



## HYDROMOTOR SÉRIE BMSY

Motor novej série BMSY prispôsobuje pokročilú prevodovku Geroler navrhnutú s diskovým rozvodom a vysokým tlakom. Jednotka môže byť dodaná v individuálnom variante v prevádzkovej multifunkcii v súlade s požiadavkami aplikácií.

### Charakteristické vlastnosti:

- Pokročilé výrobné zariadenia pre Gerolerovu prevodovku, ktoré využívajú nízky tlak pri spúšťaní, zabezpečujú hladkú a spoľahlivú prevádzku a vysokú účinnosť. Výstupný hriadeľ sa prispôsobuje v kuželíkových ložiskách, ktoré prenášajú vysoké axiálne a radiálne sily. Skriňa môže ponúkať kapacity vysokého tlaku a vysokého krútiaceho momentu v širokej škále aplikácií.
- Pokročilá konštrukcia v rozvodnom prúde kotúča, ktorá dokáže automaticky kompenzovať v prevádzke s vysokou objemovou účinnosťou a dlhou životnosťou, zabezpečuje plynulú a spoľahlivú prevádzku.
- Motor novej série je vhodný pre vozidlá s väčším zaťažením a poklesom tlaku.

### Hlavná špecifikácia

Typ		BMSY BMSYS 80	BMSY BMSYS 100	BMSY BMSYS 125	BMSY BMSYS 160	BMSY BMSYS 200	BMSY BMSYS 250	BMSY BMSYS 315	BMSY BMSYS 400	BMSY BMSYS 475
Geometrický objem (cm <sup>3</sup> / ot)		80,6	100,8	125	154	194	243	311	394	475
Max. rýchlosť (rpm)	cont.	800	748	600	470	375	300	240	185	155
	int.	988	900	720	560	450	360	280	225	185
Max. krútiaci moment (N•m)	cont.	225	290	365	485	586	708	880	880	910
	int.	305	390	480	590	705	860	1000	980	990
Max. výstup (kW)	cont.	16	18	18	18,1	18,1	18	17	11	9
	int.	20	22	23	25	24	23,8	20,2	12	11
Max. spád tlaku (MPa)	cont.	20,5	20,5	20,5	21	21	20	20	16	14
	int.	27,5	27,5	27,5	26	25	25	24	19	15
	peak	29,5	29,5	29,5	28	27	27	26	21	17,5
Max. prietok (L/min)	cont.	65	75	75	75	75	75	75	75	75
	int.	80	90	90	90	90	90	90	90	90
Max. vstupný tlak (MPa)	cont.	25	25	25	25	25	25	25	25	25
	int.	30	30	30	30	30	30	30	30	30
Hmotnosť (kg)		9,8	10	10,3	10,7	11,1	11,6	12,3	13,2	14,3

\* Trvalý tlak: Maximálna hodnota trvalej prevádzky motora.

\* Prerušovaný tlak: Maximálna hodnota prevádzkového motora za 6 sekúnd za minútu.

\* Špičkový tlak: Max. hodnota prevádzkového motora za 0,6 sekundy za minútu.

## Údaje o výkonnosti

BMSY 80 [80,6 cm<sup>3</sup>/ot]  
 Tlak (MPa)

		Max.cont.					Max.int.	
		3.5	7	10.5	14	17.5	20.5	22.5
15		35	80	120	158	195	228	249
		<b>180</b>	<b>174</b>	<b>168</b>	<b>164</b>	<b>158</b>	<b>151</b>	<b>143</b>
30		35	80	120	158	195	232	260
		<b>362</b>	<b>352</b>	<b>346</b>	<b>338</b>	<b>330</b>	<b>322</b>	<b>310</b>
40		35	79	119	155	193	227	250
		<b>487</b>	<b>480</b>	<b>468</b>	<b>457</b>	<b>446</b>	<b>438</b>	<b>425</b>
50		30	77	117	153	192	224	248
		<b>612</b>	<b>603</b>	<b>592</b>	<b>581</b>	<b>572</b>	<b>558</b>	<b>542</b>
60		28	77	117	153	192	224	243
		<b>735</b>	<b>726</b>	<b>718</b>	<b>703</b>	<b>687</b>	<b>673</b>	<b>646</b>
Max.cont.	65	26	75	116	151	188	217	236
		<b>794</b>	<b>786</b>	<b>773</b>	<b>760</b>	<b>744</b>	<b>722</b>	<b>706</b>
Max.int.	80	24	72	109	142	176	206	227
		<b>981</b>	<b>968</b>	<b>955</b>	<b>925</b>	<b>893</b>	<b>870</b>	<b>832</b>

BMSY 100 [100,8 cm<sup>3</sup>/ot]  
 Tlak (MPa)

		Max.cont.					Max.int.	
		3.5	7	10.5	14	17.5	20.5	22.5
15		48	95	150	200	250	282	310
		<b>146</b>	<b>144</b>	<b>139</b>	<b>135</b>	<b>130</b>	<b>120</b>	<b>105</b>
30		45	94	146	198	250	290	317
		<b>291</b>	<b>289</b>	<b>278</b>	<b>274</b>	<b>269</b>	<b>258</b>	<b>242</b>
40		43	89	142	196	248	288	316
		<b>387</b>	<b>384</b>	<b>374</b>	<b>359</b>	<b>350</b>	<b>335</b>	<b>320</b>
50		40	88	135	194	247	286	315
		<b>486</b>	<b>483</b>	<b>473</b>	<b>462</b>	<b>450</b>	<b>430</b>	<b>420</b>
60		37	88	132	185	244	283	312
		<b>588</b>	<b>584</b>	<b>574</b>	<b>562</b>	<b>550</b>	<b>538</b>	<b>520</b>
Max.cont.	75	35	80	130	180	240	279	310
		<b>740</b>	<b>735</b>	<b>720</b>	<b>705</b>	<b>696</b>	<b>676</b>	<b>653</b>
Max.int.	90	30	75	124	170	236	271	303
		<b>850</b>	<b>840</b>	<b>810</b>	<b>787</b>	<b>770</b>	<b>750</b>	<b>747</b>

BMSY 125 [125 cm<sup>3</sup>/ot]  
 Tlak (MPa)

		Max.cont.					Max.int.	
		3.5	7	10.5	14	17.5	20.5	22.5
15		55	120	176	245	309	345	375
		<b>115</b>	<b>113</b>	<b>110</b>	<b>104</b>	<b>98</b>	<b>90</b>	<b>84</b>
30		55	120	175	250	315	364	404
		<b>231</b>	<b>228</b>	<b>223</b>	<b>214</b>	<b>202</b>	<b>188</b>	<b>172</b>
40		53	118	178	250	315	364	403
		<b>312</b>	<b>309</b>	<b>290</b>	<b>289</b>	<b>278</b>	<b>262</b>	<b>235</b>
50		50	115	176	248	315	362	397
		<b>391</b>	<b>386</b>	<b>378</b>	<b>365</b>	<b>352</b>	<b>339</b>	<b>308</b>
60		45	113	171	241	308	358	397
		<b>469</b>	<b>461</b>	<b>450</b>	<b>437</b>	<b>425</b>	<b>400</b>	<b>372</b>
Max.cont.	75	45	110	167	240	306	352	389
		<b>588</b>	<b>574</b>	<b>560</b>	<b>544</b>	<b>526</b>	<b>505</b>	<b>481</b>
Max.int.	90	40	105	162	237	301	343	378
		<b>710</b>	<b>696</b>	<b>680</b>	<b>661</b>	<b>646</b>	<b>628</b>	<b>610</b>

BMSY 160 [154 cm<sup>3</sup>/ot]  
 Tlak (MPa)

		Max.cont.					Max.int.	
		3.5	7	10.5	14	17.5	21	22.5
15		70	142	215	298	372	435	476
		<b>93</b>	<b>91</b>	<b>89</b>	<b>85</b>	<b>80</b>	<b>76</b>	<b>58</b>
30		73	151	225	312	382	456	492
		<b>189</b>	<b>187</b>	<b>181</b>	<b>176</b>	<b>170</b>	<b>162</b>	<b>153</b>
40		75	152	228	314	383	454	488
		<b>252</b>	<b>250</b>	<b>246</b>	<b>239</b>	<b>234</b>	<b>228</b>	<b>212</b>
50		70	148	225	305	372	445	480
		<b>313</b>	<b>310</b>	<b>306</b>	<b>298</b>	<b>293</b>	<b>285</b>	<b>272</b>
60		68	143	218	296	370	442	480
		<b>378</b>	<b>376</b>	<b>370</b>	<b>362</b>	<b>353</b>	<b>346</b>	<b>332</b>
Max.cont.	75	62	140	211	291	365	439	475
		<b>475</b>	<b>469</b>	<b>461</b>	<b>450</b>	<b>441</b>	<b>432</b>	<b>414</b>
Max.int.	90	59	131	202	286	357	425	460
		<b>567</b>	<b>561</b>	<b>554</b>	<b>543</b>	<b>532</b>	<b>520</b>	<b>509</b>

Krútiaci moment (N·m) 301  
 Rýchlosť (rpm) 646

□ cont.  
 ■ int.

## Údaje o výkonnosti

BMSY 200 [194 cm<sup>3</sup>/ot]  
 Tlak (MPa)

		Max.cont.						Max.int.
		3.5	7	10.5	14	17.5	21	22.5
Prietok (L/min)	15	87	179	273	371	471	562	610
		<b>74</b>	<b>73</b>	<b>71</b>	<b>68</b>	<b>64</b>	<b>60</b>	<b>48</b>
	30	91	190	288	386	489	572	618
		<b>150</b>	<b>148</b>	<b>143</b>	<b>140</b>	<b>134</b>	<b>128</b>	<b>119</b>
	40	94	193	296	394	498	584	645
		<b>198</b>	<b>195</b>	<b>192</b>	<b>188</b>	<b>183</b>	<b>178</b>	<b>167</b>
Max.cont.	50	90	191	292	389	493	580	634
		<b>248</b>	<b>246</b>	<b>241</b>	<b>236</b>	<b>230</b>	<b>223</b>	<b>212</b>
	60	85	185	279	382	483	575	622
	<b>300</b>	<b>295</b>	<b>288</b>	<b>281</b>	<b>273</b>	<b>263</b>	<b>251</b>	
Max.int.	75	78	176	271	370	472	561	610
		<b>374</b>	<b>370</b>	<b>364</b>	<b>360</b>	<b>352</b>	<b>340</b>	<b>331</b>
	90	68	163	265	361	456	545	599
		<b>443</b>	<b>440</b>	<b>435</b>	<b>428</b>	<b>424</b>	<b>413</b>	<b>400</b>

BMSY 250 [243 cm<sup>3</sup>/ot]  
 Tlak (MPa)

		Max.cont.						Max.int.
		3.5	7	10.5	14	17.5	20	22.5
Prietok (L/min)	15	110	231	351	462	585	681	778
		<b>59</b>	<b>58</b>	<b>56</b>	<b>53</b>	<b>50</b>	<b>46</b>	<b>35</b>
	30	116	236	359	475	597	700	790
		<b>119</b>	<b>117</b>	<b>114</b>	<b>108</b>	<b>102</b>	<b>92</b>	<b>80</b>
	40	118	241	363	480	599	706	796
		<b>162</b>	<b>159</b>	<b>156</b>	<b>150</b>	<b>143</b>	<b>134</b>	<b>121</b>
Max.cont.	50	111	234	352	472	591	693	788
		<b>203</b>	<b>201</b>	<b>197</b>	<b>191</b>	<b>182</b>	<b>173</b>	<b>158</b>
	60	106	224	345	462	582	685	772
	<b>244</b>	<b>242</b>	<b>237</b>	<b>230</b>	<b>220</b>	<b>208</b>	<b>194</b>	
Max.int.	75	101	214	340	454	570	670	760
		<b>303</b>	<b>299</b>	<b>294</b>	<b>285</b>	<b>272</b>	<b>260</b>	<b>244</b>
	90	93	209	335	447	559	657	749
		<b>363</b>	<b>359</b>	<b>354</b>	<b>348</b>	<b>340</b>	<b>328</b>	<b>303</b>

BMSY 315 [311 cm<sup>3</sup>/ot]  
 Tlak (MPa)

		Max.cont.						Max.int.
		3.5	7	10.5	14	17.5	20	22.5
Prietok (L/min)	15	148	304	456	613	762	879	978
		<b>48</b>	<b>47</b>	<b>45</b>	<b>43</b>	<b>41</b>	<b>39</b>	<b>27</b>
	30	155	314	465	635	778	884	988
		<b>95</b>	<b>93</b>	<b>91</b>	<b>89</b>	<b>86</b>	<b>82</b>	<b>67</b>
	40	160	321	479	650	796	906	997
		<b>127</b>	<b>125</b>	<b>121</b>	<b>117</b>	<b>115</b>	<b>109</b>	<b>91</b>
Max.cont.	50	155	314	465	638	780	886	988
		<b>159</b>	<b>157</b>	<b>153</b>	<b>149</b>	<b>145</b>	<b>142</b>	<b>128</b>
	60	151	306	453	620	765	886	976
	<b>187</b>	<b>185</b>	<b>181</b>	<b>176</b>	<b>169</b>	<b>157</b>	<b>143</b>	
Max.int.	75	146	300	445	613	755	875	966
		<b>238</b>	<b>236</b>	<b>232</b>	<b>227</b>	<b>224</b>	<b>220</b>	<b>196</b>
	90	135	284	436	601	740	863	952
		<b>286</b>	<b>283</b>	<b>278</b>	<b>272</b>	<b>265</b>	<b>257</b>	<b>232</b>

BMSY 400 [394 cm<sup>3</sup>/ot]  
 Tlak (MPa)

		Max.cont.						Max.int.
		3.5	7	10.5	14	16	17.5	
Prietok (L/min)	15	186	379	578	779	896	986	
		<b>37</b>	<b>36</b>	<b>35</b>	<b>33</b>	<b>31</b>	<b>29</b>	
	30	190	388	590	791	905	991	
		<b>75</b>	<b>73</b>	<b>71</b>	<b>68</b>	<b>65</b>	<b>61</b>	
	40	195	394	596	797	912	998	
		<b>99</b>	<b>97</b>	<b>95</b>	<b>93</b>	<b>90</b>	<b>85</b>	
Max.cont.	50	191	388	587	785	904	983	
		<b>125</b>	<b>123</b>	<b>118</b>	<b>114</b>	<b>109</b>	<b>102</b>	
	60	186	388	587	785	904	983	
	<b>149</b>	<b>146</b>	<b>142</b>	<b>137</b>	<b>131</b>	<b>122</b>		
Max.int.	75	181	372	576	770	891	973	
		<b>187</b>	<b>183</b>	<b>177</b>	<b>171</b>	<b>164</b>	<b>153</b>	
	90	176	367	571	766	883	965	
		<b>226</b>	<b>221</b>	<b>214</b>	<b>208</b>	<b>199</b>	<b>183</b>	

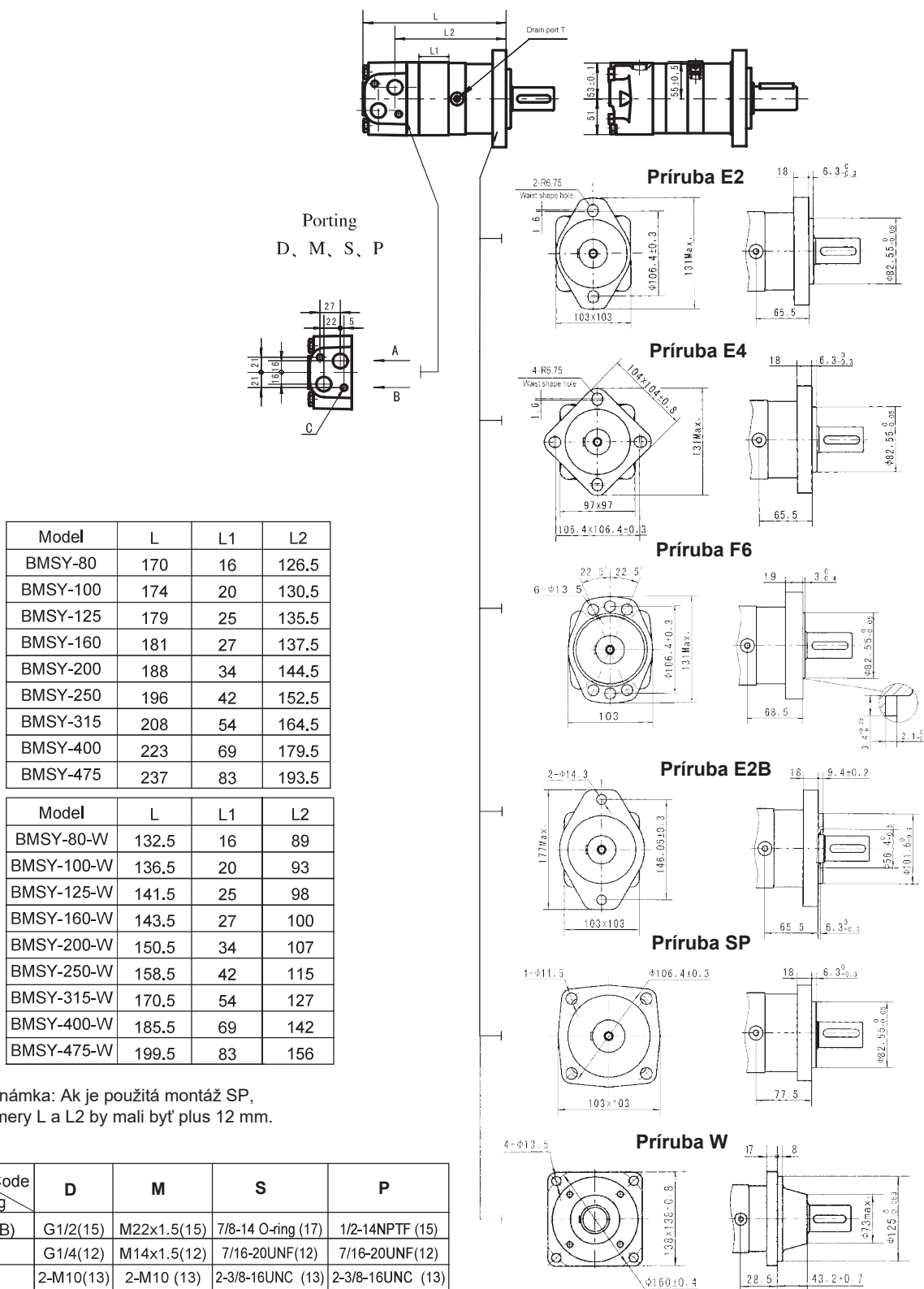
BMSY 475 [475 cm<sup>3</sup>/ot]  
 Tlak (MPa)

		Max.cont.					Max.int.
		3.5	7	10.5	14	15	
Prietok (L/min)	15	218	439	661	892	995	
		<b>30</b>	<b>29</b>	<b>28</b>	<b>27</b>	<b>25</b>	
	30	223	450	676	910	1002	
		<b>61</b>	<b>60</b>	<b>58</b>	<b>56</b>	<b>53</b>	
	40	228	461	689	927	1017	
		<b>82</b>	<b>80</b>	<b>77</b>	<b>74</b>	<b>68</b>	
Max.cont.	50	224	456	682	920	1008	
		<b>103</b>	<b>101</b>	<b>97</b>	<b>92</b>	<b>86</b>	
	60	220	451	677	913	998	
	<b>123</b>	<b>121</b>	<b>118</b>	<b>112</b>	<b>105</b>		
Max.int.	75	212	443	664	901	980	
		<b>155</b>	<b>153</b>	<b>147</b>	<b>140</b>	<b>132</b>	
	90	196	421	643	877	959	
		<b>186</b>	<b>184</b>	<b>178</b>	<b>170</b>	<b>157</b>	

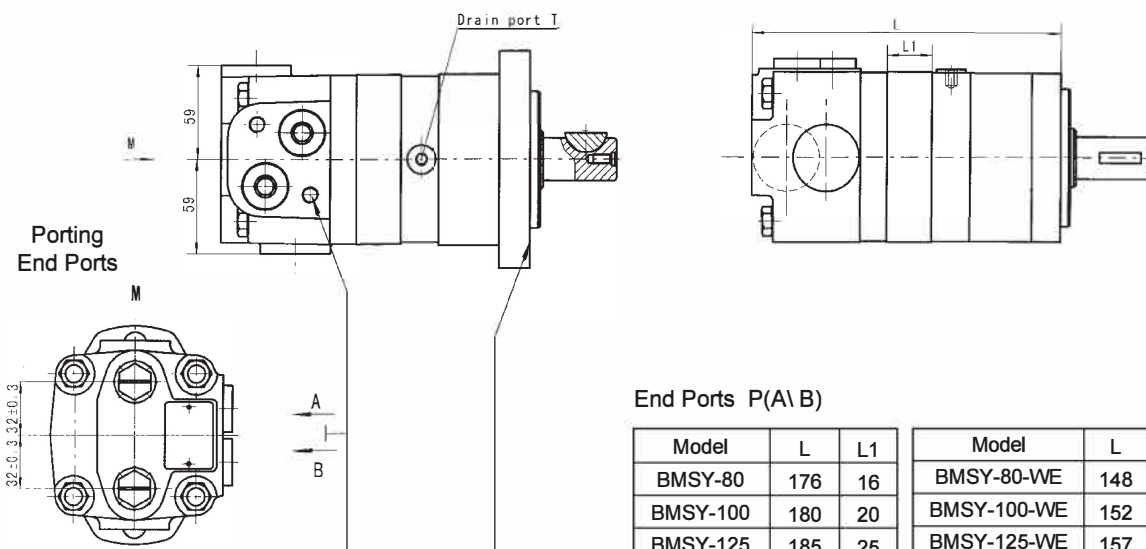
cont.  
 int.

Krútiaci moment (N•m) 766  
 Rýchlosť (rpm) 208

### BMR Rozmery a montážne parametre



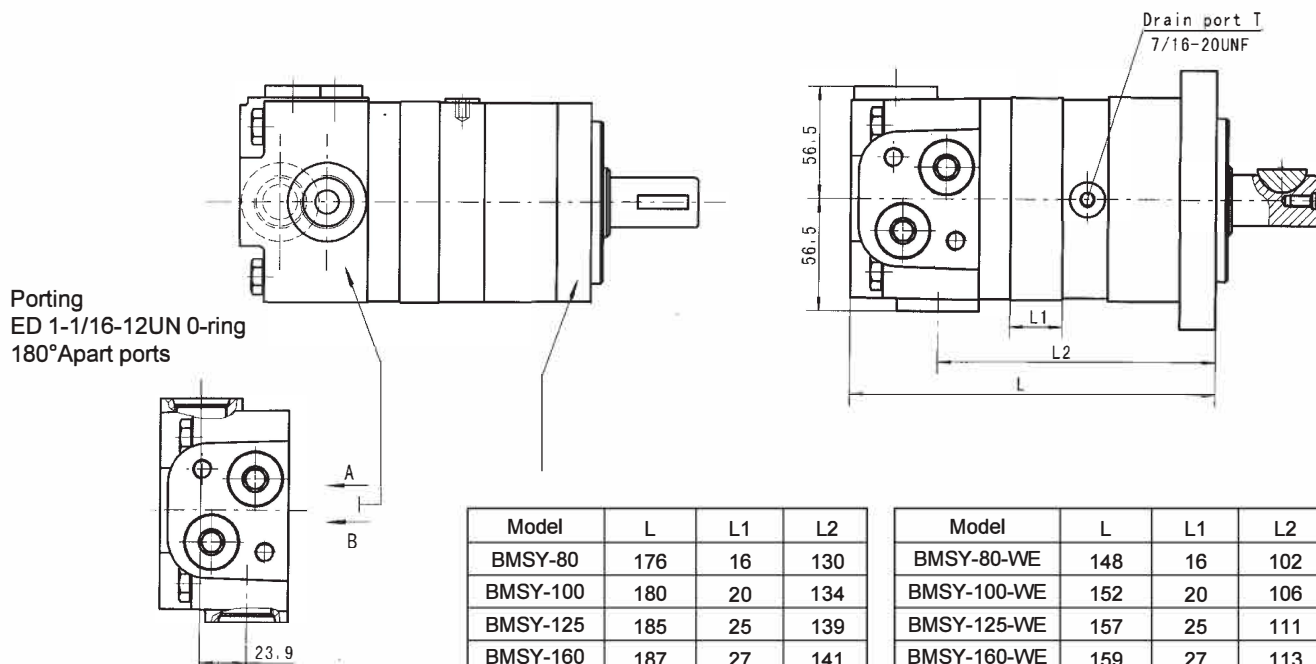
### BMR Rozmery a montážne parametre



End Ports P(A|B)

Model	L	L1	Model	L	L1
BMSY-80	176	16	BMSY-80-WE	148	16
BMSY-100	180	20	BMSY-100-WE	152	20
BMSY-125	185	25	BMSY-125-WE	157	25
BMSY-160	187	27	BMSY-160-WE	159	27
BMSY-200	194	34	BMSY-200-WE	166	34
BMSY-250	202	42	BMSY-250-WE	174	42
BMSY-315	214	54	BMSY-315-WE	186	54
BMSY-400	229	69	BMSY-400-WE	201	69
BMSY-475	243	83	BMSY-475-WE	215	83

Code Mounting	EE-D (depth)	EE-M2 (depth)	EE-S2 (depth)
	P(A,B)	G1/2 (15)	M22 x 1.5 (15)
T	G1/4 (12)	M14 x 1.5 (12)	7/16-20UNF(12)

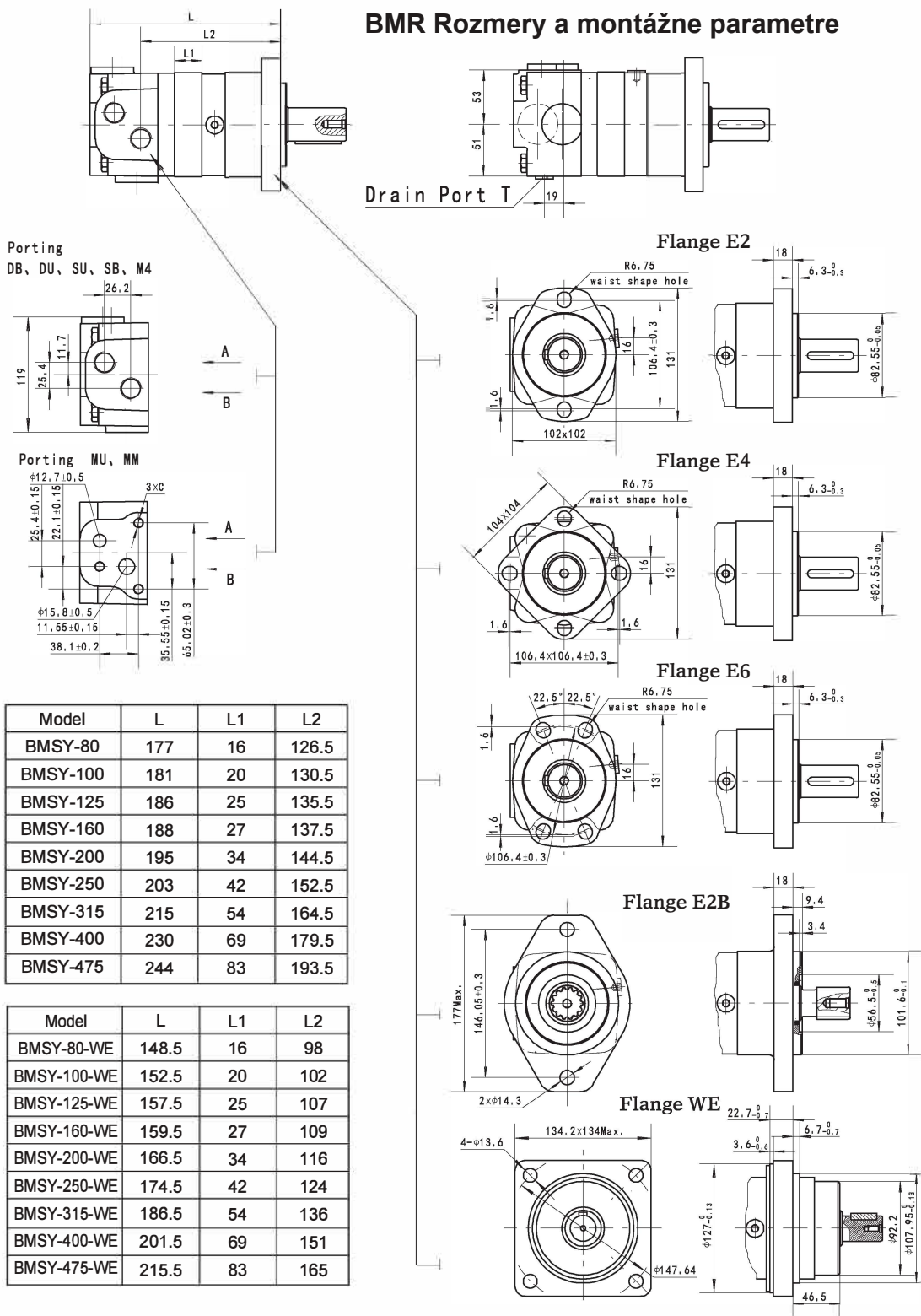


Model	L	L1	L2
BMSY-80	176	16	130
BMSY-100	180	20	134
BMSY-125	185	25	139
BMSY-160	187	27	141
BMSY-200	194	34	148
BMSY-250	202	42	156
BMSY-315	214	54	168
BMSY-400	229	69	183
BMSY-475	243	83	197

Model	L	L1	L2
BMSY-80-WE	148	16	102
BMSY-100-WE	152	20	106
BMSY-125-WE	157	25	111
BMSY-160-WE	159	27	113
BMSY-200-WE	166	34	119
BMSY-250-WE	178	42	127
BMSY-315-WE	190	54	139
BMSY-400-WE	205	69	154
BMSY-475-WE	219	83	168

Code Mounting	ED (depth)
	P(A,B)
T	7/16-20UNF (12)

### BMR Rozmery a montážne parametre

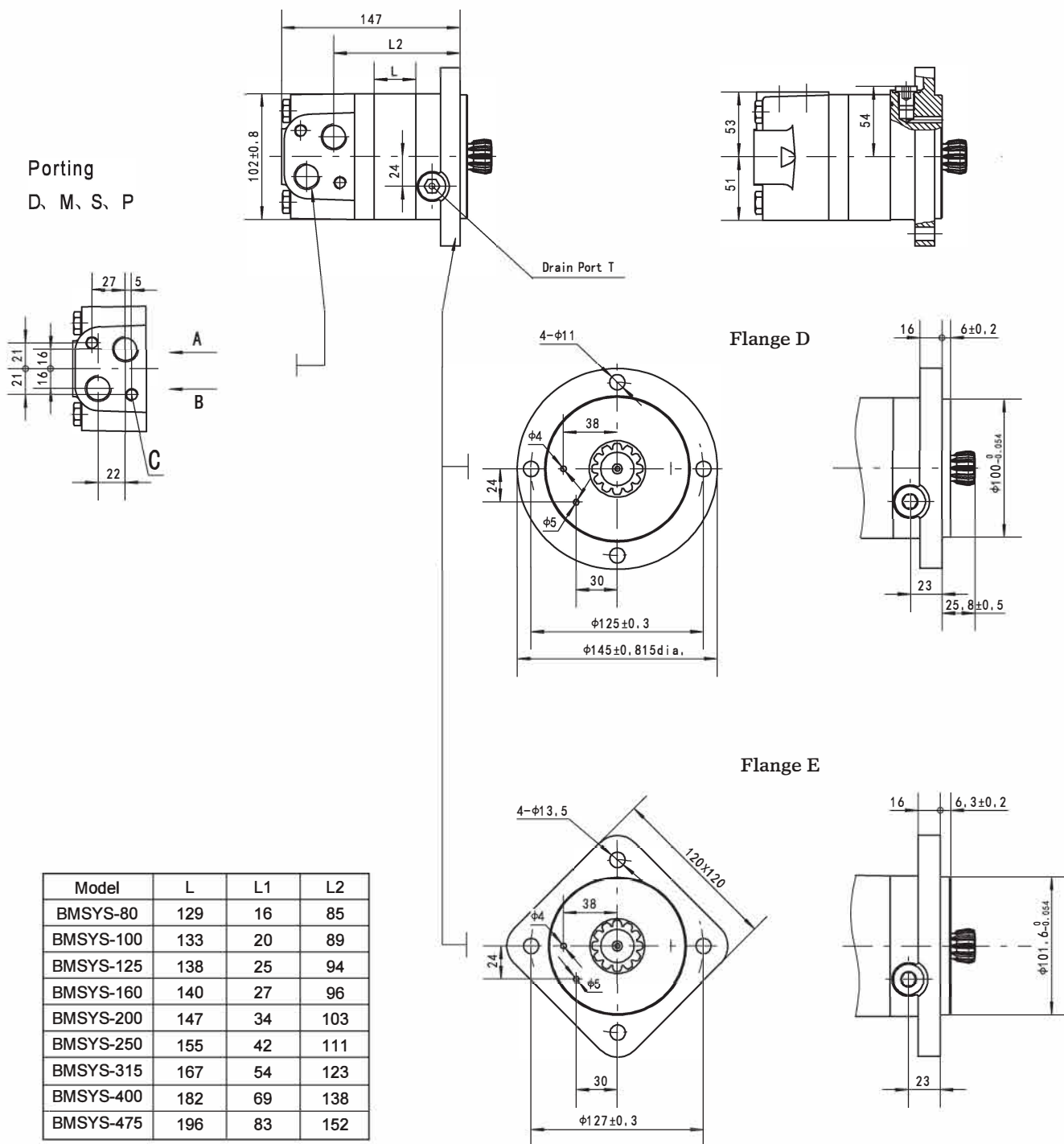


Model	L	L1	L2
BMSY-80	177	16	126.5
BMSY-100	181	20	130.5
BMSY-125	186	25	135.5
BMSY-160	188	27	137.5
BMSY-200	195	34	144.5
BMSY-250	203	42	152.5
BMSY-315	215	54	164.5
BMSY-400	230	69	179.5
BMSY-475	244	83	193.5

Model	L	L1	L2
BMSY-80-WE	148.5	16	98
BMSY-100-WE	152.5	20	102
BMSY-125-WE	157.5	25	107
BMSY-160-WE	159.5	27	109
BMSY-200-WE	166.5	34	116
BMSY-250-WE	174.5	42	124
BMSY-315-WE	186.5	54	136
BMSY-400-WE	201.5	69	151
BMSY-475-WE	215.5	83	165

Mounting	Code	DB(depth)	DU (depth)	SU (depth)	SB (depth)	M4 (depth)	MU	MM
P(A,B)		G1/2(15)	G1/2(15)	7/8-14O-ring(17)	7/8-14O-ring(17)	M22x1.5(15)	Φ12.7,Φ15.8	Φ12.7,Φ15.8
T		G1/4(12)	7/16-20UNF(12)	7/16-20UNF(12)	G1/4(12)	M14x1.5(12)	7/16-20UNF(12)	G1/4(12)
C							3/8-16UNC	M10

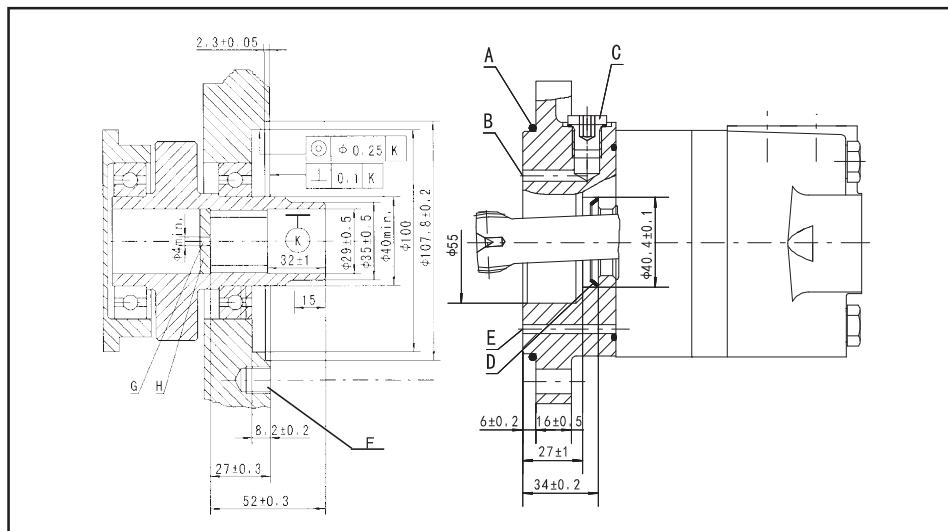
### BMR Rozmery a montážne parametre



Model	L	L1	L2
BMSYS-80	129	16	85
BMSYS-100	133	20	89
BMSYS-125	138	25	94
BMSYS-160	140	27	96
BMSYS-200	147	34	103
BMSYS-250	155	42	111
BMSYS-315	167	54	123
BMSYS-400	182	69	138
BMSYS-475	196	83	152

Code Mounting	D (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)
T	G1/4(12)	M14x1.5(12)	7/16-20UNF(12)	7/16-20UNF(12)
C	2-M10(13)	2-M10(13)	2-3/8-16UNC(13)	2-3/8-16UNC(13)

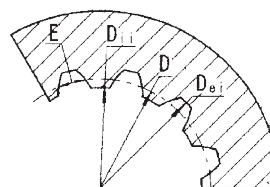
### BMR Rozmery a montážne parametre



- A: O-ring:100x3
- B: External drain channel
- C: Drain connection G 1/4;12 mm deep
- D: Conical seal ring
- E: Internal drain channel
- F: M10;min. 15mm deep
- G: Oil circulation hole
- H: Hardened stop plate

#### INTERNAL SPLINE DATA FOR THE ATTACHED COMPONENT

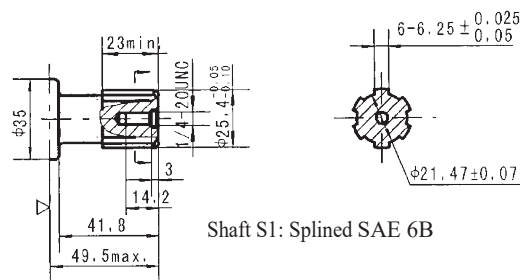
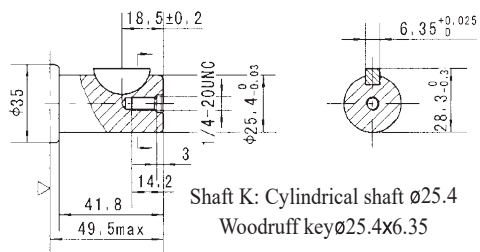
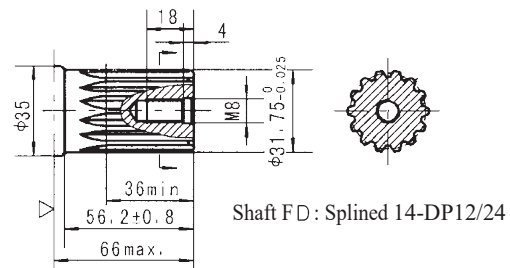
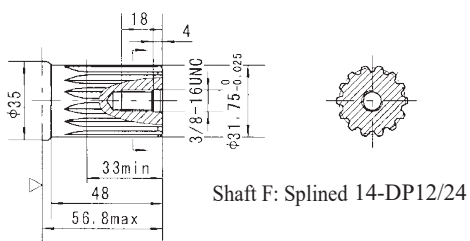
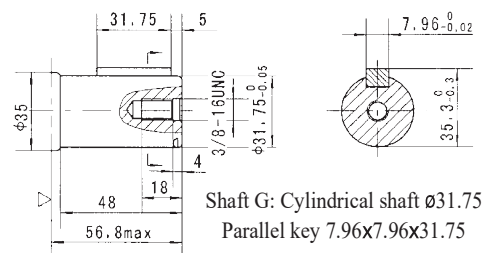
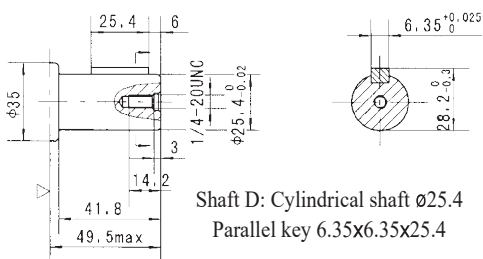
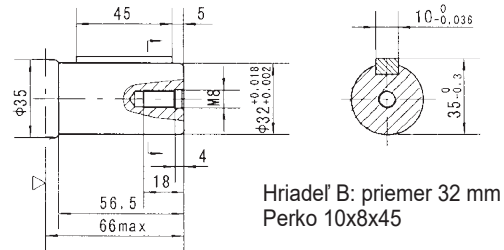
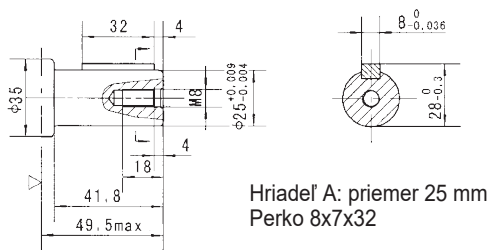
Fillet Root Side Fit		mm
Number of Teeth	Z	12
Diametral Pitch	DP	12/24
Pressure Angle	$\alpha_D$	30°
Pitch Dia.	D	$\phi 25.4$
Major Dia.	$D_{ei}$	$\phi 28_{-0.1}^0$
Minor Dia.	$D_{ii}$	$\phi 23_0^{+0.033}$
Space Width [Circular]	E	4.308±0.02



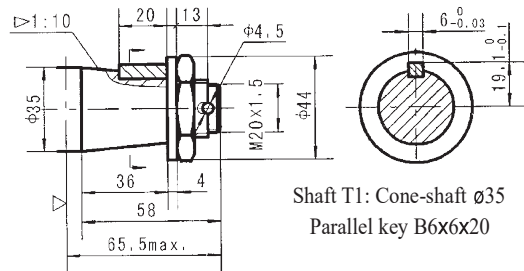
Hardening Specification: HRC 62±2  
 Effective case depth 0.7±0.2



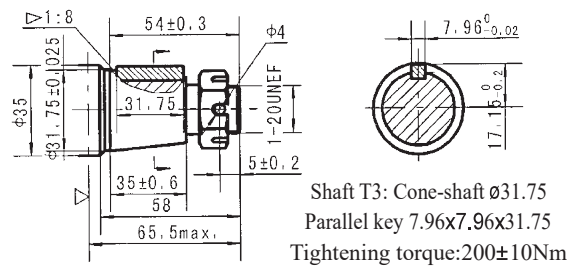
## Druhy hriadel'ov BMSY



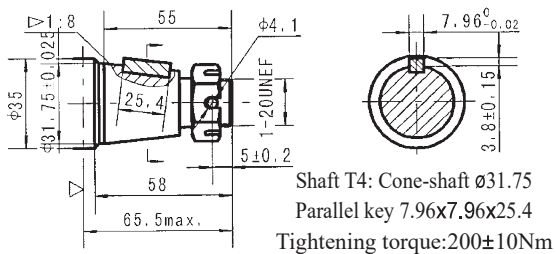
### SHAFT EXTENSIONS FOR BMSY MOTORS



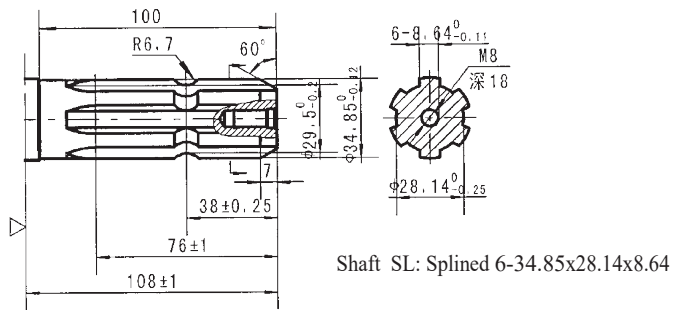
Shaft T1: Cone-shaft ø35  
 Parallel key B6x6x20



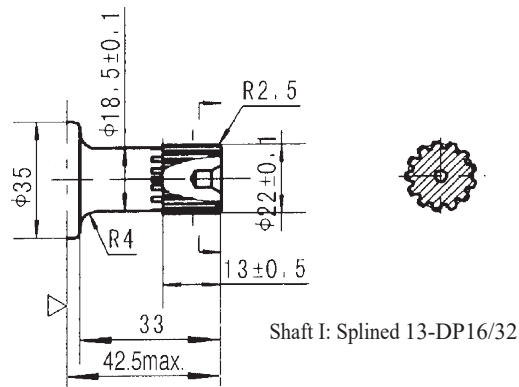
Shaft T3: Cone-shaft ø31.75  
 Parallel key 7.96x7.96x31.75  
 Tightening torque:200±10Nm



Shaft T4: Cone-shaft ø31.75  
 Parallel key 7.96x7.96x25.4  
 Tightening torque:200±10Nm



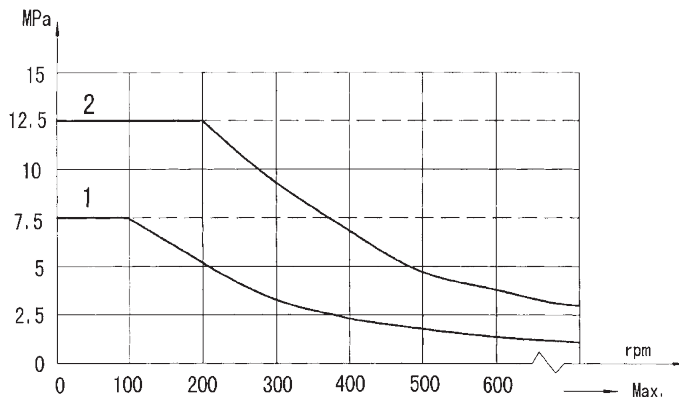
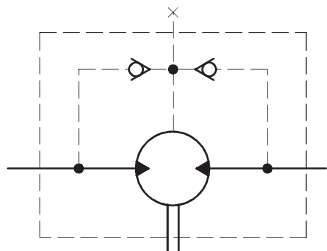
Shaft SL: Splined 6-34.85x28.14x8.64



Shaft I: Splined 13-DP16/32

## BMSY Series Hydraulic Motor

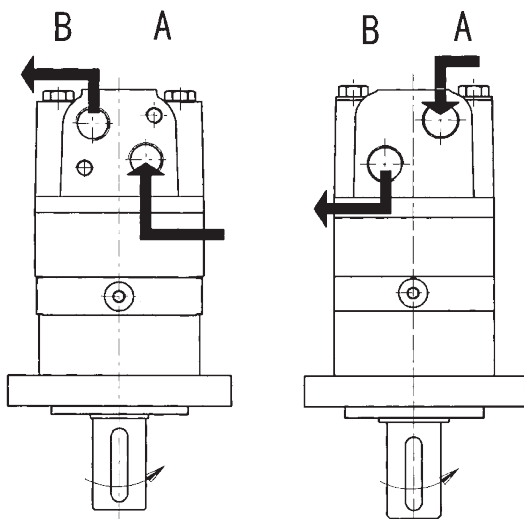
### Permissible shaft seal pressure



Note: 1. Chart for standard shaft seal;  
 2. Chart for high pressure shaft seal.

### Standard direction of shaft rotation: Standard

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



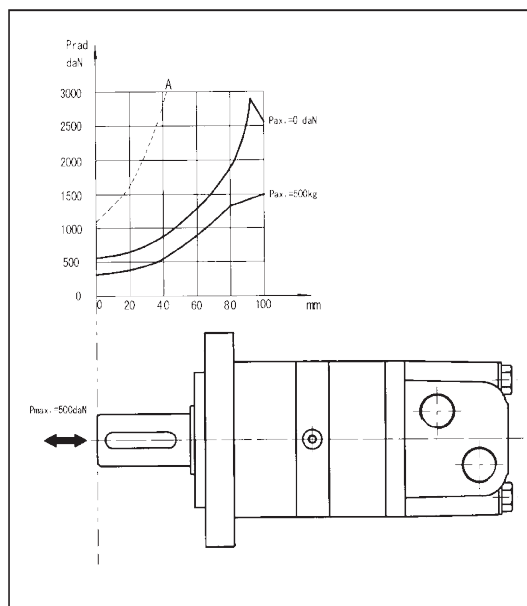
In applications without drain line, output shaft seal exceeds a bit of the pressure in the return line. When applications use the drain line, the pressure of output shaft seal equals the pressure in drain line.

### 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.)
14	20	1.5
	35	1
21	20	3
	35	2

### Axial and Radial forces



The output shaft runs in tapered bearings that permit high axial and radial forces, Curve "A" shows max radial shaft load, Any shaft loads exceeding the values quoted in the curve will involve a risk of breakage, The two other curves apply to a B10 bearing life of 3000 hours at 200 RPM.

## Objednávkové značenie

BMSY  1  -  2  -  3  -  4  -  5  -  6  -  7  -  8

Pos.1	2	3	4	5	6	7	8							
Kód	Veľkosť	Príruba	Výstupný hriadeľ	Porty	Smer rotácie	Farebnosť	Použitie							
Omit	80	E2 2-Ø13.5 Rhomb-flange Ø106.4, pilot Ø82.5×6.3 E4 4-Ø13.5 Rhomb-flange Ø106.4, pilot Ø82.5×6.3 E6 4-Ø13.5 Rhomb-flange Ø106.4, pilot Ø82.5×6.3	A Shaft Ø25 , parallel key 8×7×32 B Shaft Ø32 , parallel key 10×8×45 D Shaft Ø25.4 , parallel key 6.35×6.35×25.4 F Shaft Ø31.75 , splined key 14-DP12/24	EE-D G1/2, G1/4 EE-M 2M22×1.5, M14×1.5 EE-S2 7/8-14UNF O-ring, 7/16-20 UNF D G1/2 Manifold Mount 2-M10 , G1/4	Omit	Standard	Omit	Blue	Omit	Standard				
	100	F6 6-Ø13.5 Rhomb-flange Ø106.4, pilot Ø82.5×2.6 W 4-Ø13.5 Wheel-flange Ø160 , pilot Ø125×8	FD Long Shaft Ø31.75 , splined key 14-DP12/24 FE Shaft Ø31.75 , splined key 14-DP12/24	ED 1-1/16-12UN O-ring, 7/16-20 UNF DB G1/2, G1/4 DU G1/2, 7/16-20 UNF SB 7/8-14UNF O-ring, G1/4 SU 7/8-14UNF O-ring, 7/16-20 UNF M4 M22×1.5, M14×1.5										
	125	E2B 2-Ø14.3 Rhomb-flange Ø146.05, pilot Ø101.6×9.4	G Shaft Ø31.75 , parallel key 7.96×7.96×31.75	MU 1/2", 5/8" Crosshole Manifold 3×3/8-16UNC, 7/16-20UNF										
	160	SP 4-Ø11.5 Square-flange Ø106.4 pilot Ø82.5×6.3	K Shaft Ø25.4 , Woodruff key Ø25.4×6.35	MM 1/2", 5/8" Crosshole Manifold 3×M10, G1/4										
	200	WE 4-Ø13.6 Wheel-flange Ø147.6, pilot Ø107.95×6.4	T4 Cone-shaft Ø31.75 , parallel key 7.96×7.96×25.4	M M22×1.5 Manifold Mount 2-M10 , M14×1.5										
	250		SL shaft Ø34.85, Splined key 6-34.85×28.14×8.64	S 7/8-14UNF O-ring manifold 2-3/8-16 , 7/16-20UNF										
	315		T1 Cone-shaft Ø35 , parallel key B6×6×20	P 1/2-14NPTF manifold 2-3/8-16UNC , 7/16-20UNF										
	400		T3 Cone-shaft Ø 31.75 , parallel key 7.96×7.96×31.75	G G1/2, G1/4 M2 M22×1.5, M14×1.5										
	475		S1 Shaft Ø25.4, splined key SAE 6B I Sub-shaft Ø22 , splined key 13-DP16/32	S2 7/8-14UNF O-ring, 7/16-20 UNF										
	S	D 4-Ø11 Circle-flange Ø125 , pilot Ø100×6 E 4-Ø13.5 Circle-flange Ø127, pilot Ø101.6×6.3	Omit Short shaft 12-DP12/24								R	Opposite	B Black S Silver gray	F Free Running LS Low Speed