



# BREVINI®

Motion Systems



## BRZ Orbital Motors



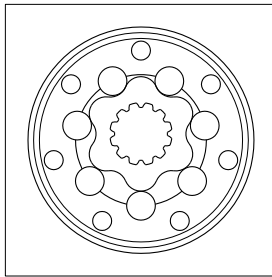
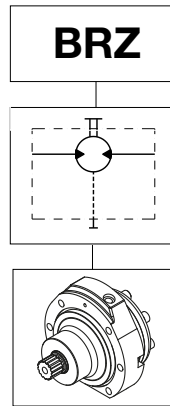
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BRZ

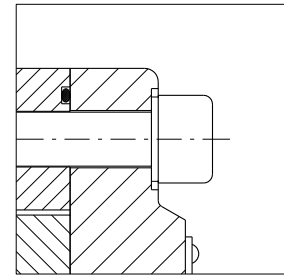
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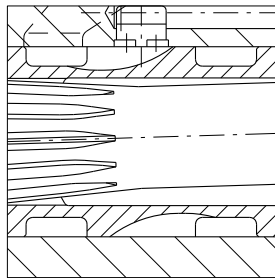




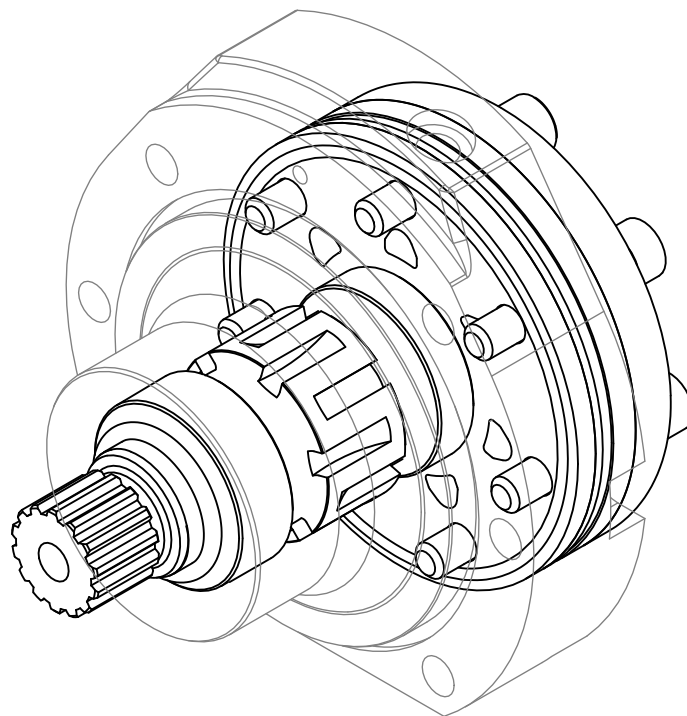
High-performance roller for improved efficiency and life.



High resistance stainless steel screws capable of withstanding the stress induced by high pressure.



Spool valve integral to the output shaft of new design features optimizing clearance geometry and so minimizing the oil slippage.



### SHORT MOTOR FOR GEAR BOXES

**BRZ** - Orbital motor with roller design and spool valve distributor. Motion control valve and disengagement brake port as optional. Available with displacement from 50 up to 400 cm<sup>3</sup>/giro [from 3.05 up to 24.4 in<sup>3</sup>/rev and power up to 13 kW [17.4 hp].

- Versions:  
**BRZV:** Valves version motor.
- Optional valves and accessories:  
**VCT11-SF:** Standard motion control valve.  
**VCT11-AF:** Motion control valve with disengagement brake port.  
**CMZ:** Flangeable manifold.

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Motor	Displacement cm <sup>3</sup> /rev [in <sup>3</sup> /rev]	Max. input pressure bar [psi]		Max. differential pressure bar [psi]		Max. torque Nm [lbf-ft]		Max. flow l/min [U.S. gpm]		Max. speed rpm		Max. power kW [hp]	
		Cont Int <sup>1)</sup> Peak <sup>2)</sup>	175 [2537] 200 [2900] 225 [3262]	Cont Int <sup>1)</sup> Peak <sup>2)</sup>	175 [2537] 200 [2900] 225 [3262]	Cont Int <sup>1)</sup> Peak <sup>2)</sup>	140 [2030] 175 [2540] 225 [3262]	Cont Int <sup>1)</sup>	103 [75.9] 126 [92.8]	Cont Int <sup>1)</sup>	40 [10.6] 50 [13.2]	Cont Int <sup>1)</sup>	775 969
<b>BRZ 50</b>	51.6 [3.14]	Cont Int <sup>1)</sup> Peak <sup>2)</sup>	175 [2537] 200 [2900] 225 [3262]	Cont Int <sup>1)</sup> Peak <sup>2)</sup>	140 [2030] 175 [2540] 225 [3262]	Cont Int <sup>1)</sup>	103 [75.9] 126 [92.8]	Cont Int <sup>1)</sup>	40 [10.6] 50 [13.2]	Cont Int <sup>1)</sup>	775 969	Cont Int <sup>1)</sup>	6.8 [9.1] 8.4 [11.2]
<b>BRZ 65</b>	64.9 [3.95]	Cont Int <sup>1)</sup> Peak <sup>2)</sup>	175 [2537] 200 [2900] 225 [3262]	Cont Int <sup>1)</sup> Peak <sup>2)</sup>	150 [2175] 185 [2682] 225 [3262]	Cont Int <sup>1)</sup>	140 [103.1] 166 [122.3]	Cont Int <sup>1)</sup>	50 [13.2] 60 [15.9]	Cont Int <sup>1)</sup>	770 924	Cont Int <sup>1)</sup>	9.2 [12.3] 10.6 [14.2]
<b>BRZ 80</b>	80.4 [4.9]	Cont Int <sup>1)</sup> Peak <sup>2)</sup>	175 [2537] 200 [2900] 225 [3262]	Cont Int <sup>1)</sup> Peak <sup>2)</sup>	175 [2537] 200 [2900] 225 [3262]	Cont Int <sup>1)</sup>	197 [145.1] 218 [160.6]	Cont Int <sup>1)</sup>	60 [15.9] 75 [19.8]	Cont Int <sup>1)</sup>	746 933	Cont Int <sup>1)</sup>	13 [17.4] 15 [20.1]
<b>BRZ 100</b>	100 [6.1]	Cont Int <sup>1)</sup> Peak <sup>2)</sup>	175 [2537] 200 [2900] 225 [3262]	Cont Int <sup>1)</sup> Peak <sup>2)</sup>	175 [2537] 200 [2900] 225 [3262]	Cont Int <sup>1)</sup>	237 [174.6] 277 [204.1]	Cont Int <sup>1)</sup>	60 [15.9] 75 [19.8]	Cont Int <sup>1)</sup>	600 750	Cont Int <sup>1)</sup>	13 [17.4] 15 [20.1]
<b>BRZ 130</b>	125.7 [7.66]	Cont Int <sup>1)</sup> Peak <sup>2)</sup>	175 [2537] 200 [2900] 225 [3262]	Cont Int <sup>1)</sup> Peak <sup>2)</sup>	175 [2537] 200 [2900] 225 [3262]	Cont Int <sup>1)</sup>	300 [221.1] 340 [250.5]	Cont Int <sup>1)</sup>	60 [15.9] 75 [19.8]	Cont Int <sup>1)</sup>	477 597	Cont Int <sup>1)</sup>	12.5 [16.8] 14.5 [19.4]
<b>BRZ 160</b>	160 [9.76]	Cont Int <sup>1)</sup> Peak <sup>2)</sup>	175 [2537] 200 [2900] 225 [3262]	Cont Int <sup>1)</sup> Peak <sup>2)</sup>	140 [2030] 175 [2540] 225 [3262]	Cont Int <sup>1)</sup>	296 [218.1] 375 [276.3]	Cont Int <sup>1)</sup>	60 [15.9] 75 [19.8]	Cont Int <sup>1)</sup>	375 469	Cont Int <sup>1)</sup>	10 [13.4] 12.5 [16.8]
<b>BRZ 200</b>	200 [12.2]	Cont Int <sup>1)</sup> Peak <sup>2)</sup>	175 [2537] 200 [2900] 225 [3262]	Cont Int <sup>1)</sup> Peak <sup>2)</sup>	115 [1667] 140 [2030] 225 [3262]	Cont Int <sup>1)</sup>	297 [218.8] 380 [280]	Cont Int <sup>1)</sup>	60 [15.9] 75 [19.8]	Cont Int <sup>1)</sup>	300 375	Cont Int <sup>1)</sup>	8.5 [11] 10 [13.4]
<b>BRZ 250</b>	250 [15.2]	Cont Int <sup>1)</sup> Peak <sup>2)</sup>	175 [2537] 200 [2900] 225 [3262]	Cont Int <sup>1)</sup> Peak <sup>2)</sup>	90 [1305] 120 [1740] 225 [3262]	Cont Int <sup>1)</sup>	297 [218.8] 377 [277.8]	Cont Int <sup>1)</sup>	60 [15.9] 75 [19.8]	Cont Int <sup>1)</sup>	240 300	Cont Int <sup>1)</sup>	7.1 [9.5] 8.5 [11]
<b>BRZ 315</b>	314.5 [19.1]	Cont Int <sup>1)</sup> Peak <sup>2)</sup>	175 [2537] 200 [2900] 225 [3262]	Cont Int <sup>1)</sup> Peak <sup>2)</sup>	70 [1020] 100 [1450] 210 [3045]	Cont Int <sup>1)</sup>	300 [221.1] 420 [309.5]	Cont Int <sup>1)</sup>	60 [15.9] 75 [19.8]	Cont Int <sup>1)</sup>	191 238	Cont Int <sup>1)</sup>	5 [6.7] 6.6 [8.8]
<b>BRZ 400</b>	393 [23.9]	Cont Int <sup>1)</sup> Peak <sup>2)</sup>	175 [2537] 200 [2900] 225 [3262]	Cont Int <sup>1)</sup> Peak <sup>2)</sup>	55 [800] 85 [1230] 175 [2537]	Cont Int <sup>1)</sup>	292 [215.2] 425 [313.2]	Cont Int <sup>1)</sup>	60 [15.9] 75 [19.8]	Cont Int <sup>1)</sup>	153 191	Cont Int <sup>1)</sup>	4.1 [5.4] 6.1 [8.1]

<sup>1)</sup> Intermittent duty must not exceed 10% each minute.

<sup>2)</sup> Peak duty must not exceed 1% each minute.

As regards not specified technical features, please refer to the section of the catalogue that concerns BR motors..

## Ordering codes

The following alphanumeric digits system has been developed to identify all of the configuration options for the BRZ motors. Use the model code below to specify the desired features. **All alphanumeric digits system of the code must be present when ordering.** We recommend to carefully read the catalogue before filling the ordering code.

1	2	3	4
Series	Displacement	Shaft end	Options
BRZV	50	S14	HPS

1	Series	
BRZV	Orbital motor	

2	Displacement	
50	51.6 cm <sup>3</sup> /giro [3.14 in <sup>3</sup> /rev]	
65	64.9 cm <sup>3</sup> /giro [3.95 in <sup>3</sup> /rev]	
80	80.4 cm <sup>3</sup> /giro [4.9 in <sup>3</sup> /rev]	
100	100 cm <sup>3</sup> /giro[6.1 in <sup>3</sup> /rev]"	
130	125.7 cm <sup>3</sup> /giro [7.66 in <sup>3</sup> /rev]	
160	160 cm <sup>3</sup> /giro[9.76 in <sup>3</sup> /rev]"	
200	200 cm <sup>3</sup> /giro[12.2 in <sup>3</sup> /rev]	
250	250 cm <sup>3</sup> /giro[15.2 in <sup>3</sup> /rev]	
315	314.5 cm <sup>3</sup> /giro [19.1 in <sup>3</sup> /rev]	
400	393 cm <sup>3</sup> /giro[23.9 in <sup>3</sup> /rev]	

3	Shaft End	
S14	Standard B25x22 DIN 5482 Splined Version	

4	Options	
HPS	High pressure seal	
TAC-U	Tachometer + high pressure seal	

## Valves and manifold ordering code <sup>1)</sup>

CODE	VALVE / MANIFOLD
VCT 11 SF	Motion control valve without disengagement brake port - Metric version
VCT11 AF	Motion control valve with disengagement brake port - Metric version
VCT 11 SF SAE	Motion control valve without disengagement brake port - SAE version
VCT11 AF SAE	Motion control valve with disengagement brake port - SAE version
CMZ SF	Flangeable manifold without disengagement brake
CMZ AF	Flangeable manifold with disengagement brake

<sup>1)</sup> To be ordered separately to the motor.

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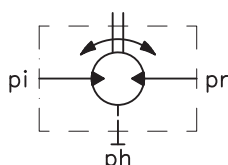
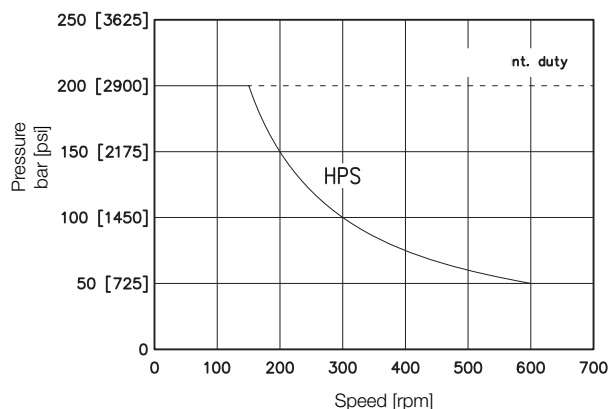
Motor	Max back pressure with drain line bar [psi]		Max starting pressure in unloaded conditions bar [psi]	Min starting torque Nm [lbf-ft]		
	Cont Int <sup>1)</sup> Peak <sup>2)</sup>	175 [2538] 200 [2900] 225 [3263]		A p max. At max. p	Cont Int <sup>1)</sup>	75[55.3] 95[70.0]
BRZ 50	Cont Int <sup>1)</sup> Peak <sup>2)</sup>	175 [2538] 200 [2900] 225 [3263]	10 [145]	A p max. At max. p	Cont Int <sup>1)</sup>	75[55.3] 95[70.0]
BRZ 65	Cont Int <sup>1)</sup> Peak <sup>2)</sup>	175 [2538] 200 [2900] 225 [3263]	10 [145]	A p max. At max. p	Cont Int <sup>1)</sup>	120[88.4] 140[103.1]
BRZ 80	Cont Int <sup>1)</sup> Peak <sup>2)</sup>	175 [2538] 200 [2900] 225 [3263]	10 [145]	A p max. At max. p	Cont Int <sup>1)</sup>	160[118] 180[133]
BRZ 100	Cont Int <sup>1)</sup> Peak <sup>2)</sup>	175 [2538] 200 [2900] 225 [3263]	10 [145]	A p max. At max. p	Cont Int <sup>1)</sup>	200[147] 225[166]
BRZ 130	Cont Int <sup>1)</sup> Peak <sup>2)</sup>	175 [2538] 200 [2900] 225 [3263]	9 [131]	A p max. At max. p	Cont Int <sup>1)</sup>	255[188] 290[214]
BRZ 160	Cont Int <sup>1)</sup> Peak <sup>2)</sup>	175 [2538] 200 [2900] 225 [3263]	7 [102]	A p max. At max. p	Cont Int <sup>1)</sup>	250[184] 300[221]
BRZ 200	Cont Int <sup>1)</sup> Peak <sup>2)</sup>	175 [2538] 200 [2900] 225 [3263]	5 [72.5]	A p max. At max. p	Cont Int <sup>1)</sup>	250[184] 320[236]
BRZ 250	Cont Int <sup>1)</sup> Peak <sup>2)</sup>	175 [2538] 200 [2900] 225 [3263]	5 [72.5]	A p max. At max. p	Cont Int <sup>1)</sup>	250[184] 310[228]
BRZ 315	Cont Int <sup>1)</sup> Peak <sup>2)</sup>	175 [2538] 200 [2900] 225 [3263]	5 [72.5]	A p max. At max. p	Cont Int <sup>1)</sup>	250[184] 300[221]
BRZ 400	Cont Int <sup>1)</sup> Peak <sup>2)</sup>	175 [2538] 200 [2900] 225 [3263]	5 [72.5]	A p max. At max. p	Cont Int <sup>1)</sup>	250[184] 320[236]

<sup>1)</sup> Intermittent duty must not exceed 10% each minute.

<sup>2)</sup> Peak duty must not exceed 1% each minute.

As regards not specified technical features, please refer to the section of the catalogue that concerns BR motors..

### Max. Permissible Shaft Pression



Motors are supplied in HPS seal version (HPS) BRZ motors don't feature build-in check valves.

The (ph) pressure on the seal is the average between inlet and outlet pressure. If ph exceeds rated figures (see graph on side), the drain line must be connected.

$$Ph = \frac{pi + pr}{2} \text{ [bar]}$$

ph = housing pressure  
pi = inlet pressure  
pr = outlet pressure

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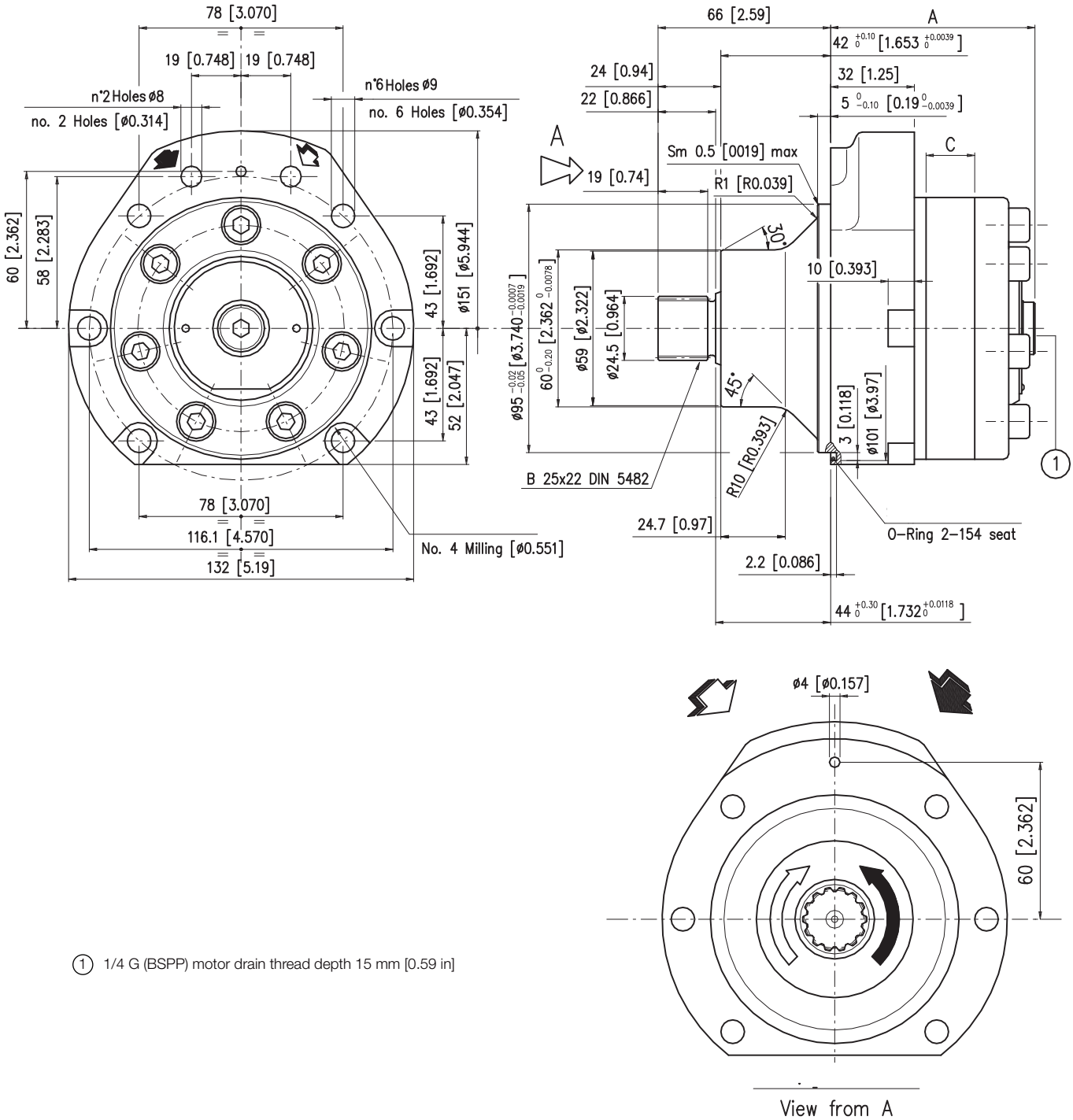
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Dimensions and weight

1 2 3 4

BRZV S14 HPS



① 1/4 G (BSPP) motor drain thread depth 15 mm [0.59 in]

		BRZV 50	BRZV 65	BRZV 80	BRZV 100	BRZV 130	BRZV 160	BRZV 200	BRZV 250	BRZV 315	BRZV 400
<b>A</b>	mm	67.5	69.8	72.5	75.9	80.3	86.3	93.3	102	113.3	126.9
	[in]	[2.65]	[2.74]	[2.85]	[2.98]	[3.16]	[3.39]	[3.67]	[4.01]	[4.46]	[4.99]
<b>C</b>	mm	9	11.3	14	17.4	21.8	27.8	34.8	43.5	54.8	68.38
	[in]	[0.354]	[0.444]	[0.551]	[0.68]	[0.85]	[1.09]	[1.37]	[1.71]	[2.15]	[2.69]
<b>Weight</b>	kg	5.6	5.8	5.9	6.2	6.5	6.8	7.1	7.6	8.3	9.5
	[lb]	[12.3]	[12.7]	[13.0]	[13.7]	[14.3]	[15.0]	[15.6]	[16.8]	[18.3]	[20.9]

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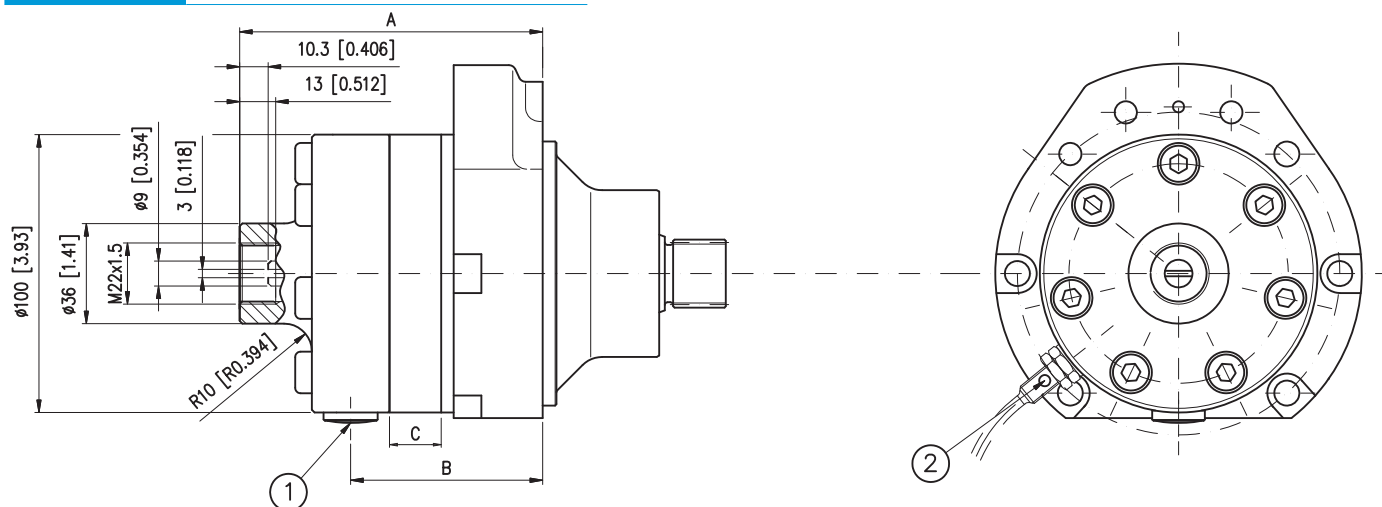


1

2

3

4

**TAC - U** Tachometer + high pressure seal

- ① 1/4 G (BSPP) motor drain port thread depth 12 mm [0.472 in]  
 ② Sensor connection M8x1

**WARNING:**

Tacho shaft has a 6 times higher revolution speed than the motor shaft and opposite direction of rotation.

**NOTE:**

Axial or radial load on tacho shaft must be avoided. Max torque on tacho 1 Nm [0.737 lbf-ft].

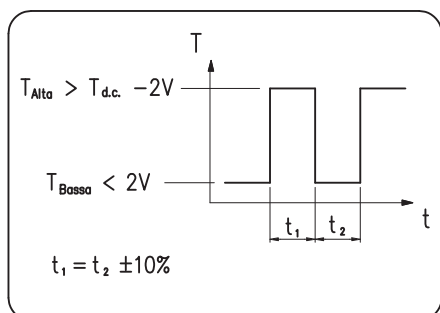
The electronic sensor is not supplied: if required, please state it clearly on order form.

Max pressure admissible on the shaft seal with closed drain port 25 bar [362 psi].

		BRZV 50	BRZV 65	BRZV 80	BRZV 100	BRZV 130	BRZV 160	BRZV 200	BRZV 250	BRZV 315	BRZV 400
<b>A</b>	mm	100	102.3	105	108.4	112.8	118.8	125.8	134.5	145.8	159.4
	[in]	[3.93]	[4.02]	[4.13]	[4.26]	[4.44]	[4.67]	[4.95]	[5.29]	[5.74]	[6.27]
<b>B</b>	mm	60.4	62.7	65.4	68.8	73.2	79.2	86.2	94.9	106.2	119.8
	[in]	[2.37]	[2.46]	[2.57]	[2.70]	[2.88]	[3.11]	[3.39]	[3.73]	[4.18]	[4.71]
<b>C</b>	mm	9	11.3	14	17.4	21.8	27.8	34.8	43.5	54.8	68.38
	[in]	[0.354]	[0.444]	[0.551]	[0.68]	[0.85]	[1.09]	[1.37]	[1.71]	[2.15]	[2.69]
<b>Weight</b>	kg	6.1	6.3	6.4	6.7	7.0	7.3	7.6	8.1	8.8	9.5
	[lb]	[13.4]	[13.8]	[14.1]	[14.8]	[15.4]	[16.1]	[16.8]	[17.9]	[19.4]	[20.9]

**Electronic sensor technical features**

Output signal electronic tacho



Number of pulses per revolution = 90 Inductive principle

Output current PNP

Voltage 10-65 V d.c.

Max load 300 mA

Max frequency 10000 Hz

Temperature range -25C +85C

Enclosure IP 67

Available versions:

Sensor with 2 metres three wires cable (cod.424.0050.0000)

Sensor with binder plug connection (cod.424.0060.0000) + binder connecting

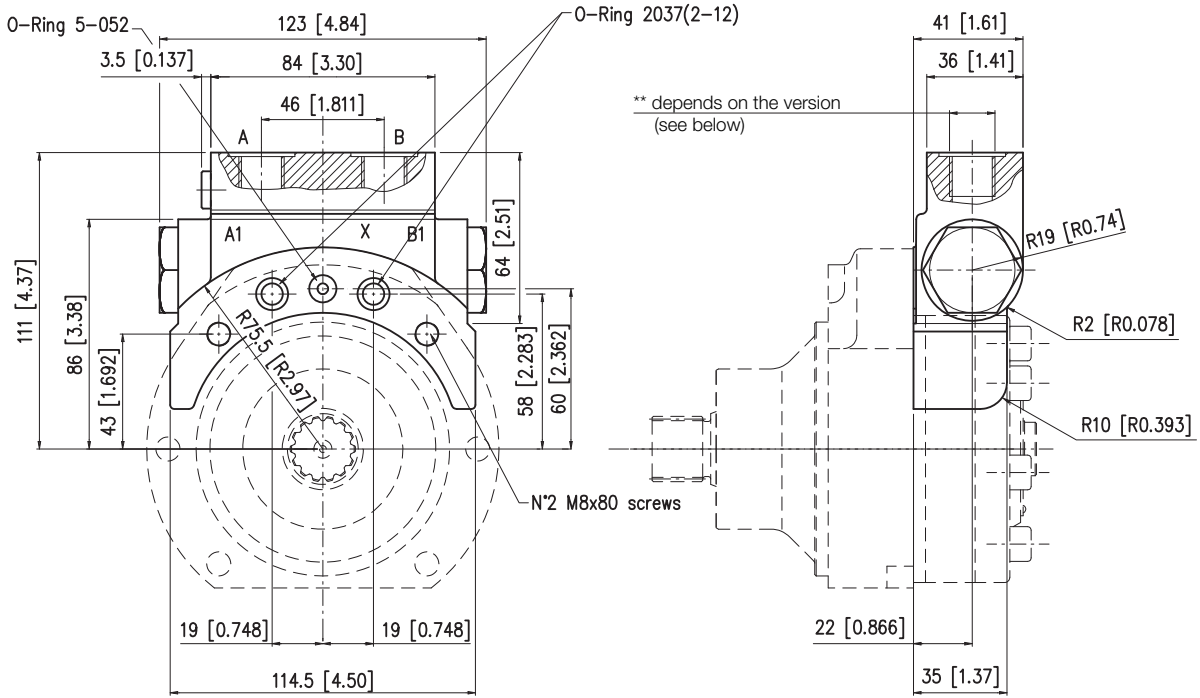
plug with 5 metres three wires cable (cod.424.0080.0000)

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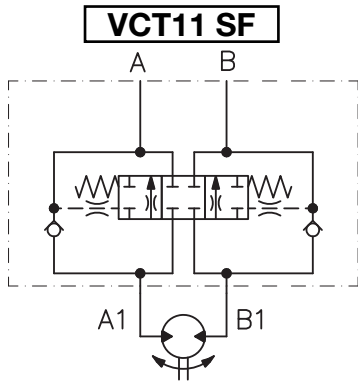


**VCT11** Motion Control Valve

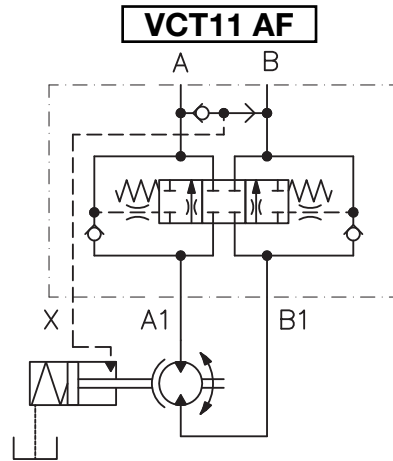


**\*\* METRIC VERSION** 3/8 G (BSP) thread depth 15 mm [0.59 in]  
**SAE VERSION** 3/4-16 UNF thread depth 15 mm [0.59 in]

**Valve without disengagement brake port**



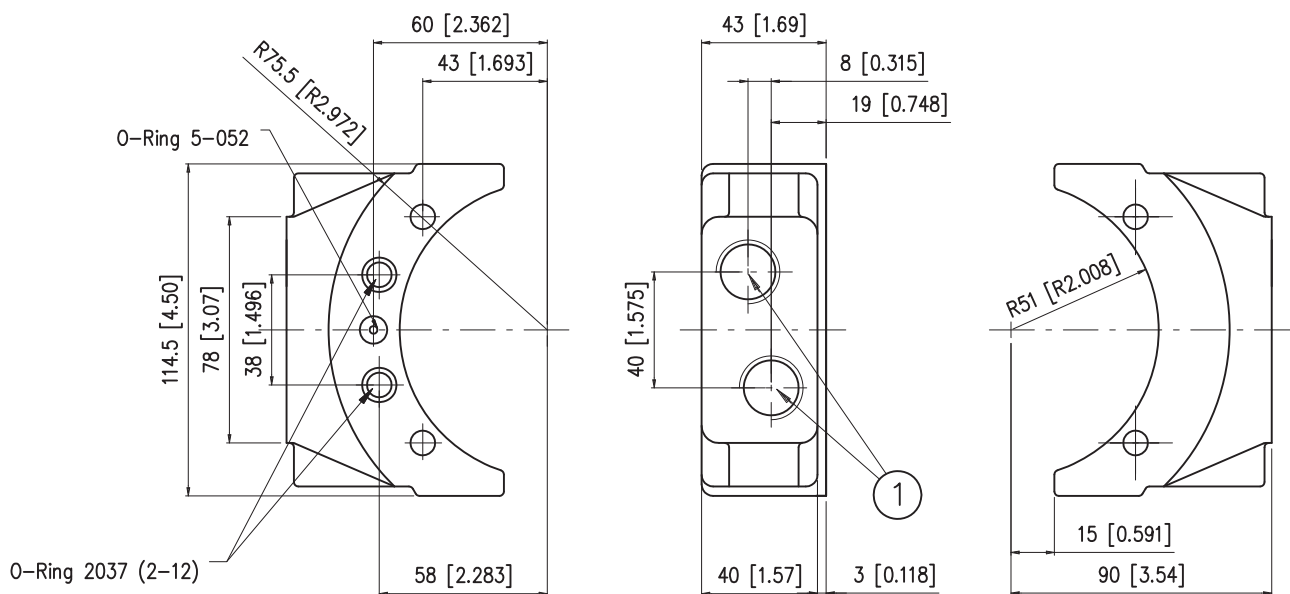
**Valve with disengagement brake port**



<b>Weight</b>	kg	1.8
	[lb]	[3.97]

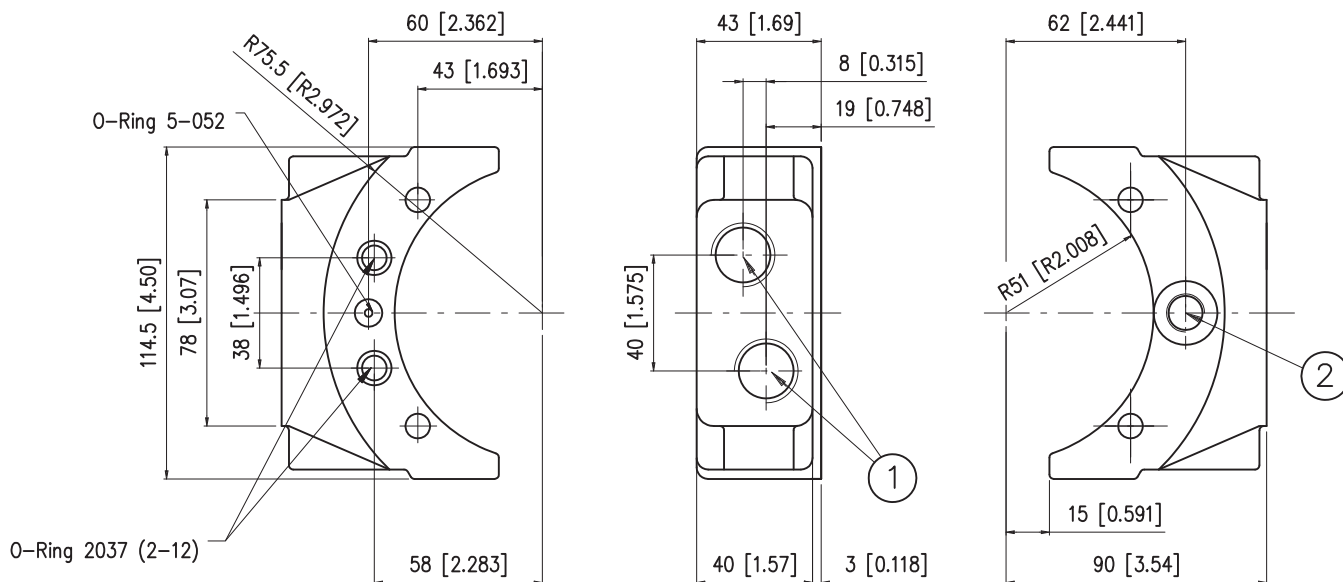


## CMZ SF Manifold without brake opening



① N° 2 1/2 G ( BSPP) main ports thread depth 19 mm [0.74 in]

## CMZ AF Manifold with brake opening



① N° 2 1/2 G ( BSPP) main ports thread depth 19 mm [0.74 in]

② 1/4 G (BSPP) drain port thread depth 13 mm [0.511 in]

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