

# MOTOARE CU ROȚI DINȚATE BIDIRECȚIONALE BHM2

## BIDIRECTIONAL GEAR MOTORS BHM2

### Descriere și utilizare

Motoarele bidirecționale pot funcționa în ambele sensuri de rotație, au 2 aspirații-ieșiri alternative și un drenaj extern, în capac.

Au o varietate mare de flanșe de prindere, de axe de antrenare, de tipuri de intrări-ievăcuări, alternative, în mod uzual aceleași, pe ambele părți ale motorului.



### Description and use

The bidirectional gear motors can work with left or right revolution sense, have 2 alternative inlets-outlets and an external drain in the back cover.

It have a large variety of fastening flanges, shafts and alternative inlets-outlets ports, usually the same for the both sides of the motor.

### Codificare – Codification

BHM 2	Vg cm <sup>3</sup> /rot ccm/rev	Ax antrenare Driving shaft	Flanșa prindere Fastening flange	Flanșa aspirație Inlet port	Flanșa refulare Outlet port	Sens Rotation	V2
	6.3	<b>1</b> Conic 1:5 BOSCH <i>Conical 1:5 BOSCH</i>	<b>1</b> PLESSEY (4xØ9)	<b>D</b> Variante PLESSEY	<b>D</b> Variante PLESSEY	B bidirecțional (drenaj extern) (external drain)	Simiring VITON VITON shaft seal
	8.2	<b>C</b> Conic 1:5 (majorat) <i>Conical 1:5 (increased)</i>	<b>2</b> DIN (4 xØ9)	<b>E</b> PLESSEY Variants	<b>E</b> PLESSEY Variants		
	11.3	<b>D</b> Conic 1:5 BOSCH <i>Conical 1:5 BOSCH</i>	<b>3</b> PLESSEY (4xØ9)	<b>V</b> Variante SAE	<b>V</b> Variante SAE		
	14	<b>2</b> Conic 1:8 (micsorat) <i>Conical 1:8 (diminished)</i>	<b>4</b> GERMAN 2xØ11	<b>W</b> SAE Variants	<b>W</b> SAE Variants		
	16	<b>3</b> Conic 1:8 PLESSEY <i>Conical 1:8 PLESSEY</i>	<b>4e</b> GERMAN 2xØ11 cu inel O - with O-ring	<b>A</b> Variante DIN	<b>A</b> Variante DIN		
	19	<b>5</b> Canelat- <i>involute spline</i> B 17x14 DIN 5482	<b>5</b> GERMAN 2xØ11	<b>B</b> DIN Variants	<b>B</b> DIN Variants		
	22.5	<b>A</b> Canelat- <i>involute spline</i> SAE 9T 16/32 Dp	<b>5e</b> GERMAN 2xØ11 cu inel O - with O-ring	<b>F</b> Variante filetate BSPP	<b>F</b> Variante filetate BSPP		
	25	<b>L</b> Canelat- <i>involute spline</i> SAE 9T 16/32 Dp	<b>6</b> GERMAN 2xØ11	<b>G</b> Threaded Variants BSPP	<b>G</b> Threaded Variants BSPP		
	27.9	<b>E</b> Cilindric Ø15.875 <i>Cylindrical Ø15.875</i>	<b>6e</b> GERMAN 2xØ11 cu inel O - with O-ring	<b>J</b> Threaded Variants BSPP	<b>J</b> Threaded Variants BSPP		
		<b>T</b> Cilindric scurt Ø15.875 <i>Cylindrical short Ø15.875</i>	<b>7</b> Ovala SAE "A" <i>Oval SAE "A"</i>	<b>K</b> Variante filetate ISO (metric)	<b>K</b> Variante filetate ISO (metric)		
		<b>0</b> Cilindric Ø17.45 <i>Cylindrical Ø17.45</i>	<b>8</b> GERMAN 2xØ11	<b>N</b> Threaded Variants BSPP	<b>N</b> Threaded Variants BSPP		
			<b>8e</b> GERMAN 2xØ11 cu inel O - with O-ring	<b>P</b> Threaded Variants ISO (metric)	<b>P</b> Threaded Variants ISO (metric)		
			<b>9</b> GERMAN 4xØ11	<b>Q</b> Threaded Variants ISO (metric)	<b>Q</b> Threaded Variants ISO (metric)		
			<b>Am</b> PLESSEY (4xØ7)	<b>R</b> ISO (metric)	<b>R</b> ISO (metric)		
			<b>An</b> PLESSEY (4 xØ9)	<b>S</b> Variante filetate SAE	<b>S</b> Variante filetate SAE		
				<b>U</b> Threaded Variants SAE	<b>U</b> Threaded Variants SAE		
				<b>Y</b> Threaded Variants SAE	<b>Y</b> Threaded Variants SAE		
				<b>0</b> Obturată Closed	<b>0</b> Obturată Closed		

"0" dacă aspirația și refularea nu sunt pe corpul pompei  
"0" if inlet or outlet ports are not on the body of the pump.

### Exemplu - Example

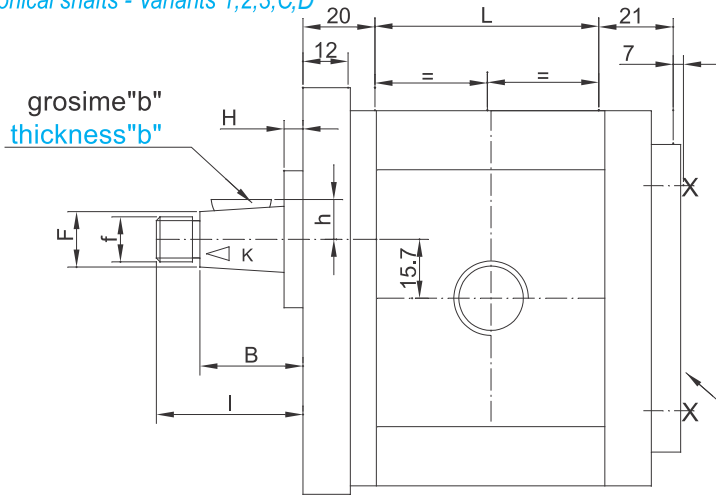
BHM 2	16	1	2	A	A	B	V2
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# MOTOARE CU ROȚI DINȚATE BIDIRECȚIONALE BHM2

## BIDIRECTIONAL GEAR MOTORS BHM2

### Axe antrenare - *Driving shafts*

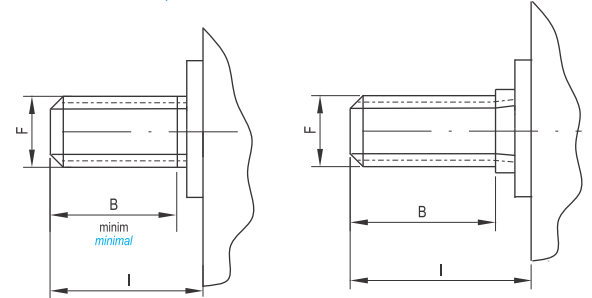
Axe conice - Variantele 1;2;3;C;D  
*Conical shafts - Variants 1;2;3;C;D*



### Axe canelate - *Grooved shafts*

Varianta A; 5  
*Variant A; 5*

Varianta L  
*Variant L*

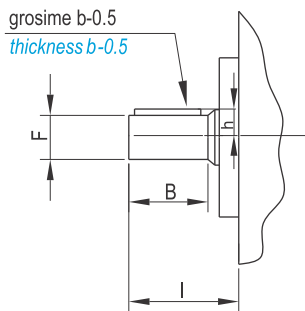


drenaj extern  
*external drain*  
 max.2bar

### Axe antrenare - *Driving shafts*

Axe cilindrice  
 Variantele O; E; T

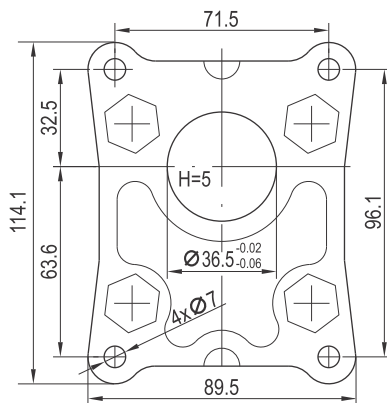
*Cylindrical shafts*  
 Variants O; E; T



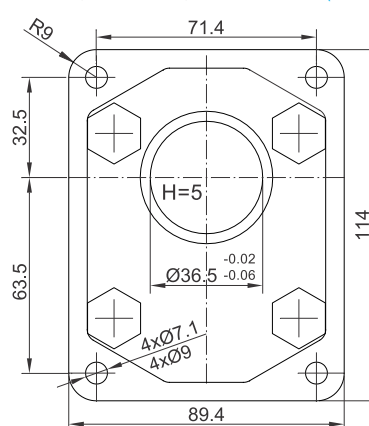
Varianta <i>Variant</i>	Tip ax – <i>Shaft type</i>	l [mm]	B [mm]	F [mm]	f [mm]	k	h [mm]	b [mm]	Mmax [Nm]
1	Conic 1:5 BOSCH <i>Conical 1:5 BOSCH</i>	38	24.8	13.6	M12x1.25	1:5	9.2	3	150
C	Conic 1:5 (majorat) <i>Conical 1:5 (increased)</i>	40	26.6	14	M12x1.25	1:5	9.6	3	160
D	Conic 1:5 BOSCH <i>Conical 1:5 BOSCH</i>	40.5	27.3	13.6	M12x1.25	1:5	9.5	3	150
2	Conic 1:8 (reduș) <i>Conical 1:8 (diminished)</i>	39	30	14	M12x1.25	1:8	9.4	3.2	170
3	Conic 1:8 PLESSEY <i>Conical 1:8 PLESSEY</i>	39	27.4	14.8	M12x1.25	1:8	9.4	3.2	180
5	Canelat Grooved B17x14 DIN 5482	26	14	16.5	-	-	-	-	75
A	Canelat Grooved SAE 9T 16/32 Dp	31.5	19	15.5	-	-	-	-	70
L	Canelat Grooved SAE 9T 16/32 Dp	32	24	15.5	-	-	-	-	70
O	Cilindric Cylindrical Ø17.45	43	37	17.45 <sup>0</sup> <sub>-0.02</sub>	-	-	11.1	4.76	70
E	Cilindric Cylindrical Ø15.875	44.5	36.5	15.87 <sup>0</sup> <sub>-0.02</sub>	-	-	9.7	3.96	65
T	Cilindric Cylindrical Ø15.875	32	25.4	15.87 <sup>0</sup> <sub>-0.02</sub>	-	-	9.7	3.96	50

### Flanșe de prindere - *Fastening Flanges*

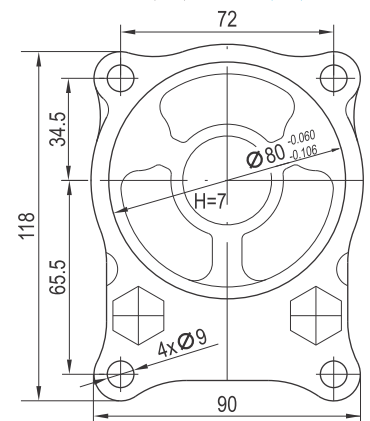
Varianta 1 (PLESSEY) - *Variant 1 (PLESSEY)*



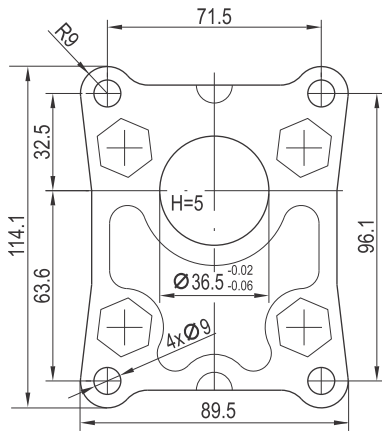
Variantele Am;An (4xØ7.1; 4xØ9) - *Variants Am;An (4xØ7.1; 4xØ9)*



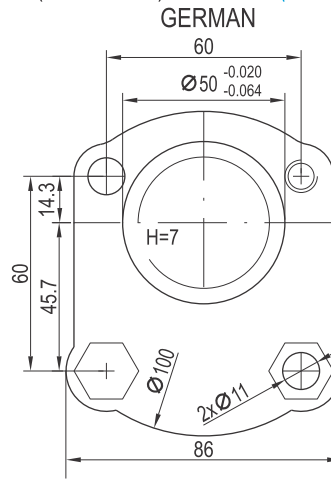
Varianta 2 (DIN) - *Variant 2 (DIN)*



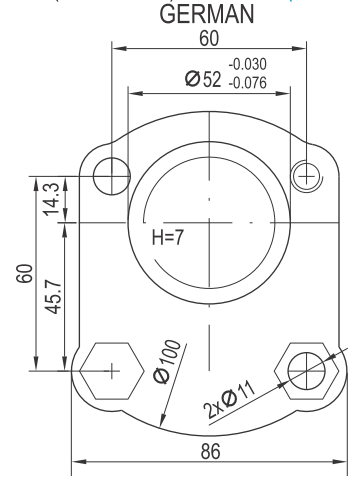
Varianta 3 (PLESSEY) - *Variant 3 (PLESSEY)*



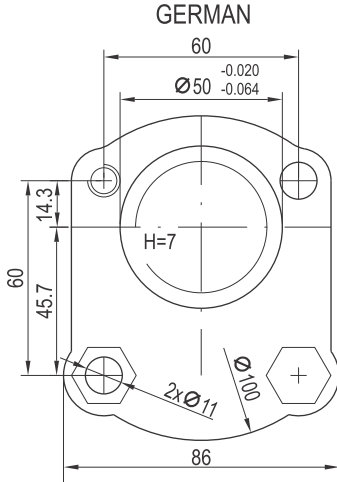
Varianta 4; (4e cu inel O) - *Variant 4; (4e with O-ring)*



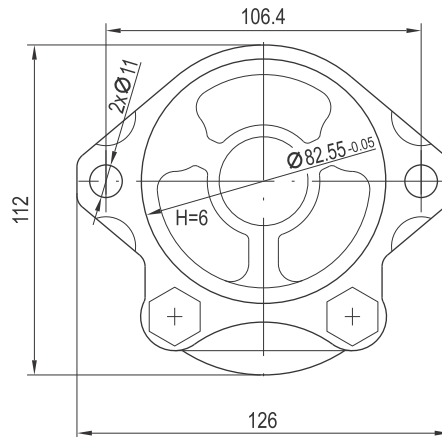
Varianta 5; (5e cu inel O) - *Variant 5; (5e with O-ring)*



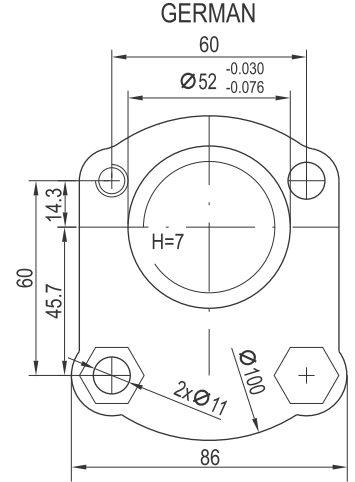
Varianta 6; (6e cu inel O) - *Variant 6; (6e with O-ring)*



Varianta 7; (SAE "A") - *Variant 7; (SAE "A")*



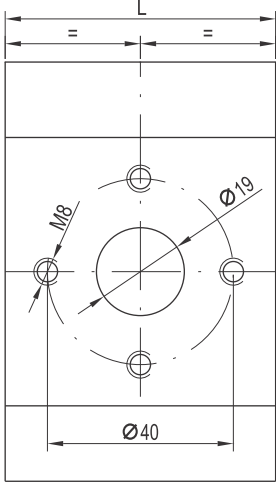
Varianta 8; (8e cu inel O) - *Variant 8; (8e with O-ring)*



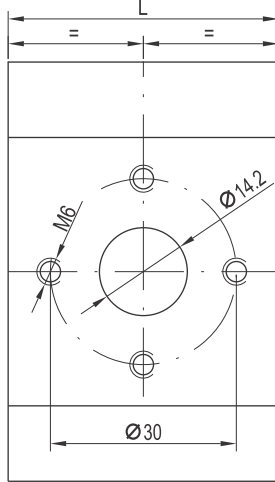
Flanșe aspirație-refulare - *Inlet-outlet ports*

Variante PLESSEY - *PLESSEY variants*

tip D - *type D*



tip E - *type E*

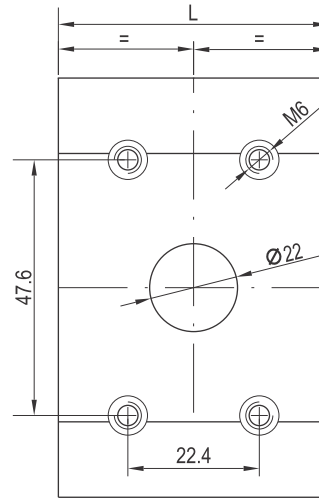


Vg cm3/rot ccm/rev	L mm
6.3	48.6
8.2	51.7
11.3	56.8
14	61.3
16	64.7
19	69.7
22.5	75.1
25	79.2
27.9	84

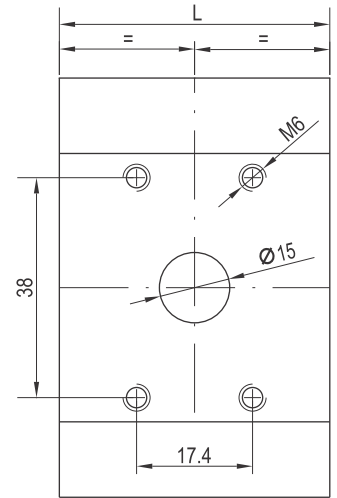
- Numai pentru Vg = 11.3...27.9 cm<sup>3</sup>/rot  
- Only for Vg = 11.3...27.9 ccm/rev

Variante SAE - *SAE variants*

tip V - *type V*



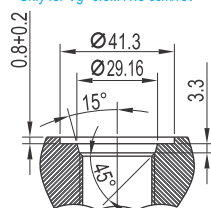
tip W - *type W*



Variante filetate SAE - *SAE threaded variants*

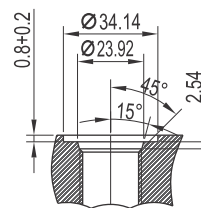
tip S - *type S*

1 1/16" - 12 UNF SAE # 12  
Numai pentru Vg=6.3...11.3 cm<sup>3</sup>/rot  
Only for Vg=6.3...11.3 ccm/rev



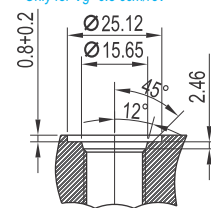
tip U - *type U*

7/8" - 14 UNF SAE # 10



tip Y - *type Y*

9/16" - 18 UNF SAE # 6  
Numai pentru Vg=6.3 cm<sup>3</sup>/rot  
Only for Vg=6.3 ccm/rev



Varianta specială - obturată  
*Special variant - closed*

tip O - *type O*

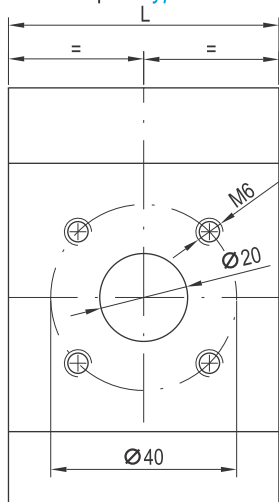


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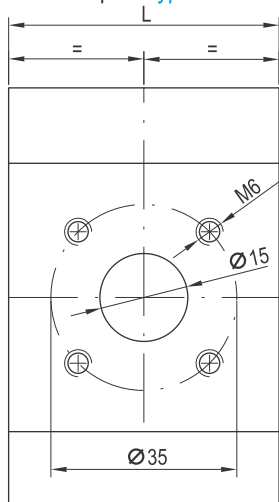
## BIDIRECTIONAL GEAR MOTORS BHM2

### Variante DIN – DIN variants

tip A - type A



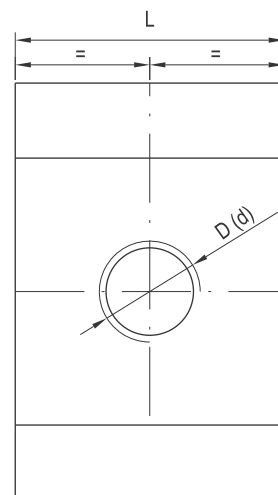
tip B - type B



### Variante filetate BSPP

BSPP threaded variants

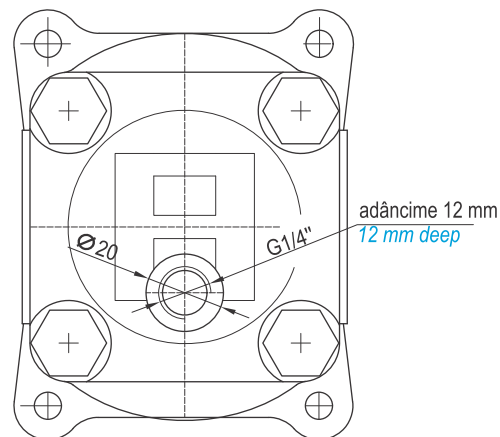
Vg cm <sup>3</sup> /rot ccm/rev	L mm	tip F - type F		tip G - type G		tip J - type J	
		inlet D	outlet d	inlet D	outlet d	inlet D	outlet d
6.3	48.6					G3/8"	G3/8"
8.2	51.7			G1/2"	G1/2"		
11.3	56.8						
14	61.3						
16	64.7	G3/4"	G3/4"				
19	69.7						
22.5	75.1						
25	79.2						
27.9	84						



### Variante filetate ISO 6149 (metric) - ISO 6149 threaded variants (metrical)

Vg cm <sup>3</sup> /rot ccm/rev	L mm	tip P - type P		tip K - type K		tip N - type N		tip Q - type Q		tip R - type R	
		inlet D	outlet d	inlet D	outlet d	inlet D	outlet d	inlet D	outlet d	inlet D	outlet d
6.3	48.6	M20 x 1.5	M20 x 1.5							M16 x 1.5	M16 x 1.5
8.2	51.7										
11.3	56.8										
14	61.3			M27 x 1.5	M27 x 1.5						
16	64.7										
19	69.7										
22.5	75.1										
25	79.2										
27.9	84										

### Drenaj extern pe capac – External drain on the cover



## CARACTERISTICI TEHNICE – TECHNICAL CHARACTERISTICS

Vg cm <sup>3</sup> /rot ccm/rev	L mm	$\eta_v$ %	Presiune - Pressure [bar]		Presiune drenaj Drain pressure (bar)	Turație (rot/min) Speed (rev/min)			Temperatura Temperature (°C)	Vâscozitate Viscosity (cSt)	Filtrare Filtration ( $\mu$ m)
			Pn	Pmax		nominal	min.	max.			
6,3	48,6	91	250	280	max. 2	1500	900	4000	-15...+ 80	12...2000	max. 25
8,2	51,7	92					800	3500			
11,3	56,8	93					600	3000			
14	61,3	94					500	2500			
16	64,7	95						2000			
19	69,7	95									
22,5	75,1	96	210	230				recomandat recommended 0...+ 60	recomandat recommended 25...200	recomandat recommended 16	
25	79,2	97	190	210							
27,9	84	98	170	185							

Notă:

- Drenajul motoarelor se conectează direct la bazin.
- Motoarele realizează un moment minim la Pn și o turație minimă la un debit determinat.
- Randamentele volumice  $\eta_v$  se garantează în condiții nominale și la o vâscozitate a uleiului de 30...40 mm<sup>2</sup>/s.
- Este interzisă încărcarea axului de antrenare al pompei cu sarcini radiale sau axiale în timpul utilizării.

Note:

- The external drain is connected directly on the tank.
- The motors realize a minimal torque at Pn and minimal speed for a determined flow.
- Volumetric efficiency  $\eta_v$  is guaranteed in nominal conditions and oil viscosity of 30...40 mm<sup>2</sup>/s.
- It is forbidden radial or axial loads on the pump shaft during the use.

Producătorul își rezervă dreptul să modifice datele din prezenta documentație, pentru îmbunătățirea produsului.

The producer reserves its right to make changes in the present documentation, to improve the quality of the product.

Notă: În cazul în care configurația produsului solicitat de dumneavoastră nu se regăsește în catalogul HESPER, vă rugăm să ne contactați la :

Note : If the configuration of the product demanded by you is not in HESPER catalogue, please contact us at :

Tel: +4021.336.23.52; +4021.335.10.50; +40722.562.899; Fax +4021.337.24.60; Email: hesper@hesper.ro; www.hesper.ro