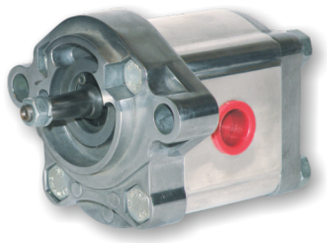
POMPE SIMPLE BIDIRECŢIONALE CU ROŢI DINŢATE BHP1
BIDIRECTIONAL SIMPLE GEAR PUMPS BHP1

Descriere şi utilizare

Sunt pompe bidirecţionale construite pe designul pompelor HP1.
Pot funcţiona în ambele sensuri.
Au drenaj extern sau intern (în capac).
Aspiraţiile şi refulările alternative sunt uzual aceleaşi pentru ambele sensuri de rotaţie.

Description and use

Are bidirectional pums, mainly build following HP1 family design.
It can operate in both rotations.
They have external or internal drain (in the end cover).
The alternative inlets and outlets are usualy the same for both rotations.



Codificare - *Codification*

BHP1 – Vg (cm^3/rot) *(ccm/rev)* – Ax antrenare *Driving shaft* – Flanşă prindere *Fastening flange* – Flanşă aspiraţie *Inlet port* – Flanşă refulare *Outlet port* – Sens *Rotation*

Vg (cm^3/rot) *(ccm/rev)*
0,85
1
1,2
1,7
2
2,2
2,6
3,2
3,8
4,3
5
6
7,8

Ax antrenare *Driving shaft*	
1	Conic 1:8 PLESSEY *Conical 1:8 PLESSEY*
2	Conic 1:8 SAUER *Conical 1:8 SAUER*
3	Cilindric - ø 12 SAUER *Cylindrical - ø 12 SAUER*
8	Cep DEUTZ *DEUTZ pin*
9	Cilindric - ø 12 *Cylindrical - ø 12*

Flanşă prindere *Fastening flange*	
1	PLESSEY (Anglia) *PLESSEY (England)*
2	SAUER (Germania) *SAUER (Germany)*
3	Ovală SAE AA *Oval SAE AA*

Flanşă aspiraţie *Inlet port*	
1	4 găuri M6 / Ø 30 *4 holes M6 / Ø 30*
2	4 găuri M6 / Ø 30 *4 holes M6 / Ø 30*
3	Filetat M20 x 1,5 *Threaded M20 x 1,5*
4	Filetat M18 x 1,5 *Threaded M18 x 1,5*
5	Filetat M16 x 1,5 *Threaded M16 x 1,5*
6	Filetat M14 x 1,5 *Threaded M14 x 1,5*
7	* Filetat BSPP G 3/4" ** Threaded BSPP G 3/4"*
8	Filetat BSPP G 1/2" *Threaded BSPP G 1/2"*
9	Filetat BSPP G 3/8" *Threaded BSPP G 3/8"*
A	SAE # 8 3/4" - 16 UNF
B	SAE # 6 9/16" - 18 UNF
C	Filetat BSPP G 1/4" *Threaded BSPP G 1/4"*
0	** Obturată *** Closed*

Flanşă refulare *Outlet port*	
1	4 găuri M6 / Ø 30 *4 holes M6 / Ø 30*
2	4 găuri M6 / Ø 30 *4 holes M6 / Ø 30*
3	Filetat M20 x 1,5 *Threaded M20 x 1,5*
4	Filetat M18 x 1,5 *Threaded M18 x 1,5*
5	Filetat M16 x 1,5 *Threaded M16 x 1,5*
6	Filetat M14 x 1,5 *Threaded M14 x 1,5*
7	* Filetat BSPP G 3/4" ** Threaded BSPP G 3/4"*
8	Filetat BSPP G 1/2" *Threaded BSPP G 1/2"*
9	Filetat BSPP G 3/8" *Threaded BSPP G 3/8"*
A	SAE # 8 3/4" - 16 UNF
B	SAE # 6 9/16" - 18 UNF
C	Filetat BSPP G 1/4" *Threaded BSPP G 1/4"*
0	** Obturată *** Closed*

Sens *Rotation*	
B (bidirecţional) *(bidirecţional)*	↻
BI (bidirecţional) cu drenaj intern *with internal drain*	↻

* cu restricţii
** dacă aspiraţia sau refularea nu sunt pe corpul pompei

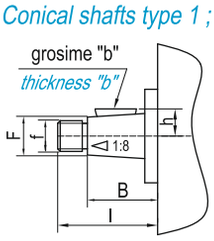
** restricted*
*** if the inlet or outlet ports are not on the body of the pump*

Exemplu - *Example*

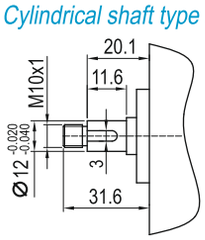
BHP1	- 2,6	- 1	1	1	1	-	B
BHP1	- 5	- 2	2	2	5	-	BI

Axe antrenare - *Driving shafts*

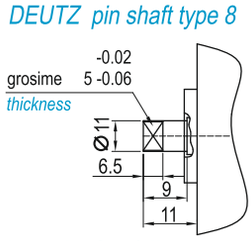
Axe conice tip 1 ; 2
Conical shafts type 1 ; 2



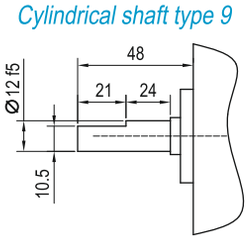
Ax cilindric tip 3
Cylindrical shaft type 3



Ax cu cep DEUTZ tip 8
DEUTZ pin shaft type 8



Ax cilindric tip 9
Cylindrical shaft type 9



Axe de antrenare (dimensiuni) - *Driving shafts (dimensions)*

Varianta *Variant*	Tip ax *Shaft type*	l (mm)	B (mm)	F (mm)	f (mm)	k (mm)	h (mm)	b (mm)	Mmax (Nm)
1	Conic 1:8 (PLESSEY) *Conical 1:8 (PLESSEY)*	29	20	Ø 8+0,1	M6	1:8	5,6	2,4	40
2	Conic 1:8 (SAUER) *Conical 1:8 (SAUER)*	29	19,5	Ø 9-0,1	M8	1:8	6	3	50
3	Cilindric Ø 12 (SAUER) *Cylindrical Ø 12 (SAUER)*	-	-	-	-	-	7,5	3	30
8	Cep DEUTZ *DEUTZ pin*	-	-	-	-	-	-	-	20
9	Cilindric Ø 12 *Cylindrical Ø 12*	-	-	-	-	-	-	-	30

Ediţia:
Februarie 2015

Edition:
February 2015

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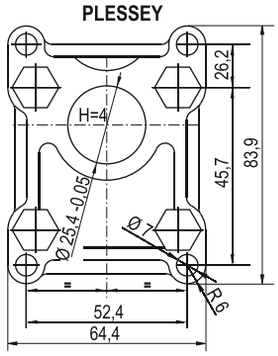
Flanşe prindere - *Fastening flanges*

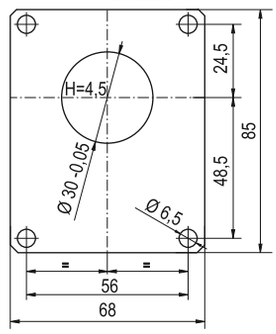
Varianta 1 - *Variant 1*

PLESSEY



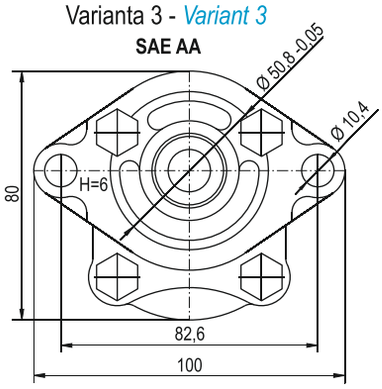
Varianta 2 - *Variant 2*

SAUER



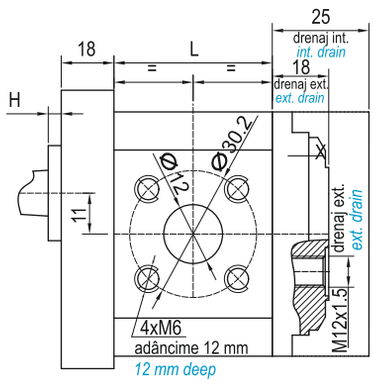
Varianta 3 - *Variant 3*

SAE AA



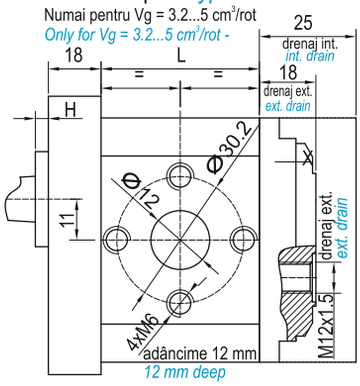
Aspiraţii şi refulări - *Inlet and outlet ports*

tip 1 - *type 1*

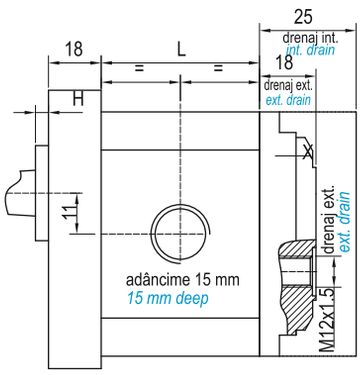


tip 2 - *type 2*

Numai pentru Vg = 3.2...5 cm³/rot
Only for Vg = 3.2...5 cm³/rot -

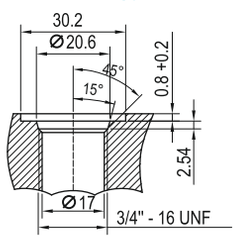


tip 3;4;5;6;7;8;9;A;B;C - *type 3;4;5;6;7;8;9,A,B,C*

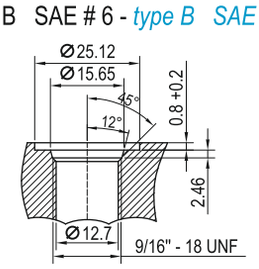


Tip *Type*	filete *threads*	Obs.
3	M20 x 1,5	
4	M18 x 1,5	
5	M16 x 1,5	
6	M14 x 1,5	
7	G 3/4"	Vg= 3.2...5
8	G 1/2"	
9	G 3/8"	
C	G 1/4"	
A	3/4" – 16 UNF 2B SAE #8	
B	9/16" – 18 UNF 2B SAE #6	

tip A SAE # 8 - *type A SAE # 8*



tip B SAE # 6 - *type B SAE # 6*



CARACTERISTICI TEHNICE - *TECHNICAL CHARACTERISTICS*

Vg (cm³/rot) *(ccm/rev)*	L (mm)	Condiţii normale - Normal conditions						Turaţie (rot/min) *Speed (rev/min)*			Temperatura *Temperature* (°C)	Vâscozitate *Viscosity* (cSt)	Filtrare *Filtration* (µm)
		Pn (bar)	Pmax (bar)	η_v %	η_m %	η_t %	Zgomot *noise* (dB)	n_n	n_{min}	n_{max}			
0,85	33,2	250	280	80	68	55	60	1500	1200	4500	-15 ... +80	12 ... 2000	20
1	33,7			84	70	59							
1,2	34,5			86	72	62							
1,7	36,3			88	74	65			1000	3500			
2	37,4			89	76	68	61						
2,2	38,2			90	78	70							
2,6	39,7			91	80	73							
3,2	41,9			92	82	75	62		800	3200	recomandat *recommended* 0 ... +60	recomandat *recommended* 25 ... 200	
3,8	43,7			94	84	79			700	2800			
4,3	45,6			95	85	81	63						
5	47,8	230	250	96	85	82			600	2400			
6	51,2	190	210	97	85	83	64		500	2000			
7,8	57,5	150	170	98	85	83							

Notă:
- Pn: presiune nominală
- Randamentele se garantează în condiţii nominale şi la o vâscozitate a uleiului de 30...40 mm²/s.
- Funcţionarea pompelor la turaţii ridicate, fără cavitaţie, este posibilă numai cu o aspiraţie suficient de largă.
- Pompele cu drenaj extern pot lucra cu presiuni ridicate pe aspiraţia alternativă a pompei.
- Pompele cu drenaj intern pot lucra cu o presiune de max. 2 bar pe aspiraţia alternativă a pompei.

Note:
- *Pn: nominal pressure*
- *The efficiencies are guaranteed in nominal conditions and viscosity 30…40 mm²/s.*
- *Functioning at high speed, without cavitation, it is possible only with an enough large inlet.*
- *The pumps with external drain can work with high pressure on the alternative inlet of pump.*
- *The pumps with internal drain can work with max. 2 bar pressure on the alternative inlet of the pump.*

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