



## BMH SERIES HYDRAULIC MOTOR

BMH series motor adapt the advanced Geroler gear set design with shaft distribution flow, which can automatically compensate in operating with high pressure, provide reliable and smooth operation, high efficiency and long life.

### Characteristic features:

- \*Advanced manufacturing devices for the Geroler gear set, which use low pressure of start-up, provide smooth, reliable operation and high efficiency.
- \*Shaft seal can bear high pressure of back and the motor can be used in parallel or series.
- \*Special design in the driver-linker and prolong operating life.
- \*Special design for distribution system can meet the requirement of low noise of unit.
- \*Compact volume and easy installation.

## Main Specification

Type		BMH 200	BMH 250	BMH 315	BMH 400	BMH 500
Geometric displacement (cm <sup>3</sup> /rev.)		203.2	255.9	316.1	406.4	489.2
Max. speed (rpm)	cont.	366	290	236	183	155
	int.	439	348	282	220	184
Max. torque (N·m)	cont.	510	621	740	850	830
	int.	579	702	827	990	1040
	peak	651	790	980	1092	1170
Max. output (kW)	cont.	16	16	14	12.5	11
	int.	18.5	18.5	15.5	15	14
Max. pressure drop (MPa)	cont.	17.5	17.5	17.5	15.5	12.5
	int.	20	20	20	19	16
	peak	22.5	22.5	22.5	21	18
Max. flow (L/min)	cont.	75	75	75	75	75
	int.	90	90	90	90	90
Weight (kg)		10.5	11	11.5	12.3	13

Type		Max.inlet pressure	Max.return pressure with drain line
BMH200-500 (MPa)	cont.	20	17.5
	int.	22.5	20
	peak	25	22.5

- \* Continuous pressure:Max. value of operating motor continuously.
- \* Intermittent pressure:Max. value of operating motor in 6 seconds per minute.
- \* Peak pressure:Max. value of operating motor in 0.6 second per minute.
- \* Technical data BMH with 35mm cylindrical, 1<sup>1</sup>/<sub>4</sub> in splined and 35mm tapered shaft.

Performance Data

BMH 200 [203.2cm³/rev.]

Pressure (MPa)						Max.cont.	Max.int.
3.5	7	10.5	14	17.5	20		

Flow (L/min)	Pressure (MPa)						
	3.5	7	10.5	14	17.5	20	
5	98 <b>25</b>	194 <b>25</b>	284 <b>22</b>				
10	101 <b>43</b>	204 <b>41</b>	301 <b>36</b>	391 <b>29</b>	482 <b>14</b>		
20	99 <b>100</b>	201 <b>97</b>	304 <b>93</b>	402 <b>85</b>	509 <b>69</b>	576 <b>56</b>	
30	97 <b>145</b>	197 <b>143</b>	300 <b>139</b>	402 <b>130</b>	510 <b>114</b>	579 <b>101</b>	
40	90 <b>200</b>	190 <b>200</b>	292 <b>200</b>	399 <b>188</b>	507 <b>168</b>	578 <b>153</b>	
50	82 <b>248</b>	183 <b>246</b>	284 <b>244</b>	392 <b>235</b>	500 <b>213</b>	571 <b>199</b>	
60	73 <b>292</b>	174 <b>290</b>	274 <b>287</b>	384 <b>279</b>	493 <b>260</b>	563 <b>244</b>	
70	63 <b>352</b>	163 <b>350</b>	264 <b>349</b>	374 <b>338</b>	481 <b>318</b>	554 <b>301</b>	
Max.cont.	59 <b>366</b>	157 <b>365</b>	259 <b>363</b>	366 <b>355</b>	475 <b>335</b>	547 <b>319</b>	
80	53 <b>381</b>	150 <b>381</b>	253 <b>380</b>	358 <b>371</b>	466 <b>352</b>	538 <b>338</b>	
Max.int.	39 <b>439</b>	140 <b>437</b>	241 <b>434</b>	348 <b>426</b>	456 <b>407</b>	526 <b>392</b>	

BMH 250 [255.9cm³/rev.]

Pressure (MPa)							Max.cont.	Max.int.
3.5	7	9	12	14.5	17.5	20		

Flow (L/min)	Pressure (MPa)						
	3.5	7	9	12	14.5	17.5	20
5	121 <b>19</b>	246 <b>19</b>	318 <b>18</b>	398 <b>14</b>			
10	130 <b>34</b>	258 <b>33</b>	331 <b>31</b>	425 <b>29</b>	515 <b>23</b>	595 <b>12</b>	
20	130 <b>78</b>	258 <b>77</b>	332 <b>76</b>	432 <b>73</b>	520 <b>65</b>	621 <b>53</b>	702 <b>42</b>
30	122 <b>115</b>	251 <b>113</b>	327 <b>111</b>	429 <b>105</b>	520 <b>96</b>	621 <b>84</b>	700 <b>75</b>
40	115 <b>157</b>	240 <b>157</b>	323 <b>156</b>	422 <b>150</b>	513 <b>139</b>	616 <b>127</b>	698 <b>114</b>
50	105 <b>196</b>	232 <b>195</b>	314 <b>192</b>	411 <b>185</b>	505 <b>173</b>	606 <b>159</b>	687 <b>147</b>
60	94 <b>232</b>	220 <b>230</b>	302 <b>226</b>	401 <b>218</b>	496 <b>206</b>	596 <b>192</b>	676 <b>180</b>
70	81.4 <b>274</b>	209 <b>274</b>	288 <b>274</b>	389 <b>266</b>	484 <b>252</b>	582 <b>238</b>	666 <b>222</b>
Max.cont.	72 <b>290</b>	203 <b>289</b>	280 <b>287</b>	381 <b>279</b>	475 <b>266</b>	574 <b>251</b>	659 <b>236</b>
80	66 <b>303</b>	194 <b>302</b>	273 <b>298</b>	371 <b>290</b>	467 <b>279</b>	566 <b>264</b>	651 <b>249</b>
Max.int.	49 <b>348</b>	178 <b>347</b>	256 <b>345</b>	355 <b>337</b>	453 <b>325</b>	552 <b>309</b>	634 <b>292</b>

BMH 315 [316.1cm³/rev.]

Pressure (MPa)							Max.cont.	Max.int.
3.5	7.5	10	13.5	15.5	17.5	20		

Flow (L/min)	Pressure (MPa)						
	3.5	7.5	10	13.5	15.5	17.5	20
5	155 <b>16</b>	325 <b>13</b>					
10	163 <b>27</b>	342 <b>24</b>	454 <b>18</b>	556 <b>14</b>			
20	169 <b>63</b>	349 <b>61</b>	469 <b>55</b>	582 <b>48</b>	664 <b>40</b>	733 <b>32</b>	809 <b>19</b>
30	165 <b>93</b>	344 <b>89</b>	470 <b>82</b>	580 <b>77</b>	669 <b>67</b>	740 <b>59</b>	824 <b>46</b>
40	154 <b>126</b>	337 <b>126</b>	465 <b>119</b>	577 <b>111</b>	663 <b>99</b>	737 <b>88</b>	827 <b>73</b>
50	141 <b>159</b>	325 <b>155</b>	455 <b>148</b>	568 <b>139</b>	656 <b>126</b>	728 <b>115</b>	824 <b>98</b>
60	121 <b>187</b>	312 <b>186</b>	440 <b>179</b>	555 <b>169</b>	643 <b>154</b>	715 <b>143</b>	812 <b>124</b>
70	103 <b>222</b>	298 <b>222</b>	425 <b>215</b>	541 <b>205</b>	631 <b>187</b>	703 <b>176</b>	800 <b>157</b>
Max.cont.	94 <b>236</b>	287 <b>233</b>	417 <b>224</b>	529 <b>215</b>	623 <b>196</b>	696 <b>184</b>	792 <b>166</b>
80	82 <b>246</b>	277 <b>244</b>	406 <b>236</b>	518 <b>228</b>	611 <b>210</b>	688 <b>197</b>	784 <b>174</b>
Max.int.	62 <b>282</b>	256 <b>280</b>	386 <b>275</b>	496 <b>266</b>	593 <b>248</b>	669 <b>234</b>	767 <b>209</b>

BMH 400 [406.4cm³/rev.]

Pressure (MPa)						Max.cont.	Max.int.
3.5	6	10.5	12.5	15.5	19		

Flow (L/min)	Pressure (MPa)					
	3.5	6	10.5	12.5	15.5	19
5	196 <b>13</b>	348 <b>13</b>	516 <b>10</b>			
10	205 <b>22</b>	363 <b>21</b>	546 <b>21</b>	702 <b>17</b>	859 <b>11</b>	
20	209 <b>50</b>	366 <b>49</b>	543 <b>46</b>	708 <b>41</b>	874 <b>36</b>	988 <b>31</b>
30	201 <b>73</b>	357 <b>72</b>	542 <b>70</b>	706 <b>63</b>	864 <b>56</b>	984 <b>51</b>
40	195 <b>99</b>	346 <b>98</b>	532 <b>96</b>	701 <b>86</b>	858 <b>77</b>	973 <b>71</b>
50	173 <b>123</b>	332 <b>122</b>	518 <b>118</b>	687 <b>107</b>	848 <b>97</b>	958 <b>90</b>
60	154 <b>146</b>	319 <b>144</b>	501 <b>141</b>	668 <b>128</b>	833 <b>115</b>	944 <b>106</b>
70	138 <b>174</b>	305 <b>173</b>	480 <b>169</b>	649 <b>156</b>	814 <b>141</b>	925 <b>130</b>
Max.cont.	128 <b>183</b>	294 <b>181</b>	466 <b>177</b>	637 <b>163</b>	802 <b>149</b>	911 <b>138</b>
80	113 <b>192</b>	277 <b>191</b>	451 <b>188</b>	621 <b>174</b>	786 <b>158</b>	899 <b>144</b>
Max.int.	90 <b>220</b>	256 <b>220</b>	433 <b>215</b>	595 <b>202</b>	767 <b>183</b>	881 <b>165</b>

Torque (N·m) 593  
Speed (rpm) 248

cont.  
int.

Performance Data

BMH 500 [489.2cm<sup>3</sup>/rev.]

Pressure (MPa)

Max.cont. Max.int.

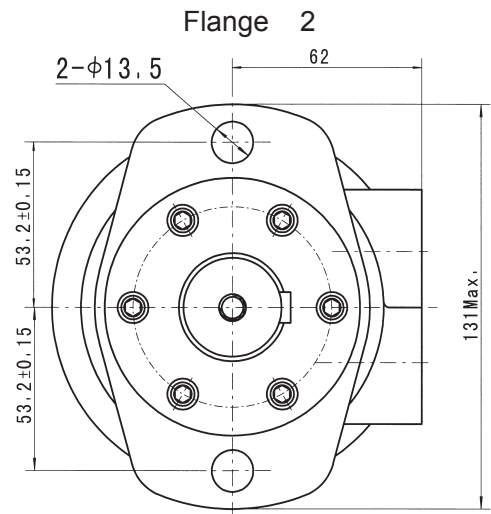
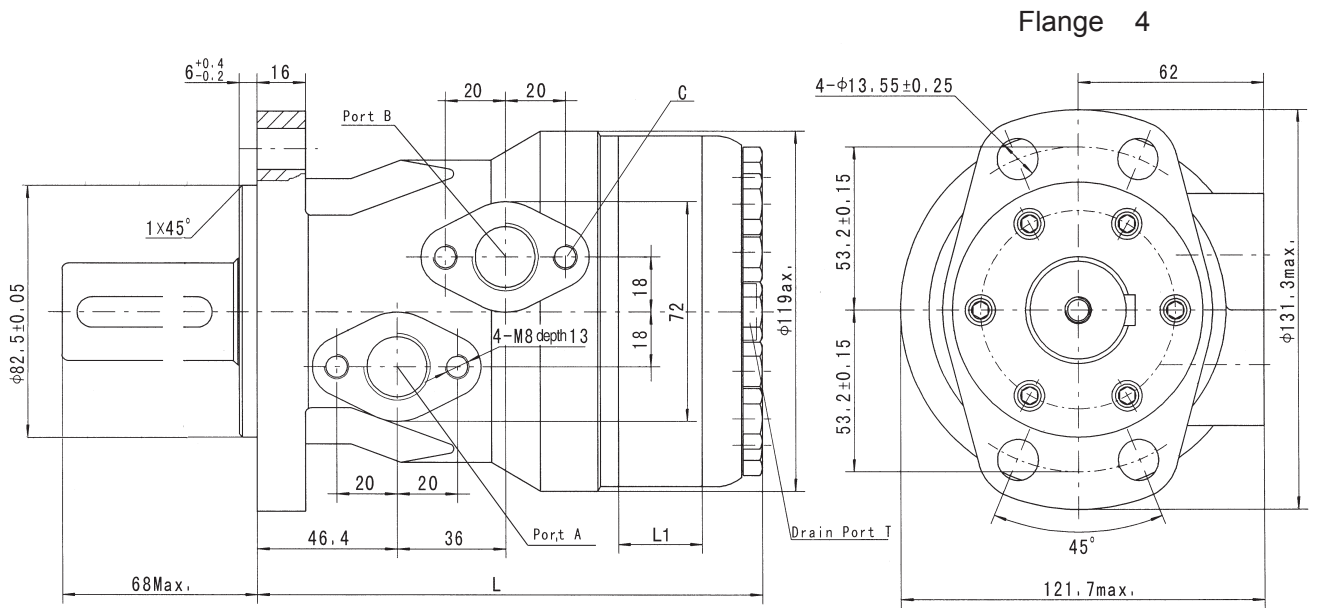
2.5	5	8.5	10	12.5	16
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Flow (L/min)	5	165 <b>11</b>	317 <b>11</b>	516 <b>8</b>				
	10	178 <b>20</b>	335 <b>19</b>	555 <b>17</b>	669 <b>15</b>	791 <b>13</b>	969 <b>9</b>	
	20	177 <b>42</b>	331 <b>42</b>	559 <b>41</b>	673 <b>38</b>	799 <b>36</b>	988 <b>29</b>	
	30	172 <b>64</b>	320 <b>63</b>	553 <b>61</b>	663 <b>57</b>	792 <b>53</b>	983 <b>47</b>	
	40	163 <b>85</b>	309 <b>85</b>	541 <b>83</b>	654 <b>79</b>	783 <b>75</b>	971 <b>67</b>	
	50	146 <b>103</b>	296 <b>103</b>	523 <b>103</b>	635 <b>97</b>	768 <b>93</b>	954 <b>85</b>	
	60	121 <b>124</b>	275 <b>124</b>	502 <b>123</b>	614 <b>117</b>	747 <b>113</b>	934 <b>103</b>	
	70	97 <b>148</b>	256 <b>148</b>	482 <b>148</b>	597 <b>140</b>	729 <b>134</b>	917 <b>122</b>	
	Max.cont.	75	79 <b>155</b>	240 <b>155</b>	469 <b>155</b>	582 <b>152</b>	714 <b>144</b>	902 <b>130</b>
		80	60 <b>166</b>	226 <b>166</b>	453 <b>166</b>	570 <b>159</b>	701 <b>153</b>	884 <b>139</b>
Max.int.	90	34 <b>184</b>	201 <b>183</b>	421 <b>182</b>	550 <b>177</b>	673 <b>166</b>	869 <b>155</b>	

cont.  
int.

Torque (N·m) 673  
Speed (rpm) 166

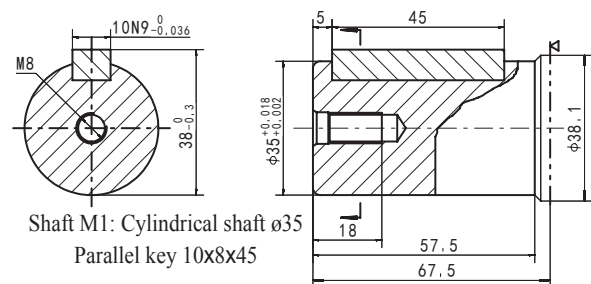
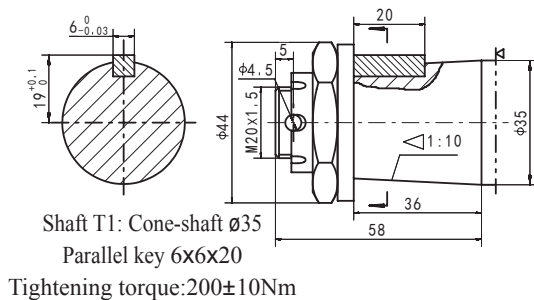
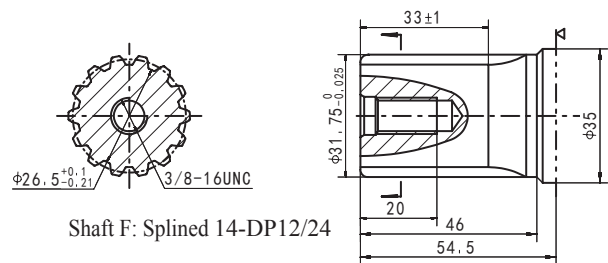
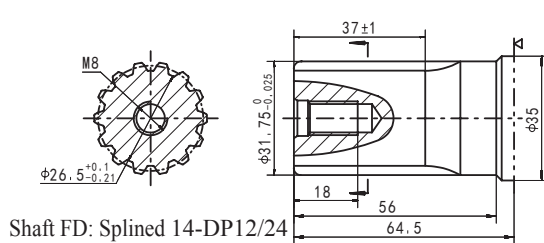
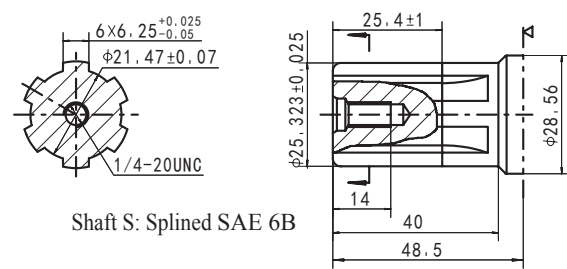
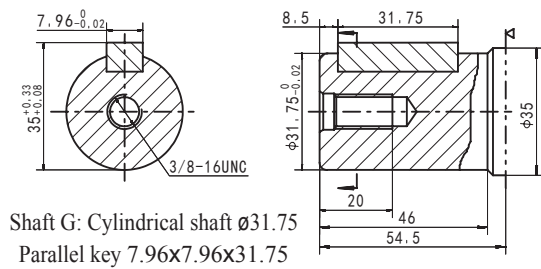
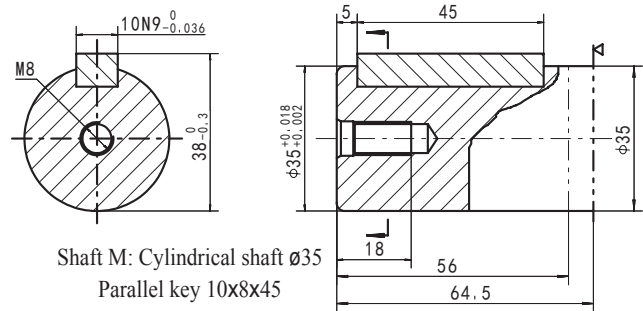
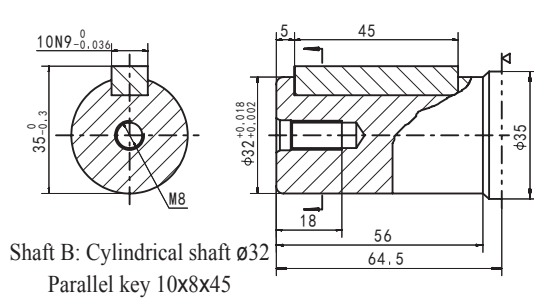
**BMH DIMENSIONS AND MOUNTING DATA**



Model	L	L1
BMH-160	162	21
BMH-200	168	27
BMH-250	175	34
BMH-315	183	42
BMH-400	195	54
BMH-500	206	65

Code	D (depth)	M (depth)	S (depth)	P (depth)	R (depth)
P(A,B)	G1/2 (15)	M22 x 1.5 (15)	7/8-14 O-ring (15)	1/2-14NPTF (15)	PT(RC)1/2 (15)
C	4-M8 (13)	4-M8 (13)	4-5/16-18UNC(13)	4-5/16-18UNC(13)	4-M8 (13)
T	G1/4 (12)	M14 x 1.5 (12)	7/16-20UNF(12)	7/16-20UNF (12)	PT(RC)1/4 1/4

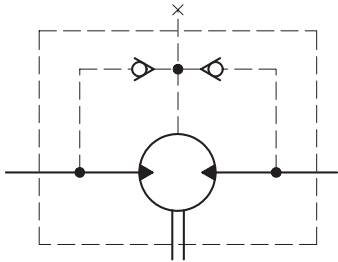
**BMH SHAFT EXTENSIONS DIMINSIONS DATA**



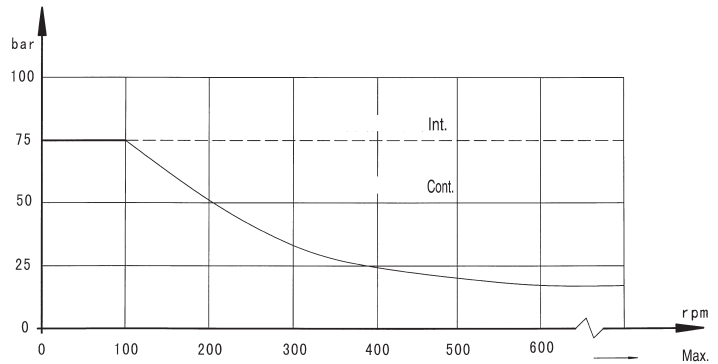
▷ Motor Mounting Surface

## BMH series Hydraulic Motor

### Permissible shaft seal pressure



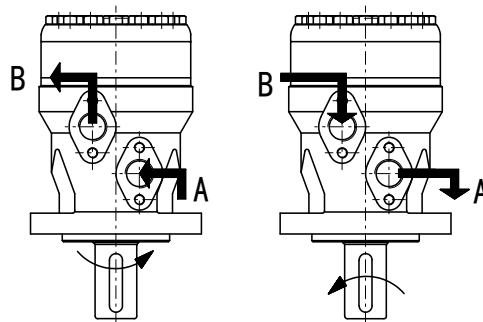
In applications without drain line, output shaft seal exceeds a bit of the pressure in the return line. When applications use the drain line, the pressure of output shaft seal equals the pressure in drain line.



### 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.

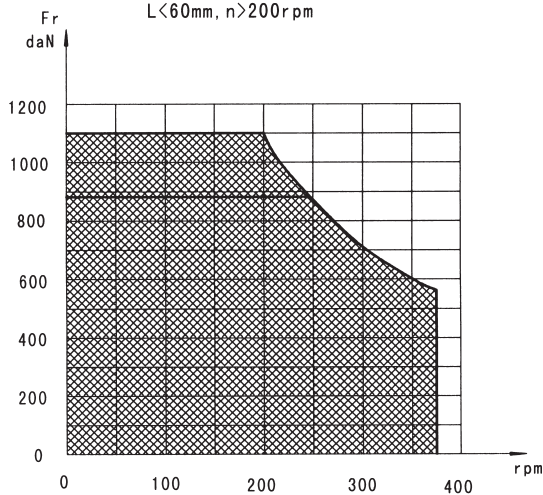
BMH



Status of the shaft's radial force

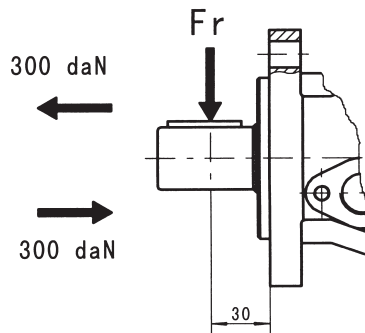
$$F_r = \frac{1100}{n} \times \frac{25000}{103.5+L} \text{ daN}$$

$L < 60\text{mm}, n > 200\text{rpm}$



— shaft  $\phi 1''$  ( $\phi 25.4\text{mm}$ ) and shaft SAE 6B

The drawing is the Possible load when  $L=30\text{mm}$ .



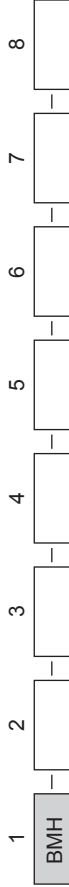
$F_r$  =Radial Force (daN)  
 $L$  =Distance (mm)  
 $n$  =Speed (rpm)

### Oil flow in drain line

The table shows the Max. oil flow in the drain line at a return pressure less than 0.5-1MPa.

Pressure drop (MPa)	Viscosity (mm <sup>2</sup> /s)	Oil flow in the drain line (L/min.)
10	20	2.5
	35	1.8
14	20	3.5
	35	2.8

### Order Information



Pos.1	2	3	4	5	6	7	8
Code	Flange		Output shaft	Ports and drain port	Rotation direction	Paint	Unusually function
160	4	4xØ13.5 Rhombxflange	B	D	Omit	00	Standard
200			B Shaft Ø32 , parallel key 10x8x45				
250	2	2xØ13.5 Rhombxflange	M1	M	R	B	No drain
315			Pilot Ø82.5x6	F Shaft Ø35, parallel key 10x8x45	M22x1.5 Manifold mount 4xM8,	Opposite	Blue
400	Pilot Ø82.5x6	Pilot Ø82.5x6	F	S	R	Black	Running
470			FD	Long Shaft Ø31.75, splined key 14-DP12/24	7/8-14 O-ring Manifold mount 4x5/16-18UNC,7/16-20UNF	S	Silver grey
500			G	P			Big radial force
			T1	R			
			S				
			M				

Note:When the table is used, please fill the code of left rows in dash area and give us, which the code information is consists of construction, displacement, mounting flange, output shaft and ports. If the specification is not in the table or you have specific requirements, please contact us.



# 专业做液压-专注做精品

PROFESSIONAL ON HYDRAULIC- FOCUS ON HIGH QUALITY



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