thread ( —Indicates no this thread ) , T—Drain connettion

**OTMP SHAFT VERSION**

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

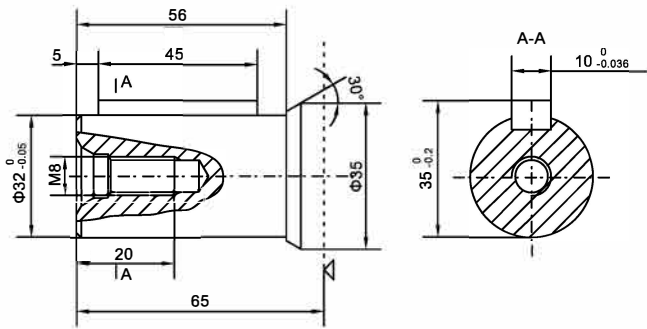
P3:  $\Phi 25.4$  Cylindrical shaft, parallel key  $6.35 \times 6.35 \times 32$



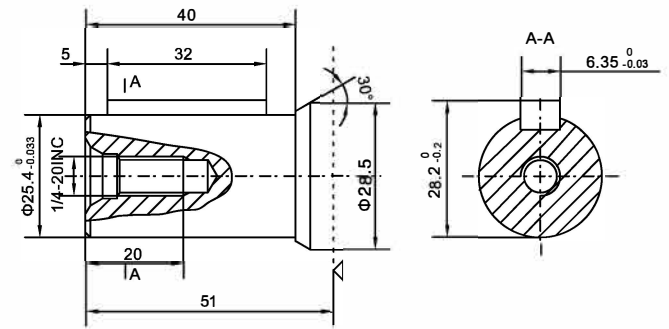
 : Motor mounting surface

■ OTMP SHAFT VERSION

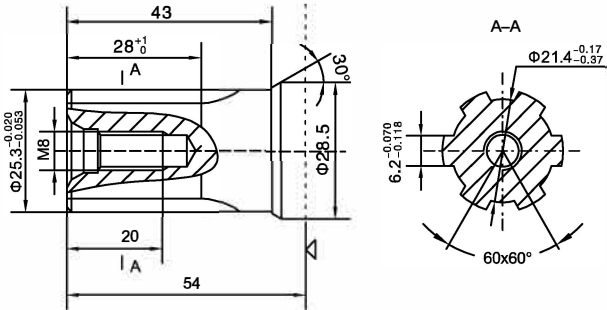
P5:  $\Phi 32$  Cylindrical shaft, parallel key  $10 \times 8 \times 45$



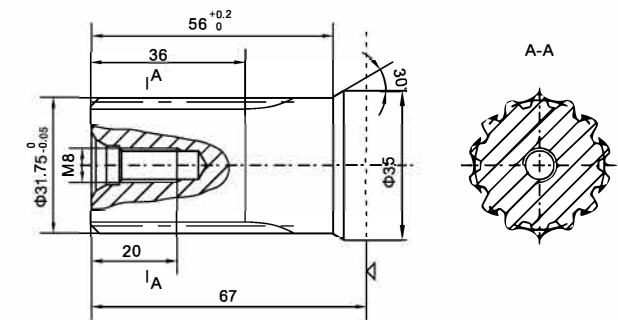
P33:  $\Phi 25.4$  Cylindrical shaft, parallel key  $6.35 \times 6.35 \times 32$



H3:  $\Phi 25.3$  Splined shaft,  $6-25.3 \times 21.4 \times 6.2$



K13:  $\Phi 31.75$  involute splined shaft  $14-DP12/24 \ a=30^\circ$



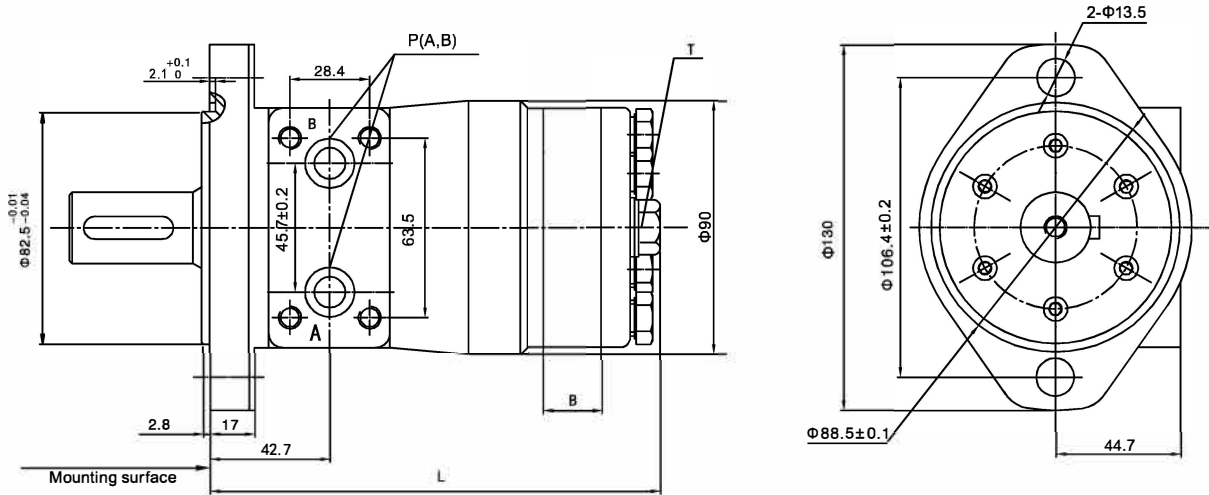
◁ : Motor mounting surface



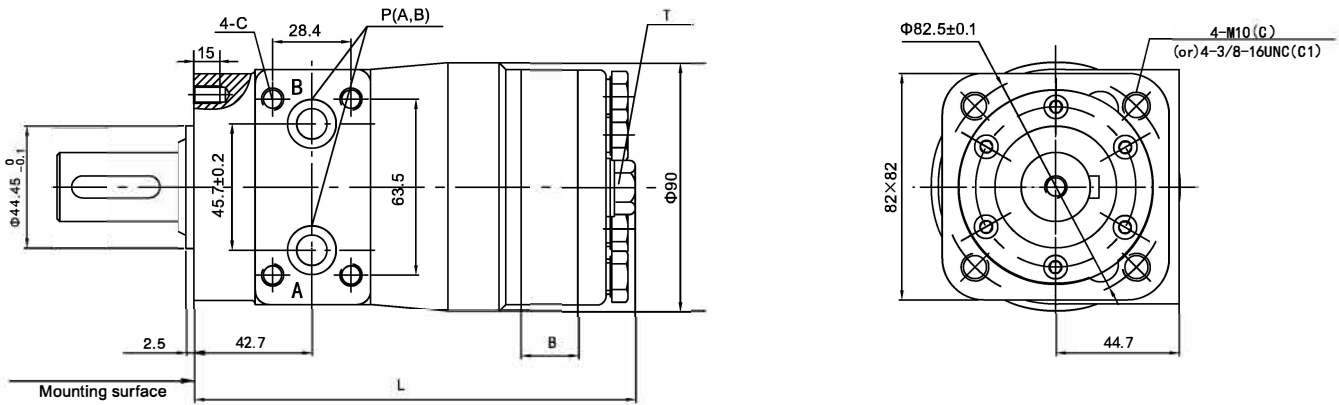
OTMPH Orbit Hydraulic Motor With Spool Valve

■ OTMPH Installation

2-hole oval flange A II



Square flange C,C1



TYPE	OTMPH-50	OTMPH-80	OTMPH-100	OTMPH-125	OTMPH-160	OTMPH-200	OTMPH-250	OTMPH-315	OTMPH-400
L	151.5	153	155	158	163	168	174	184	194
B	7	11	13	16	21	26	32	42	52

## OTMPH Orbit Hydraulic Motor With Spool Valve

**OTMPH PORTS CODE**

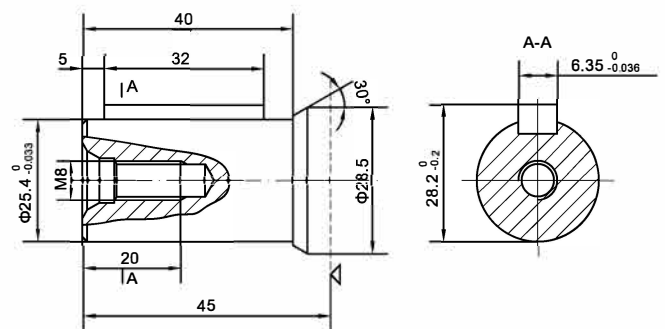
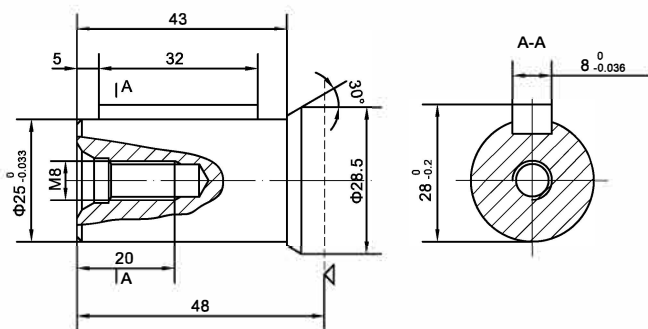
Code	Ports	P(A, B)(deep)	C ( deep )	T ( deep )
Y		G1/2 (15)	—	M14 × 1.5(12)
Y5		7/8–14UNF(15)	—	7/16–20UNF(12)
Y7		ZG1/2(15)	—	G1/4(12)
Y9		NPTF1/2(15)	—	7/16–20UNF(12)
Y10		G1/2(15)	—	G1/4(12)
Y17		3/4–16UNF(15)	—	7/16–20UNF(12)
Y19		Φ 11(15)	5/16–18UNC(13)	7/16–20UNF(12)
Y20		M18 × 1.5(15)	M8 (13)	G1/4(12)

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

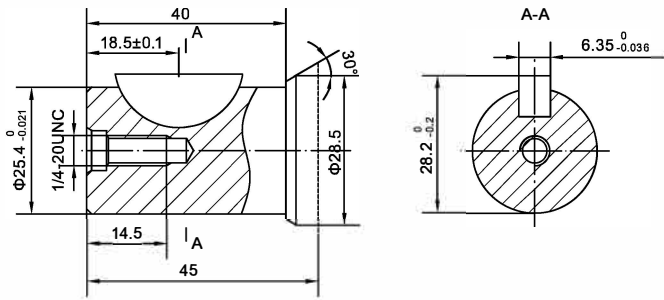
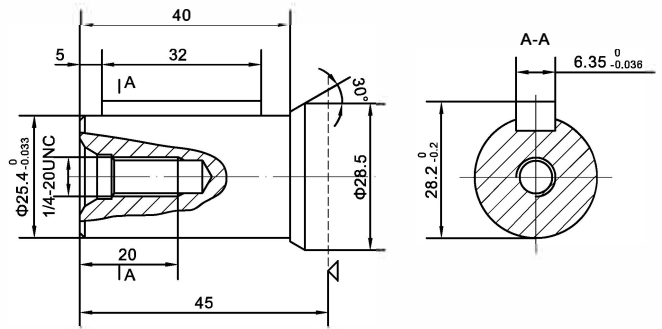
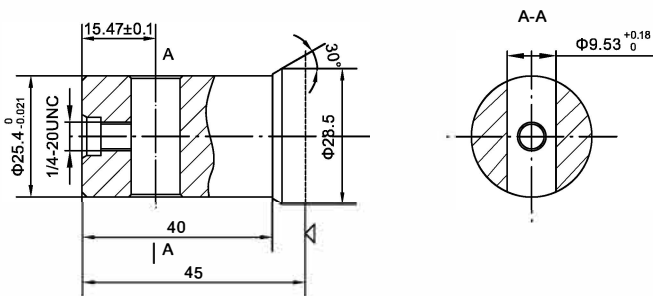
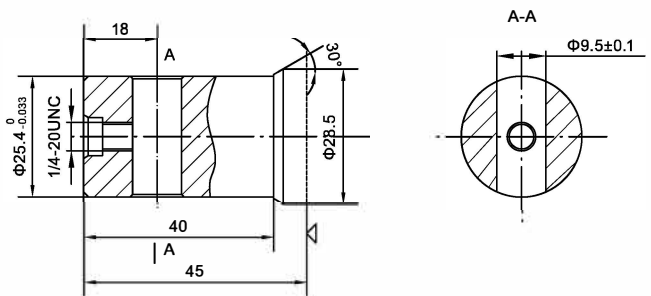
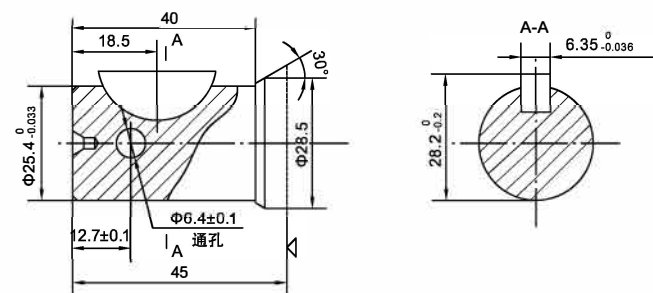
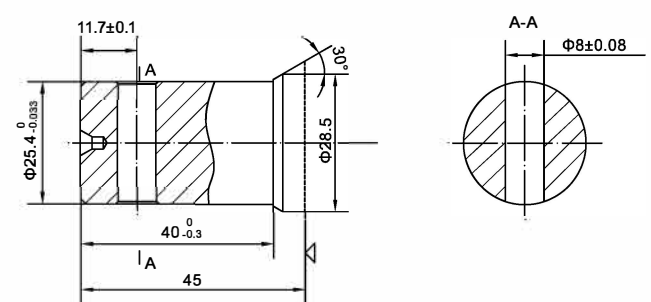
**OTMPH SHAFT VERSION**

P1: Φ25 Cylindrical shaft, parallel key 8 × 7 × 32

P3: Φ25.4 Cylindrical shaft, parallel key 6.35 × 6.35 × 32



 : Motor mounting surface

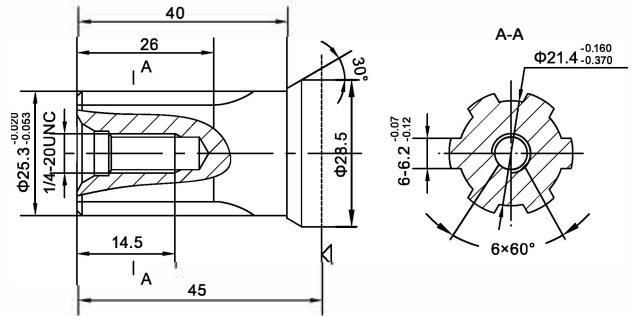
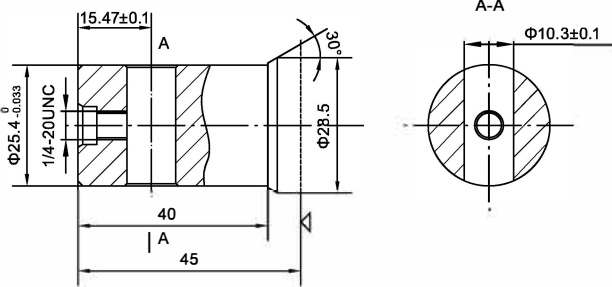
**OTMPH SHAFT VERSION**
**P4:  $\Phi 25.4$  Cylindrical shaft, Woodruff key  $\Phi 25.4 \times 6.35$** 

**P33:  $\Phi 25.4$  Cylindrical shaft, parallel key  $6.35 \times 6.35 \times 32$** 

**P89:  $\Phi 25.4$  Cylindrical shaft pin hole  $\Phi 9.53$** 

**P93:  $\Phi 25.4$  Cylindrical shaft pin hole  $\Phi 9.5$** 

**P95:  $\Phi 25.4$  Cylindrical shaft pin hole  $\Phi 6.4$ ,  
Woodruff key  $\Phi 25.4 \times 6.35$** 

**P96:  $\Phi 25.4$  Cylindrical shaft pin hole  $\Phi 8$** 

 : Motor mounting surface

OTMPH Orbit Hydraulic Motor With Spool Valve

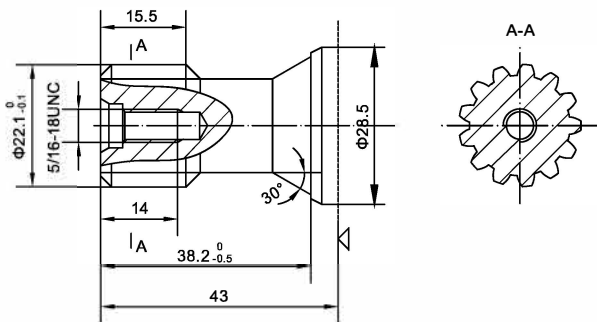
■ OTMPH SHAFT VERSION


P97:  $\Phi 25.4$  Cylindrical shaft pin hole  $\Phi 10.3$

H4:  $\Phi 25.3$  Splined shaft, 6-25.3 x 21.4 x 6.2



K8:  $\Phi 22.1$  involute splined shaft 13-DP16/32

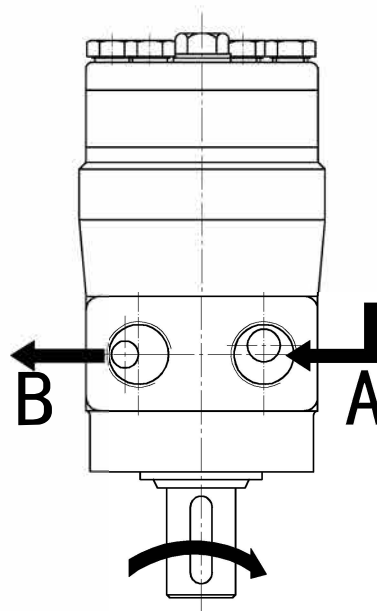
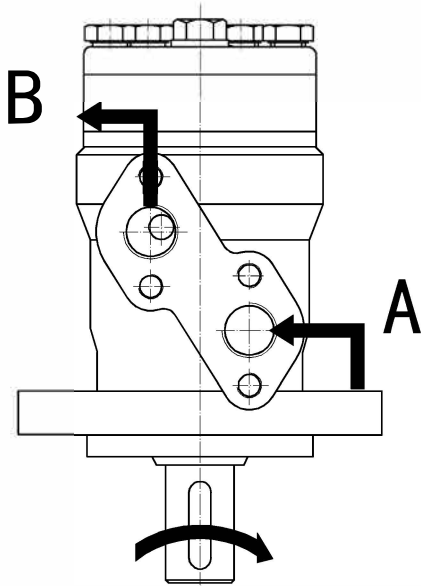


 : Motor mounting surface

■ OTMP、OTMPH Series Motor

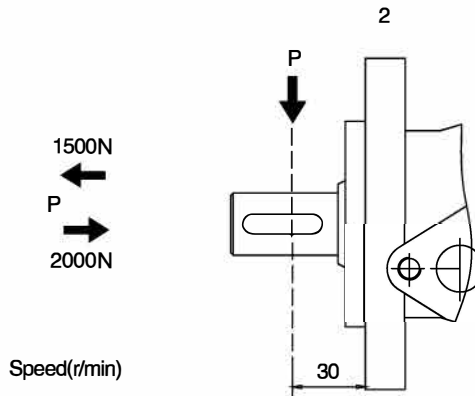
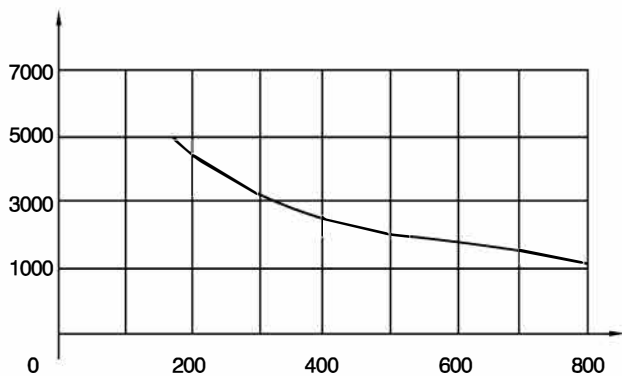
Direction of shaft rotation: Standard

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



■ PERMISSIBLE SHAFT LOADS

P (N) Radial force



OTMP, OTMPH ORDERING CODE

■ OTMP OTMPH ORDERING CODE

1	2	3	4	5	6	7
OTMP	—				/	—

Pos.1	2	3		4		
Series	Disp	Output		Flange		
OTMP	50	P1	Φ25 Cylindrical shaft, parallel key8 × 7 × 32		A II	2-Φ 13.5 Oval flange, pilot Φ82.5 × 8
	80	P3	Φ 25.4 Cylindrical shaft, parallel key6.35 × 6.35 × 32			
	100	P5	Φ 32 Cylindrical shaft, parallel key10 × 8 × 45			
	125				C	4-M10 Square flange, pilotΦ44.45 × 2.5
	160	P33	Φ 25.4 Cylindrical shaft, parallel key6.35 × 6.35 × 32			
	200	H3	Φ 25.3 Splined shaft, 6-25.3 × 21.4 × 6.2			
	250				C1	4-3/8-16UNC Square flange, pilotΦ44.45 × 2.5
	315	H33	Φ 25.3 Splined shaft, 6-25.3 × 21.4 × 6.2			
	400	K13	Φ31.75 involute splined shaft, 14-DP12/24 a=30°			

5			6		7	
Code	Ports		Special features		Rotation direction	
	Ports(A,B)(deep)	Drain port T(deep)				
Y	G1/2(15)	M14 × 1.5(12)	Omit	Standard	Omit	Standard
Y1	M18 × 1.5(15)	M14 × 1.5(12)				
Y2	M22 × 1.5(15)	M14 × 1.5(12)				
Y4	ZG3/8(15)	M14 × 1.5(12)				
Y5	7/8-14UNF(15)	M14 × 1.5(12)	T7	With dustproof ring	L	Opposite
Y7	ZG1/2(15)	M14 × 1.5(12)				
Y8	NPT1/2(15)	M14 × 1.5(12)	T10	With high pressure seals		
Y9	NPTF1/2(15)	7/16-20UNF(12)				
Y10	G1/2(15)	G1/4(12)				
Y15	7/8-14UNF(15)	7/16-20UNF(12)				

Note: C、C1 mounting are assembling to OTMPH shaft.

## OTMP、OTMPH ORDERING CODE

## ■ OTMP, OTMPH ORDERING CODE

	1	2	3	4	5	6	7
OTMPH	—				/		—

Pos.1	2	3			4		
Series	Disp				Flange		
OTMPH	50	P1	Φ25 Cylindrical shaft, parallel key8 × 7 × 32		A II	2-Φ13.5 Oval flange, pilot Φ82.5 × 2.8	
	80	P3	Φ25.4 Cylindrical shaft, parallel key6.35 × 6.35 × 32				
		P4	Φ25.4 Cylindrical shaft, Woodruff keyΦ25.4 × 6.35				
	100	P33	Φ25.4 Cylindrical shaft, parallel key6.35 × 6.35 × 32				
	125	P89	Φ25.4 Cylindrical shaft pin hole Φ9.53		C	4-M10 Square flange, pilotΦ44.45 × 2.8	
	160	P93	Φ25.4 Cylindrical shaft pin hole Φ9.5				
	200	P95	Φ25.4 Cylindrical shaft pin hole Φ6.4, Woodruff key Φ25.4 × 6.35				
	250	P96	Φ25.4 Cylindrical shaft pin hole Φ8				
		P97	Φ25.4 Cylindrical shaft pin hole Φ10.3				
	315	H4	Φ25.3 Splined shaft, 6-25.3 × 21.4 × 6.2		C1	4-3/8-16UNC Square flange, pilotΦ44.45 × 2.8	
400	K8	Φ22.1 involute splined shaft, 13-DP16/32					

5			6		7	
Code	Ports		Special features		Rotation direction	
	Ports(A,B)(deep)	Drain port T(deep)				
Y	G1/2(15)	M14 × 1.5(12)				
Y5	7/8-14UNF(15)	7/16-20UNF(12)				
Y7	ZG1/2(15)	G1/4(12)				
Y9	NPTF1/2(15)	7/16-20UNF(12)	Omit	Standard	Omit	Standard
Y10	G1/2(15)	G1/4(12)	T21	No case drain	L	Opposite
Y17	3/4-16UNF(15)	7/16-20UNF(12)				
Y19	Φ11(15)	7/16-20UNF(12)				
Y20	M18 × 1.5(15)	G1/4(12)				

## OTH Orbit Hydraulic Motor With Spool Valve

### OTH 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 to agriculture, forestry, plastics, machine tools and minmachines etc.

### OTH CHARACTERISTICS

- 1、With the axial oil distribution structure, it is of smaller, high efficiency and long life.
- 2、shaft seal can bear high pressure of motor of which can be used in parallel or in series.

### OTH TECHNICAL DATA

TYPE		OTH-50	OTH-80	OTH-100	OTH-125	OTH-160	OTH-200	OTH-250	OTH-315	OTH-400
Displacement(ml/r)		49.3	76.6	95.8	120.4	153.2	191.6	240.8	306.5	383.1
Max.Pressure.Drop (Mpa)	cont.	10.5	10.5	10.5	10.5	10.5	10.5	9	7	7
	int.	14	14	14	14	14	14	11.5	10.5	9
	peak.	18	18	18	18	18	18	15	14	11
Max.torque (N.m)	cont.	65	105	130	160	205	255	275	305	335
	int.	90	140	175	220	280	350	360	410	429
	peak.	115	180	225	285	365	455	475	560	550
Max.Speed ( cont.)(r/min )		810	520	415	330	260	205	165	125	100
Max.Flow(L/min )		40	40	40	40	40	40	40	40	40
Max.Output.Power(cont.)(Kw)		4.5	4.8	4.8	4.8	4.8	4.6	4	3.5	3

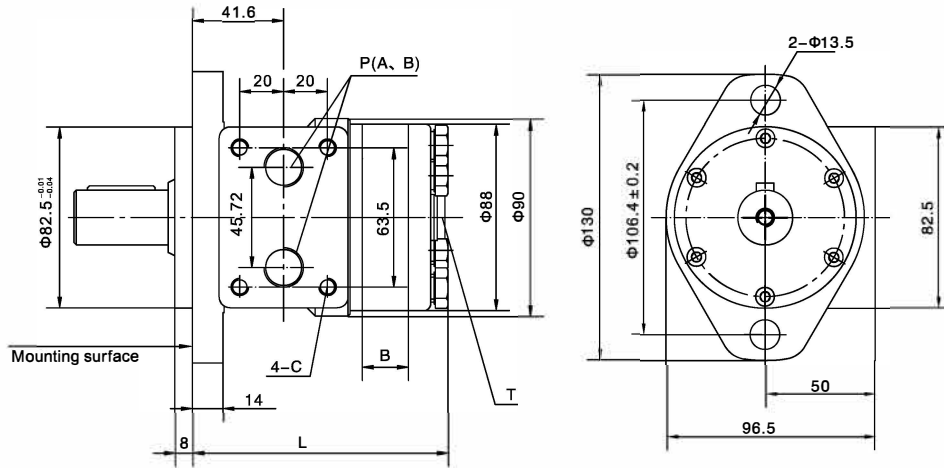
Intermittent operation the permissible values may occur for max. 10% of every minute

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



## OTH Orbit Hydraulic Motor With Spool Valve

### OTH INSTALLATION

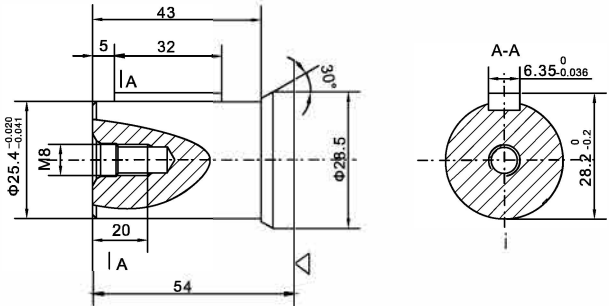
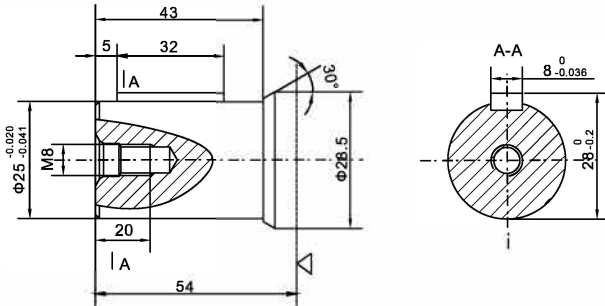
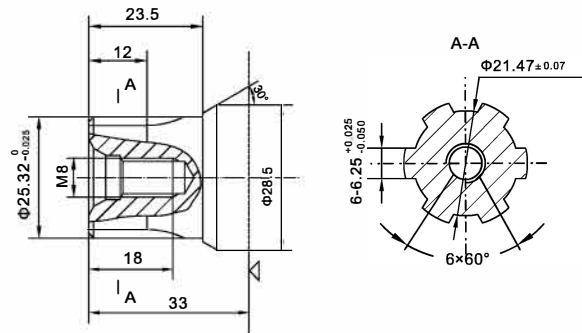
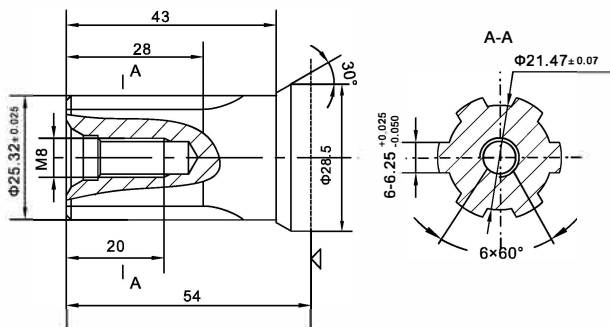



TYPE	OTH-50	OTH-80	OTH-100	OTH-125	OTH-160	OTH-200	OTH-250	OTH-315	TH-400
L	107	112	115.5	120	126	133	142	154	168
B	9	14	17.5	22	28	35	44	56	70

### OTH PORTS CODE

Code	Ports	P (A, B) ( deep )	C ( deep )	T ( deep )
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		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 )

Note: P(A, B)---Ports, C---Mounting Thread ( —Indicates no this thread ), T---Drain connection

**OTH Orbit Hydraulic Motor With Spool Valve**
**OTH SHAFT VERSION**
**P1:  $\Phi 25$  Cylindrical shaft, parallel key 8x7x32**
**P3:  $\Phi 25.4$  Cylindrical shaft, parallel key 6.35x6.35x32**

**H3:  $\Phi 25.3$  Splined shaft, 6-25.32x21.47x6.25**
**H5:  $\Phi 25.3$  Splined shaft, 6-25.32x21.47x6.25**

 : Motor mounting surface

**OTH Orbit Hydraulic Motor With Spool Valve**
**OTH ORDERING CODE**

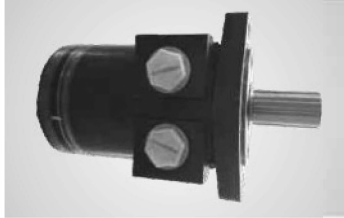
1	2	3	4	5	6	7
OTH	—				/	—

Pos.1	2	3			4	
Series	Disp	Output Shaft			Flange	
OTH	50	P1	Φ 25 Cylindrical shaft, parallel key 8x7x32		A II	2-Φ13.5 Oval flange polit Φ82.5x8
	80					
	100	P3	Φ 25.4 Cylindrical shaft, parallel key 6.35x6.35x32			
	125					
	160	H3	Φ25.3 Splined shaft, 6-25.32x21.47x6.25			
200	H5	Φ25.3 Splined shaft, 6-25.32x21.47x6.25				
250						
	315					
	400					

5			6		7	
Code	Ports		Special features		Rotation direction	
	Ports(A,B)(deep)	Drain port T(deep)				
Y	G1/2 ( 15 )	M14x1.5 ( 12 )	Omit	Standard	Omit	Standard
Y1	M18x1.5 ( 15 )	M14x1.5 ( 12 )				
Y2	M22x1.5 ( 15 )	M14x1.5 ( 12 )				
Y9	NPTF1/2 ( 15 )	7/16-20UNF ( 12 )				
Y10	G1/2 ( 15 )	G1/4 ( 12 )				
Y15	7/8-14UNF ( 15 )	7/16-20UNF ( 12 )			L	

## OTMPH Orbit Hydraulic Motor With Spool Valve

### INTRODUCTION



OTMPH series motors is a compact, economical and spool valve type of hydraulic motor. Suitable for working conditions with small load and intermittent operation. Widely used in agriculture, forestry, plastics, machine tools and mining machinery. Such as in injection plastic machine's mold adjustment, sweeping car, sawmill and other work platforms.

### CHARACTERISTICS

1. Due to the geroler type, it has low friction, high mechanical efficiency and long lifetime.
2. High shaft seal could be used in parallel and in series.
3. With two inside check valves, it needn't to connect the case drain.
4. Same performance with BMR series motor, similar size with BMP series motor.
5. The mounting flange and the front housing are separated, so it is easy to replace the flange.

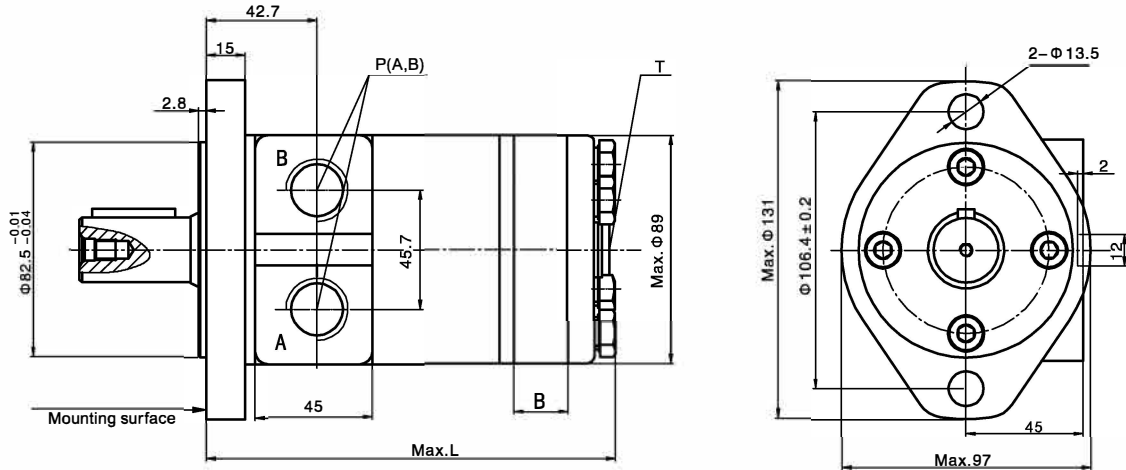
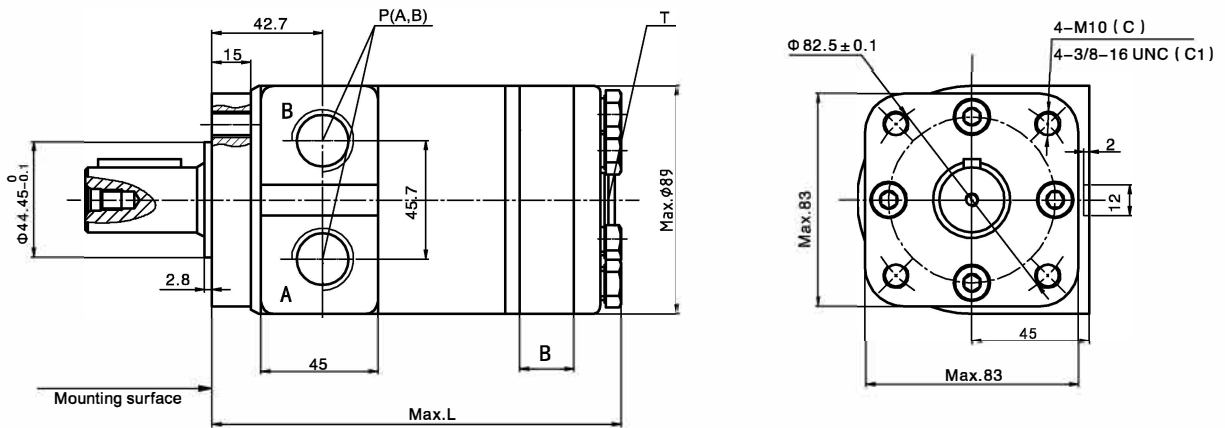
### OTMPH TECHNICAL DATA

TYPE		OTMPH-50	OTMPH-80	OTMPH-100	OTMPH-125	OTMPH-160	OTMPH-200	OTMPH-250	OTMPH-315	OTMPH-400
Displacement(ml/r)		49.3	76.6	95.8	120.4	153.2	191.6	240.8	306.5	383.1
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 (N.m)	cont.	90	140	175	220	280	350	350	360	350
	int.	115	175	220	275	355	440	445	445	455
	peak.	130	205	255	320	410	510	515	530	555
Max.Speed ( cont.)(r/min )		810	780	625	495	390	310	245	195	155
Max.Flow(L/min )		40	60	60	60	60	60	60	60	60
Max.Output.Power(cont.)(Kw)		6.4	9.5	9.5	9.5	9.5	9.5	7.4	6	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

## OTMPH Orbit Hydraulic Motor With Spool Valve

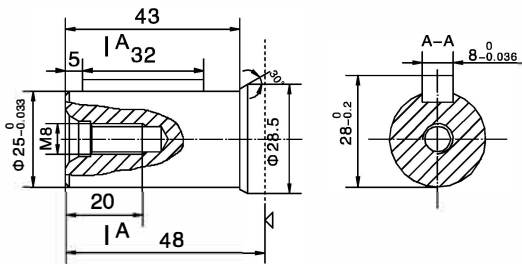
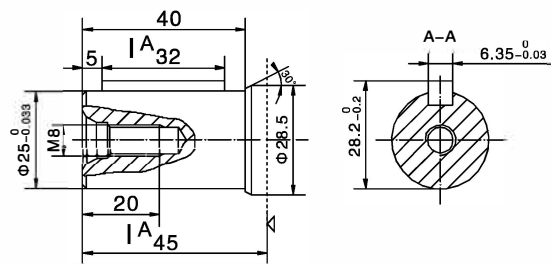
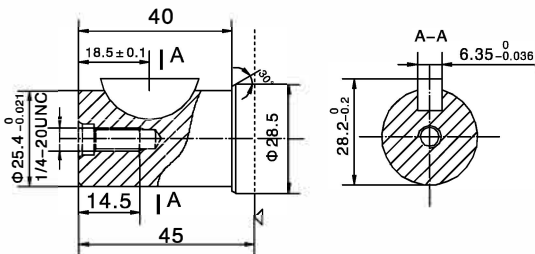
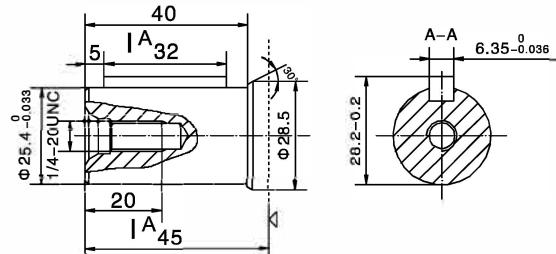
**OTMPH Installation**
**2-Ø13.5hole oval flange AII**

**Square flange C, C1**


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

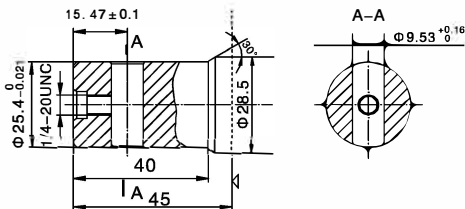
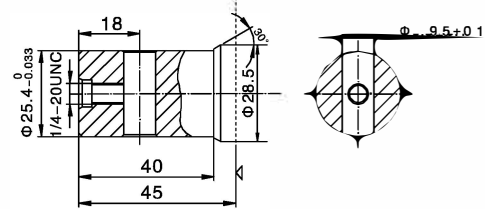
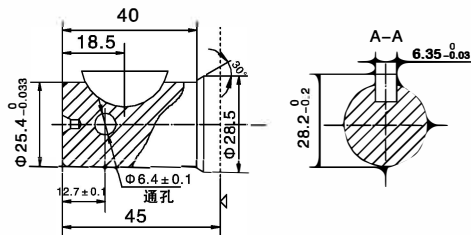
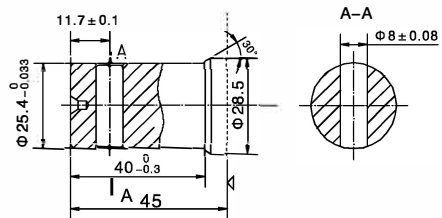
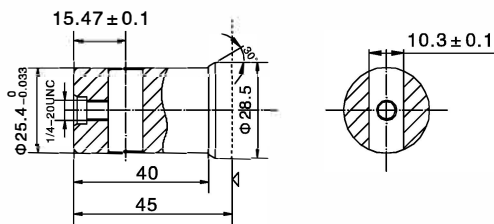
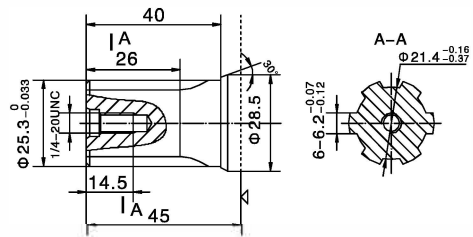
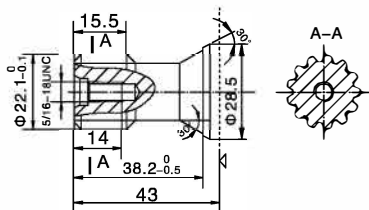
**OTMPH Orbit Hydraulic Motor With Spool Valve**
**OTMPH Ports Code**

Code	Ports	P(A、B)(deep)	C ( deep )	T ( deep )
Y		G1/2 (15)	—	M14 × 1.5 (12)
Y7		ZG1/2 (15)	—	G1/4 (12)
Y9		NPTF1/2 (15)	—	7/16–20 UNF(12)
Y10		G1/2 (15)	—	G1/4 (12)
Y15		7/8–14UNF (15)	—	7/16–20 UNF(12)

P(A、B)—Ports, C—Mounting Thread ( —Indicates no this thread ) , T—Drain connettion

**OTMPH SHAFT VERSION**
**P1:  $\Phi 25$  Cylindrical shaft, parallel key  $8 \times 7 \times 32$** 

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

**P4:  $\Phi 25.4$  Cylindrical shaft, Woodruff key  $\Phi 25.4 \times 6.35$** 

**P33:  $\Phi 25.4$  Cylindrical shaft, parallel key  $6.35 \times 6.35 \times 32$** 


◁ : Motor mounting surface

**OTMPH SHAFT VERSION**
**P89:  $\phi 25.4$  Cylindrical shaft pin hole  $\phi 9.53$** 

**P93:  $\phi 25.4$  Cylindrical shaft pin hole  $\phi 9.5$** 

**P95:  $\phi 25.4$  Cylindrical shaft pin hole  $\phi 6.4$   
Woodruff key  $\phi 25.4 \times 6.35$** 

**P96:  $\phi 25.4$  Cylindrical shaft pin hole  $\phi 8$** 

**P97:  $\phi 25.4$  Cylindrical shaft pin hole  $\phi 10.3$** 

**H4:  $\phi 25.3$  Splined Shaft, 6-25.3  $\times$  21.4  $\times$  6.2**

**K8:  $\phi 22.1$  involute cylindrical shaft, 13-DP 16/32**


◁: Motor mounting surface

■ OTMPH

1	2	3	4	5	6	7
OTMPH	—				/	—

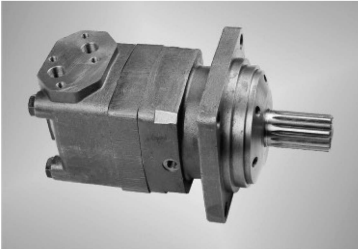
Pos.1	2	3		4	
Series	Disp	Output		Flange	
OTMPH	50	P1	Φ25 Cylindrical shaft, parallel key 8 × 7 × 32	A II	2-Φ13.5 Oval flange, pilot Φ82.5 × 6
	80	P3	Φ25.4 Cylindrical shaft, parallel key 6.35 × 6.35 × 32		
		P4	Φ25.4 Cylindrical shaft, Woodruff key Φ25.4 × 6.35		
	100	P33	Φ25.4 Cylindrical shaft, parallel key 6.35 × 6.35 × 32		
	125	P89	Φ25.4 Cylindrical shaft pin hole Φ9.53		
		P93	Φ25.4 Cylindrical shaft pin hole Φ9.5		
	160	P95	Φ25.4 Cylindrical shaft pin hole Φ6.4, Woodruff key Φ25.4 × 6.35	C	4-M10 Square flange, pilot Φ44.45 × 2.8
		P96	Φ25.4 Cylindrical shaft pin hole Φ8		
	200	P97	Φ25.4 Cylindrical shaft pin hole Φ6.4, Woodruff key Φ25.4 × 6.35		
	250	H4	Φ25.3 Splined shaft, 6-25.3 × 21.4 × 6.2		
	315	K8	Φ22.1 involute splined shaft, 13-DP16/32	C1	4-3/8-16UNC Square flange, pilot Φ44.45 × 2.8

Code	5		6	7
	Ports			
	Ports(A,B)(deep)	Drain port T(deep)	Special features	Rotation direction
Y	G1/2(15)	M14 × 1.5(12)		
Y7	ZG1/2(15)	G1/4(12)	Omit	Standard
Y9	NPTF1/2(15)	7/16-20UNF(12)	T21	No case drain
Y10	G1/2(15)	G1/4(12)	T26	Flange face is vertical ports
Y15	7/8-14UNF(15)	7/16-20UNF(12)		



## INTRODUCTION

### FEATURES AND APPLICATIONS

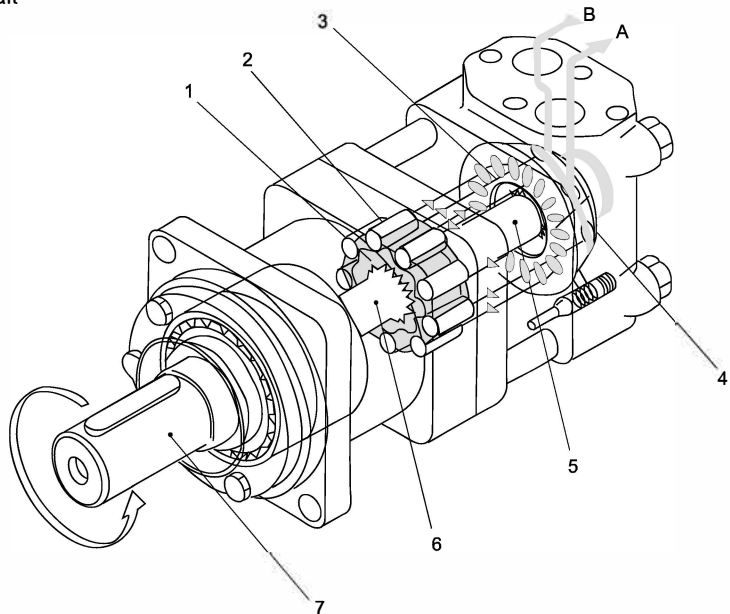


OTM hydraulic motor is one type of high torque low speed hydraulic motors, with high efficiency and long life. OTM motor has a wide Speed range, high starting torque and rotating stable at high speed Compact and light, it can be connected to working machine directly, adapted to all kinds of low speed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

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

### WORKING PRINCIPLE

- 1 orbit cam 2 roll 3 distributor 4 auxiliary plate  
5 distributor shaft 6 transmission shaft 7 output shaft



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.

**OTM3Y Orbit Hydraulic Motor With Disk Valve**
**OTM3Y TECHNICAL DATA**

TYPE	OTM3Y OTM3SY OTM3S3Y OTM3WY 80	OTM3Y OTM3SY OTM3S3Y OTM3WY 100	OTM3Y OTM3SY OTM3S3Y OTM3WY 125	OTM3Y OTM3SY OTM3S3Y OTM3WY 160	OTM3Y OTM3SY OTM3S3Y OTM3WY 200	OTM3Y OTM3SY OTM3S3Y OTM3WY 250	OTM3Y OTM3SY OTM3S3Y OTM3WY 315	OTM3Y OTM3SY OTM3S3Y OTM3WY 400	OTM3Y OTM3SY OTM3S3Y OTM3WY 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	25	19	14	
	peak.	29.5	29.5	29.5	28	27	27	26	16	
Max.torque (N.m)	cont.	226	282	355	451	564	684	870	813	728
	int.	293	365	459	559	672	845	1032	1021	903
	peak.	306	383	481	588	708	891	1091	1141	1044
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	

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

## OTM3Y Orbit Hydraulic Motor With Disk Valve

**OTM3Y PERFORMANCE DATA**

OTM3Y 80(80.5ml/r)

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

OTM3Y 100(100.5ml/r)

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

OTM3Y 125(126.3ml/r)

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

OTM3Y 160(160.8ml/r)

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

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

□ Cont.  
 □ Int.

OTM3Y Orbit Hydraulic Motor With Disk Valve

OTM3Y PERFORMANCE DATA

OTM3Y 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	184	285	374	467	557	596
		<b>73</b>	<b>71</b>	<b>68</b>	<b>66</b>	<b>63</b>	<b>61</b>	<b>56</b>
30		89	187	287	379	474	560	599
		<b>145</b>	<b>142</b>	<b>139</b>	<b>136</b>	<b>132</b>	<b>129</b>	<b>124</b>
40		92	187	287	387	482	564	599
		<b>194</b>	<b>192</b>	<b>186</b>	<b>182</b>	<b>178</b>	<b>175</b>	<b>166</b>
50		88	182	282	382	474	560	591
		<b>244</b>	<b>241</b>	<b>238</b>	<b>232</b>	<b>226</b>	<b>223</b>	<b>212</b>
60		84	175	275	374	469	555	586
		<b>295</b>	<b>290</b>	<b>286</b>	<b>280</b>	<b>272</b>	<b>268</b>	<b>257</b>
Max.cont.	75	77	170	270	369	464	550	581
		<b>370</b>	<b>365</b>	<b>358</b>	<b>351</b>	<b>343</b>	<b>336</b>	<b>325</b>
Max.int.	90	68	165	260	349	434	510	532
		<b>445</b>	<b>440</b>	<b>430</b>	<b>423</b>	<b>412</b>	<b>404</b>	<b>392</b>

OTM3Y 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	234	358	469	584	377	742
		<b>58</b>	<b>56</b>	<b>54</b>	<b>53</b>	<b>50</b>	<b>48</b>	<b>45</b>
30		115	235	361	471	587	680	746
		<b>116</b>	<b>113</b>	<b>110</b>	<b>108</b>	<b>105</b>	<b>103</b>	<b>100</b>
40		115	235	355	473	591	684	751
		<b>155</b>	<b>153</b>	<b>148</b>	<b>144</b>	<b>141</b>	<b>139</b>	<b>136</b>
50		114	230	355	474	587	680	746
		<b>194</b>	<b>192</b>	<b>189</b>	<b>185</b>	<b>180</b>	<b>175</b>	<b>169</b>
60		112	225	352	471	583	675	741
		<b>234</b>	<b>231</b>	<b>228</b>	<b>224</b>	<b>219</b>	<b>214</b>	<b>208</b>
Max.cont.	75	109	220	349	467	578	669	735
		<b>295</b>	<b>290</b>	<b>285</b>	<b>279</b>	<b>273</b>	<b>267</b>	<b>260</b>
Max.int.	90	103	213	343	460	568	654	715
		<b>354</b>	<b>350</b>	<b>342</b>	<b>334</b>	<b>326</b>	<b>320</b>	<b>310</b>

OTM3Y 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	284	433	583	745	863	947
		<b>45</b>	<b>44</b>	<b>43</b>	<b>41</b>	<b>40</b>	<b>38</b>	<b>35</b>
30		140	288	437	586	748	866	951
		<b>91</b>	<b>89</b>	<b>87</b>	<b>85</b>	<b>83</b>	<b>81</b>	<b>78</b>
40		138	290	440	588	752	870	956
		<b>121</b>	<b>120</b>	<b>116</b>	<b>113</b>	<b>111</b>	<b>109</b>	<b>106</b>
50		136	291	439	587	748	866	951
		<b>153</b>	<b>151</b>	<b>149</b>	<b>145</b>	<b>141</b>	<b>139</b>	<b>136</b>
60		134	286	435	583	744	862	947
		<b>184</b>	<b>181</b>	<b>179</b>	<b>175</b>	<b>170</b>	<b>166</b>	<b>160</b>
Max.cont.	75	131	280	431	580	738	856	939
		<b>231</b>	<b>228</b>	<b>224</b>	<b>220</b>	<b>214</b>	<b>210</b>	<b>204</b>
Max.int.	90	125	272	421	570	718	826	899
		<b>278</b>	<b>275</b>	<b>269</b>	<b>264</b>	<b>258</b>	<b>253</b>	<b>243</b>

OTM3Y 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	347	522	705	806	926	
		<b>36</b>	<b>35</b>	<b>34</b>	<b>33</b>	<b>32</b>	<b>30</b>	
30		174	350	526	708	809	930	
		<b>73</b>	<b>71</b>	<b>69</b>	<b>68</b>	<b>66</b>	<b>64</b>	
40		173	352	529	710	813	935	
		<b>97</b>	<b>96</b>	<b>93</b>	<b>91</b>	<b>89</b>	<b>86</b>	
50		171	350	531	710	809	930	
		<b>122</b>	<b>121</b>	<b>119</b>	<b>116</b>	<b>113</b>	<b>110</b>	
60		168	343	522	705	801	924	
		<b>147</b>	<b>145</b>	<b>143</b>	<b>140</b>	<b>136</b>	<b>130</b>	
Max.cont.	75	164	339	517	700	791	916	
		<b>185</b>	<b>183</b>	<b>179</b>	<b>176</b>	<b>171</b>	<b>163</b>	
Max.int.	90	160	325	503	680	766	886	
		<b>223</b>	<b>220</b>	<b>215</b>	<b>211</b>	<b>206</b>	<b>196</b>	

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

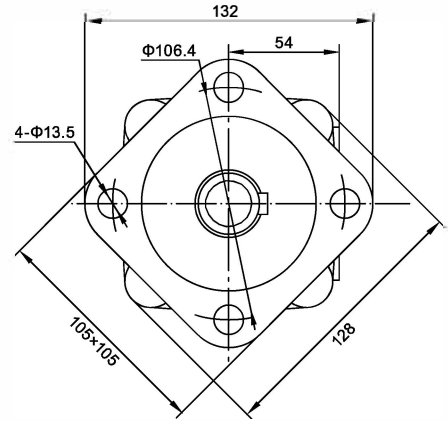
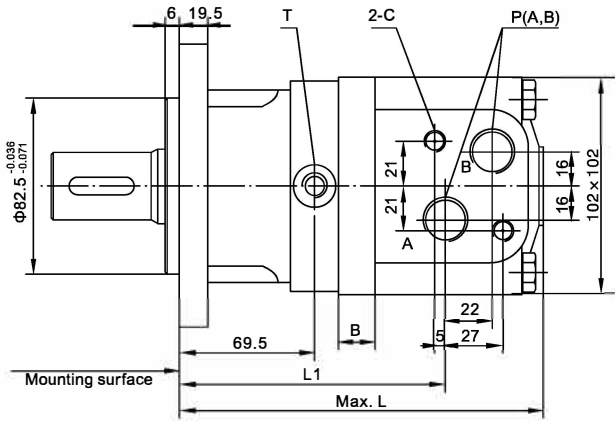
OTM3Y 500(476.5ml/r)

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

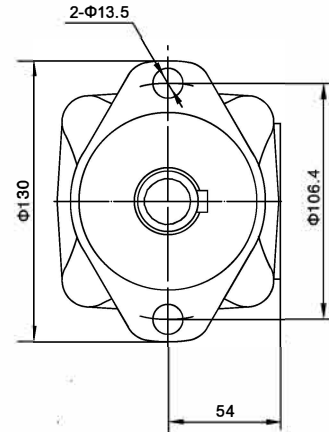
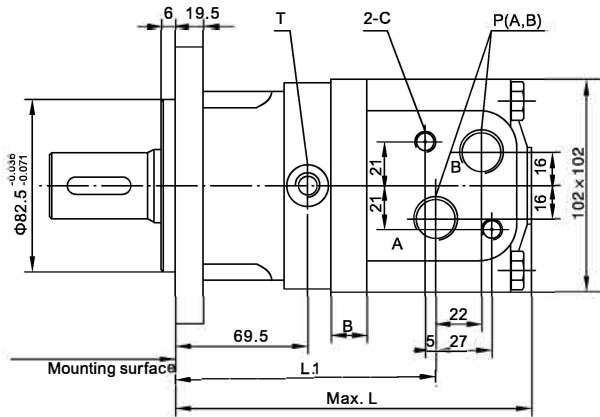
Cont.  
Int.

■ OTM3Y Installation

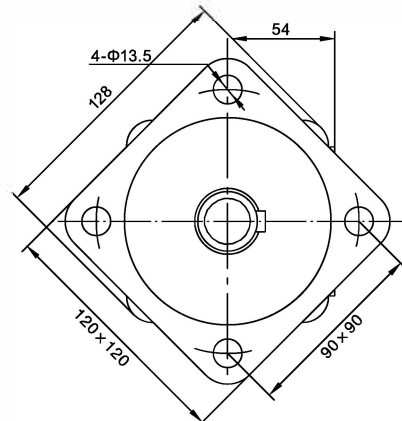
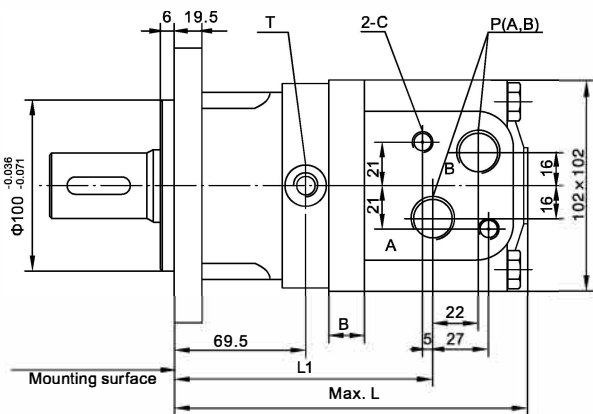
Square flange A



2-hole oval flange AII

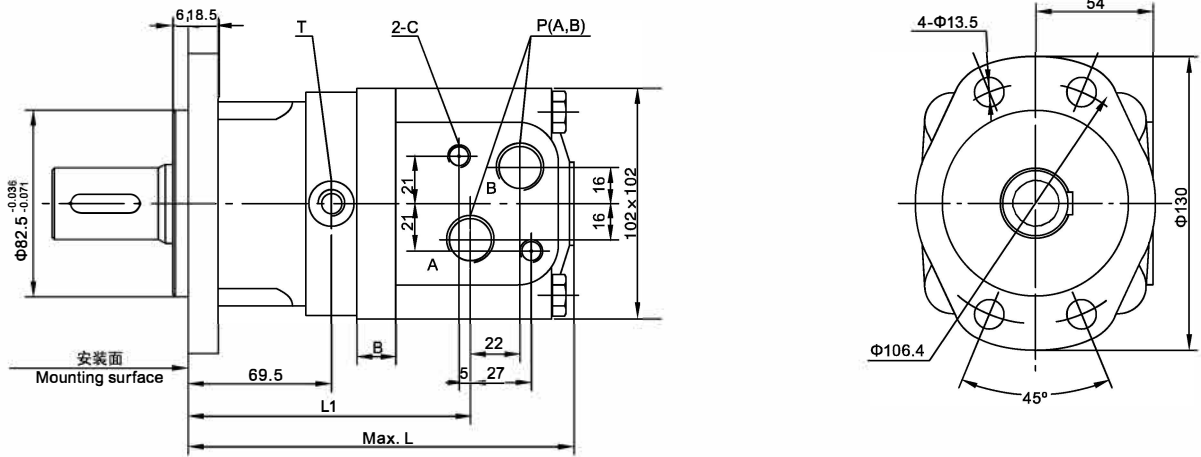


Square flange A2III



**OTM3Y Installation**

## 4-hole oval flange AIV



Type	OTM3Y -80	OTM3Y -100	OTM3Y -125	OTM3Y -160	OTM3Y -200	OTM3Y -250	OTM3Y -315	OTM3Y -400	OTM3Y -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

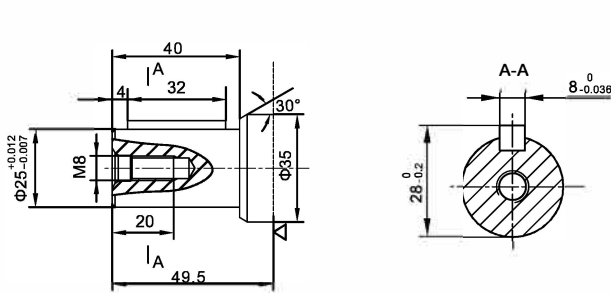
**OTM3Y Orbit Hydraulic Motor With Disk Valve**
**OTM3Y PORTS CODE**

Code	Ports	P(A, B)( deep)	C ( deep )	T ( deep )
Y		G1/2 (15)	M10 (12)	G1/4 (12)
Y1		M18 × 1.5 (15)	M10 (12)	M14 × 1.5 (12)
Y2		M22 × 1.5 (15)	M10 (12)	M14 × 1.5 (12)
Y3		M20 × 1.5 (15)	M10 (12)	M14 × 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)

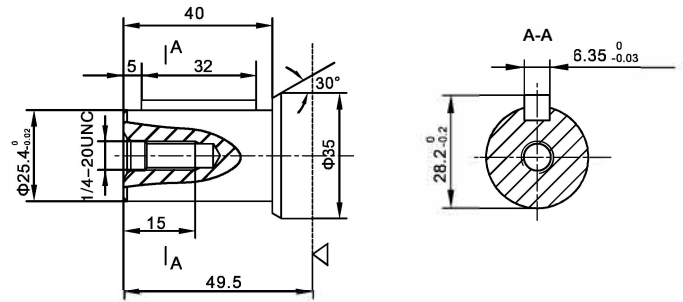
Note:P(A, B)--Ports, C--Mounting Thread ( —Indicates no this thread ) , T--Drain connettion

**OTM3Y SHAFT VERSION**

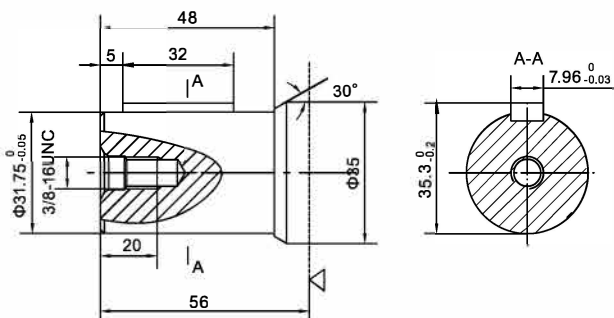
P1:  $\Phi 25$  Cylindrical shaft, parallel key  $8 \times 7 \times 32$



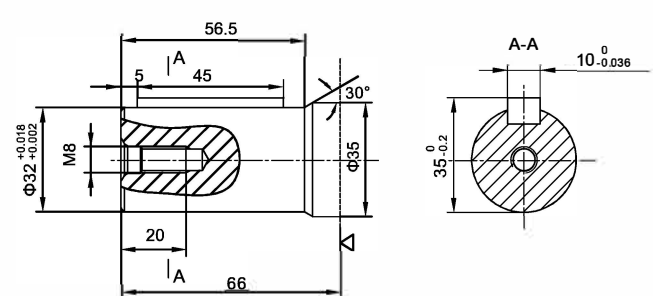
P3:  $\Phi 25.4$  Cylindrical shaft, parallel key  $6.35 \times 6.35 \times 32$



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



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

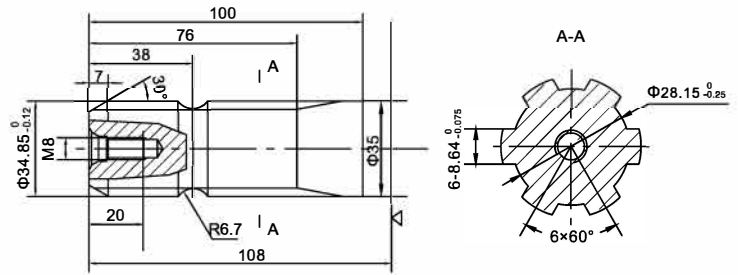
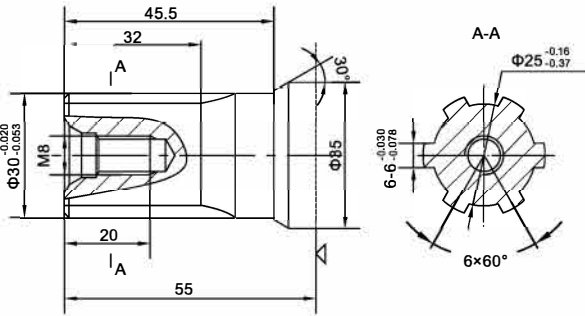


◁-- Motor mounting surface

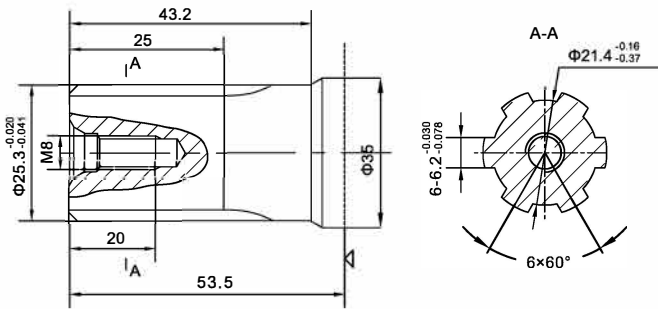
■ OTM3Y SHAFT VERSION

H1:  $\Phi 30$  Splined shaft, 6–30 × 25 × 6

H3:  $\Phi 34.85$  Splined shaft, 6–34.85 × 28.15 × 8.64



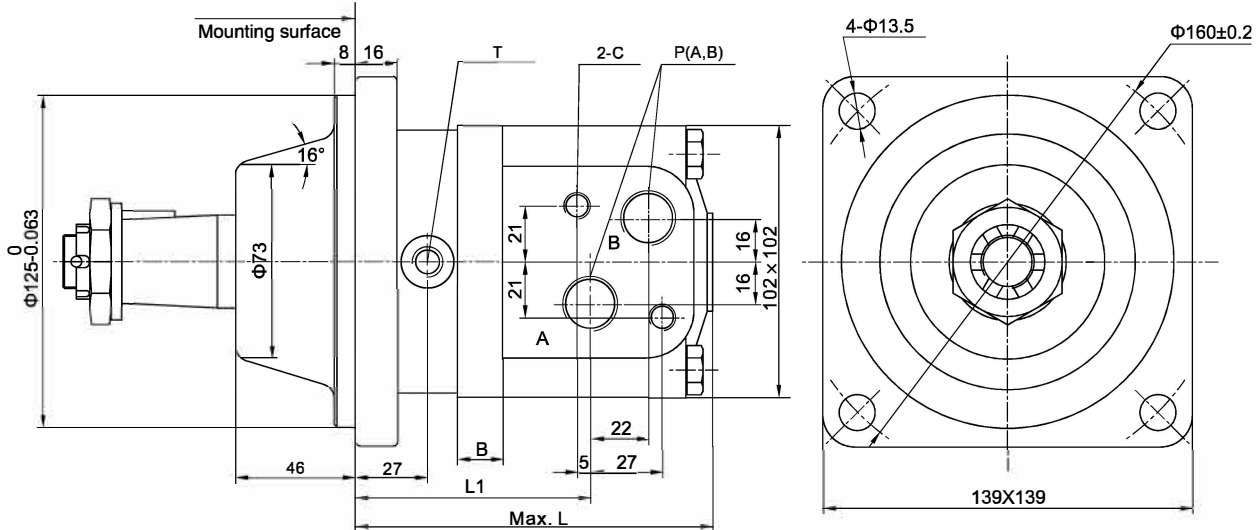
H51:  $\Phi 25.3$  Splined shaft, 6–25.3 × 21.4 × 6.2



◁-- Motor mounting surface



## OTM3WY Orbit Hydraulic Motor With Disk Valve

**OTM3WY Installation**


Type	OTM3WY 80	OTM3WY 100	OTM3WY 125	OTM3WY 160	OTM3WY 200	OTM3WY 250	OTM3WY 315	OTM3WY 400	OTM3WY 500
L	127.5	131	135.5	141.5	148.5	157.5	169.5	183.5	196.5
L1	83	86.5	91	97	104	113	125	139	152
B	11	14.5	19	25	32	41	53	67	80

**OTM3WY PORTS CODE**

Code	Ports	P(A, B)(deep)	C ( deep )	T ( deep )
Y		G1/2 (15)	M10 (12)	G1/4 (12)
Y5		7/8-14UNF (15)	—	7/16-20UNF (12)

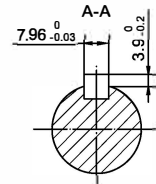
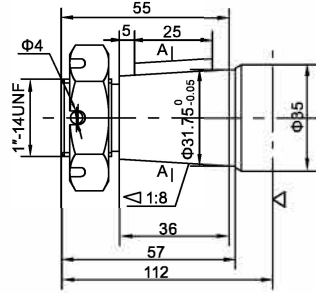
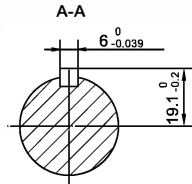
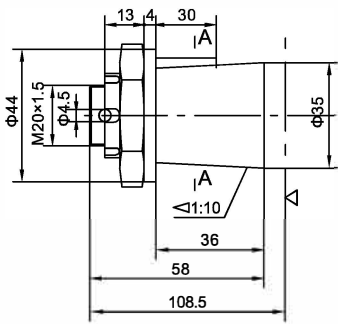
Note: P(A, B)---Ports, C---Mounting Thread ( —Indicates no this thread ), T---Drain connettion

OTM3WY Orbit Hydraulic Motor With Disk Valve

■ OTM3WY SHAFT VERSION

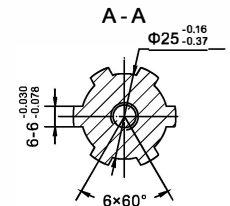
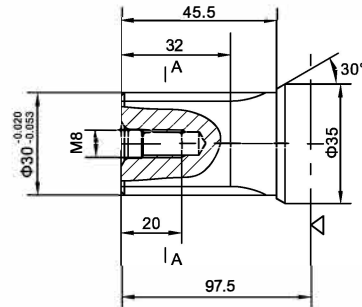
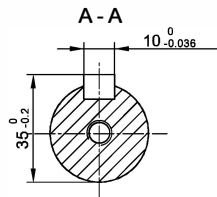
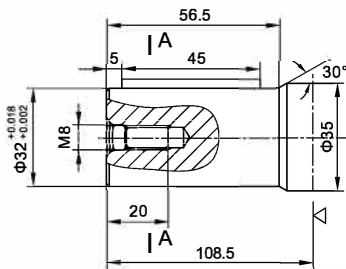
Z:  $\Phi 35$  Tapered shaft, taper1:10, parallel key  $6 \times 6 \times 30$

Z2:  $\Phi 31.75$  Tapered shaft, taper1:8, parallel key  $7.96 \times 7.96 \times 25$



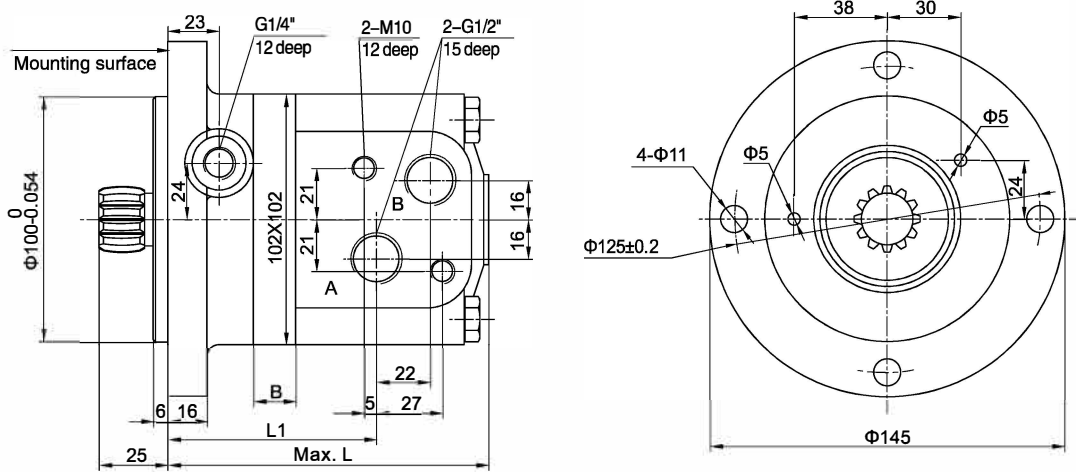
P10:  $\Phi 32$  Cylindrical shaft, parallel key  $10 \times 8 \times 45$

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

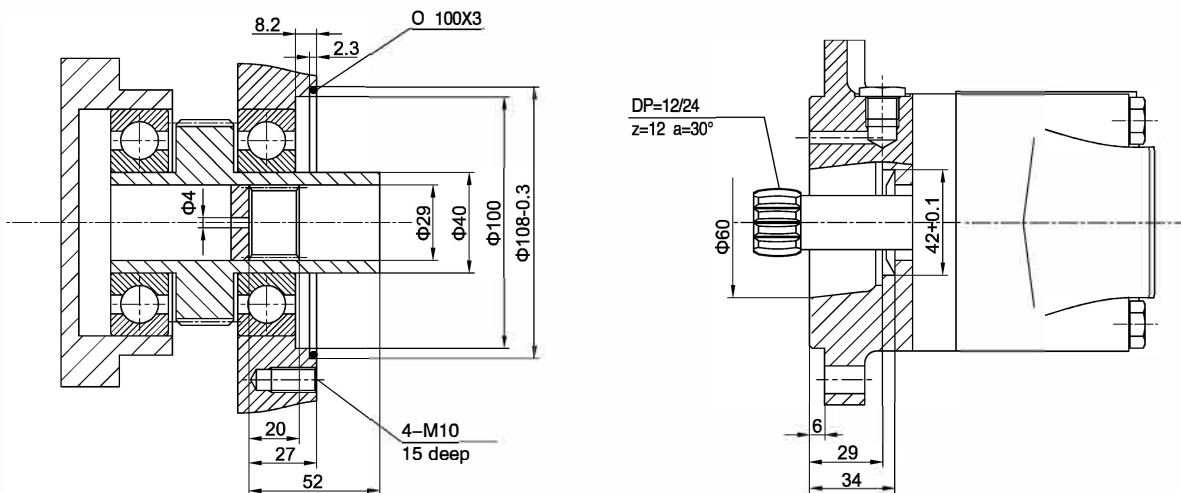


$\triangleleft$  -- Motor mounting surface

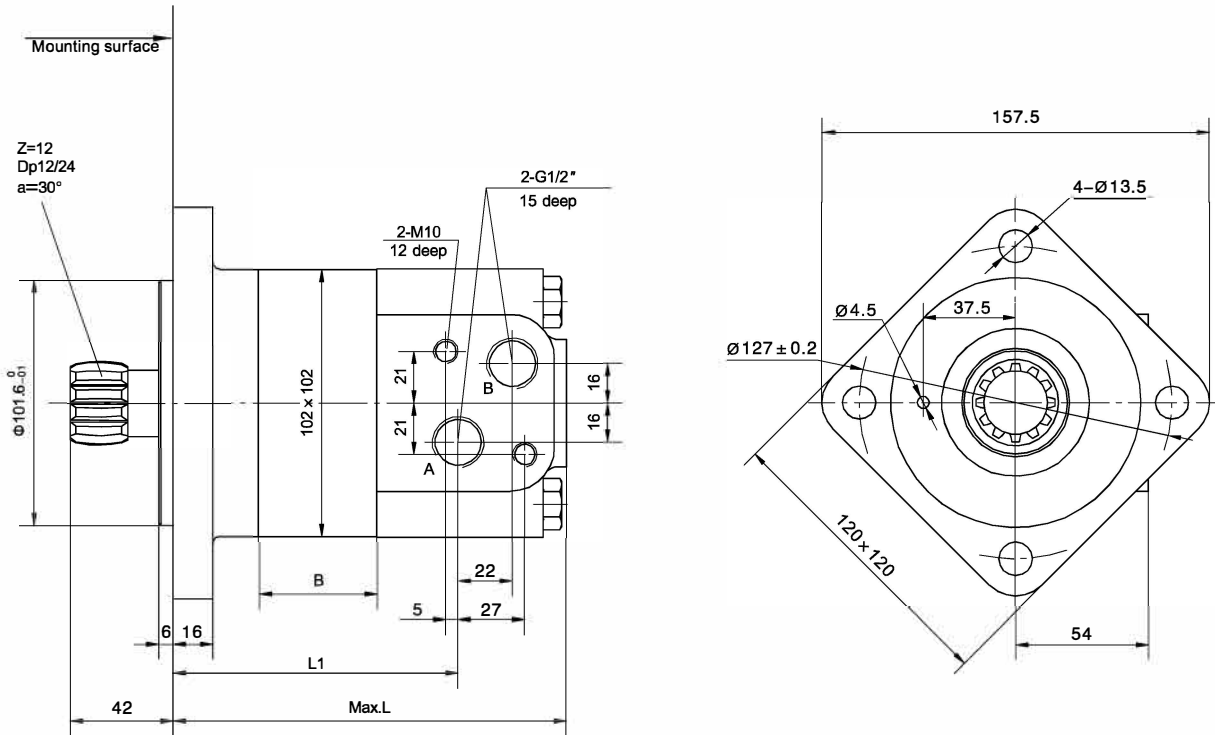
## OTM3SY Orbit Hydraulic Motor With Disk Valve

**OTM3SY Installation**


Type	OTM3SY 80	OTM3SY 100	OTM3SY 125	OTM3SY 160	OTM3SY 200	OTM3SY 250	OTM3SY 315	OTM3SY 400	OTM3SY 500
L	124	127.5	132	138	145	154	166	180	193
L1	79.5	83	87.5	93.5	100.5	109.5	121.5	135.5	148.5
B	11	14.5	19	25	32	41	53	67	80

**OTM3SY DIMENSIONS OF THE ATTACHED COMPONENT**


## OTM3S3Y Orbit Hydraulic Motor With Disk Valve

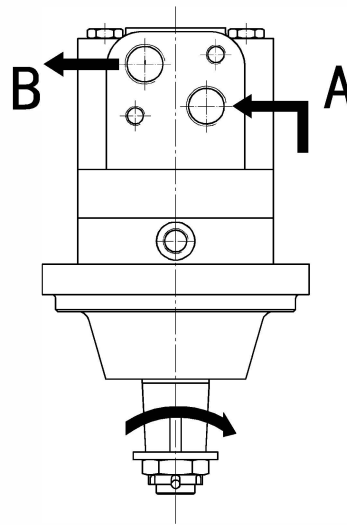
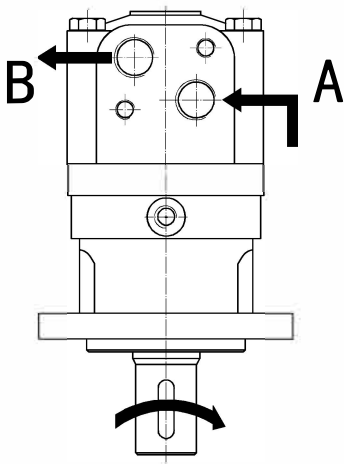
**OTM3S3Y Installation**


Type	OTM3S3Y 80	OTM3S3Y 100	OTM3S3Y 125	OTM3S3Y 160	OTM3S3Y 200	OTM3S3Y 250	OTM3S3Y 315	OTM3S3Y 400	OTM3S3Y 500
L	124	127.5	132	138	145	154	166	180	193
L1	79.5	83	87.5	93.5	100.5	109.5	121.5	135.5	148.5
B	11	14.5	19	25	32	41	53	67	80

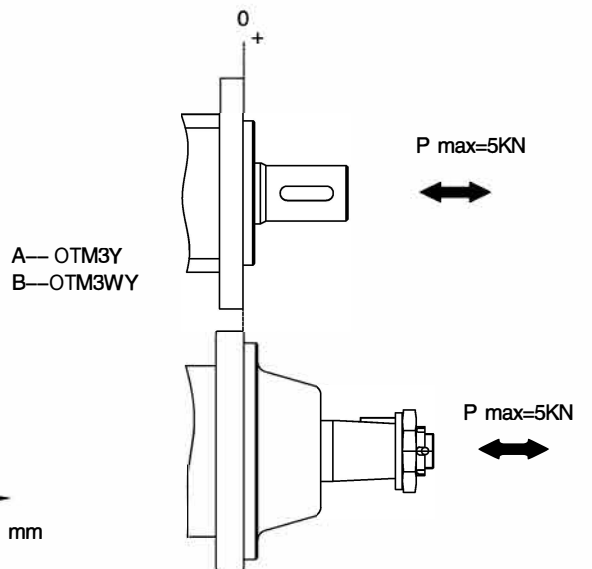
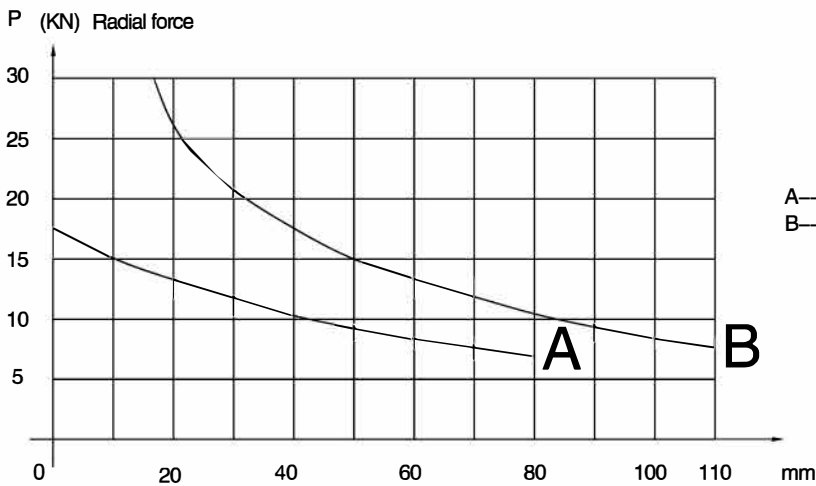
■ OTM3Y, OTM3WY, OTM3SY Series Motor

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.



■ PERMISSIBLE SHAFT LOADS



## OTM3Y、OTM3WY、OTM3SY Series Motor

**OTM3Y ORDERING CODE**

1	2	3	4	5	6	7
OTM3Y	—				/	—

Pos.1	2	3		4	
Series	Disp	Output		Flange	
OTM3Y	80	P1	Φ25 Cylindrical shaft, parallel key8 × 7 × 32	A	4- Φ 13.5 Square flange, pilot Φ 82.5
	100	P3	Φ25.4 Cylindrical shaft, parallel key6.35 × 6.35 × 32		
	125	P5	Φ31.75 Cylindrical shaft, parallel key7.96 × 7.96 × 32	A II	2- Φ 13.5 Oval flange, pilot Φ 82.5
	160				
	200	P10	Φ32 Cylindrical shaft, parallel key10 × 8 × 45	A2 III	4- Φ 13.5 Square flange, pilot Φ 100
	250	H1	Φ30 Splined shaft, 6-30 × 25 × 6	AIV	4- Φ 13.5 Oval flange, pilot Φ 82.5
	315	H3	Φ34.85 Splined shaft, 6-34.85 × 28.15 × 8.64		
	400				
	500	H51	Φ25.3 Splined shaft, 6-25.3 × 21.4 × 6.2		

Code	5		6		7	
	Ports		Special features		Rotation direction	
	Ports(A,B)(deep)	Drain port T(deep)				
Y	G1/2(15)	G1/4(12)	Omit	Standard	Omit	Standard
Y1	M18 × 1.5(15)	M14 × 1.5(12)				
Y2	M22 × 1.5(15)	M14 × 1.5(12)				
Y3	M20 × 1.5(15)	M14 × 1.5(12)				
Y5	7/8-14UNF(15)	7/16-20UNF(12)				
Y8	NPT1/2(15)	G1/4(12)				
Y10	G1/2(15)	G1/4(12)			L	Opposite

## OTM3Y、OTM3WY、OTM3SY Series Motor

## ■ OTM3WY、OTM3SY、OTM3S3Y ORDERING CODE

1	2	3	4	5	6	7
OTM3WY	—				/	—

Pos.1	2	3		4		
Series	Disp	Output		Flange		
OTM3WY	80	P10	Φ32 Cylindrical shaft, parallel key10×8×45		A	4-Φ13.5 Square flange, pilotΦ125
	100					
	125	H1	Φ30 Splined shaft, 6-30×25×6			
	160					
	200	Z	Φ35 Tapered shaft, taper1:10, parallel key6×6×30			
250	Z2	Φ31.75 Tapered shaft, taper1:8, parallel key7.96×7.96×25				
315						
400						
500						

5			6		7	
Code	ports		Special features		Rotation direction	
	Ports(A,B)(deep)	Drain port T(deep)				
Y	G1/2(15)	M14×1.5(12)	Omit	Standard	Omit	Standard
Y5	7/8-14UNF(15)	7/16-20UNF(12)			L	Opposite

1	2	3
OTM3WY	—	/

1	2	3
OTM3S3Y	—	/

Pos.1	2	3	
Series	Disp	Special features	
OTM3SY	80	Omit	Standard
	100		
	125		
	200		
	250		
	315		
	400		
	500		

Pos.1	2	3	
Series	Disp	Special features	
OTM3S3Y	80	Omit	Standard
	100		
	125		
	160		
	200		
	250		
	315		
	400		
500			

**OTM4 Orbit Hydraulic Motor With Disk Valve**
**OTM4 TECHNICAL DATA**

TYPE	OTM4-160 OTM4S-160 OTM4W-160	OTM4-200 OTM4S-200 OTM4W-200	OTM4-250 OTM4S-250 OTM4W-250	OTM4-320 OTM4S-320 OTM4W-320	OTM4-400 OTM4S-400 OTM4W-400	OTM4-500 OTM4S-500 OTM4W-500
Displacement(ml/r)	158.8	200.8	252.2	317.5	401.6	535.3
Max.Pressure.Drop (Mpa)	cont.	20	20	20	18	16
	int.	24	24	24	24	18
	peak.	28	28	28	28	21
Max.torque (N.m)	cont.	450	561	710	902	1121
	int.	559	714	883	1143	1377
	peak.	663	818	1021	1322	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 (kg)	20.3	20.8	21.4	22.4	23	24

**OTM4Y TECHNICAL DATE**

TYPE	OTM4Y-160	OTM4Y-200	OTM4Y-250	OTM4Y-320	OTM4Y-400	OTM4Y-500
Displacement(ml/r)	158.8	200.8	252.2	317.5	401.6	535.3
Max.Pressure.Drop (Mpa)	cont.	24	24	24	23	18
	int.	27	27	27	26	20
	peak.	30	30	30	29	23
Max.torque (N.m)	cont.	559	714	883	1095	1377
	int.	639	789	985	1227	1521
	peak.	710	876	1093	1369	1750
Max.Speed ( cont.)(r/min )	625	495	395	310	245	185
Max.Flow(L/min )	100	100	100	100	100	100
Max.Output.Power(cont.)(Kw)	24.1	30	30	28.8	25.3	24.1
Weight ( kg )	20.3	20.8	21.4	22.4	23	24

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.



**OTM4 Orbit Hydraulic Motor With Disk Valve**
**OTM4 PERFORMANCE DATA**

 OTM4 160[158.8cm<sup>3</sup>/rev]

Pressure (Mpa)

Max.cont. Max.int.

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

 OTM4 200[200.8cm<sup>3</sup>/rev]

Pressure (Mpa)

Max.cont. Max.int.

		4	8	10	12	16	20	24
Flow(L/min)	10	119	221	275	323	431	532	636
		<b>48</b>	<b>47</b>	<b>46</b>	<b>43</b>	<b>40</b>	<b>38</b>	<b>34</b>
20		120	227	283	330	445	547	661
		<b>97</b>	<b>96</b>	<b>94</b>	<b>92</b>	<b>89</b>	<b>86</b>	<b>77</b>
40		115	229	281	334	451	560	680
		<b>199</b>	<b>197</b>	<b>195</b>	<b>191</b>	<b>187</b>	<b>182</b>	<b>171</b>
60		111	225	280	334	454	560	682
		<b>306</b>	<b>301</b>	<b>298</b>	<b>296</b>	<b>288</b>	<b>282</b>	<b>269</b>
80		103	220	275	333	450	557	680
		<b>403</b>	<b>401</b>	<b>397</b>	<b>392</b>	<b>385</b>	<b>378</b>	<b>367</b>
Max.cont.	100	94	216	272	327	447	551	676
		<b>503</b>	<b>500</b>	<b>496</b>	<b>492</b>	<b>485</b>	<b>477</b>	<b>470</b>
Max.int.	125	80	198	262	316	436	538	662
		<b>627</b>	<b>623</b>	<b>619</b>	<b>614</b>	<b>607</b>	<b>600</b>	<b>584</b>
Max.int.	150	67	184	247	308	425	526	648
		<b>758</b>	<b>754</b>	<b>749</b>	<b>741</b>	<b>731</b>	<b>720</b>	<b>696</b>

 OTM4 250[252.2cm<sup>3</sup>/rev]

Pressure (Mpa)

Max.cont. Max.int.

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

 OTM4 320[317.5cm<sup>3</sup>/rev]

Pressure (Mpa)

Max.cont. Max.int.

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

 OTM4 400[401.6cm<sup>3</sup>/rev]

Pressure (Mpa)

Max.cont. Max.int.

		3	6	9	12	15	18	21
Flow(L/min)	10	165	343	524	669	827	982	1130
		<b>25</b>	<b>24</b>	<b>23</b>	<b>22</b>	<b>21</b>	<b>20</b>	<b>19</b>
20		167	346	528	679	841	1001	1156
		<b>51</b>	<b>50</b>	<b>49</b>	<b>46</b>	<b>44</b>	<b>42</b>	<b>40</b>
40		165	346	530	685	859	1020	1181
		<b>99</b>	<b>98</b>	<b>96</b>	<b>93</b>	<b>90</b>	<b>86</b>	<b>82</b>
60		163	338	526	682	860	1024	1187
		<b>149</b>	<b>147</b>	<b>143</b>	<b>139</b>	<b>135</b>	<b>131</b>	<b>125</b>
80		155	330	517	672	853	1014	1181
		<b>199</b>	<b>197</b>	<b>194</b>	<b>190</b>	<b>186</b>	<b>182</b>	<b>176</b>
Max.cont.	100	140	317	503	662	838	998	1171
		<b>249</b>	<b>247</b>	<b>245</b>	<b>241</b>	<b>235</b>	<b>231</b>	<b>225</b>
Max.int.	125	126	289	490	643	816	977	1142
		<b>311</b>	<b>309</b>	<b>307</b>	<b>303</b>	<b>298</b>	<b>294</b>	<b>287</b>
Max.int.	150	118	273	475	623	797	954	1119
		<b>375</b>	<b>373</b>	<b>369</b>	<b>365</b>	<b>361</b>	<b>357</b>	<b>350</b>

 OTM4 500[535.3cm<sup>3</sup>/rev]

Pressure (Mpa)

Max.cont. Max.int.

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

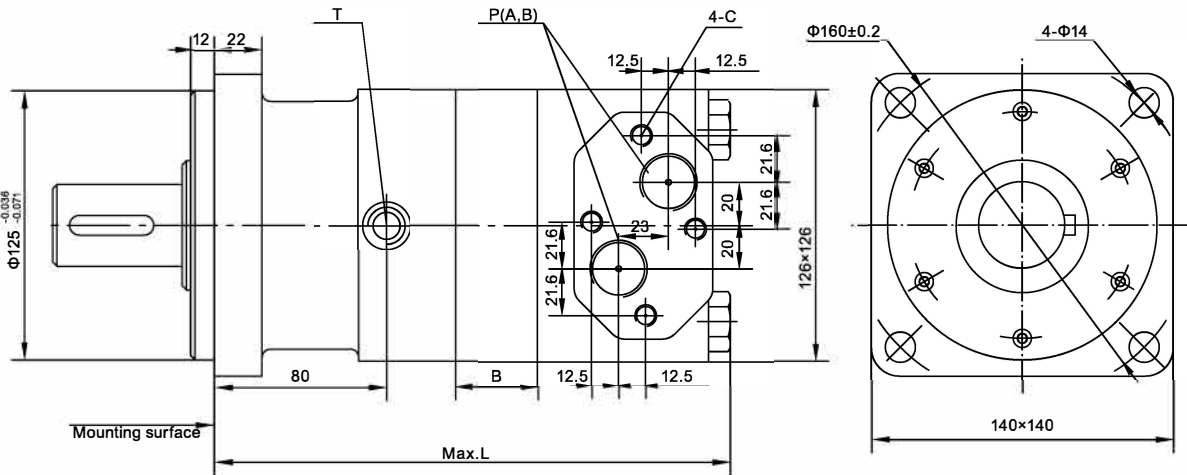
 ( Torque ) : 797Nm  
 ( Speed ) : 361r/min

 □ Cont.  
 ■ Int.

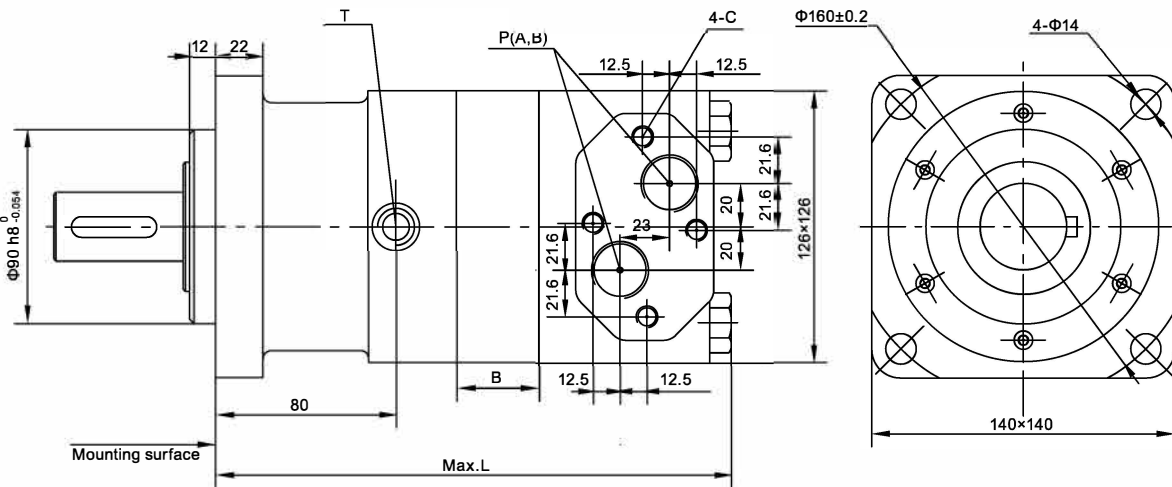
OTM4 Orbit Hydraulic Motor With Disk Valve

■ OTM4 Installation

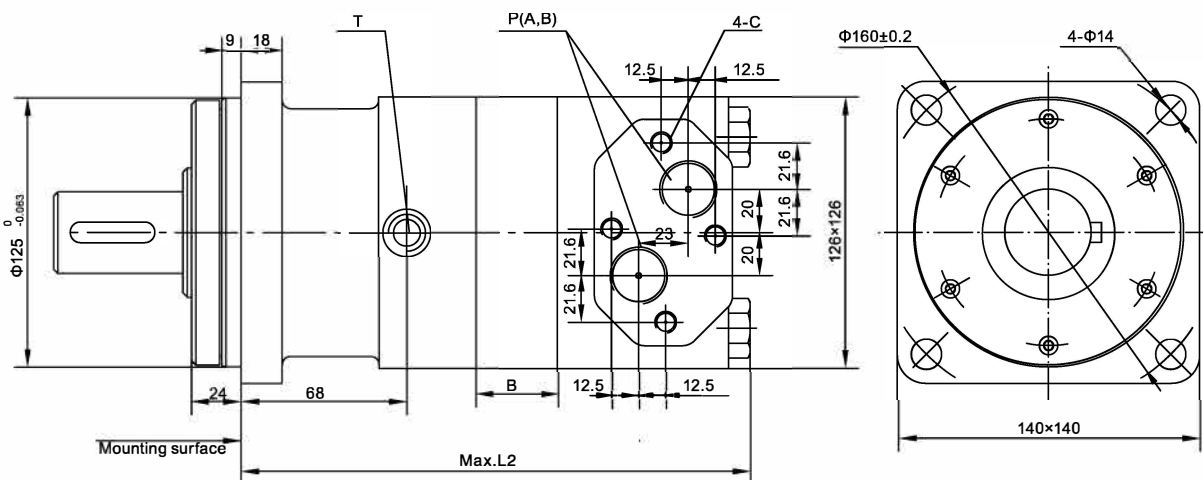
Square flange A



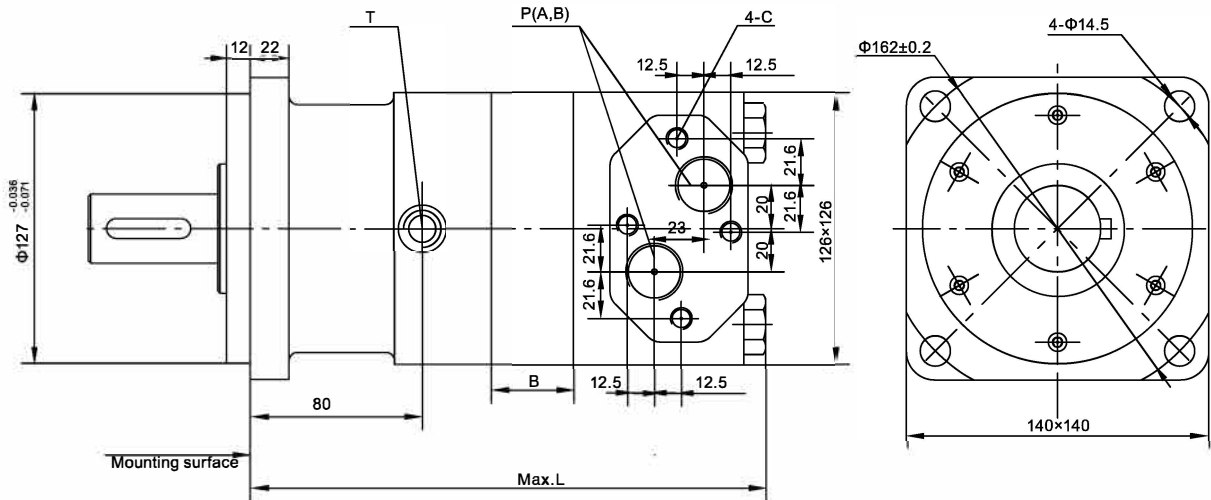
Square flange A1



Square flange A4



## OTM4 Orbit Hydraulic Motor With Disk Valve

**OTM4 Installation**


Type	OTM4-160	OTM4-200	OTM4-250	OTM4-320	OTM4-400	OTM4-500
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

**OTM4 PORTS CODE**

Code	Ports	P(A, B)(deep)	C ( deep )	T ( deep )
Y		G3/4 (15)	M10 (12)	G1/4(12)
Y3		M27 × 2(15)	M10 (12)	M14 × 1.5(12)
Y4		M22 × 1.5(15)	M10 (12)	M14 × 1.5(12)
Y8		7/8-14UNF(15)	—	7/16-20UNF(12)
Y10		1 1/16-12UN(15)	—	9/16-18UNF(12)

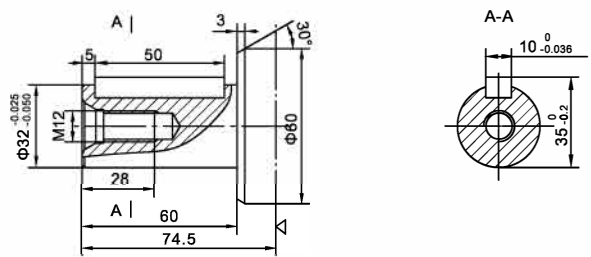
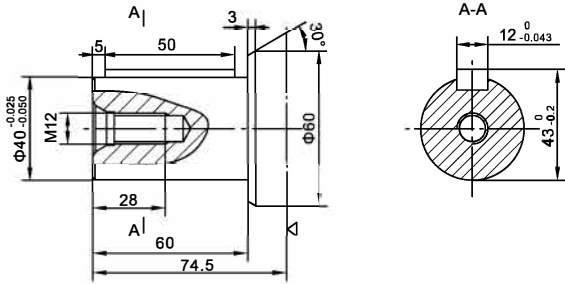
P(A, B)—Ports, C—Mounting Thread ( —Indicates no this thread ), T—Drain connettion

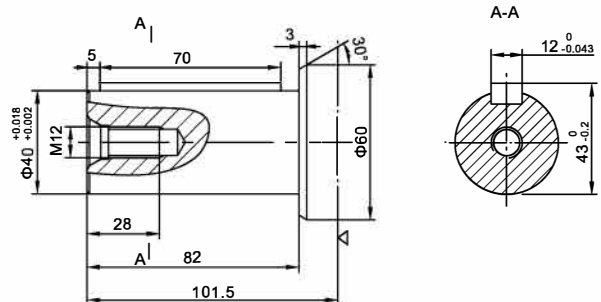
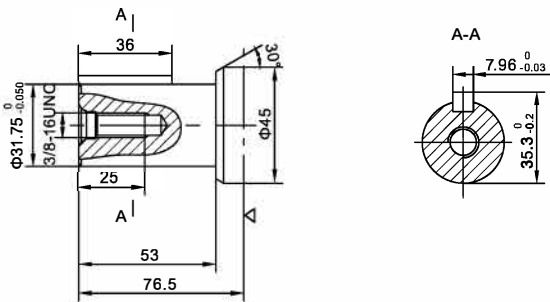
## OTM4 Orbit Hydraulic Motor With Disk Valve

**OTM4 SHAFT VERSION**

Only match A,A1,A7 flange

 P:  $\Phi 40$  Cylindrical shaft, parallel key  $12 \times 8 \times 50$ 

 P1:  $\Phi 32$  Cylindrical shaft, parallel key  $10 \times 8 \times 50$ 

 P13:  $\Phi 31.75$  Cylindrical shaft, parallel key  $7.96 \times 7.96 \times 36$ 

 P33:  $\Phi 40$  Cylindrical shaft, parallel key  $12 \times 8 \times 70$ 

 : Motor mounting surface

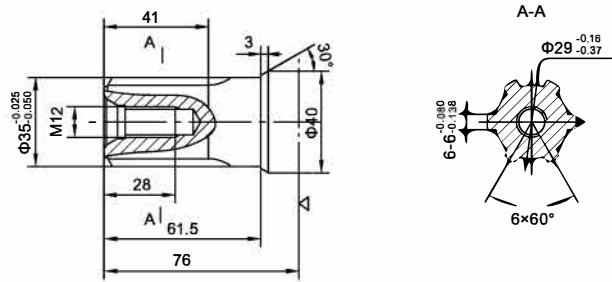
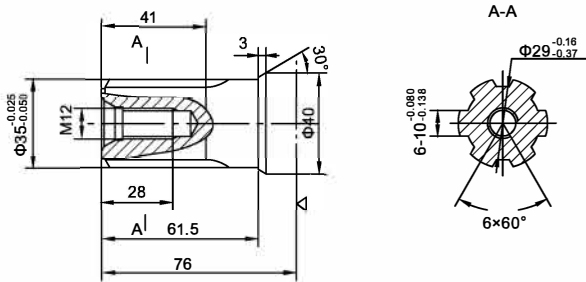
OTM4 Orbit Hydraulic Motor With Disk Valve

■ OTM4 SHAFT VERSION

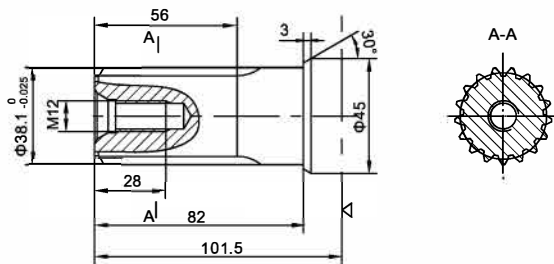
Only match A,A1,A7 flange

H4:  $\Phi 35$  Splined shaft, 6-35  $\times$  29  $\times$  10

H5:  $\Phi 35$  Splined shaft, 6-35  $\times$  29  $\times$  6



K3:  $\Phi 38.1$  involute splined shaft 17-DP12/24  $a=30^\circ$

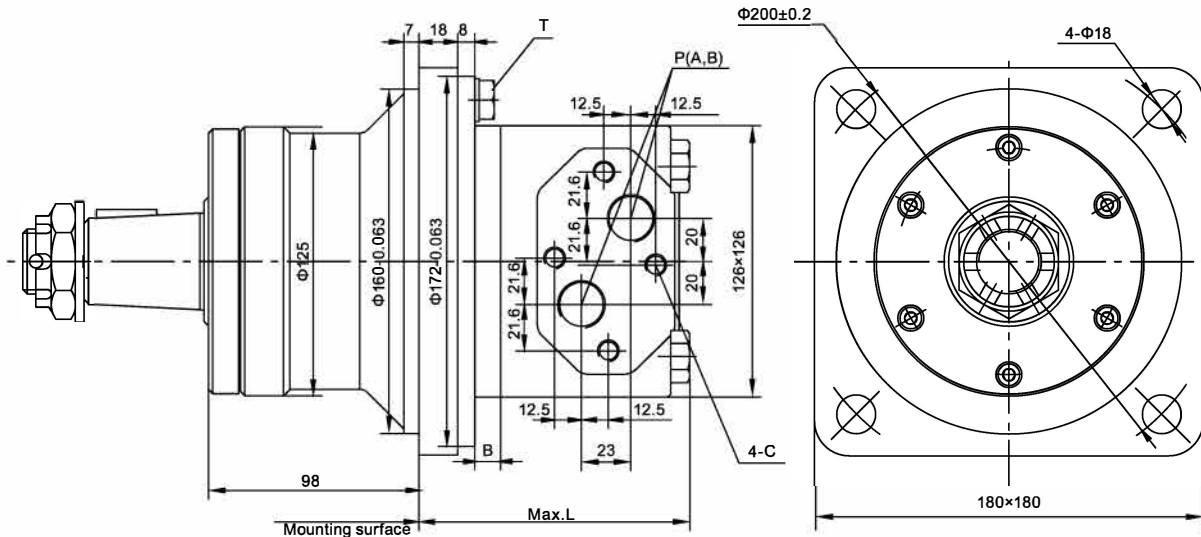


Note: Flange with A4 type, hydraulic motor shaft from the mounting surface to increase 12mm.

◁ : Motor mounting surface

## O TM4W Orbit Hydraulic Motor With Disk Valve

### OTM4W ORDERING CODE



Type	OTM4W-160	OTM4W-200	OTM4W-250	OTM4W-320	OTM4W-400	OTM4W-500
L	131.5	136	142.5	149.5	158.5	177
B	12	16.5	22	29	38	56.5

### OTM4W PORTS CODE

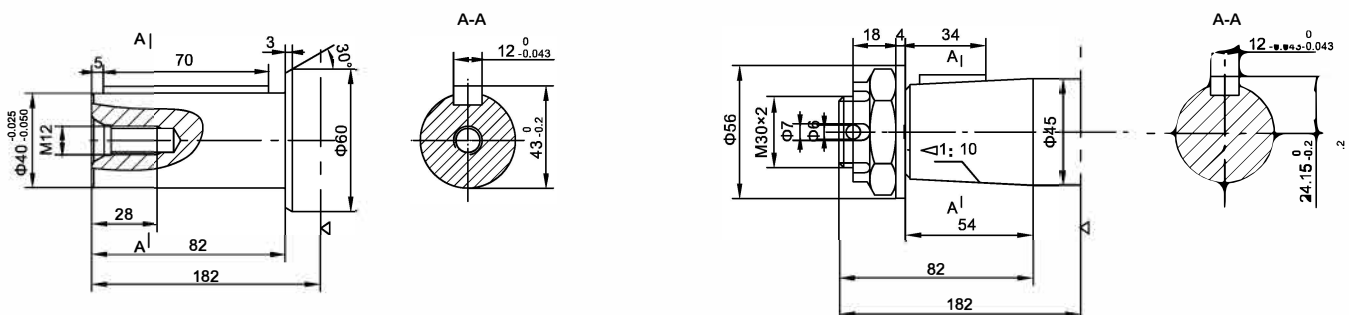
Code	Ports	P(A, B)(deep)	C ( deep )	T ( deep )
Y		G3/4 (15)	M10 (12)	G1/4(12)

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

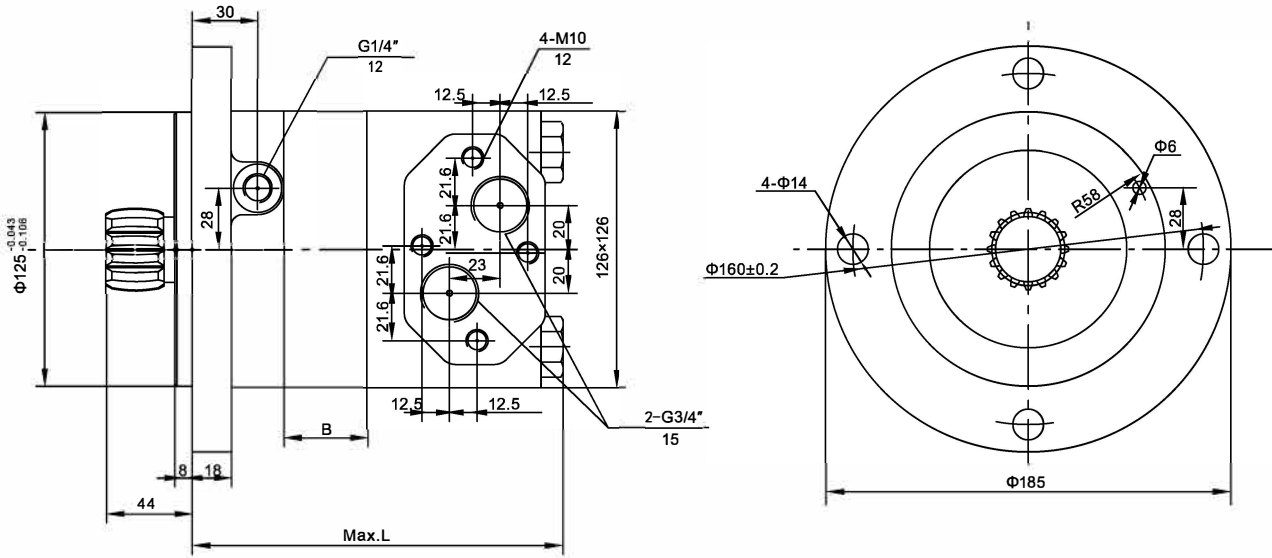
### OTM4W SHAFT VERSION

P31: Φ40 Cylindrical shaft, parallel key 12 × 8 × 70

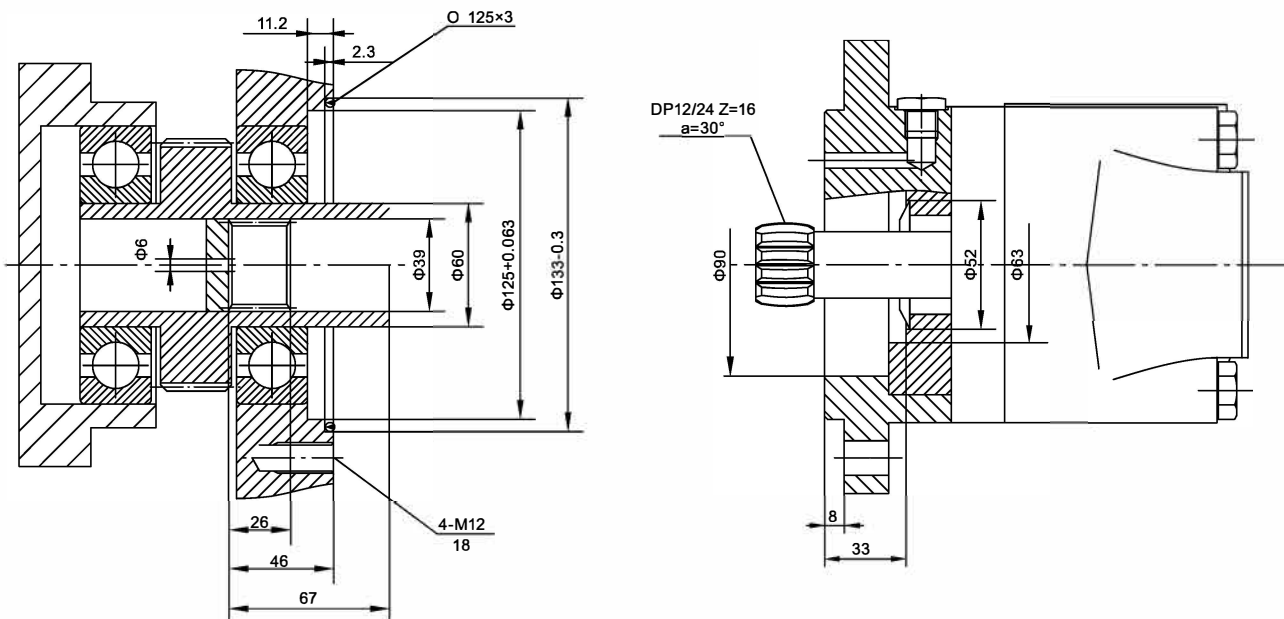
Z2: Φ45 Tapered shaft, taper 1:10, parallel key 12 × 8 × 28



## OTM4S Orbit Hydraulic Motor With Disk Valve

**OTM4S INSTALLATION**


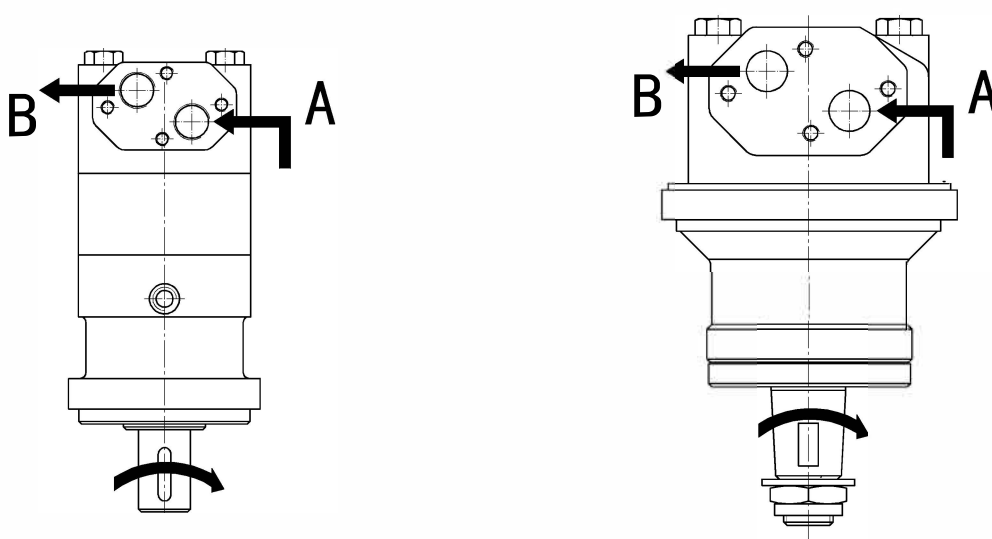
Type	OTM4S-160	OTM4S-200	OTM4S-250	OTM4S-320	OTM4S-400	OTM4S-500
L	148.5	153	158.5	165.5	174.5	193
B	12	16.5	22	29	38	56.5

**OTM4S SHAFT VERSION**


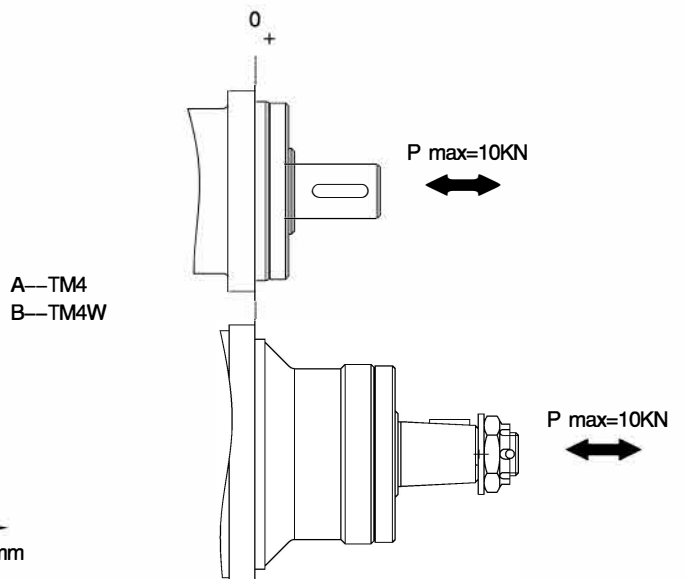
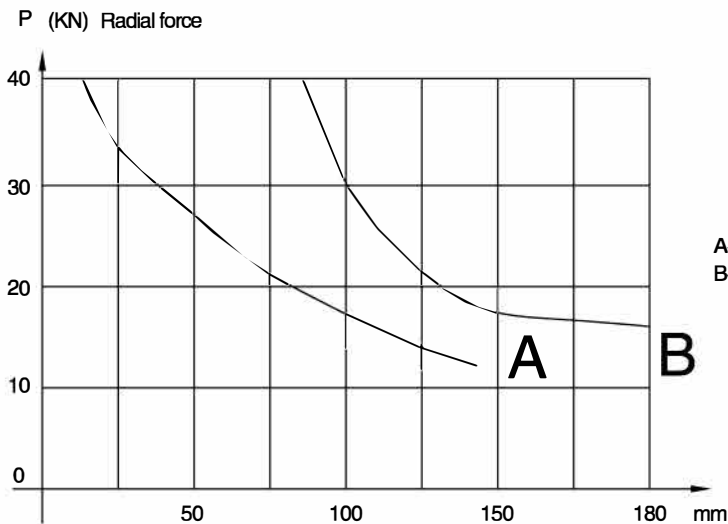
■ OTM4、OTM4W、OTM4S Series Motor

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.



■ PERMISSIBLE SHAFT LOADS





OTM4、OTM4W、OTM4S Series Motor

■ OTM4、OTM4W、OTM4S ORDE RING CODE

1	2	3	4	5	6	7
OTM4	—				/	—

Pos.1	2	3		4	
Series	Disp	Output		Flange	
OTM4	160	P33	Φ40 Cylindrical shaft, parallel key12×8×70	A	4-Φ14 Oval flange, pilotΦ125
	200	P	Φ40 Cylindrical shaft, parallel key12×8×50		
	250	P1	Φ32 Cylindrical shaft, parallel key10×8×50	A1	4-Φ14 Oval flange, pilotΦ90
		P13	Φ31.75 Cylindrical shaft, parallel key7.96×7.96×36		
	320	H4	Φ35 Splined shaft, 6-35×29×10	A4	4-Φ14 Oval flange, pilotΦ125
	400	H5	Φ35 Splined shaft, 6-35×29×6	A7	4-Φ14.5 Oval flange, pilotΦ127
	500	K3	Φ38.1 involute splined shaft, 17-DP12/24 a=30°		

5			6		7	
Code	Ports		Special features		Rotation direction	
	Ports(A,B)(deep)	Drain port T(deep)				
Y	G3/4(15)	G1/4(12)	Omit T7	Standard With dustproof ring	Omit L	Standard Opposite
Y3	M27×2(15)	M14×1.5(12)				
Y4	M22×1.5(15)	M14×1.5(12)				
Y8	7/8-14UNF(15)	7/16-20UNF(12)				
Y10	1 1/16-12UN(15)	9/16-18UNF(12)				

## OTM4、OTM4W、OTM4S Series Motor

**■ OTM4、OTM4W、OTM4S ORDERING CODE**

1	2	3	4	5	6	7
OTM4W	—				/	—

Pos.1	2	3		4		
Series	Disp	Output		Flange		
OTM4W	160 200 250 320 400 500	P31	Φ 40 Cylindrical shaft, parallel key12 × 8 × 70		A	4- Φ 18 Oval flange, pilot Φ 160
		Z2	Φ 45 Tapered shaft, taper1:10, parallel keyB12 × 8 × 28			

5			6		7	
Code	Ports		Special features		Rotation direction	
	Ports(A,B)(deep)	Drain port T(deep)				
Y	G3/4(15)	G1/4(12)	Omit	Standard	Omit L	Standard Opposite

1	2	3
OTM4S	—	/

Pos.1	2	3	
Series	Disp	Special features	
OTM4S	160 200 250 320 400 500	Omit	Standard

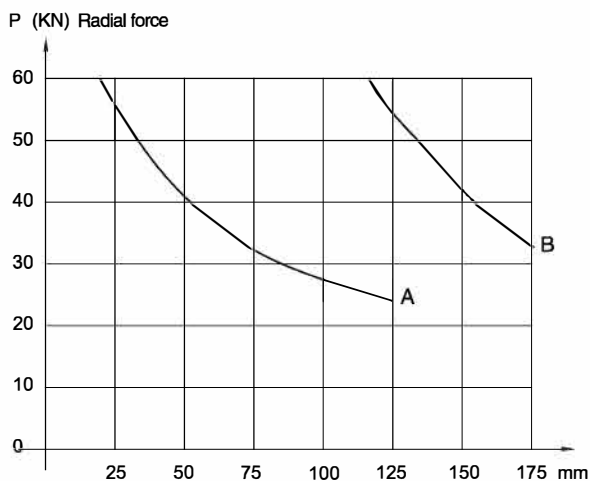
## OTM5 Orbit Hydraulic Motor With Disk Valve

**OTM5 TECHNICAL DATA**

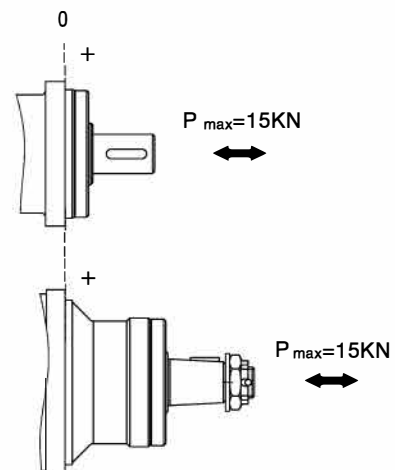
TYPE	OTM5-315 OTM5S-315 OTM5W-315	OTM5-400 OTM5S-400 OTM5W-400	OTM5-500 OTM5S-500 OTM5W-500	OTM5-630 OTM5S-630 OTM5W-630	OTM5-800 OTM5S-800 OTM5W-800	OTM5-985 OTM5S-985 OTM5W-985
Displacement(ml/r)	314.9	399.7	496.6	617.8	787.4	969.1
Max.Pressure.Drop (Mpa)	cont.	20	20	20	18	14
	int.	24	24	24	21	16
	peak.	28	28	28	24	18
Max.torque (N.m)	cont.	873	1108	1385	1570	1773
	int.	1119	1440	1783	1951	2122
	peak.	1293	1650	2060	2249	2481
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 (kg)	30.7	31.5	32.4	33.6	35.2	37.2

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

**PERMISSIBLE SHAFT LOADS**


A--TM5  
B--TM5W



## OTM5 Orbit Hydraulic Motor With Disk Valve

**OTM5 PERFORMANCE DATA**

OTM5 315[314.9ml/r]

Pressure (Mpa)

Max.cont. Max.int.

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

OTM5 400[399.7ml/r]

Pressure (Mpa)

Max.cont. Max.int.

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

OTM5 500[496.6ml/r]

Pressure (Mpa)

Max.cont. Max.int.

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

OTM5 630[617.8ml/r]

Pressure (Mpa)

Max.cont. Max.int.

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

OTM5 800[787.4ml/r]

Pressure (Mpa)

Max.cont. Max.int.

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

OTM5 985[969.1ml/r]

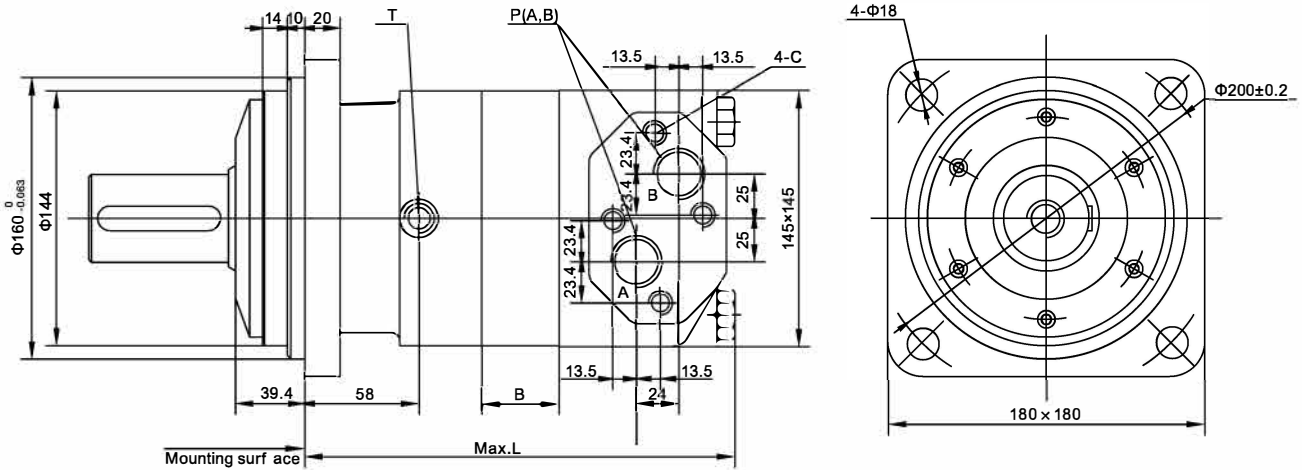
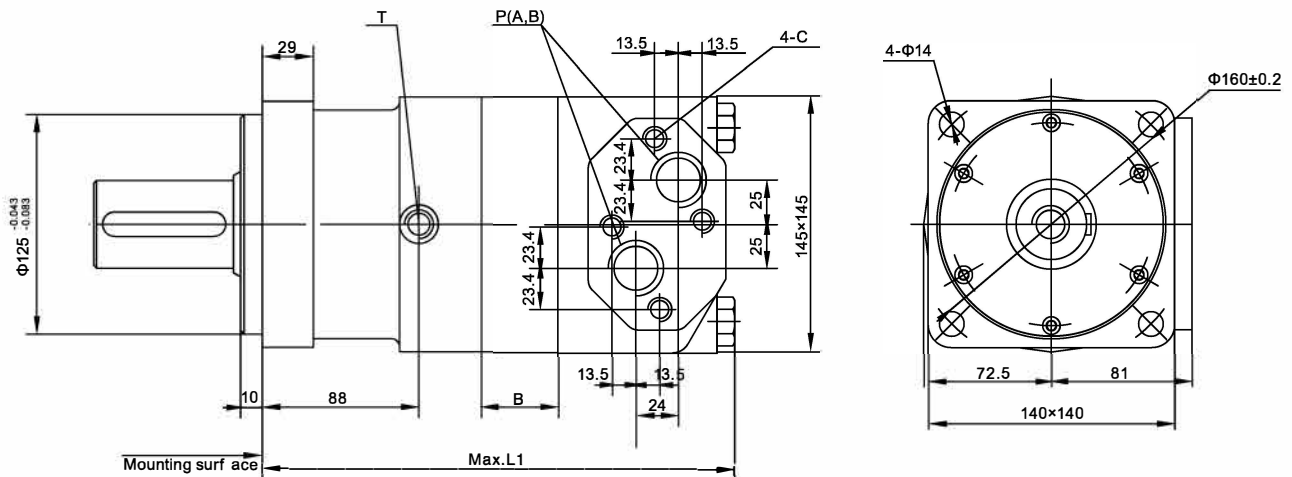
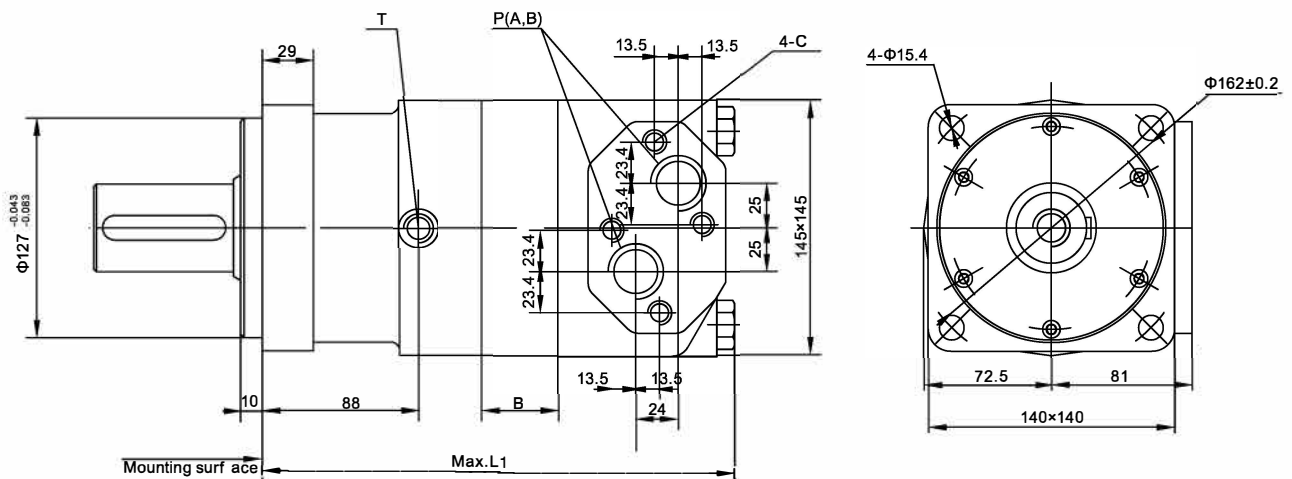
Pressure (Mpa)

Max.cont. Max.int.

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

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

□ Cont.  
■ Int.

**OTM5 Installation**
**A Square flange A**

**A1 Square flange A1**

**A7 Square flange A7**


**OTM5 Orbit Hydraulic Motor With Disk Valve**

Type	OTM5-315	OTM5-400	OTM5-500	OTM5-630	OOTM5-800	OTM5-985
L	216	223	231	241	255	270
L1	246	253	261	271	285	300
B	19	26	34	44	58	73

**OTM5 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 × 2(18)	M12(12)	M14 × 1.5(12)
Y3		M27 × 2(18)	M12(12)	M14 × 1.5(12)
Y8		1 5/16-12UN(18)	—	9/16-18UNF(12)

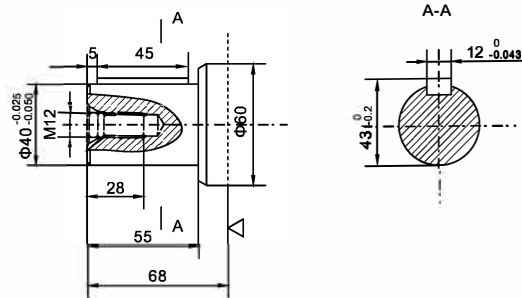
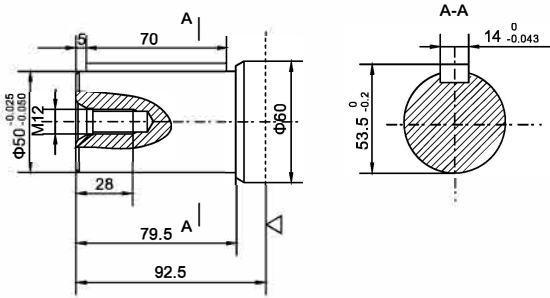
P(A, B)—Ports, C—Mounting Thread ( —Indicates no this thread ) , T—Drain connettion

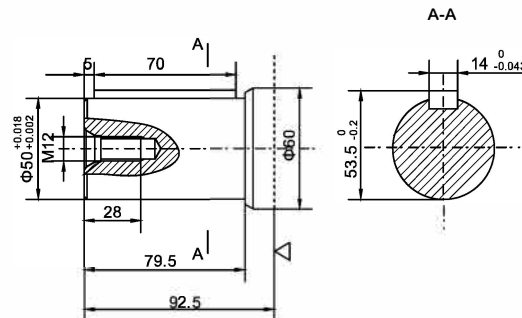
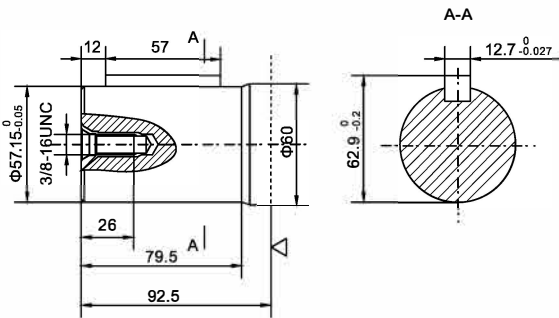
## OTM5 Orbit Hydraulic Motor With Disk Valve

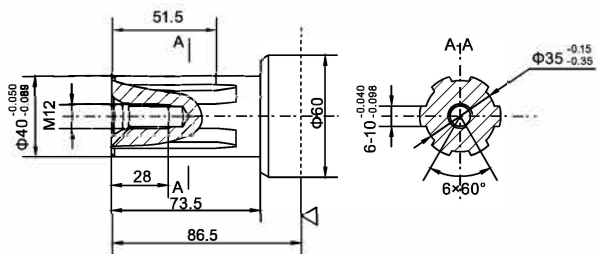
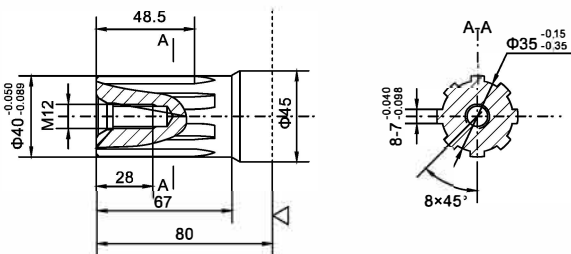

**■ OTM5 SHAFT VERSION**

Only match A 1,A7 flange

 P:  $\Phi 50$  Cylindrical shaft, parallel key  $14 \times 9 \times 70$ 

 P1:  $\Phi 40$  Cylindrical shaft, parallel key  $12 \times 8 \times 45$ 

 P12:  $\Phi 57.15$  Cylindrical shaft, parallel key  $12.7 \times 12.7 \times 57$ 

 P99:  $\Phi 50$  Cylindrical shaft, parallel key  $14 \times 9 \times 70$ 

 H4:  $\Phi 40$  Splined shaft, 8-40  $\times 35 \times 7$ 

 H5:  $\Phi 40$  Splined shaft, 6-40  $\times 35 \times 10$ 

 : Motor mounting surface

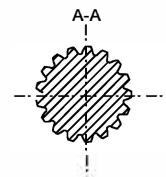
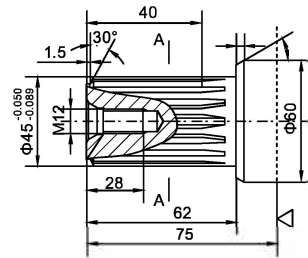
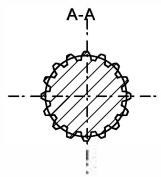
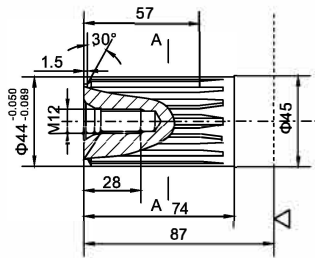
OTM5 Orbit Hydraulic Motor With Disk Valve

■ OTM5 SHAFT VERSION

Only match A1,A7 flange

K2:  $\Phi 44$  involute splined shaft m2.5 z16  $a=30^\circ$

K3:  $\Phi 45$  involute splined shaft m2.5 z17  $a=30^\circ$

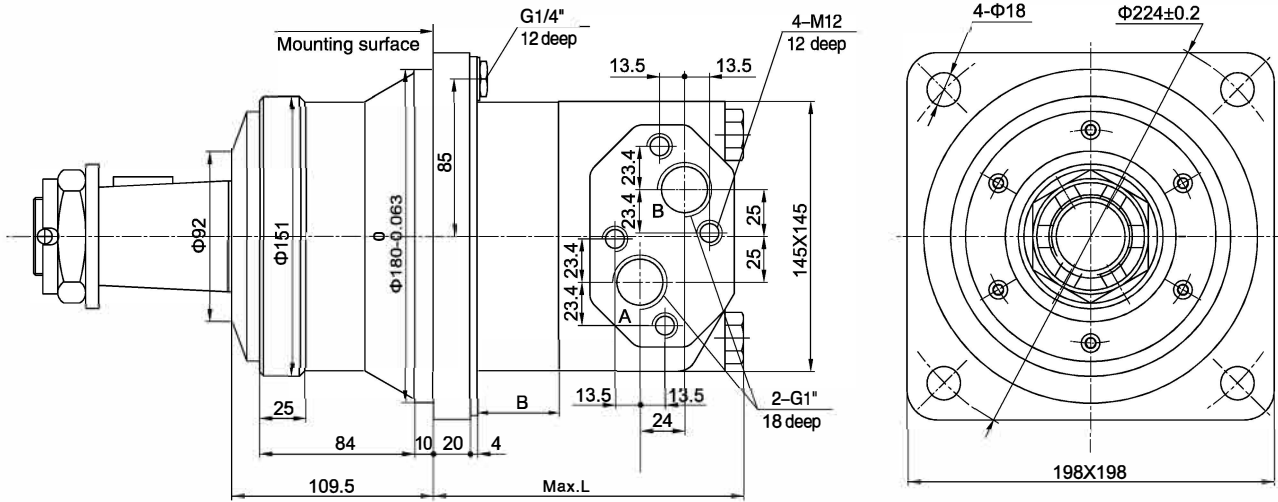


Note: Flange with A type, hydraulic motor shaft from the mounting surface to increase 30mm.

 : Motor mounting surface



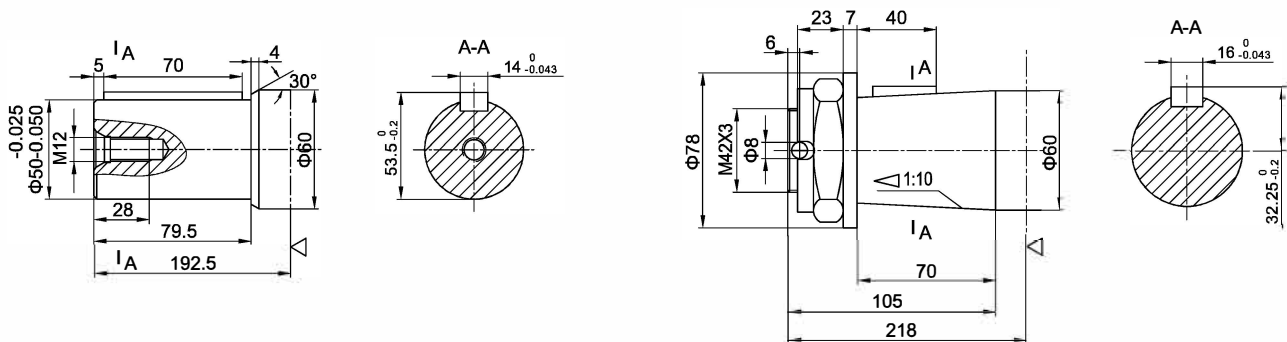
## OTM5W Orbit Hydraulic Motor With Disk Valve

**OTM5W Installation**


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

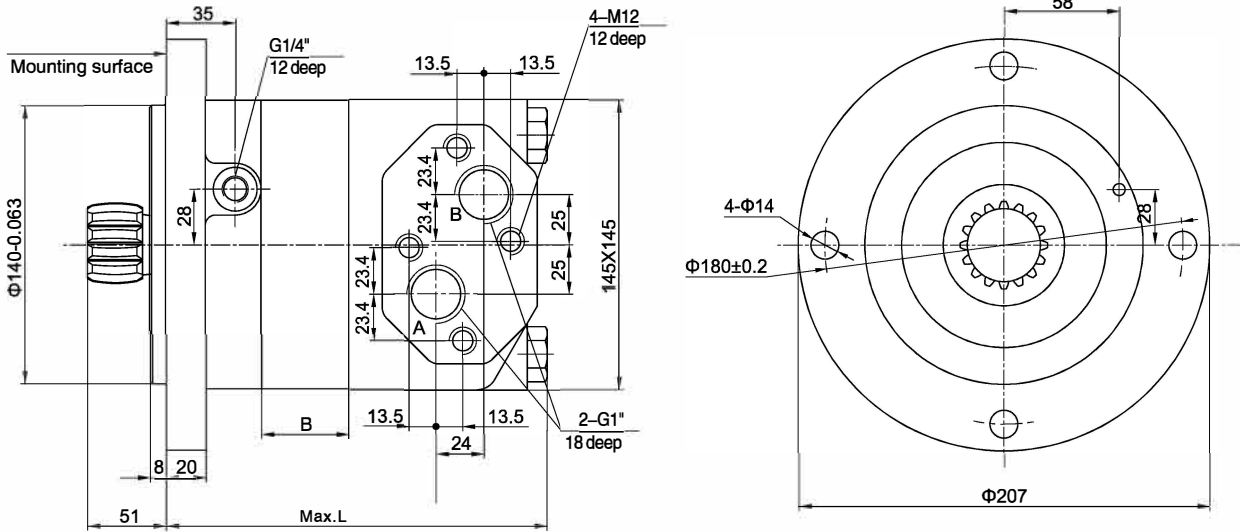
**OTM5W SHAFT VERSION**

 P:  $\Phi 50$  Cylindrical shaft, parallel key 14X9X70

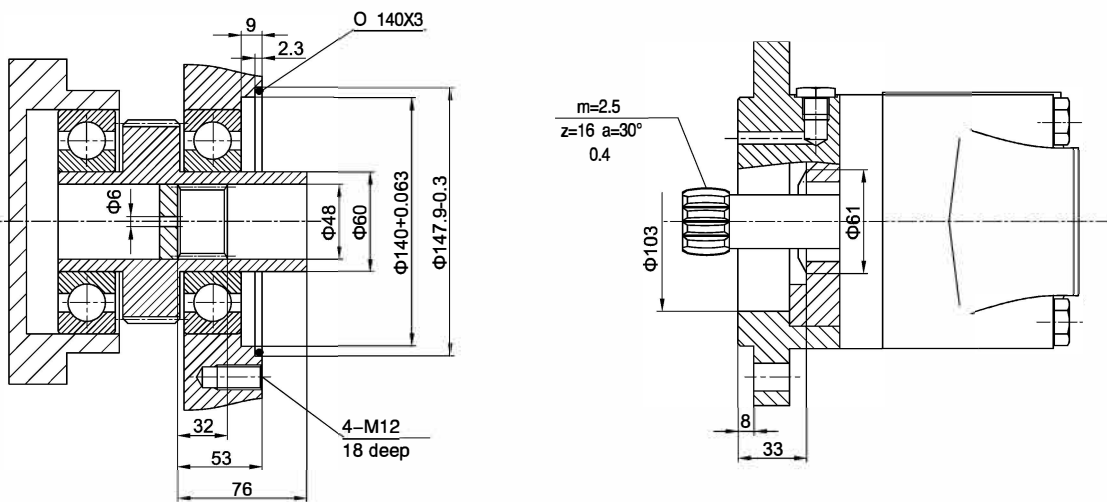
 Z:  $\Phi 60$  Tapered shaft, taper1: 10, parallel key 16X10X32


◁-- Motor mounting surface

## OTM5S Orbit Hydraulic Motor With Disk Valve

**OTM5S Installation**


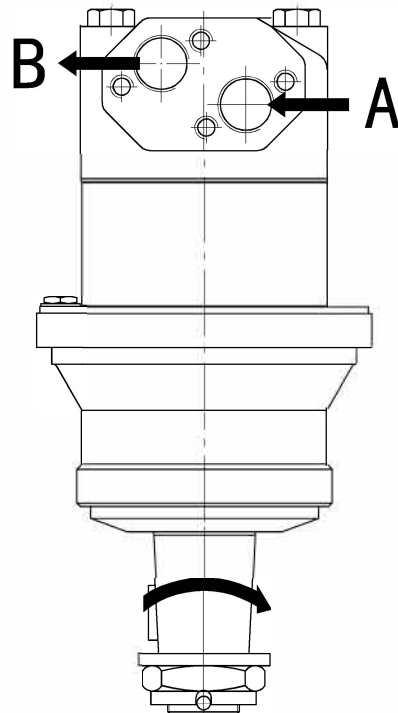
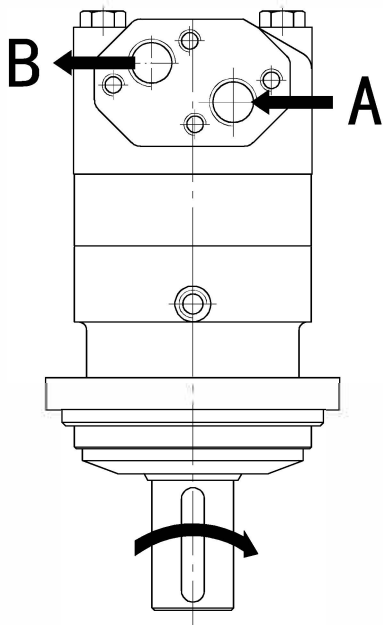
TYPE	OTM5S-315	OTM5S-400	OTM5S-500	OTM5S-630	OTM5S-800	OTM5S-985
L	170	177	185	195	209	224
B	19	26	34	44	58	73

**OTM5S SHAFT VERSION**


■ OTM5, OTM5W, OTM5S 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.



## OTM5、OTM5W、OTM5S Ordering Code

## ■ OTM5、OTM5W、OTM5S ORDE RING CODE

1	2	3	4	5	6	7
OTM5	—				/	—

Pos.1	2	3		4		
Series	Disp	Output		Flange		
OTM5	315	P	Φ50 Cylindrical shaft, parallel key14 × 9 × 70		A	4-Φ 18 Square flange, pilot Φ 160
	400	P1	Φ40 Cylindrical shaft, parallel key12 × 8 × 45			
		P12	Φ57.15 Cylindrical shaft, parallel key12.7 × 12.7 × 57			
	500	P99	Φ50 Cylindrical shaft, parallel key14 × 9 × 70		A1	4-Φ 14 Square flange, pilot Φ 125
	630	H4	Φ40 Splined shaft, 8-40 × 35 × 7			
		H5	Φ40 Splined shaft, 6-40 × 35 × 10			
	800	K2	Φ44 involute splined shaft, m2.5,z16,a=30°		A7	4-Φ 15.4 Square flange, pilot Φ 127
	985	K3	Φ45 involute splined shaft, m2.5,z17,a=30°			

Code	5		6		7	
	Ports		Special features		Rotation direction	
	Ports(A,B)(deep)	Drain port T(deep)				
Y	G1(18)	G1/4(12)	Omit	Standard	Omit	Standard
Y1	G3/4(18)	G1/4(12)				
Y2	M33 × 2(18)	M14 × 1.5(12)				
Y3	M27 × 2(18)	M14 × 1.5(12)				
Y8	1 5/16-12UN(18)	9/16-18UNF(12)				
					L	Opposite

## OTM5、OTM5W、OTM5S Ordering Code

**■ OTM5、OTM5W、OTM5S ORDERING CODE**

1	2	3	4	5	6	7
OTM5W	—				/	—

Pos.1	2	3			4	
Series	Disp	Output			Flange	
OTM5W	315 400 500 630 800 985	P	Φ50 Cylindrical shaft, parallel key14×9×70		A	4-Φ18 Square flange, pilot Φ180
		Z	Φ60 Tapered shaft, taper1:10, parallel key 16×10×32			

5			6		7	
Code	Ports		Special features		Rotation direction	
	Ports(A,B)(deep)	Drain port T(deep)				
Y	G1(18)	G1/4(12)	Omit	Standard	Omit L	Standard Opposite

1	2	3
OTM5S	—	/

Pos.1	2	3	
Series	Disp	Special features	
OTM5S	315 400 500 630 800 985	Omit	Standard

## OTM6 Orbit Hydraulic Motor With Disk Valve

**OTM6 TECHNICAL DATA**

TYPE		OTM6-800	OTM6-1000	OTM6-1250
Displacement(ml/r)		759.6	949.5	1186.8
	cont.	16	16	16
Max.Pressure.Drop (Mpa)	int.	18	18	18
	peak.	21	21	21
	cont.	1690	2160	2650
Max.torque (N.m)	int.	1903	2379	2973
	peak.	2220	2774	3469
	cont.	1690	2160	2650
Speed.Range(cont.)(r/min)		5-200	5-160	5-130
Max.Flow(cont.)(L/min)		160	160	160
Max.Output.Power(cont.)(Kw)		35	35	35
Weight (kg)		54	56	58

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

**OTM6 PERFORMANCE DATA**

OTM6 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. 160			612 198	932 197	1092 196			
Max.int. 190			913 241	1071 240	1961 238			

OTM6 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. 160			761 163	1186 162	1368 161			
Max.int. 190			742 193	1165 192	1352 191			

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

 Cont.  
 Int.

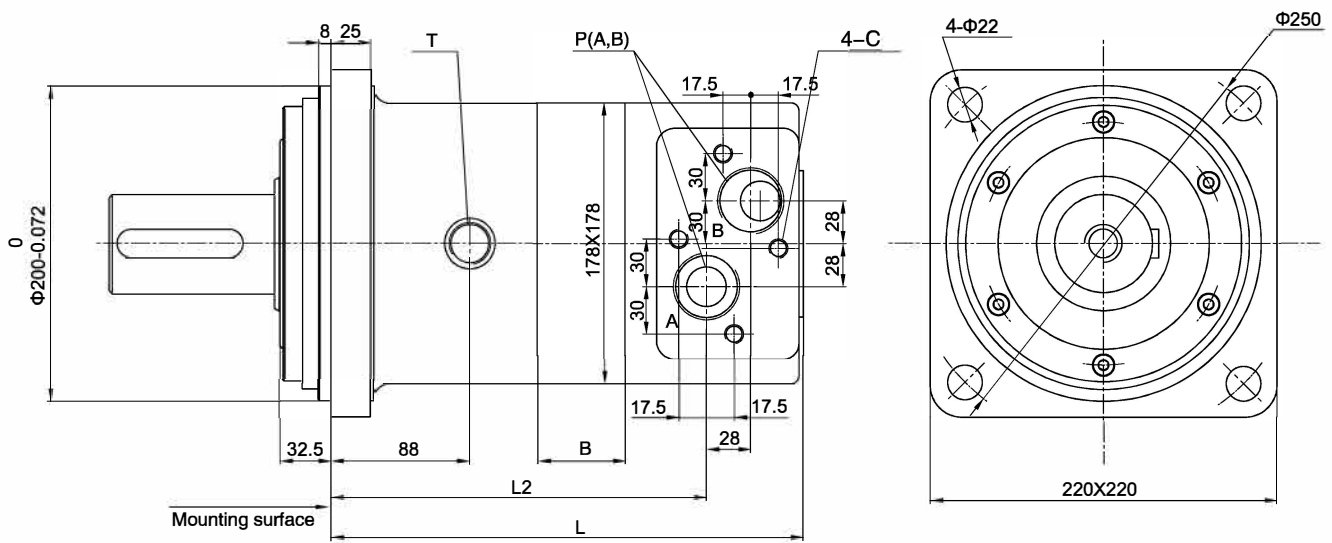
**OTM6 Orbit Hydraulic Motor With Disk Valve**
**OTM6 PERFORMANCE DATA**

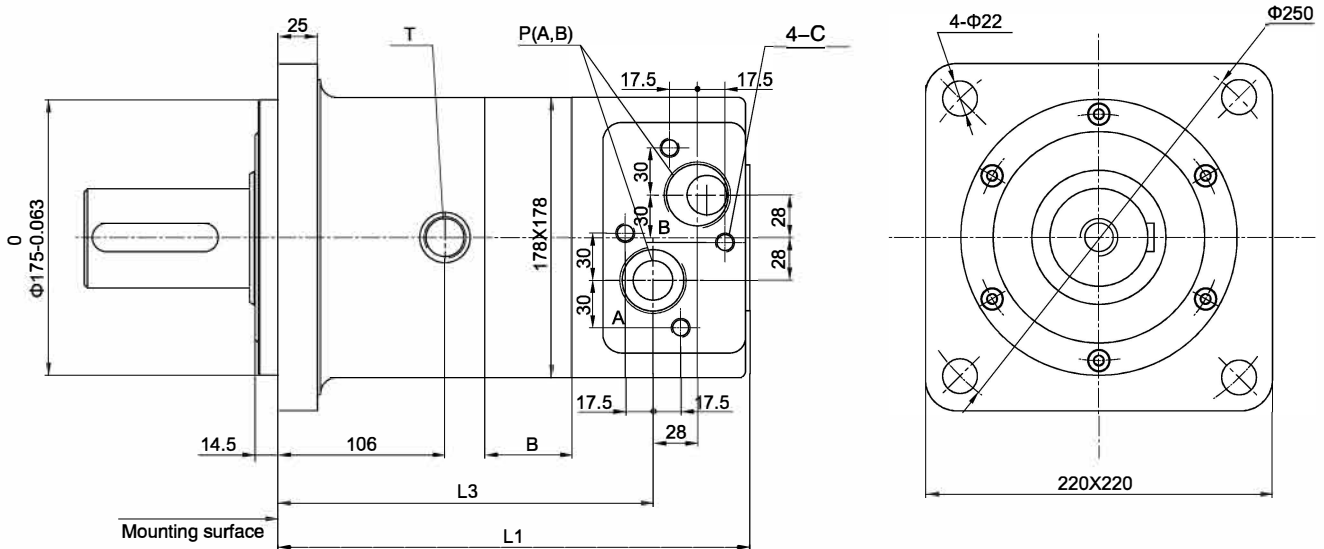
OTM6 1250[1186.8ml/r]  
 Pressure (Mpa) Max.cont. Max.int.

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

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

Cont.  
 Int.

**OTM6 Installation**
**4-Φ22 square flange A**


**OTM6 Orbit Hydraulic Motor With Disk Valve**
**OTM6 Installation**
**4-Φ22 square flange A1**


TYPE	OTM6-800	OTM6-1000	OTM6-1250
L	278	288	300
L1	296	306	318
L2	217	227	239
L3	235	245	257
B	33	43	55.5

**OTM6 PORTS CODE**

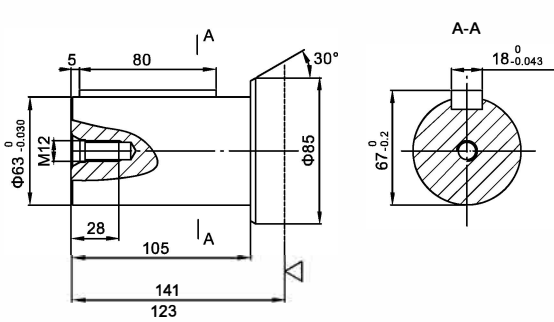
Code	Ports	P(A, B)( deep)	C ( deep )	T ( deep )
Y		G1-1/4(20)	M12(12)	G3/8" (12)
Y1		Φ36(20)	M12(12)	G3/8" (12)

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

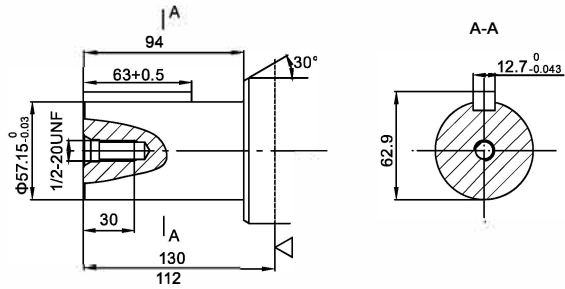


■ OTM6 SHAFT VERSION

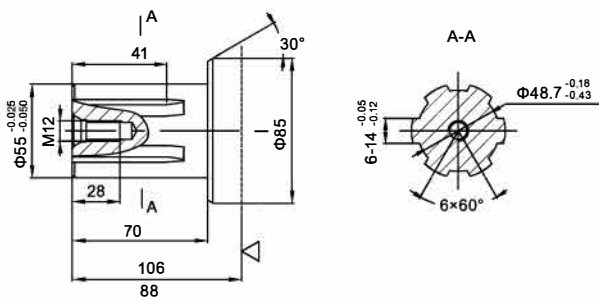
P:  $\Phi 63$  Cylindrical shaft, parallel key 18  
 $\times 11 \times 80$



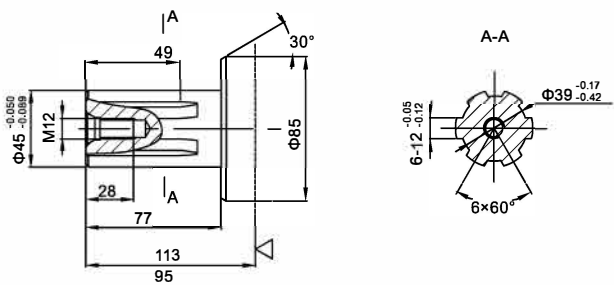
P1:  $\Phi 57.15$  Cylindrical shaft, parallel key C12.7x11x63



H1:  $\Phi 55$  Splined shaft, 6-55  $\times 48.7 \times 14$



H2:  $\Phi 45$  Splined shaft, 6-45  $\times 39 \times 12$

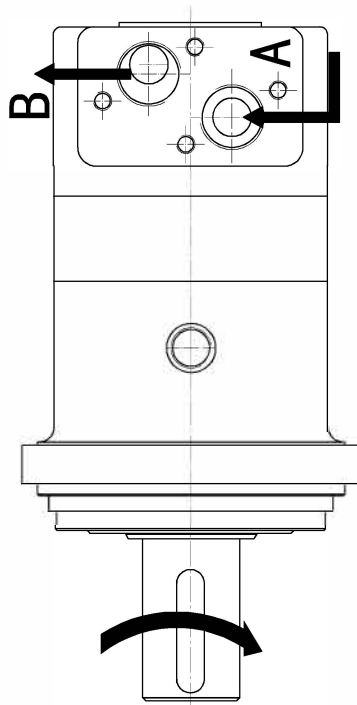


◁ : Motor mounting surface

■ OTM6 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.



OTM6 Orbit Hydraulic Motor With Disk Valve

■ OTM6 ORDERING CODE

1	2	3	4	5	6	7
OTM6	—				/	—

Pos.1	2	3		4	
Series	Disp	Output			
OTM6	800	P	Φ63 Cylindrical shaft, parallel key 18 × 11 × 80	A	4-Φ22 Square flange, pilot Φ 200
		P1	Φ57.15 Cylindrical shaft, parallel key C12.7 × 11 × 63		
	1250	H1	Φ55 Splined shaft, 6-55 × 48.7 × 14	A1	4-Φ22 Square flange, pilot Φ 175
		H2	Φ45 Splined shaft, 6-45 × 39 × 12		

5			6		7	
Code	Ports		Special features		Rotation direction	
	Ports(A,B)(deep)	Drain port T(deep)				
Y	G1 1/4(20)	G3/8" (12)	Omit	Standard	Omit	Standard
Y1	Φ36(20)	G3/8" (12)			L	Opposite

## APPENDIX

### ■ COMPARISON

	OTMP	OTMR	OTM3Y	OTM3SY	OTM4	OTM4S	OTM5	OTM5S	OTM6
<b>Danfoss</b>	OMP	OMR	OMS	OMSS	OMT	OMTS	OMV	OMVS	-
<b>M+S</b>	EPM	EPRM	EPMS	-	EPMT	-	EPMV	-	-

### ■ USAGE AND NOTICE

- 1、Selecting motor by standard technical data.
- 2、The motor must be coaxial with the driven part and the bracket should be stiff enough.
- 3、Working temperature is 25~55 °C, maximum temperature is 65 °C. Hydraulic oil with kinematic viscosity 25~70mm<sup>2</sup>/s (50 °C) is recommended. The filter is about 20μm. The oil must be clear, polluted oil will damage the motor badly.
- 4、For BM4-6 there should be a pipe connected the drain port and the oil tank; for OTMR、OTMP、OTM3 the back pressure should be lower than 0.7Mpa, if the back pressure is higher than 1.0Mpa, a drain line should be connected to the oil tank.
- 5、If nonstandard motor is needed, please contact our technical department.

### ■ COMMON UNIT AND CONVERSION

N	1 N = 10 <sup>-3</sup> KN
kgf	1 kgf = 9.81 N
lbf	1 lbf = 4.45 N
bar	1 bar = 10 <sup>5</sup> Pa = 14.5 Psi
Pa	1 Pa = 1 N/m <sup>2</sup> = 10 <sup>-6</sup> MPa
N · m	
kgf · m	1kgf·m=9.81 N·m

### ■ FORMULA

(一) n	(二) Ts	(三) Ps
$n = \frac{q_s}{V} \eta_v \quad (r/min)$ $q_s \text{ --- (L/min)}$ $V \text{ --- (L/r)}$ $\eta_v \text{ ---}$	$Ts = \frac{\Delta p V}{2\pi} \eta_m \quad (N \cdot m)$ $\Delta p \text{ --- (MPa)}$ $V \text{ --- (ml/r)}$ $\eta_m \text{ ---}$	$Ps = n \cdot Ts / 9550$

**ZOTMR Hydraulic Motor with Brake**

**INTRODUCTION**

ZOTMR are OTMR orbit hydraulic motor with multi-disc brake. There are shuttle valve and inner hydraulic control system. It has small volume, short radial dimension, low weight and easy to install. It's widely applied in construction machinery, shipping machinery, cranes, mining, port, metallurgical industry, etc.

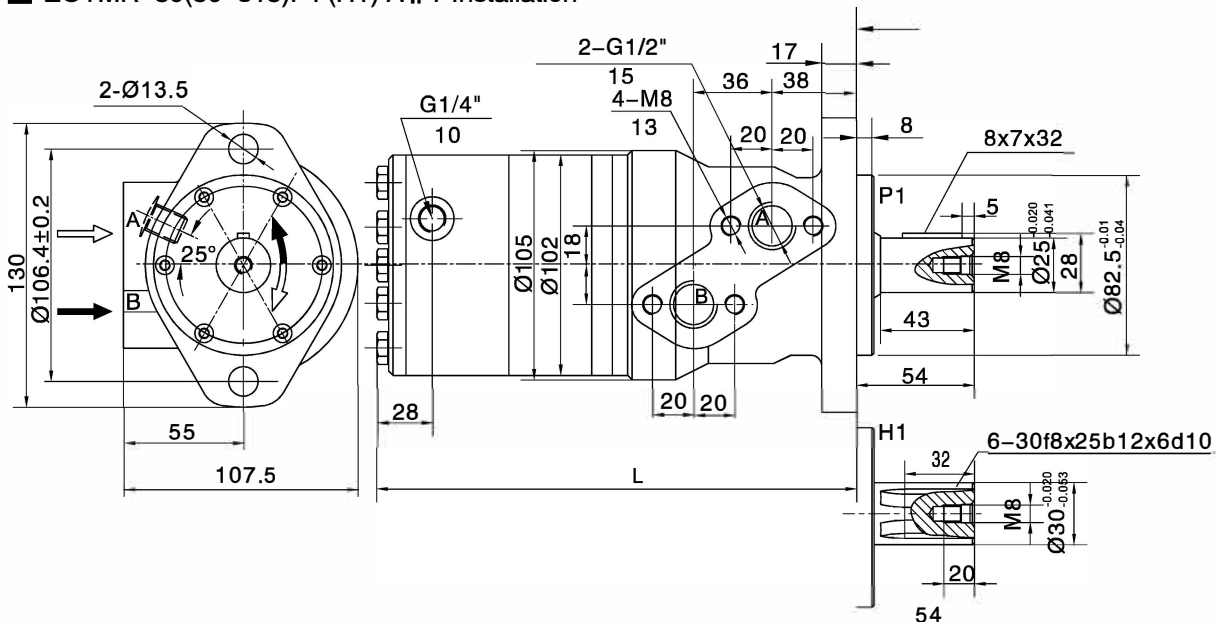
**ORDERING CODE**

	1	2	3	4	5
ZOTMR	-				/

- |                         |                     |
|-------------------------|---------------------|
| 1、 Displacement         | 3、 Mounting Flange  |
| 2、 Output shaft         | 4、 Ports            |
| P1– Standard flat key   | 5、 Special Features |
| H1– Standard spline key |                     |

**TECHNICAL DATA**

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

**ZOTMR-80(80-315)P1 (H1) A || Y Installation**


**ZOTMR/N Hydraulic motor with brake**

**INTRODUCTION**

ZOTMR/N hydraulic motor-brake is made up of OTMR geroler motor and multi-disc brake, with shuttle valve and built-in control oil circuit. It has the advantages of simple structure, short radial dimension, more compact and easy installation, etc.. This brake is characterized by point braking, and there are total six braking points in a circle. When receiving the stop signal, the motor needs to keep running at most 60 degrees to be braked. It can not stop running suddenly and can not be used for precise positioning. It is widely used for injection molding machine, some of transmission and horizontal pulling application.

**ORDERING CODE**

ZOTMR - 

1	2	3	4
---	---	---	---

 / N - 

5
---

- |                                                  |                    |
|--------------------------------------------------|--------------------|
| 1、Displacement                                   | 3、Mounting Flange  |
| 2、Output shaft                                   | 4、Ports            |
| P1- Standard flat key    H1- Standard spline key | 5、Special Features |

**TECHNICAL DATA**

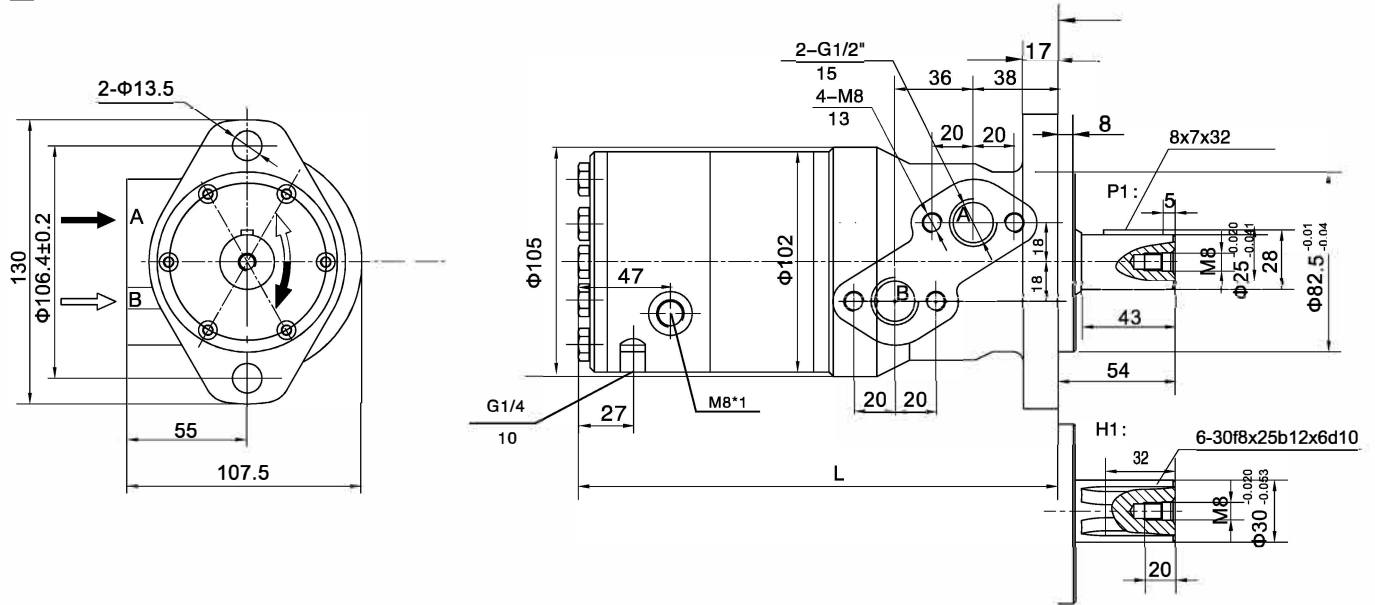
Type	Displacement ml/r	Max. pressure Mpa	Max. torque N · m	Speed range r/min	Braker		Associated motor	Length mm	Weight kg
					Mpa Releasing pressure	N.m Brake torque			
ZOTMR-80/N	80.5	14	152	60-500	2.4	450	OTMR-80	187	9.4
ZOTMR-100/N	100.5	14	194	50-480	2.4	450	OTMR-100	190	9.5
ZOTMR-125/N	126.3	14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

Notice: 1. ZOTMR/N Hydraulic Motor-Brake is only for static brake.

2. When the motor is braked: for the internal control motor, the input and output 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.

ZOTMR/N Hydraulic motor with brake

■ ZOTMR-(80-400)P1(H1)AIIY/N



## ZOTM Hydraulic motor with brake



## ■ INTRODUCTION

ZOTM are OTM orbit hydraulic motor with multi-disc friction brake. The brake can be released or closed automatically while the motor starts or stops, to keep the motor being blocked stably without working pressure. Also, the control inlet can be connected to any other control loops, to accomplish different applications, adapted for high system pressure working places.

## ■ TECHNICAL DATA

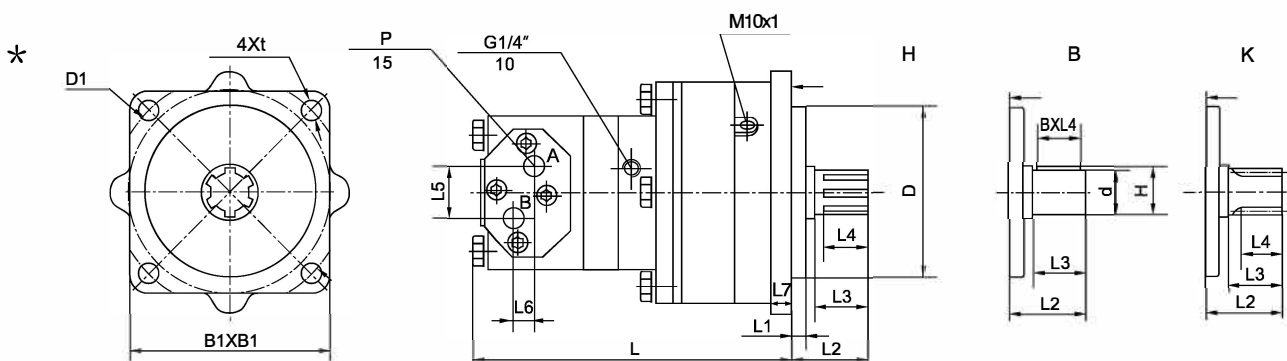
Type	Displacement ml/r	Max. pressure Mpa	Max. torque N · m	Speed range r/min	Braker		Associated motor	Weight kg
					Mpa Releasing pressure	N.m Brake torque		
ZOTM3/80	80.5	16	156	15-620	2.6	245	OTM3-80	18
ZOTM3/100	100.5	16	193	15-500	2.6	245	OTM3-100	18
ZOTM3/125	126.3	16	243	15-400	2.6	245	OTM3-125	18
ZOTM4/160	158.8	16	307	15-500	2.6	590	OTM4-160	37
ZOTM4/200	200.8	16	387	12-400	2.6	824	OTM4-200	37
ZOTM4/250	252.2	16	513	12-320	2.6	824	OTM4-250	37
ZOTM4/320	317.5	16	613	10-250	2.6	824	OTM4-320	37
ZOTM4/400	401.6	12.5	685	10-200	2.6	824	OTM4-400	38
ZOTM5/400	399.7	16	770	10-250	2.6	824	OTM5-400	46
ZOTM5/500	496.6	16	960	10-200	2.6	1060	OTM5-500	46
ZOTM5/630	617.8	13	983	10-160	2.6	1060	OTM5-630	46
ZOTM5B/630	617.8	16	1250	30-200	3.0	1450	OTM5-630	55
ZOTM5B/800	787.4	16	1600	30-150	3.0	1680	OTM5-800	55
ZOTM6B/1250	1186.8	16	2250	20-110	3.6	2330	OTM6-1250	70

## ■ ORDERING CODE

 ZOIM  /  -  -  -  

1. Orbit hydraulic motor with braker
2. Series
3. Displacement
4. Installation dimension: F- Vertical front flange
5. Standard spline key B- Standard flat key
6. Inner hydraulic control system (see page 121)
7. ports

## ■ ZOTM \* / -F-H-K1Y Installation

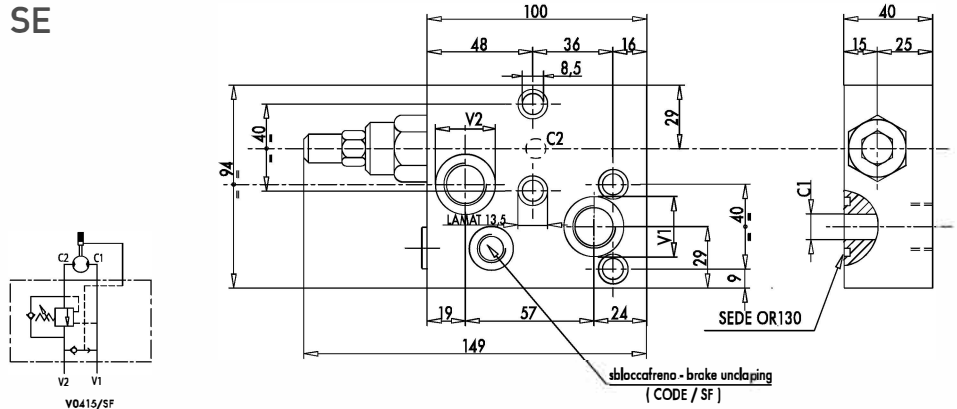








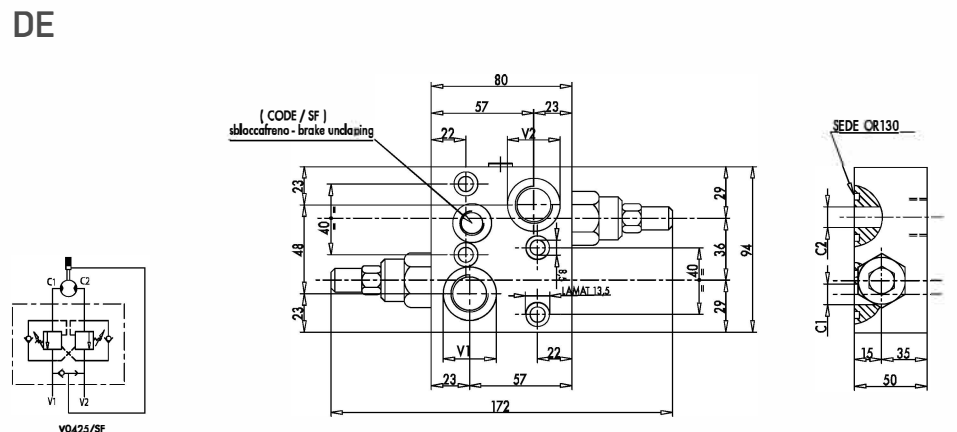
**OVERCENTRE VALVES FLANGEABLE ON DANFOSS MOTORS OMP/OMR**
**TYPE VTCD F SE OMP/OMR**

**SE**


Art.	Type	Pilot ratio	Max flow Lt./min	Max pressure Bar	V1-V2 Gas	C1-C2	Weight Kg
MQ248030	VTCDF 1/2" SE OMP-OMR	1:4,5	50	350	G 1/2"	Ø 9	2,686
MQ248031	VTCDF 1/2" SE OMP-OMR SF	1:4,5	50	350	G 1/2"	Ø 9	2,686

On request: VTCD F/SF-DE - With brake release port - Face mounting - Material: steel

**TYPE VTCD F DE OMP/OMR**

**DE**


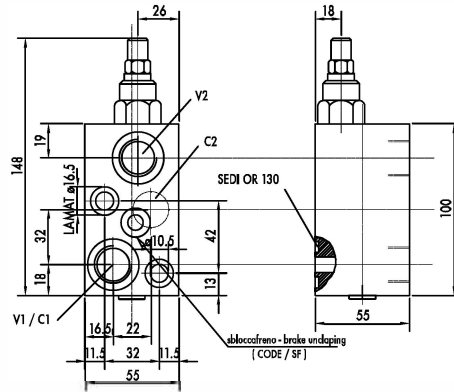
Art.	Type	Pilot ratio	Max flow Lt./min	Max pressure Bar	V1-V2 Gas	C1-C2	Weight Kg
MQ248032	VTCDF 1/2" DE OMP-OMR	1:4,5	50	350	G 1/2"	Ø 9	2,708
MQ248033	VTCDF 1/2" DE OMP-OMR SF	1:4,5	50	350	G 1/2"	Ø 9	2,708

On request: VTCD F/SF-DE - With brake release port - Face mounting - Material: steel

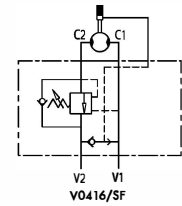
## Hydraulic components

**OVERCENTRE VALVES FLANGEABLE ON DANFOSS MOTORS OMS**

## TYPE VBCDF SE OMS



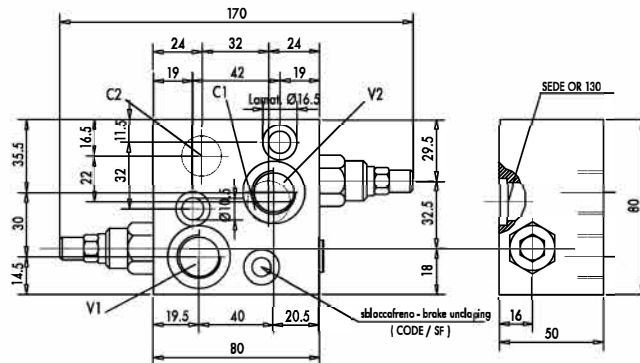
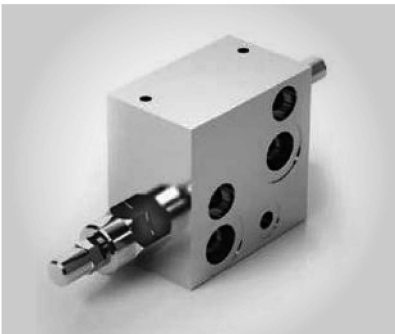
SE



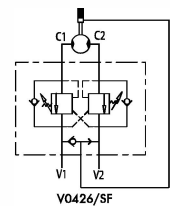
Art.	Type	Pilot ratio	Max flow Lt./min	Max pressure Bar	V1-V2 Gas	C1-C2	Weight Kg
MQ248034	VTCDF 1/2" SE OMS	1:4,5	50	350	G 1/2"	Ø 9	1,700
MQ248035	VTCDF 1/2" SE OMS SF	1:4,5	50	350	G 1/2"	Ø 9	1,700

On request: VTCDF/SF-SE - With brake release port - Face mounting - Material: steel

## TYPE VTCDF DE OMS



DE



Art.	Type	Pilot ratio	Max flow Lt./min	Max pressure Bar	V1-V2 Gas	C1-C2	Weight Kg
MQ248036	VTCDF 1/2" DE OMS	1:4,5	50	350	G 1/2"	Ø 9	2,150
MQ248037	VTCDF 1/2" DE OMS SF	1:4,5	50	350	G 1/2"	Ø 9	2,150

On request: VBCDF/SF-SE - With brake release port - Face mounting - Material: steel



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Certified Company

ISO 9001:2015 – ISO 14001:2015



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