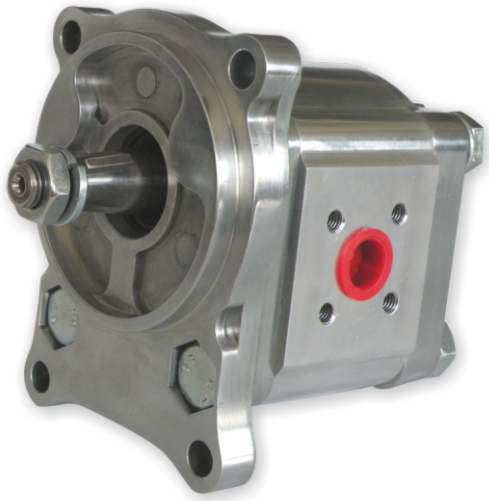
POMPE SIMPLE CU ROŢI DINŢATE SUPER SILENŢIOASE SS-HP2
SUPER SILENT GEAR PUMPS SS-HP2

Descriere şi utilizare

Sunt pompe pentru aplicaţii generale, cu o varietate foarte mare de flanşe de prindere, de axe de antrenare, de tipuri de aspiraţie şi de refulare.
Au performanţe funcţionale foarte bune şi nivel de zgomot foarte mic, datorită danturii înclinate utilizate.
Pompele cu roţi dinţate au volum geometric constant şi sunt utilizate în acţionări hidraulice, la maşini agricole, echipamente anexe pentru tractoare, utilaje de ridicat şi transport, utilaje terasiere grele, maşini unelte, s.a.



Description and use

Are pumps for general applications, with a large variety of fastening flanges, shafts and inlet / outlet ports. It have very good functional parameters an very low level of noise, because of the helical gear used.
The gear pumps with constant displacement, are used in the hydro drive installation, for agricultural equipment, mobiles, heavy-duty equipment for transport and earth moving, machines-tools.

Codificare – *Codification*

SS-HP 2 – Vg (cm3/rot, *ccm/rev*) – Ax antrenare / *Driving shaft* – Flanşa prindere / *Fastening flange* – Flanşa aspiraţie / *Inlet port* – Flanşa refulare / *Outlet port* – Sens / *Rotation*

Vg (cm3/rot, *ccm/rev*)
6.3
8.2
11.3
14
16
19
22.5
25
27.9

Ax antrenare / *Driving shaft*	
1	Conic 1:5 BOSCH *Conical 1:5 BOSCH*
C	Conic 1:5 (majorat) *Conical 1:5 (increased)*
D	Conic 1:5 BOSCH *Conical 1:5 BOSCH*
2	Conic 1:8 (micsorat) *Conical 1:8 (diminished)*
3	Conic 1:8 PLESSEY *Conical 1:8 PLESSEY*
5	Canelat-*involute spline* B 17x14 DIN 5482
A	Canelat-*involute spline* SAE 9T 16/32 Dp
L	Canelat-*involute spline* SAE 9T 16/32 Dp
E	Cilindric Ø15.875 *Cylindrical Ø15.875*
T	Cilindric scurt Ø15.875 *Cilindrical short Ø15.875*
0	Cilindric Ø17.45 *Cylindrical Ø17.45*
B	Cep DEUTZ - scurt *Deutz pin - short*
F	Cep DEUTZ - lung *Deutz pin - long*
G	Cep DEUTZ - scurt cu frezare *DEUTZ pin - short with milling*

Flanşa prindere / *Fastening flange*	
1	PLESSEY (4xØ7)
2	DIN (4 xØ9)
3	PLESSEY (4xØ9)
4	GERMAN 2xØ11
4e	GERMAN 2xØ11 cu inel O - *with O-ring*
5	GERMAN 2xØ11
5e	GERMAN 2xØ11 cu inel O - *with O-ring*
6	GERMAN 2xØ11
6e	GERMAN 2xØ11 cu inel O - *with O-ring*
7	Ovala SAE "A" *Oval SAE "A"*
8	GERMAN 2xØ11
8e	GERMAN 2xØ11 cu inel O - *with O-ring*
9	GERMAN 4xØ11

Flanşa aspiraţie / *Inlet port*	
3 4 8 D E M	Variante PLESSEY *PLESSEY Variants*
V W	Variante SAE *SAE Variants*
2 5 A B	Variante DIN *DIN Variants*
1 9 F G H J T	Variante filetate BSPP *Threaded Variants BSPP*
7 K N P Q R	Variante filetate ISO (metric) *Threaded Variants ISO (metrical)*
6 C S U Y	Variante filetate UNF *Threaded Variants UNF*
0	Obturată *Closed*

Flanşa refulare / *Outlet port*	
3 4 8 D E M	Variante PLESSEY *PLESSEY Variants*
V W	Variante SAE *SAE Variants*
2 5 A B	Variante DIN *DIN Variants*
1 9 F G H J T	Variante filetate BSPP *Threaded Variants BSPP*
7 K N P Q R	Variante filetate ISO (metric) *Threaded Variants ISO (metrical)*
6 C S U Y	Variante filetate UNF *Threaded Variants UNF*
0	Obturată *Closed*

Sens / *Rotation*	
A	(stânga) *(Anticlockwise)*
C	(dreapta) *(Clockwise)*

"0" daca aspiraţia şi refularea nu sunt pe corpul pompei
"0" if inlet or outlet ports are not on the body of the pump.

Exemplu - *Example*

SS-HP 2	–	11.3	–	3	3	1	1	-	A

Ediţia:
Octombrie 2016

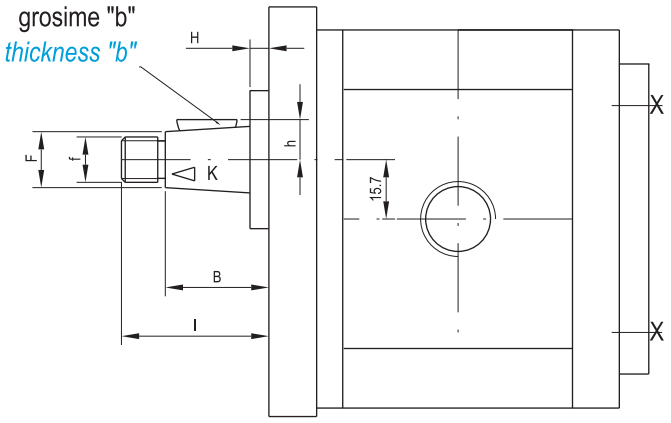
Edition:
October 2016

Str. Dr. C-tin. Istrati nr.1, Sector 4, Cod 040542, BUCUREŞTI
Tel: +4021.336.23.52; +4021.335.10.50; +40722.562.899; Fax +4021.337.24.60;
Email: hesper@hesper.ro; www.hesper.ro

POMPE SIMPLE CU ROȚI DINȚATE SUPER SILENȚIOASE SS-HP2
SUPER SILENT GEAR PUMPS SS-HP2

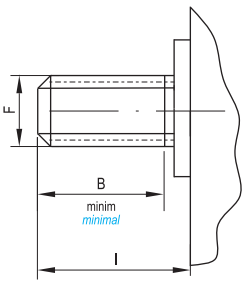
Axe antrenare - *Driving shafts*

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

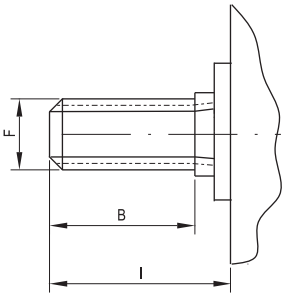


Axe canelate - *Grooved shafts*

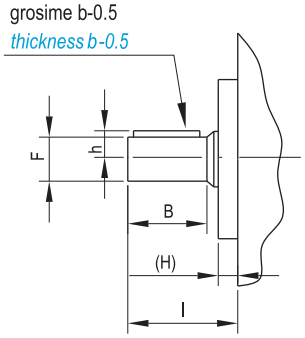
Varianta A; 5
Variant A; 5



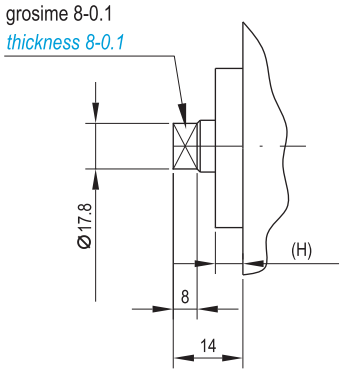
Varianta L
Variant L



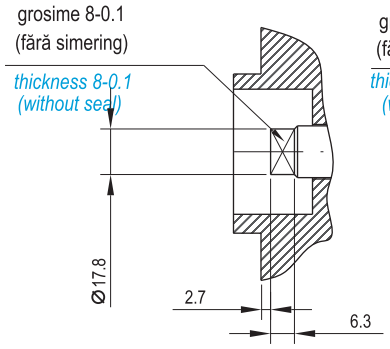
Axe cilindrice
Variantele O;E;T
Cylindrical shafts
Variants O;E;T



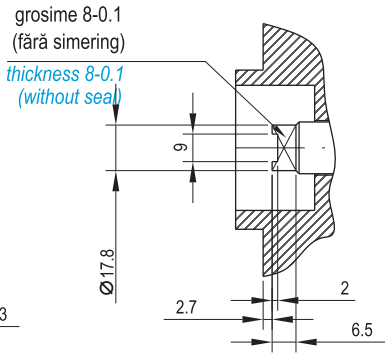
Cep DEUTZ lung
Varianta F
DEUTZ pin - long
Variant F



Cep DEUTZ scurt
Varianta B
DEUTZ pin - short
Variant B



Cep DEUTZ scurt
Varianta G
DEUTZ pin - short
Variant G

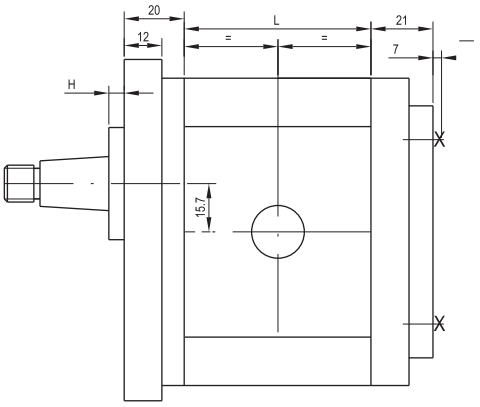


Axe antrenare - *Driving shafts*

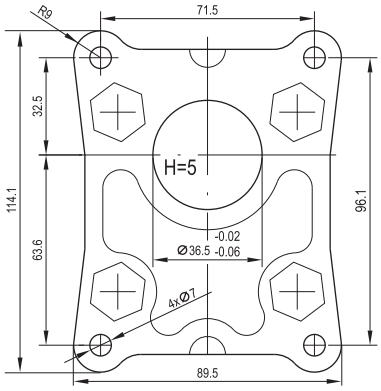
Varianta *Variant*	Tip ax *Shaft type*	l (mm)	B (mm)	F (mm)	f (mm)	k	h (mm)	b (mm)	Mmax (Nm)
1	Conic 1:5 BOSCH *Conical 1:5 BOSCH*	38	24.8	13.6	M12x1.25	1:5	9.2	3	150
C	Conic 1:5 (majorat) *Conical 1:5 (increased)*	40	26.6	14	M12x1.25	1:5	9.6	3	160
D	Conic 1:5 BOSCH *Conical 1:5 BOSCH*	40.5	27.3	13.6	M12x1.25	1:5	9.5	3	150
2	Conic 1:8 (redus) *Conical 1:8 (diminished)*	39	30	14	M12x1.25	1:8	9.4	3.2	170
3	Conic 1:8 PLESSEY *Conical 1:8 PLESSEY*	39	27.4	14.8	M12x1.25	1:8	9.4	3.2	180
5	Canelat *Grooved* B17x14 DIN 5482	26	19	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
0	Cilindric Ø17.45 *Cylindrical Ø17.45*	43	37	17.45 $^{0}_{-0.02}$	-	-	11.1	4.76	70
E	Cilindric Ø15.875 *Cylindrical Ø15.875*	44.5	36.5	15.87 $^{0}_{-0.02}$	-	-	9.7	3.96	65
T	Cilindric Ø15.875 *Cylindrical Ø15.875*	32	25.4	15.87 $^{0}_{-0.02}$	-	-	9.7	3.96	50
F	Cep DEUTZ - lung *DEUTZ pin - long*	-	-	-	-	-	-	-	65
B	Cep DEUTZ - scurt *DEUTZ pin - short*	-	-	-	-	-	-	-	65
G	Cep DEUTZ cu frezare *DEUTZ pin with milling*	-	-	-	-	-	-	-	65

POMPE SIMPLE CU ROŢI DINŢATE SUPER SILENŢIOASE SS-HP2
SUPER SILENT GEAR PUMPS SS-HP2

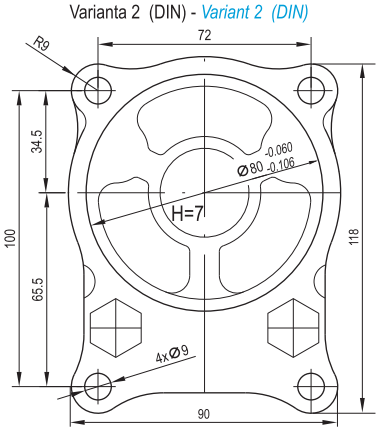
Flanşe de prindere - *Fastening Flanges*



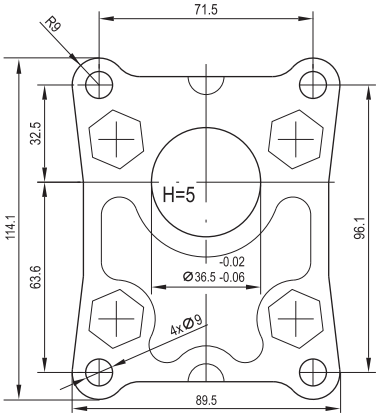
Varianta 1 (Plessey) - *Variant 1 (Plessey)*



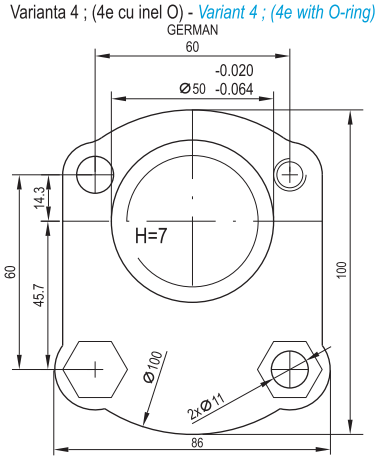
Varianta 2 (DIN) - *Variant 2 (DIN)*



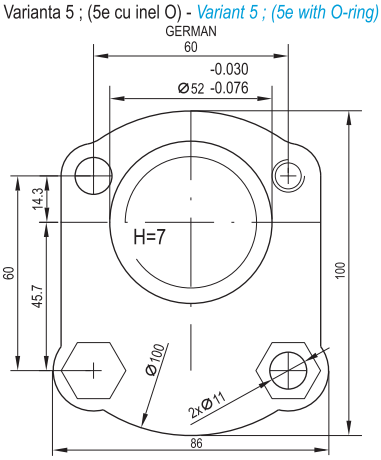
Varianta 3 (Plessey) - *Variant 3 (Plessey)*



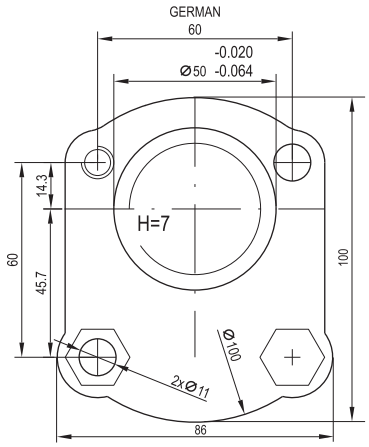
Varianta 4 ; (4e cu inel O) - *Variant 4 ; (4e with O-ring)*



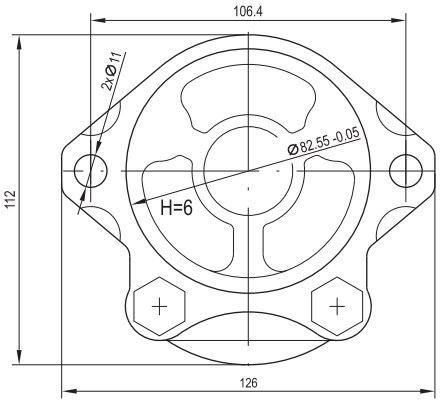
Varianta 5 ; (5e cu inel O) - *Variant 5 ; (5e with O-ring)*



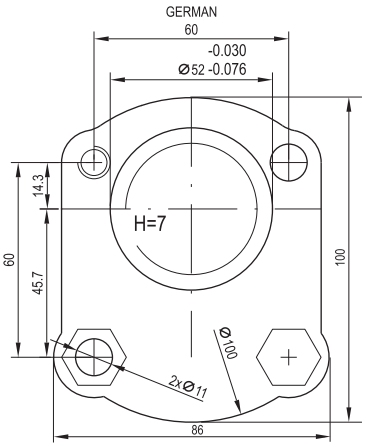
Varianta 6 ; (6e cu inel O) - *Variant 6 ; (6e with O-ring)*



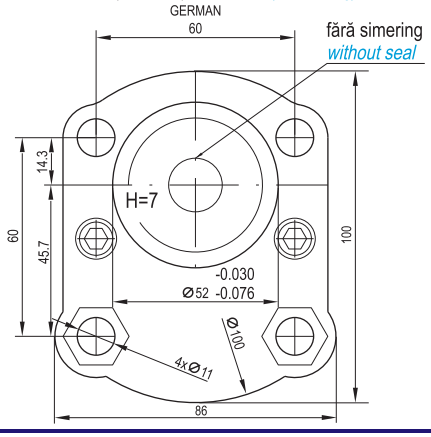
Varianta 7 (SAE "A") - *Variant 7 (SAE "A")*



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



Varianta 9 (cu inel O) - *Variant 9 (with O-ring)*

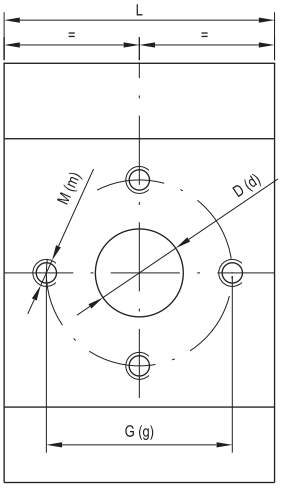


Producătorul îşi rezervă dreptul să modifice datele din prezenta documentaţie, pentru îmbunătăţirea produsului.
The producer reserves its right to make changes in the present documentation, to increase the quality of the product.

POMPE SIMPLE CU ROŢI DINŢATE SUPER SILENŢIOASE SS-HP2
SUPER SILENT GEAR PUMPS SS-HP2

Flanşe aspiraţie-refulare - *Inlet-outlet ports*

Variante PLESSEY - *PLESSEY variants*



Vg cm3/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

tip 3 - *type 3*					
inlet			*outlet*		
D	G	M	d	g	m
13.1	30.2	M6	13.1	30.2	M6
19	39.7	M8	14.2	30.2	M6
22	39.7	M8	16	39.7	M8

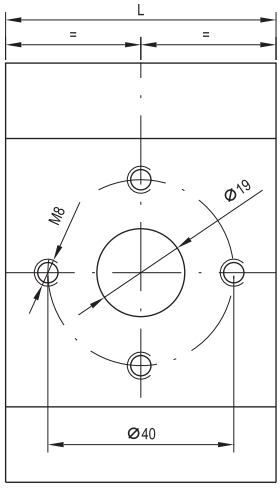
tip 8 - *type 8*					
inlet			*outlet*		
D	G	M	d	g	m
13	30.2	M6	13	30.2	M6
19	39.7	M8			
22	39.7	M8			

tip M - *type M*					
inlet			*outlet*		
D	G	M	d	g	m
13	30	M6	13	30	M6
19	40	M8	19	40	M8

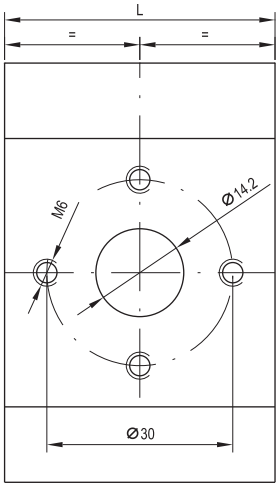
tip 4 - *type 4*					
inlet			*outlet*		
D	G	M	d	g	m
15	30.2	M6	15	30.2	M6
20	39.7	M8			

Variante SAE - *SAE variants*

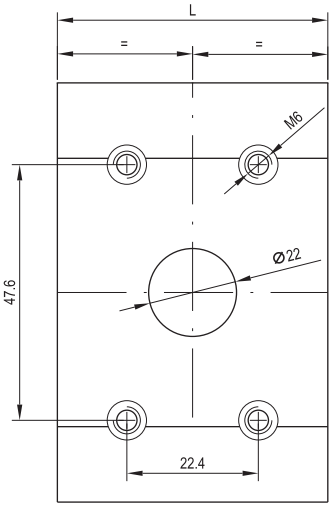
tip D - *type D*



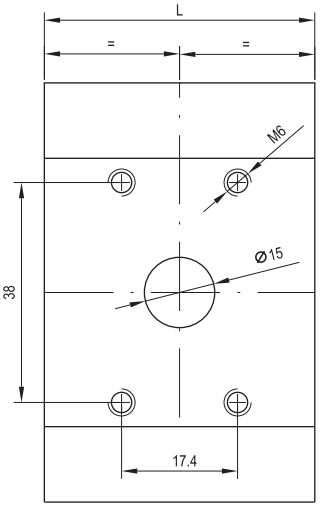
tip E - *type E*



tip V - *type V*

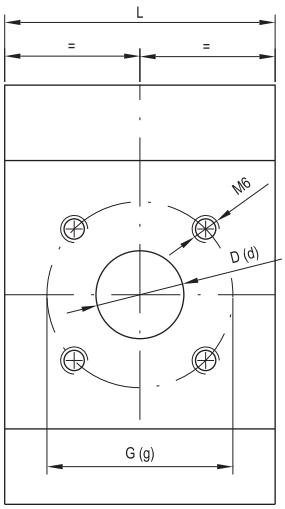


tip W - *type W*



Numai pentru Vg = 11,3 – 27,9 cm^3/rot.
Only for Vg = 11,3– 27,9 cmc/rev.

tip 2 - *type 2*

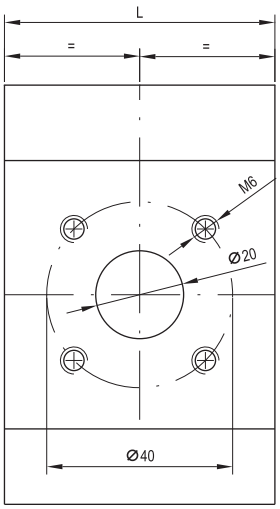


Variante DIN - *DIN variants*

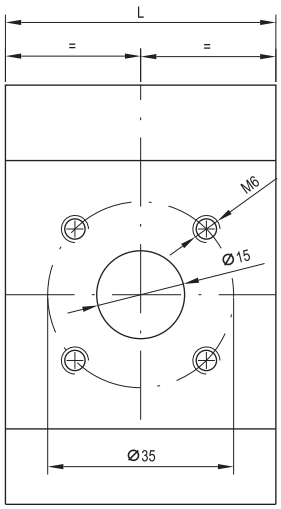
Vg cm3/rev	L mm
6.3	48.6
8.2	51.7
11.3	56.8
14	61.3
16	64.7
19	69.7
22.5	75.1
25	79.2
27.9	84

tip 2 - *type 2*			
inlet		*outlet*	
D	G	d	g
15	40	12	35
20		15	

tip A - *type A*



tip B - *type B*



Notă: Aspiraţia trebuie să fie suficient de mare în conformitate cu Vg şi turaţia.
Note: Inlet should be large enough, in conformity with Vg and speed.

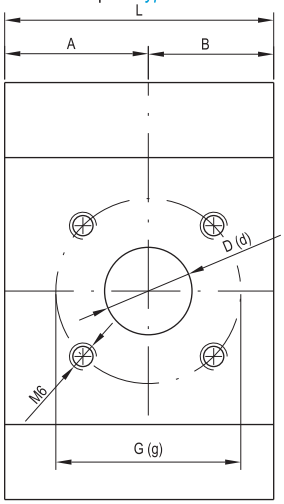
HESPER FONDAT 1871

Str. Dr. C-tin. Istrati nr.1, Sector 4, Cod 040542, BUCUREŞTI
Tel: +4021.336.23.52; +4021.335.10.50; +40722.562.899; Fax +4021.337.24.60;
Email: hesper@hesper.ro; www.hesper.ro

POMPE SIMPLE CU ROȚI DINȚATE SUPER SILENȚIOASE SS-HP2
SUPER SILENT GEAR PUMPS SS-HP2

Variante asimetrice - *Asimetrical variants*

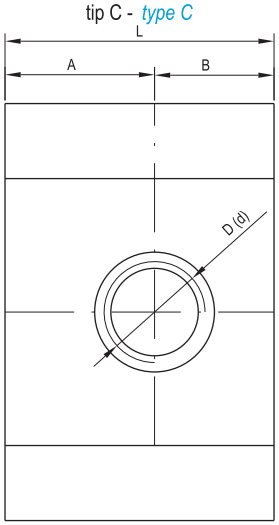
tip 5 - *type 5*



Vg cm3/rev	L mm	tip 5 - type 5 inlet D	inlet G	outlet d	outlet g	A mm	B mm
6.3	48.6	15	40	12	35	28.6	20
8.2	51.7					30.1	21.6
11.3	56.8	20		15		34.5	22.3
14	61.3						26.8
16	64.7						30.2
19	69.7						35.2
22.5	75.1						33.1
25	79.2					42	37.2
27.9	84						42

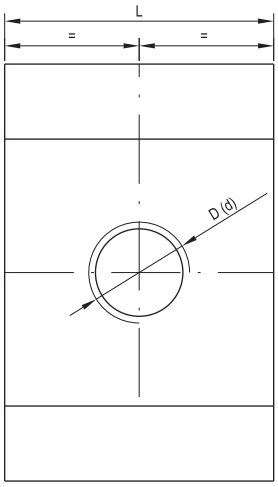
Dimensiunea "A" este spre flanșă
Dimension "A" is to the fastening flange side.

tip C - *type C*



Vg cm3/rev	L mm	tip C - type C inlet D	outlet d	A mm	B mm
6.3	48.6	SAE # 12 1"1/16 - 12 UNF	SAE # 10 7/8" - 14 UNF		
8.2	51.7				
11.3	56.8				
14	61.3				
16	64.7				
19	69.7				
22.5	75.1			36.1	39
25	79.2				
27.9	84				

Dimensiunea "A" este spre flanșă
Dimension "A" is to the fastening flange side.



Variante filetate BSPP - *BSPP threaded variants*

Vg cm3/rev	L mm	tip 1 - type 1 inlet D	outlet d	tip 9 - type 9 inlet D	outlet d	tip H - type H inlet D	outlet d	tip F - type F inlet D	outlet d	tip G - type G inlet D	outlet d	tip J - type J inlet D	outlet d	tip T - type T inlet D	outlet d
6.3	48.6	G1/2"	G1/2"	G3/4"	G1/2"	G3/4"	G1/2"	G3/4"	G3/4"	G1/2"	G1/2"	G3/8"	G3/8"	Rc1/2"	Rc1/2"
8.2	51.7														
11.3	56.8														
14	61.3	G3/4"		G1"										Rc3/4"	
16	64.7				G3/4"										Rc1/2"
19	69.7														
22.5	75.1														
25	79.2	G1"	G3/4"												
27.9	84														

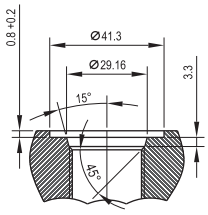
Variante filetate ISO 6149 (metric) - *ISO 6149 threaded variants (metrical)*

Vg cm3/rev	L mm	tip 7 - type 7 inlet D	outlet d	tip P - type P inlet D	outlet d	tip K - type K inlet D	outlet d	tip N - type N inlet D	outlet d	tip Q - type Q inlet D	outlet d	tip R - type R inlet D	outlet d
6.3	48.6	M20 x 1.5	M16 x 1.5	M20 x 1.5	M20 x 1.5	M27 x 1.5	M27 x 1.5	M22 x 1.5	M22 x 1.5	M18 x 1.5	M18 x 1.5	M16 x 1.5	M16 x 1.5
8.2	51.7												
11.3	56.8												
14	61.3												
16	64.7												
19	69.7		M20 x 1.5										
22.5	75.1	M22 x 1.5											
25	79.2												
27.9	84												

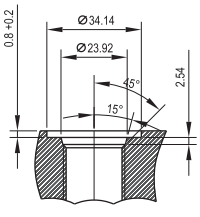
Variante filetate UNF - *UNF threaded variants*

tip 6 - type 6 inlet D	outlet d	tip S - type S inlet D	outlet d	tip U - type U inlet D	outlet d	tip Y - type Y inlet D	outlet d
1 1/16" - 12 UNF	7/8" - 14 UNF	1 1/16" - 12 UNF	1 1/16" - 12 UNF	7/8" - 14 UNF	7/8" - 14 UNF	9/16" - 18 UNF	9/16" - 18 UNF
		SAE # 12	SAE # 12	SAE # 10	SAE # 10	SAE # 6	SAE # 6

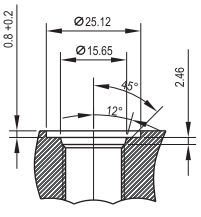
1 1/16" - 12 UNF
SAE # 12



7/8" - 14 UNF
SAE # 10



9/16" - 18 UNF
SAE # 6



POMPE SIMPLE CU ROȚI DINȚATE SUPER SILENȚIOASE SS-HP2
SUPER SILENT GEAR PUMPS SS-HP2

CARACTERISTICI TEHNICE - *TECHNICAL CHARACTERISTICS*

Vg cm^3/rot *ccm/rev*	L mm	η_v %	η_m %	Zgomot maxim *max. noise* (dB)	Presiune - *Pressure* (bar)		Presiune aspirație *Inlet pressure* (bar)	Turație (rot/min) *Speed (rev/min)*			Temperatura *Temperature* (°C)	Vâscozitate *Viscosity* (cSt)	Filtrare *Filtration* (µm)
					Pn	Pmax		nominal	min.	max.			
6,3	48,6	91	87	65	250	280	min. - 0,3 max. 2	1500	900	4000	-15...+ 80	12...2000	max. 25
8,2	51,7	92	88						800	3500			
11,3	56,8	93											
14	61,3	94	89						600	3000			
16	64,7	95			235	250							
19	69,7	95	90		200	220			500		recomandat *recommended* 0...+ 60	recomandat *recommended* 25...200	recomandat *recommended* 16
22,5	75,1	96			160	180				2500			
25	79,2	97			150	170							
27,9	84	98			140	160				2000			

Notă:

- Pn: presiunea nominală la care se garantează fucționarea continuă, durabilitatea şi randamentul volumic.
- Randamentele volumice η_v se garantează în condiții nominale şi la o vâscozitate a uleiului de 30….40 mm^2/s.
- Funcționarea pompelor la turații ridicate, fără cavitație, este posibilă numai cu o aspirație suficient de largă.
- Presiunea de aspirație nu va scade sub 0,7 bar abs.
- Este interzisă încărcarea axului de antrenare al pompei cu sarcini radiale sau axiale în timpul utilizării.

Note:

- *Pn: nominal pressure for which, continuous running, life time and volumetric efficiency are guaranteed.*
- *Volumetric efficiency η_v is guaranteed in nominal conditions and viscosity 30…40 mm^2/s.*
- *Functioning at high speed, without cavitation, it is possible only with an enough large inlet.*
- *The inlet pressure should not decrease under 0.7 bar absolute.*
- *It is forbidden radial or axial loads on the pump shaft during the use.*