



## BMR SERIES HYDRAULIC MOTOR

BMR series motor adapt the advanced Gerolor 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 Gerolor 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 in 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

Technical data for BMR with 25 and 1 in and 1 in splined and 28.56 tapered shaft

Type		BMR BMRS 36	BMR BMRS 50	BMR BMRS 80	BMR BMRS 100	BMR BMRS 125	BMR BMRS 160	BMR BMRS 200	BMR BMRS 250	BMR BMRS 315	BMR BMRS 375
Geometric displacement (cm <sup>3</sup> /rev.)		36	51.7	81.5	102	127.2	157.2	194.5	253.3	317.5	381.4
Max. speed (rpm)	cont.	1085	960	750	600	475	378	310	240	190	155
	int.	1220	1150	940	750	600	475	385	300	240	190
Max. torque (N·m)	cont.	72	100	195	240	300	360	360	390	390	365
	int.	83	126	220	280	340	430	440	490	535	495
	peak	105	165	270	320	370	460	560	640	650	680
Max. output (kW)	cont.	8.5	9.5	12.5	13.0	12.5	12.5	10.0	7.0	6.0	5.0
	int.	9.8	11.2	15.0	15.0	14.5	14.0	13.0	9.5	9.0	8.0
Max. pressure drop (MPa)	cont.	14.0	14	17.5	17.5	17.5	16.5	13	11	9	7
	int.	16.5	17.5	20	20	20	20	17.5	15	13	10
	peak	22.5	22.5	22.5	22.5	22.5	22.5	22.5	20	17.5	15
Max. flow (L/min)	cont.	40	50	60	60	60	60	60	60	60	60
	int.	45	60	75	75	75	75	75	75	75	75
Weight (kg)		6.5	6.7	6.9	7	7.3	7.6	8.0	8.5	9.0	9.5

\* 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.

## Main Specification

### Technical data for BMR with 31.75 and 32 shaft

Type		BMR 36	BMR 50	BMR 80	BMR 100	BMR 125	BMR 160	BMR 200	BMR 250	BMR 315	BMR 375
Geometric displacement (cm <sup>3</sup> /rev.)		36	51.7	81.5	102	127.2	157.2	194.5	253.3	317.5	381.4
Max. speed (rpm)	cont.	1250	960	750	600	475	378	310	240	190	155
	int.	1520	1150	940	750	600	475	385	300	240	190
Max. torque (N·m)	cont.	72	100	195	240	300	380	450	540	550	580
	int.	83	126	220	280	340	430	500	610	690	690
	peak	105	165	270	320	370	460	560	710	840	830
Max. output (kW)	cont.	8.5	9.5	12.5	13.0	12.5	12.5	11.0	10.0	9.0	7.5
	int.	9.8	11.2	15.0	15.0	14.5	14.0	13.0	12.0	10.0	9.0
Max. pressure drop (MPa)	cont.	14.0	14	17.5	17.5	17.5	17.5	17.5	17.5	13.5	11.5
	int.	16.5	17.5	20	20	20	20	20	20	17.5	15
	peak	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	21	17.5
Max. flow (L/min)	cont.	45	50	60	60	60	60	60	60	60	60
	int.	55	60	75	75	75	75	75	75	75	75
Weight (kg)		6.5	6.7	6.9	7	7.3	7.6	8.0	8.5	9.0	9.5

\* 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.

# Performance Data

BMR 36 [36cm³/rev.]

Pressure (MPa)

		Max.cont. Max.int.									
		2	3	5	7	9	10	12.5	14.0	16.5	
Flow (L/min)	4	10	16	25	37	46	50				
		<b>105</b>	<b>100</b>	<b>92</b>	<b>80</b>	<b>71</b>	<b>58</b>				
	8	9	15	25	37	47	50	63	71	83	
		<b>208</b>	<b>200</b>	<b>188</b>	<b>175</b>	<b>158</b>	<b>149</b>	<b>134</b>	<b>120</b>	<b>108</b>	
	15	8	14	23	36	45	51	64	72	82	
		<b>403</b>	<b>392</b>	<b>380</b>	<b>365</b>	<b>348</b>	<b>326</b>	<b>318</b>	<b>302</b>	<b>274</b>	
	20	6	13	22	35	44	50	64	72	82	
		<b>540</b>	<b>531</b>	<b>518</b>	<b>500</b>	<b>483</b>	<b>462</b>	<b>450</b>	<b>435</b>	<b>412</b>	
	30	6	12	21	32	42	47	63	70	80	
		<b>810</b>	<b>798</b>	<b>780</b>	<b>763</b>	<b>742</b>	<b>722</b>	<b>705</b>	<b>694</b>	<b>668</b>	
	40	5	11	19	30	41	45	61	68	79	
Max.cont.		<b>1092</b>	<b>1080</b>	<b>1069</b>	<b>1056</b>	<b>1042</b>	<b>1028</b>	<b>1011</b>	<b>984</b>	<b>957</b>	
	45	4	10	17	29	40	44	59	66	77	
Max.int.		<b>1230</b>	<b>1215</b>	<b>1194</b>	<b>1170</b>	<b>1150</b>	<b>1128</b>	<b>1100</b>	<b>1070</b>	<b>1020</b>	

BMR 50 [51.7cm³/rev.]

Pressure (MPa)

		Max.cont. Max.int.									
		5	7	9	10	12	14	16	17.5		
Flow (L/min)	5	35	45	61	67	77	88				
		<b>93</b>	<b>84</b>	<b>76</b>	<b>73</b>	<b>69</b>	<b>46</b>				
	10	36	46	62	69	80	95	108	120		
		<b>186</b>	<b>178</b>	<b>166</b>	<b>162</b>	<b>153</b>	<b>136</b>	<b>118</b>	<b>97</b>		
	15	35	49	63	73	88	100	109	123		
		<b>283</b>	<b>277</b>	<b>269</b>	<b>261</b>	<b>250</b>	<b>230</b>	<b>211</b>	<b>185</b>		
	20	34.5	47	61	69	83	96	109	126		
		<b>377</b>	<b>375</b>	<b>365</b>	<b>361</b>	<b>346</b>	<b>330</b>	<b>302</b>	<b>270</b>		
	30	33	44	60	67	80	95	108	126		
		<b>576</b>	<b>569</b>	<b>561</b>	<b>554</b>	<b>542</b>	<b>531</b>	<b>500</b>	<b>465</b>		
	40	30	41	58	66	79	92	106	122		
		<b>760</b>	<b>758</b>	<b>753</b>	<b>750</b>	<b>738</b>	<b>724</b>	<b>700</b>	<b>670</b>		
	45	29.5	40	57	65	78	90	105	121		
		<b>856</b>	<b>853</b>	<b>849</b>	<b>845</b>	<b>835</b>	<b>815</b>	<b>796</b>	<b>770</b>		
	50	26	37	53	60	73	85	99	114		
Max.cont.		<b>950</b>	<b>940</b>	<b>925</b>	<b>906</b>	<b>880</b>	<b>852</b>	<b>832</b>	<b>801</b>		
	60	20	33	48	56	69	81	95	109		
Max.int.		<b>1138</b>	<b>1124</b>	<b>1100</b>	<b>1075</b>	<b>1056</b>	<b>1028</b>	<b>1006</b>	<b>970</b>		

BMR 80 [81.5cm³/rev.]

Pressure (MPa)

		Max.cont. Max.int.									
		5	7	9	10	12	14	16	17.5	20	
Flow (L/min)	5	50	64	88	108	133					
		<b>59</b>	<b>56</b>	<b>50</b>	<b>44</b>	<b>38</b>					
	10	54	77	99	108	129	150	173			
		<b>118</b>	<b>113</b>	<b>106</b>	<b>97</b>	<b>86</b>	<b>79</b>	<b>56</b>			
	20	57	78.0	102	111	134	155	177	196	225	
		<b>238</b>	<b>234</b>	<b>227</b>	<b>216</b>	<b>203</b>	<b>190</b>	<b>178</b>	<b>154</b>	<b>135</b>	
	30	54	75	100	108	131	152	176	195	223	
		<b>360</b>	<b>352</b>	<b>340</b>	<b>332</b>	<b>316</b>	<b>302</b>	<b>290</b>	<b>274</b>	<b>250</b>	
	40	48	73	96	105	127	148	172	190	220	
		<b>480</b>	<b>470</b>	<b>458</b>	<b>445</b>	<b>430</b>	<b>418</b>	<b>403</b>	<b>388</b>	<b>359</b>	
	50	42	70	93	102	124	147	170	188	218	
		<b>604</b>	<b>595</b>	<b>582</b>	<b>570</b>	<b>556</b>	<b>540</b>	<b>521</b>	<b>504</b>	<b>487</b>	
	60	37	66	89	98	121	144	166	184	213	
Max.cont.		<b>726</b>	<b>715</b>	<b>704</b>	<b>692</b>	<b>678</b>	<b>663</b>	<b>647</b>	<b>622</b>	<b>594</b>	
	70	32	60	83	95	116	140	160	177	208	
		<b>845</b>	<b>834</b>	<b>820</b>	<b>802</b>	<b>789</b>	<b>767</b>	<b>754</b>	<b>730</b>	<b>705</b>	
	75	21	50	78	90	111	135	154	171	200	
Max.int.		<b>910</b>	<b>895</b>	<b>881</b>	<b>867</b>	<b>852</b>	<b>830</b>	<b>806</b>	<b>787</b>	<b>756</b>	

BMR 100 [102cm³/rev.]

Pressure (MPa)

		Max.cont. Max.int.									
		5	7	9	10	12	14	16	17.5	20	
Flow (L/min)	5	66	92	120	135	156					
		<b>45</b>	<b>42</b>	<b>38</b>	<b>34</b>	<b>27</b>					
	10	68	96	125	138	159	188	212			
		<b>93</b>	<b>90</b>	<b>86</b>	<b>81</b>	<b>74</b>	<b>57</b>	<b>42</b>			
	20	65	94.0	123	137	155	186	210	238	274	
		<b>189</b>	<b>185</b>	<b>180</b>	<b>173</b>	<b>165</b>	<b>158</b>	<b>150</b>	<b>139</b>	<b>118</b>	
	30	63	92	120	133	153	185	209	235	270	
		<b>286</b>	<b>281</b>	<b>275</b>	<b>266</b>	<b>257</b>	<b>246</b>	<b>237</b>	<b>225</b>	<b>207</b>	
	40	57	88	117	130	152	185	208	233	267	
		<b>385</b>	<b>378</b>	<b>365</b>	<b>355</b>	<b>345</b>	<b>332</b>	<b>320</b>	<b>314</b>	<b>297</b>	
	50	48	79	110	123	150	183	204	228	260	
		<b>482</b>	<b>477</b>	<b>470</b>	<b>460</b>	<b>448</b>	<b>435</b>	<b>420</b>	<b>405</b>	<b>389</b>	
	60	38	70	105	120	144	178	200	220	252	
Max.cont.		<b>580</b>	<b>572</b>	<b>560</b>	<b>548</b>	<b>535</b>	<b>523</b>	<b>510</b>	<b>500</b>	<b>478</b>	
	70	32	65	100	118	141	176	197	215	246	
		<b>678</b>	<b>670</b>	<b>660</b>	<b>648</b>	<b>638</b>	<b>626</b>	<b>615</b>	<b>606</b>	<b>580</b>	
	75	23	59	93	111	136	170	192	210	240	
Max.int.		<b>728</b>	<b>720</b>	<b>710</b>	<b>695</b>	<b>681</b>	<b>667</b>	<b>650</b>	<b>634</b>	<b>618</b>	

Torque (N•m) 135  
Speed (rpm) 830

□ cont.  
■ int.

# Performance Data

BMR 125 [127.2cm³/rev.]

Pressure (MPa)

	5	7	9	10	12	14	16	17.5	20
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Flow (L/min)	Max.cont.									Max.int.
	5	7	9	10	12	14	16	17.5	20	
5	76 <b>36</b>	110 <b>31</b>	145 <b>25</b>	167 <b>19</b>	189 <b>13</b>					
10	84 <b>73</b>	118 <b>70</b>	155 <b>60</b>	176 <b>48</b>	202 <b>36</b>	228 <b>25</b>	253 <b>19</b>			
20	82 <b>153</b>	117 <b>151</b>	153 <b>148</b>	174 <b>144</b>	200 <b>138</b>	230 <b>128</b>	259 <b>117</b>	294 <b>104</b>	332 <b>73</b>	
30	79 <b>231</b>	116 <b>228</b>	151 <b>224</b>	171 <b>218</b>	198 <b>210</b>	228 <b>201</b>	257 <b>183</b>	292 <b>168</b>	329 <b>137</b>	
40	72 <b>309</b>	114 <b>307</b>	148 <b>303</b>	168 <b>298</b>	196 <b>292</b>	226 <b>280</b>	256 <b>270</b>	290 <b>252</b>	327 <b>218</b>	
50	62 <b>389</b>	105 <b>386</b>	143 <b>382</b>	165 <b>378</b>	195 <b>370</b>	223 <b>360</b>	254 <b>344</b>	287 <b>328</b>	323 <b>292</b>	
60	52 <b>467</b>	98 <b>463</b>	136 <b>459</b>	160 <b>456</b>	191 <b>448</b>	220 <b>427</b>	250 <b>410</b>	282 <b>399</b>	319 <b>352</b>	
70	41 <b>545</b>	90 <b>542</b>	130 <b>538</b>	156 <b>534</b>	187 <b>529</b>	215 <b>520</b>	242 <b>508</b>	278 <b>486</b>	313 <b>430</b>	
75	32 <b>586</b>	79 <b>583</b>	126 <b>578</b>	148 <b>570</b>	180 <b>560</b>	208 <b>546</b>	234 <b>532</b>	262 <b>520</b>	300 <b>480</b>	

BMR 160 [157.2cm³/rev.]

Pressure (MPa)

	5	7	9	10	12	14	16	17.5	20
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Flow (L/min)	Max.cont.									Max.int.
	5	7	9	10	12	14	16	17.5	20	
5	104 <b>26</b>	146 <b>23</b>	190 <b>20</b>	210 <b>16</b>	245 <b>10</b>					
10	107 <b>59</b>	150 <b>56</b>	195 <b>50</b>	216 <b>45</b>	250 <b>37</b>	290 <b>30</b>	335 <b>22</b>			
20	102 <b>121</b>	151 <b>118</b>	198 <b>115</b>	220 <b>113</b>	257 <b>108</b>	298 <b>102</b>	342 <b>97</b>	370 <b>90</b>	420 <b>78</b>	
30	97 <b>184</b>	146 <b>178</b>	190 <b>173</b>	217 <b>170</b>	256 <b>164</b>	295 <b>155</b>	340 <b>143</b>	368 <b>128</b>	416 <b>103</b>	
40	89 <b>246</b>	140 <b>241</b>	185 <b>235</b>	210 <b>228</b>	252 <b>220</b>	290 <b>210</b>	335 <b>194</b>	363 <b>177</b>	412 <b>150</b>	
50	72 <b>310</b>	128 <b>307</b>	179 <b>300</b>	202 <b>295</b>	244 <b>287</b>	284 <b>278</b>	327 <b>262</b>	358 <b>247</b>	409 <b>210</b>	
60	60 <b>374</b>	116 <b>367</b>	170 <b>359</b>	198 <b>354</b>	240 <b>346</b>	279 <b>338</b>	321 <b>323</b>	352 <b>306</b>	400 <b>265</b>	
70	49 <b>437</b>	107 <b>430</b>	164 <b>421</b>	193 <b>415</b>	233 <b>403</b>	271 <b>393</b>	309 <b>381</b>	344 <b>365</b>	390 <b>318</b>	
75	36 <b>472</b>	98 <b>463</b>	152 <b>450</b>	185 <b>441</b>	226 <b>431</b>	265 <b>420</b>	300 <b>405</b>	334 <b>389</b>	379 <b>365</b>	

BMR 200 [194.5cm³/rev.]

Pressure (MPa)

	5	7	9	10	12	14	16	17.5	20
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Flow (L/min)	Max.cont.									Max.int.
	5	7	9	10	12	14	16	17.5	20	
5	132 <b>24</b>	181 <b>22</b>	238 <b>18</b>	262 <b>13</b>	310 <b>10</b>					
10	135 <b>49</b>	186 <b>47</b>	240 <b>45</b>	264 <b>43</b>	315 <b>38</b>	356 <b>33</b>	403 <b>24</b>			
20	131 <b>99</b>	183 <b>97</b>	238 <b>94</b>	260 <b>92</b>	314 <b>88</b>	358 <b>83</b>	404 <b>74</b>	438 <b>64</b>	498 <b>56</b>	
30	126 <b>149</b>	178 <b>147</b>	233 <b>144</b>	254 <b>141</b>	311 <b>135</b>	355 <b>126</b>	402 <b>113</b>	431 <b>105</b>	486 <b>91</b>	
40	112 <b>200</b>	169 <b>197</b>	228 <b>194</b>	250 <b>191</b>	307 <b>185</b>	352 <b>174</b>	400 <b>160</b>	426 <b>151</b>	477 <b>127</b>	
50	95 <b>252</b>	156 <b>249</b>	221 <b>246</b>	246 <b>243</b>	300 <b>238</b>	350 <b>228</b>	398 <b>212</b>	421 <b>194</b>	470 <b>161</b>	
60	78 <b>304</b>	145 <b>301</b>	213 <b>298</b>	238 <b>294</b>	289 <b>286</b>	342 <b>276</b>	386 <b>262</b>	412 <b>243</b>	459 <b>218</b>	
70	67 <b>355</b>	135 <b>353</b>	206 <b>349</b>	228 <b>340</b>	277 <b>329</b>	336 <b>316</b>	375 <b>300</b>	408 <b>288</b>	453 <b>257</b>	
75	58 <b>382</b>	125 <b>379</b>	197 <b>373</b>	220 <b>362</b>	270 <b>350</b>	321 <b>337</b>	360 <b>322</b>	398 <b>312</b>	442 <b>278</b>	

BMR 250 [253.5cm³/rev.]

Pressure (MPa)

	5	7	9	10	12	14	16	17.5	20
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Flow (L/min)	Max.cont.									Max.int.
	5	7	9	10	12	14	16	17.5	20	
5	175 <b>17</b>	243 <b>16</b>	304 <b>14</b>	342 <b>12</b>	407 <b>10</b>					
10	178 <b>37</b>	246 <b>35</b>	310 <b>31</b>	344 <b>28</b>	409 <b>23</b>	465 <b>18</b>	525 <b>11</b>			
20	175 <b>75</b>	244 <b>73</b>	308 <b>72</b>	340 <b>70</b>	408 <b>66</b>	463 <b>58</b>	520 <b>53</b>	558 <b>50</b>	636 <b>42</b>	
30	162 <b>114</b>	235 <b>111</b>	304 <b>108</b>	332 <b>106</b>	400 <b>100</b>	455 <b>92</b>	516 <b>83</b>	550 <b>77</b>	621 <b>65</b>	
40	143 <b>154</b>	223 <b>152</b>	300 <b>150</b>	329 <b>147</b>	396 <b>143</b>	447 <b>132</b>	512 <b>120</b>	546 <b>110</b>	617 <b>90</b>	
50	124 <b>193</b>	208 <b>190</b>	289 <b>187</b>	323 <b>174</b>	384 <b>168</b>	440 <b>160</b>	503 <b>149</b>	535 <b>140</b>	600 <b>116</b>	
60	103 <b>233</b>	192 <b>230</b>	280 <b>227</b>	314 <b>224</b>	371 <b>218</b>	426 <b>205</b>	489 <b>190</b>	514 <b>181</b>	578 <b>155</b>	
70	88 <b>273</b>	178 <b>270</b>	264 <b>267</b>	301 <b>263</b>	356 <b>252</b>	418 <b>242</b>	479 <b>226</b>	498 <b>209</b>	560 <b>173</b>	
75	62 <b>294</b>	165 <b>291</b>	256 <b>287</b>	288 <b>283</b>	347 <b>274</b>	412 <b>263</b>	474 <b>249</b>	486 <b>236</b>	542 <b>211</b>	

cont.  
int.

Torque (N·m) 256  
Speed (rpm) 287

# Performance Data

BMR 315 [317.5cm³/rev.]

Pressure (MPa)

	5	7	9	10	12	14	16	17.5
						Max.cont.		Max.int.

Flow (L/min)	5	215 <b>13</b>	302 <b>11</b>						
	10	218 <b>28</b>	305 <b>27</b>	383 <b>25</b>	422 <b>24</b>	488 <b>21</b>	551 <b>18</b>	622 <b>13</b>	
20	215 <b>60</b>	303 <b>59</b>	380 <b>57</b>	418 <b>55</b>	485 <b>52</b>	549 <b>49</b>	620 <b>45</b>	660 <b>42</b>	
30	204 <b>91</b>	296 <b>89</b>	375 <b>86</b>	413 <b>84</b>	480 <b>81</b>	542 <b>78</b>	613 <b>72</b>	654 <b>67</b>	
40	196 <b>122</b>	287 <b>120</b>	368 <b>117</b>	410 <b>112</b>	477 <b>106</b>	539 <b>100</b>	609 <b>94</b>	650 <b>85</b>	
50	176 <b>154</b>	270 <b>151</b>	356 <b>147</b>	393 <b>140</b>	461 <b>131</b>	526 <b>120</b>	597 <b>109</b>	645 <b>100</b>	
60	162 <b>185</b>	246 <b>182</b>	339 <b>177</b>	374 <b>172</b>	446 <b>163</b>	511 <b>152</b>	586 <b>140</b>	628 <b>134</b>	
70	143 <b>217</b>	235 <b>213</b>	324 <b>208</b>	358 <b>201</b>	430 <b>190</b>	493 <b>178</b>	562 <b>166</b>	614 <b>158</b>	
75	125 <b>232</b>	212 <b>228</b>	303 <b>222</b>	339 <b>216</b>	417 <b>208</b>	481 <b>200</b>	543 <b>183</b>	582 <b>171</b>	

Max.cont.

Max.int.

Torque (N·m) 481  
Speed (rpm) 200

BMR 375 [381.4cm³/rev.]

Pressure (MPa)

	3	4.5	5.5	6.5	8	10	12.5	14
						Max.cont.		Max.int.

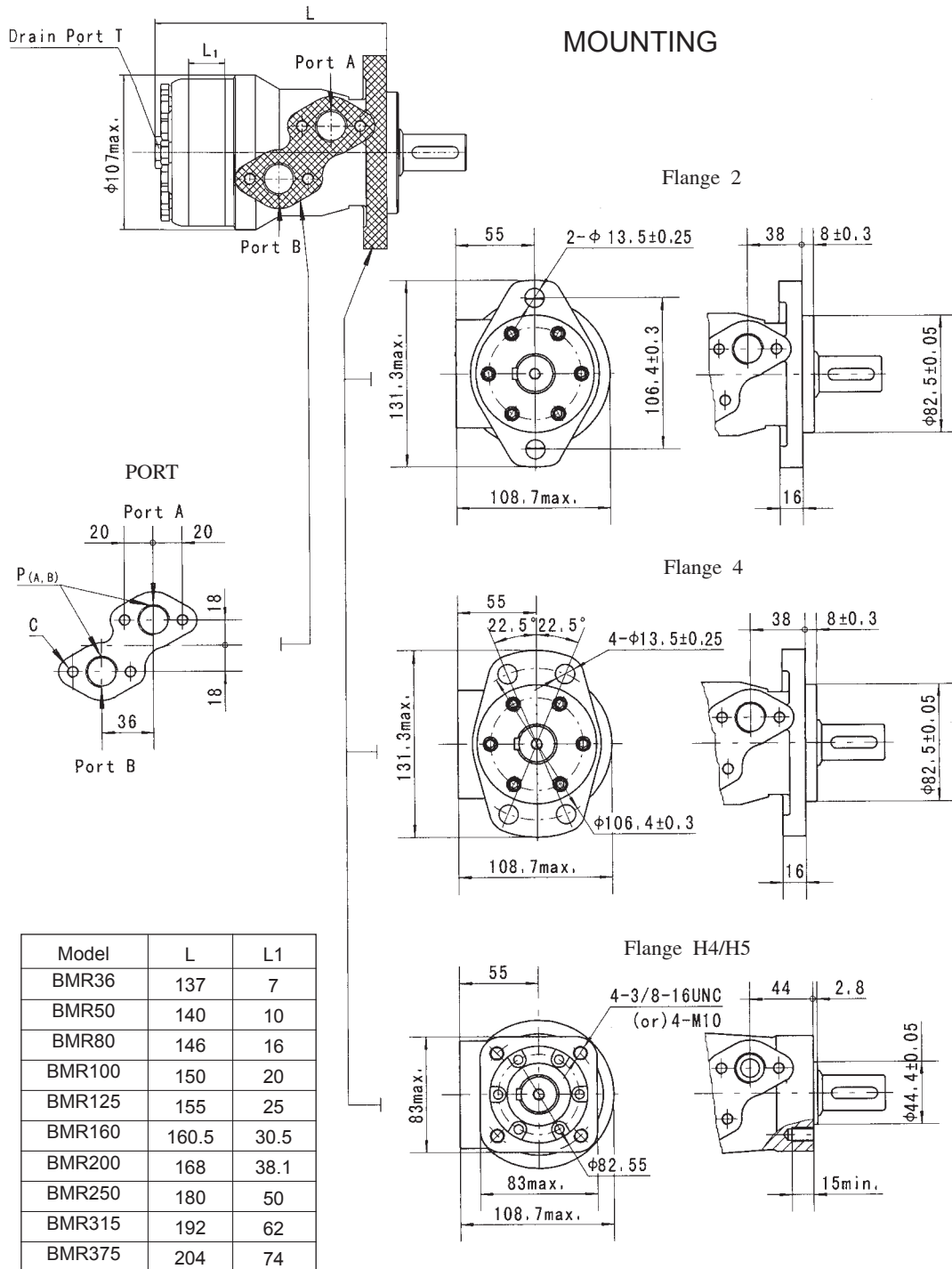
Flow (L/min)	5	153 <b>12</b>	232 <b>10</b>						
	10	157 <b>24</b>	236 <b>23</b>	284 <b>22</b>	337 <b>21</b>	406 <b>19</b>	497 <b>17</b>	612 <b>15</b>	668 <b>12</b>
20	150 <b>49</b>	232 <b>48</b>	280 <b>47</b>	332 <b>46</b>	401 <b>44</b>	490 <b>41</b>	606 <b>38</b>	660 <b>32</b>	
30	142 <b>76</b>	215 <b>75</b>	274 <b>74</b>	327 <b>73</b>	398 <b>71</b>	483 <b>67</b>	603 <b>63</b>	652 <b>50</b>	
40	126 <b>103</b>	212 <b>101</b>	268 <b>99</b>	320 <b>97</b>	393 <b>95</b>	477 <b>92</b>	593 <b>88</b>	635 <b>70</b>	
50	105 <b>128</b>	187 <b>126</b>	242 <b>124</b>	302 <b>121</b>	376 <b>118</b>	455 <b>115</b>	583 <b>111</b>	608 <b>96</b>	
60	90 <b>154</b>	167 <b>152</b>	229 <b>150</b>	281 <b>148</b>	362 <b>145</b>	444 <b>138</b>	566 <b>130</b>	600 <b>121</b>	
70	90 <b>180</b>	149 <b>179</b>	200 <b>178</b>	258 <b>176</b>	341 <b>173</b>	425 <b>168</b>	546 <b>160</b>	580 <b>148</b>	
75	56 <b>195</b>	125 <b>194</b>	182 <b>193</b>	241 <b>191</b>	320 <b>189</b>	408 <b>185</b>	524 <b>178</b>	565 <b>170</b>	

Max.cont.

Max.int.

cont.  
 int.

## BMR DIMENSIONS AND MOUNTING DATA

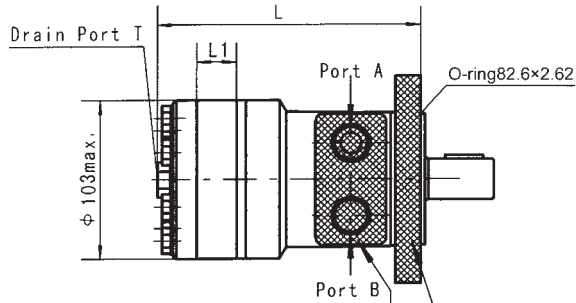


Code	D (depth)	M (depth)	S (depth)	P (depth)	R (depth)
P(A,B)	G1/2 (15)	M22 x 1.5 (15)	7/8-14 O-ring (17)	1/2-14NPTF (15)	PT(RC)1/2 (15)
C	4-M8 (13)	4-M8 (13)	4-5/16-18UNC(13)	4-5/16-18UNC(13)	4-M8 (13)
T	G1/4 (12)	M14 x 1.5 (12)	7/16-20UNF (12)	7/16-20UNF (12)	PT(RC)1/4 (9.7)

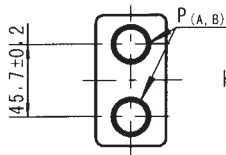


## BMRS DIMENSIONS AND MOUNTING DATA

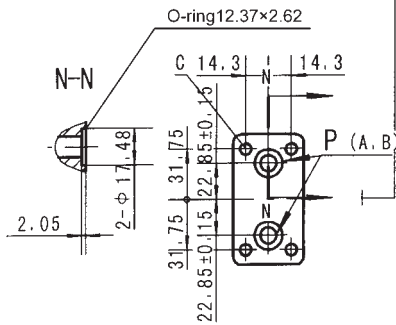
### MOUNTING



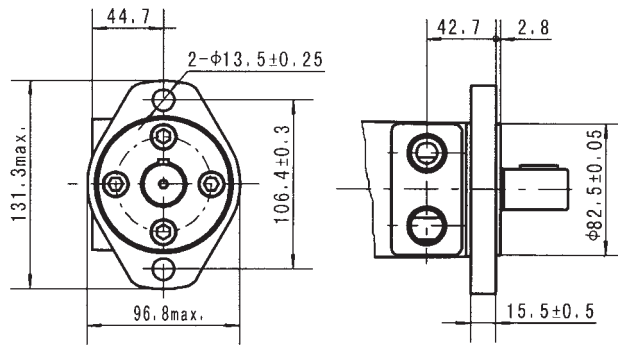
PORT: G, S, P, R, M1, M2, M3



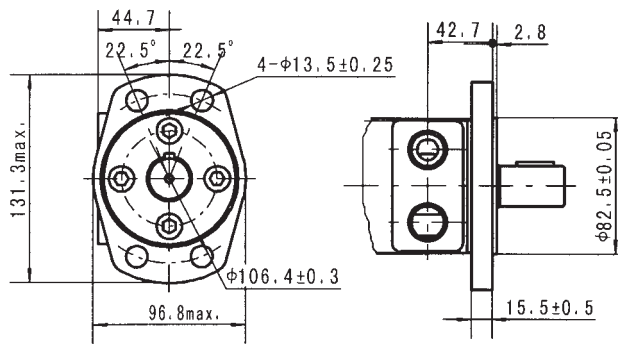
PORT: B4, B5



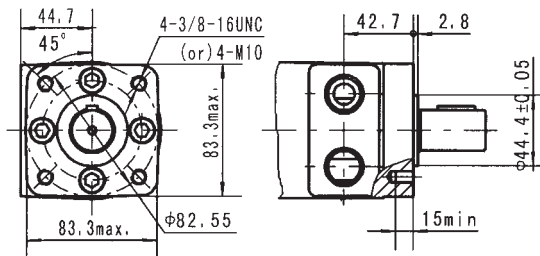
Flange H2



Flange H6



Flange H4/H5

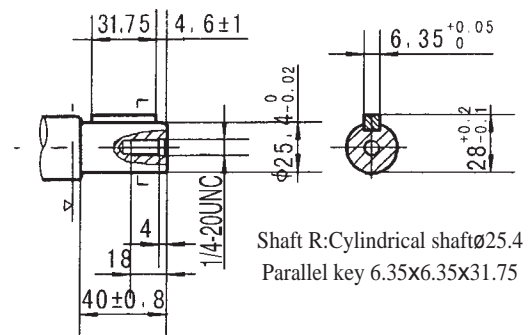
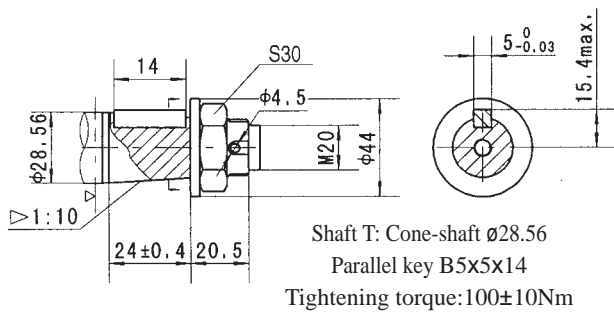
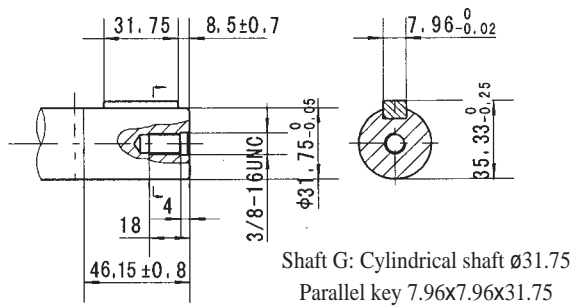
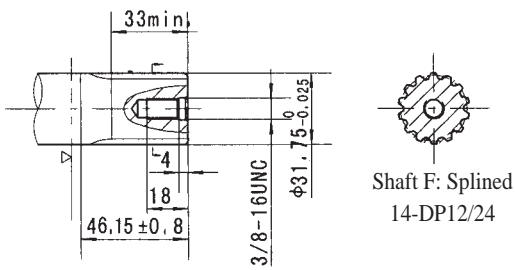
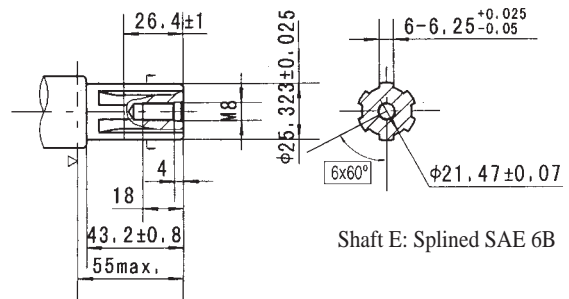
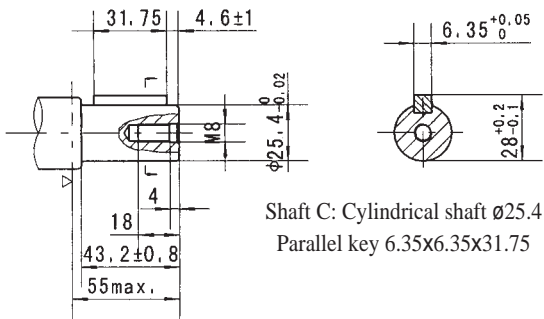
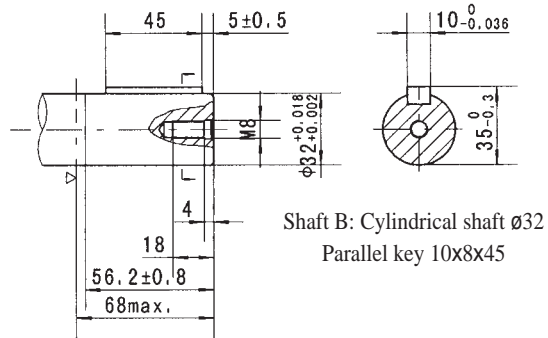
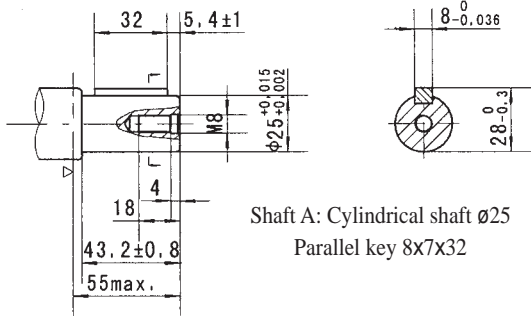


Note: The size L of the BMRS N1 should be increased by 2mm.

Model	L	L1
BMRS36	143	7
BMRS50	146	10
BMRS80	152	16
BMRS100	156	20
BMRS125	161	25
BMRS160	166.5	30.5
BMRS200	174	38.1
BMRS250	186	50
BMRS315	198	62
BMRS375	210	74

Code Mounting	G (depth)	S (depth)	P (depth)	R (depth)	M1 (depth)	M2 (depth)	M3 (depth)	B4 (depth)	B5 (depth)
P(A,B)	G1/2 (15)	7/8-14 O-ring (17)	1/2-14NPTF (15)	PT(RC)1/2 (15)	M18 x 1.5 (15)	M20 x 1.5 (15)	M22 x 1.5 (15)	ø10	ø10
T	G1/4 (12)	7/16-20UNF (12)	7/16-20UNF (12)	PT(RC)1/4 (9.7)	M10 x 1 (12)	M10 x 1 (12)	M10 x 1 (12)	7/16-20UNF(12)	G1/4(12)
C	-	-	-	-	-	-	-	4-5/16-18UNC(13)	4-M8(13)

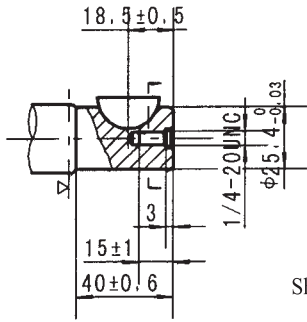
## BMR SHAFT EXTENSIONS DIMENSIONS DATA



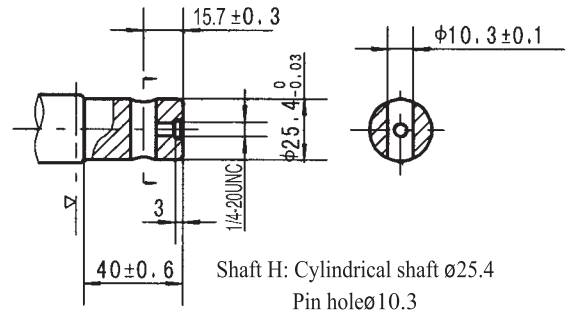
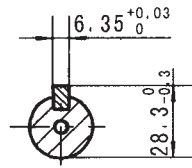
▷ Motor Mounting Surface



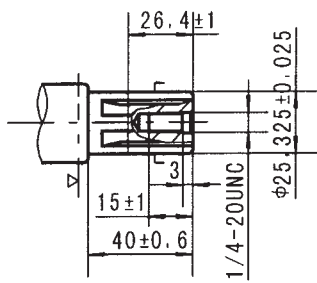
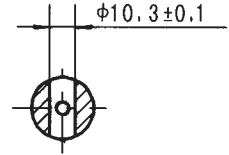
## BMRS SHAFT EXTENSIONS DIMENSIDNS DATA



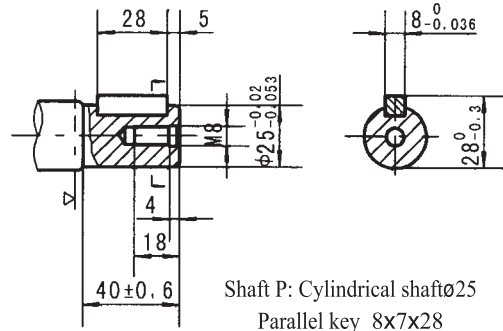
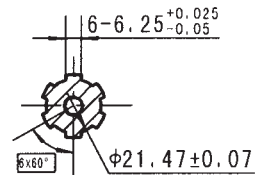
Shaft K: Cylindrical shaft  $\phi 25.4$   
Woodruff key  $\phi 25.4 \times 6.35$



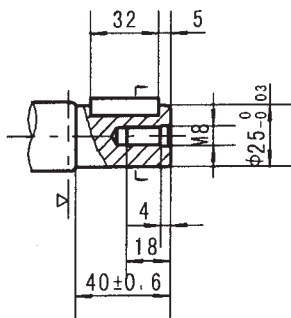
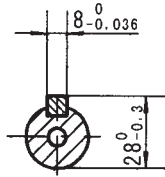
Shaft H: Cylindrical shaft  $\phi 25.4$   
Pin hole  $\phi 10.3$



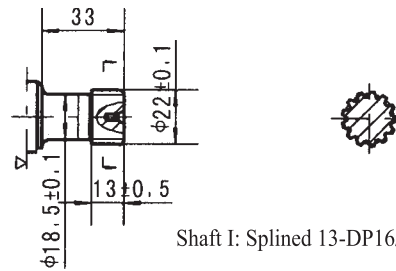
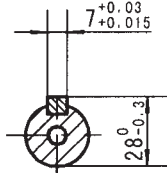
Shaft S: Splined SAE 6B



Shaft P: Cylindrical shaft  $\phi 25$   
Parallel key  $8 \times 7 \times 28$



Shaft J: Cylindrical shaft  $\phi 25$   
Parallel key  $7 \times 7 \times 32$

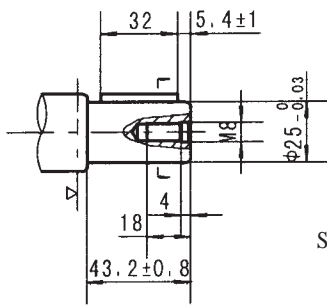


Shaft I: Splined 13-DP16/32

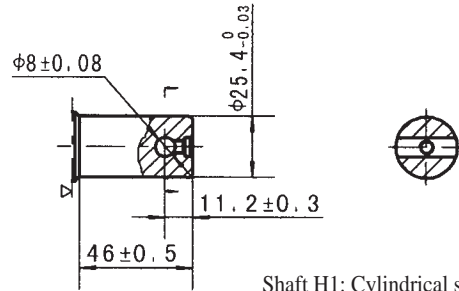


▷ Motor Mounting Surface

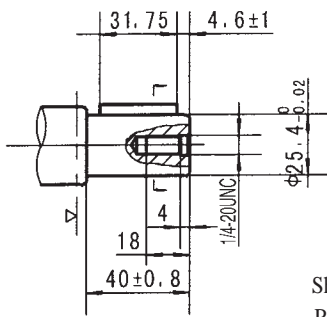
## BMRS SHAFT EXTENSIONS DIMENSIONS DATA



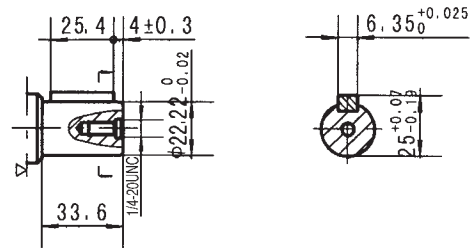
Shaft A: Cylindrical shaft  $\phi 25$   
Parallel key 8x7x32



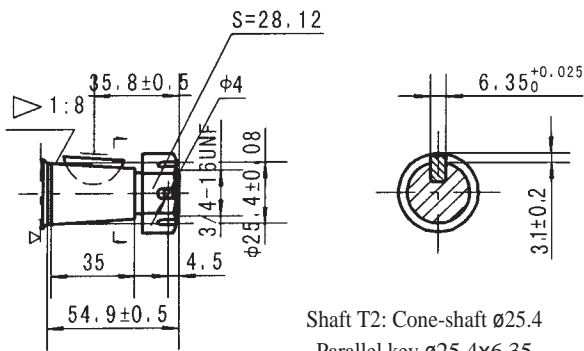
Shaft H1: Cylindrical shaft  $\phi 25.4$   
Pin hole  $\phi 8$



Shaft R: Cylindrical shaft  $\phi 25.4$   
Parallel key 6.35x6.35x31.75



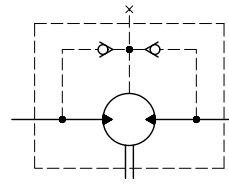
Shaft D: Cylindrical shaft  $\phi 22.22$   
Parallel key 6.35x6.35x25.4



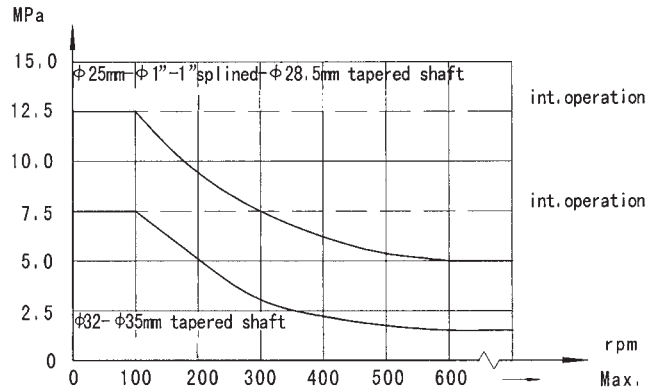
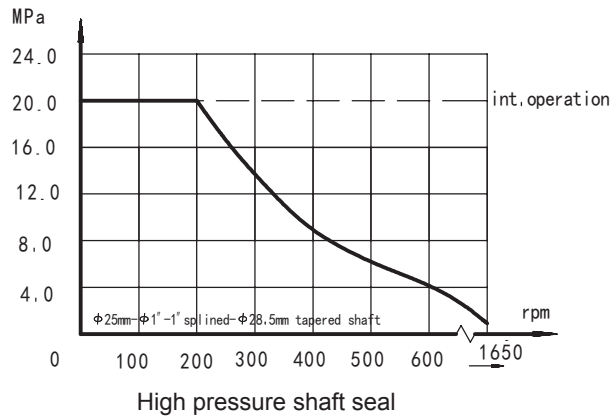
Shaft T2: Cone-shaft  $\phi 25.4$   
Parallel key  $\phi 25.4 \times 6.35$   
Tightening torque:  $200 \pm 10 \text{ Nm}$

▷ Motor Mounting Surface

## BMR, BMRS Series Hydraulic Motor



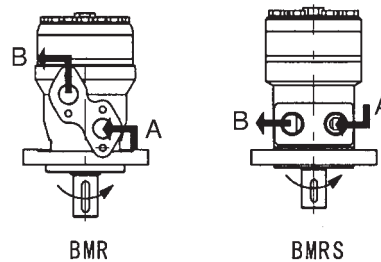
### Permissible shaft seal pressure



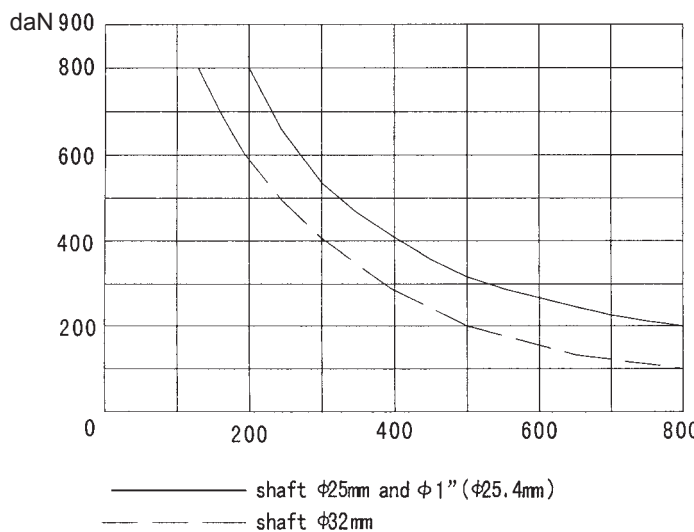
In applications without drain line, output shaft seal exceeds a bit of the pressure in the return line. When applications use the drain line, the pressure of output shaft seal equals the pressure in drain line.

### 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.



### Status of the shaft's radial force (Standard motor with journal bearing)



$$F_r = \frac{800 \cdot 25000}{n \cdot 95 + L} \text{ daN}$$

150 daN

200 daN

L

$F_r$  = Radial Force (daN)  
L = Distance (mm)  
n = Speed (rpm)  
Rhomb-flange L=30mm  
Square-flange L=24mm

### 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

1  2  3  4  5  6  7  8

**BMR**

Pos.1	2	3	4	5	6	7	8
Code	Disp.	Flange	Output Shaft	Ports and Drain Port	Rotation Direction	Paint	Unusually Function
	36	2-Ø13.5Rhomb-flange, pilot Ø82.5x8	A Shaft Ø25,parallel Key 8x7x32	D G1/2 Manifold Mount 4-M8, G1/4	Omit	00	Standard
	50		C Shaft Ø25.4,parallel Key 6.35x6.35x31.75				
	80	4-Ø13.5Rhomb-flange, pilot Ø82.5x8	E Shaft Ø25.4, splined tooth SAE 6B	S 7/8-14 O-ring manifold 4-5/16-18UNC, 7/16-20UNF	R	B	Big radial force
	100		R Short shaft Ø25.4,parallel key 6.35x6.35x31.75				
	125	4-3/8-16 Square-flange, pilot Ø44.4x2.8	T Cone-Shaft Ø28.56,parallel Key B5x5x14	P Manifold 4-5/16-18UNC, 7/16-20UNF	Opposite	S	Free Running
	160		B Shaft Ø32,parallel Key 10x8x45				
	200	4-M10 Square-flange, pilot Ø44.4x2.8	F Shaft Ø31.75, splined tooth 14-DP12/24	R PT (Rc)1/2 Manifold 4-M8, PT (Rc)1/4			Low Speed
	250		FD Long shaft Ø31.75, splined tooth 14-DP12/24				
	315		G Shaft Ø31.75, parallel Key 7.96x7.96x31.75				
	375						

Note: The shafts of B\F\FD\G\T1\T3 are only suitable for flanges of 2 and 4.

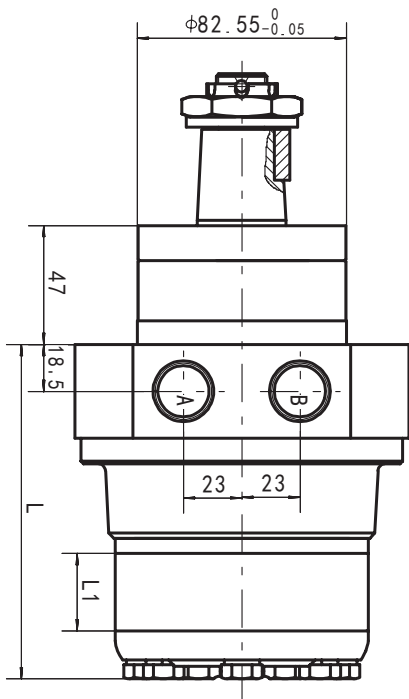
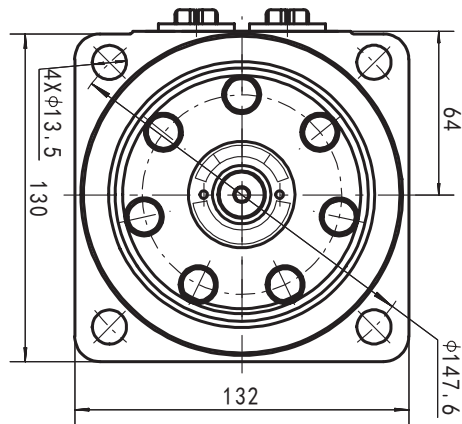
1  2  3  4  5  6  7  8

**BMRS**

Pos.1	2	3	4	5	6	7	8
Code	Disp.	Flange	Output Shaft	Ports and Drain Port	Rotation Direction	Paint	Unusually Function
	36	2-Ø13.5Rhomb-flange, pilot Ø82.5x2.8	K Shaft Ø25.4,Woodruff Key Ø25.4x6.35	G G1/2, G1/4	Omit	00	Standard
	50		S Sub-shaft Ø25.4, splined tooth SAE 6B				
	80	4-Ø13.5Rhomb-flange, pilot Ø82.5x2.8	A Shaft Ø25 , parallel key 8x7x32	P 1/2-14 NPTF, 7/16-20UNF (G1/4)	R	B	Big radial force
	100		R Shaft Ø25.4, parallel key 6.35x6.35x31.75				
	125	4-3/8-16 Square-flange, pilot Ø44.4x2.8	H Sub-shaft Ø25.4,Pin hole Ø10.3	T 3/4-16 O-ring, 7/16-20UNF	Opposite	S	Free Running
	160		H1 Shaft Ø25.4, pin hole Ø8				
	200	4-M10 Square-flange, pilot Ø44.4x2.8	D Shaft Ø22.22, parallel key 6.35x6.35x25.4	B5			Low Speed
	250		I Shaft Ø22.22, splined tooth 13-DP16/32				
	315		T2 Cone shaft Ø25.4 , woodruff key Ø25.4x6.35	M1 M18x1.5, M10x1			
	375		P Shaft Ø25,parallel Key 8x7x28	M2 M20x1.5, M10x1			
			J Shaft Ø25,parallel Key 7x7x32	M3 M22x1.5, M10x1			

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.

## BMRWN DIMENSIONS MOUNTING DATA



Model	L	L1
BMRWN-50	113	10
BMRWN-80	119	16
BMRWN-100	123	20
BMRWN-125	128	25
BMRWN-160	133.5	30.5
BMRWN-200	141	38.1
BMRWN-250	153	50
BMRWN-315	165	62
BMRWN-375	177	74



### Order Information

Pos.1	2	3	4	5	6	7	8
Code	50 80 100 125 160 200 250 315 375	Flange 4-Ø13.5 Wheel Mount , Ø82.5x9.4 Omit	Output shaft T1 1:10Cone shaft Ø35, parallel key B6x6x20 B Shaft Ø32 , parallel key 10x8x4 F Shaft Ø31.75, splined key 14-DP12/2 FD Long Shaft Ø31.75, splined key14-DP12/24 G Shaft Ø31.75, parallel key 7.96x7.96x31.75	Ports and drain port D G1/2, G1/4 M M22x1.5, M14x1.5 S 7/8-14 O-ring, 7/16-20UNF P 1/2-14NPTF, 7/16-20UNF	Rotation direction Omit Standard Opposite R	Paint 00 No paint Omit Blue B Black S Silver grey	Unusually function Omit Standard

Note: When the table is used, please fill the code of right rows in the table 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.

Mounting / Code	G(depth)	M(depth)	S(depth)	P(depth)
P(A,B)	G1/2(15)	M22x1.5(15)	7/8-14O-ring(17)	1/2-14NPTF(15)
C	G1/4(12)	M14x1.5(12)	7/16-20UNF(12)	7/16-20UNF(12)



## BMR-BK01 SERIES HYDRAULIC MOTOR WITH BRAKE

BMR-BK01 Series hydraulic motor with brake extending BMR series motor range. This motor has an integrated holding brake.

### 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 use in parallel or in 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 .
- \*Small volume and radial dimension,high holding torque,power brake,low weight and easy to install.

### Main Specification

Type		BMR -BK01 50	BMR -BK01 80	BMR -BK01 100	BMR -BK01 125	BMR -BK01 160	BMR -BK01 200	BMR -BK01 250	BMR -BK01 315	BMR -BK01 375
Geometric displacement (cm <sup>3</sup> /rev.)		51.7	81.5	102	127.2	157.2	194.5	253.3	317.5	381.4
Max. speed (rpm)	rated	490	479	478	421	341	276	212	169	141
	cont.	509	502	497	459	372	301	231	184	166
	int.	603	598	574	574	465	376	289	230	192
Max. torque (N·m)	rated	104	164	205	256	316	335	437	456	465
	cont.	103	203	254	317	391	359	437	456	465
	int.	88.6	160	200	250	308	333	473	502	520
Max. output (KW)	rated	5.3	8.2	10.3	11.3	11.3	9.7	9.7	8.1	6.9
	cont.	5.5	10.7	13.2	15.2	15.2	11.3	10.6	8.8	8.1
	int.	5.6	10	12	15	15	13.1	14.3	12.1	10.5
Max. Pressure drop (MPa)	rated	14	14	14	14	14	12	12	10	8.5
	cont.	14	17.5	17.5	17.5	17.5	13	12	10	8.5
	int.	17.5	20	20	20	20	17.5	13	11	9.5
Max. Flow (L/min)	rated	26	40	50	55	55	55	55	55	55
	cont.	27	42	52	60	60	60	60	60	65
	int.	32	50	60	75	75	75	75	75	75
Min. opening pressure (MPa)		1.7—2.2								
Max. inlet pressure (MPa)		25								
Max. brake release port pressure (MPa)		25								
Max. static torque (Nm)		500—550								
Weight (kg)		11.7	11.9	11.9	12.2	12.5	13	13.5	14	14.5

\*Rated speed and rated torque:output value of speed and torque under rated flow and rated pressure.

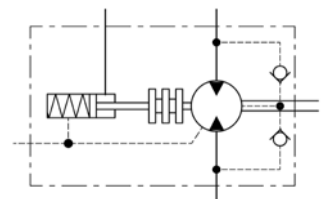
\*Continuous pressure:Max. value of operating motor continuously.

\*Intermittent pressure:Max. value of operating motor in 6 seconds per minute .

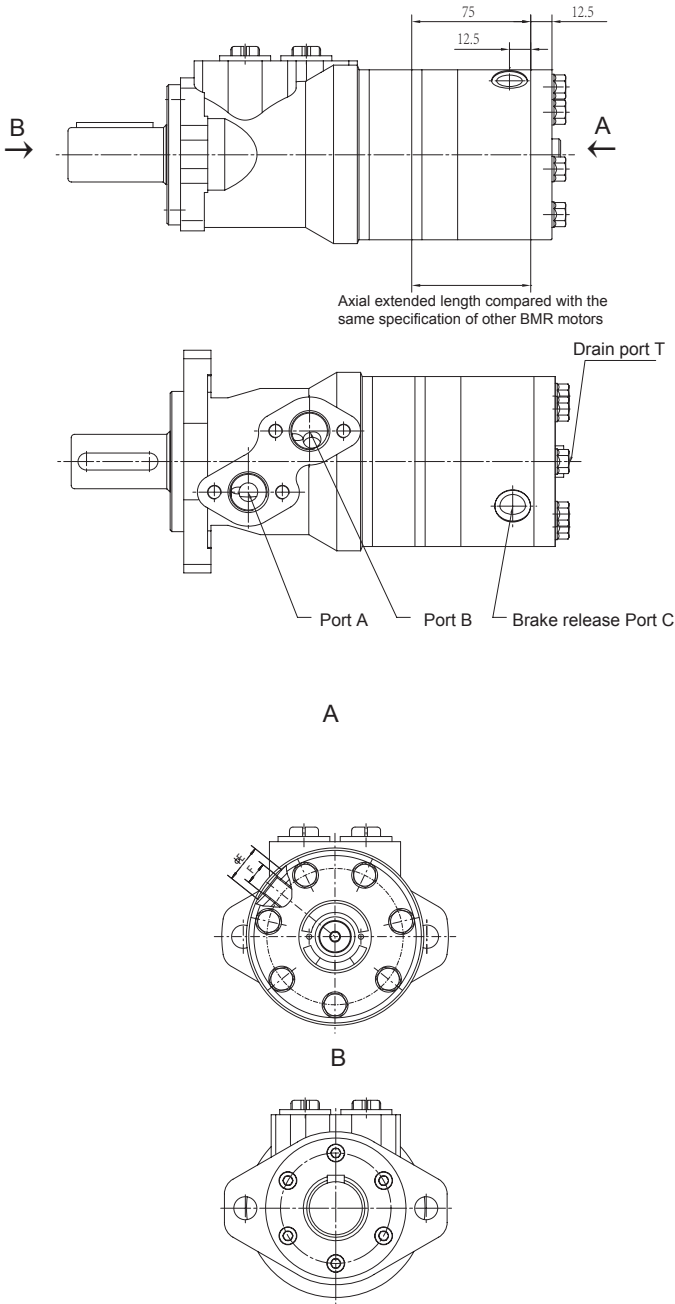
\*Peak pressure:Max. value of operating motor in 0.6 second per minute.

\*Such kind of brake is only used in static paring brake.Dynamic braking in not recommended.

When the motor integrated with brake is working, the pressure at releasing port must be more than 2.2MPa. In the status of braking, the pressure at releasing port must be less than 1.7 MPa, optimally 0 MPa. It is attention in use that the back pressure of the oil circuit is the best 0 MPa.



# BMR-BK01 DIMENSIONS AND MOUNTING DATA



Model	Port C	ΦE	F
	G	22	G1/4 Depth 9

Note: The mount data is completely referred to BMR series motor. The axial extended length reduces 75mm as picture. Port C is brake releasing port, the position is as picture.

## Order information

Pos.1	2	3	4	5	6	7	8	9
Code	Disp.	Flange	Output Shaft	Ports and Drain Port	Brake release Port	Rotation Direction	Paint	Unusually Function
	50 80 100 125 160 200 250 315 375	2-Ø13.5Rhomb-flange, pilot Ø82.5×8 4-Ø13.5Rhomb-flange, pilot Ø82.5×8 4-3/8-16Square-flange, pilot Ø44.4×2.8 4-M10Square-flange, pilot Ø44.4×2.8	A Shaft Ø25,parallel Key 8×7×32 C Shaft Ø25.4,parallel Key 6.35×6.35×31.75 E Shaft Ø25.4,spined tooth SAE 6B R Short shaft Ø25.4,parallel Key 6.35×6.35×31.75 B Shaft Ø32,parallel Key 10×8×45 F Shaft Ø31.75,spined tooth 14-DP12/24 FD Long shaft Ø31.75,spined tooth 14-DP12/24 G Shaft Ø31.75,parallel Key 7.96×7.96×31.75 T Cone-Shaft Ø28.56,parallel Key B5×5×14	D G1/2 Manifold Mount 4×M8, G1/4 M M22×1.5 Manifold Mount 4×M8, M14×1.5 S 7/8-14 O-ring manifold P 4×5/16-18UNC, 7/16-20UNF R 1/2-14 NPTF Manifold 4×5/16-18UNC, 7/16-20UNF PT(Rc)1/2 Manifold 4×M8, PT(Rc)1/4	G Depth 9 facing Ø22	Omit Standard Opposite R	00 No paint Omit Blue B Black S Silver grey	N1 Big radial force

Note: When the table is used, please fill the code of right rows in the table 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.  
Note: The shafts of B1F/DG1/T3 are only suitable for flanges of 2 and 4.