

POMPE SIMPLE CU ROȚI DINȚATE HP2

SIMPLE GEAR PUMPS HP2

Descriere și utilizare

Sunt pompe pentru aplicații generale.

Au performanțe funcționale foarte bune și nivel de zgomot relativ mic.

Pompele cu roți dințate au volum geometric constant și sunt utilizate în acționări hidraulice, la mașini agricole, echipamente pentru tractoare utilaje de ridicat și transport, utilaje terasiere grele, mașini unelte, s.a.

Description and use

Are pumps for general applications.

It have very good functional parameters and relatively low level of noise.

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

| HP 2 | Vg <small>cm³/rot ccm/rev</small> | Ax antrenare <i>Driving shaft</i> | Flanșa prindere <i>Fastening flange</i> | Flanșa aspirație <i>Inlet port</i> | Flanșa refulare <i>Outlet port</i> | Sens <i>Rotation</i> |
|------|---|---|---|---------------------------------------|---------------------------------------|--------------------------------------|
| 4 | 1 | Conic 1:5 BOSCH <i>Conical 1:5 BOSCH</i> | 1 PLESSEY (4xØ7) | 3 | 3 | A (stânga) <i>(Anticlockwise)</i> |
| 4.5 | C | Conic 1:5 (majorat) <i>Conical 1:5 (increased)</i> | 2 DIN (4 xØ9) | 4 Variante PLESSEY | 4 Variante PLESSEY | |
| 5.5 | D | Conic 1:5 BOSCH <i>Conical 1:5 BOSCH</i> | 3 PLESSEY (4xØ9) | D PLESSEY Variants | D PLESSEY Variants | |
| 6.3 | | | | E | E | |
| 8.2 | 2 | Conic 1:8 (micsorat) <i>Conical 1:8 (diminished)</i> | 4 GERMAN 2xØ11 | M Variante SAE | M Variante SAE | |
| 11.3 | 3 | Conic 1:8 PLESSEY <i>Conical 1:8 PLESSEY</i> | 4e GERMAN 2xØ11 cu inel O - <i>with O-ring</i> | W Variante SAE | W Variante SAE | |
| 14 | | | | 2 | 2 | |
| 16 | 5 | Canelat- <i>involute spline</i> B 17x14 DIN 5482 | 5 GERMAN 2xØ11 | 5 Variante DIN | 5 Variante DIN | |
| 19 | A | Canelat- <i>involute spline</i> SAE 9T 16/32 Dp | 5e GERMAN 2xØ11 cu inel O - <i>with O-ring</i> | A Variante DIN | A Variante DIN | |
| 22.5 | L | Canelat- <i>involute spline</i> SAE 9T 16/32 Dp | 6 GERMAN 2xØ11 | B | B | |
| 25 | | | | 1 | 1 | |
| 27.9 | E | Cilindric Ø15.875 <i>Cylindrical Ø15.875</i> | 6e GERMAN 2xØ11 cu inel O - <i>with O-ring</i> | 9 Variante filetate | 9 Variante filetate | |
| | T | Cilindric scurt Ø15.875 <i>Cylindrical short Ø15.875</i> | 7 | F BSPP | F BSPP | |
| | 0 | Cilindric Ø17.45 <i>Cylindrical Ø17.45</i> | 8 GERMAN 2xØ11 | G Threaded Variants | G Threaded Variants | |
| | B | Cep DEUTZ - scurt <i>Deutz pin - short</i> | 8e GERMAN 2xØ11 cu inel O - <i>with O-ring</i> | H BSPP | H BSPP | |
| | F | Cep DEUTZ - lung <i>Deutz pin - long</i> | 9 GERMAN 4xØ11 cu inel O - <i>with O-ring</i> | J | J | |
| | G | Cep DEUTZ - scurt cu frezare <i>DEUTZ pin - short with milling</i> | Am PLESSEY (4xØ7) | T | T | |
| | | | An PLESSEY (4 xØ9) | 7 Variante filetate | 7 Variante filetate | |
| | | | | K ISO (metric) | K ISO (metric) | |
| | | | | P Threaded Variants | P Threaded Variants | |
| | | | | Q ISO (metric) | Q ISO (metric) | |
| | | | | R Threaded Variants SAE | R Threaded Variants SAE | |
| | | | | 6 Variante filetate SAE | 6 Variante filetate SAE | |
| | | | | S Threaded Variants SAE | S Threaded Variants SAE | |
| | | | | U | U | |
| | | | | Y | Y | |
| | | | | 0 | 0 | |

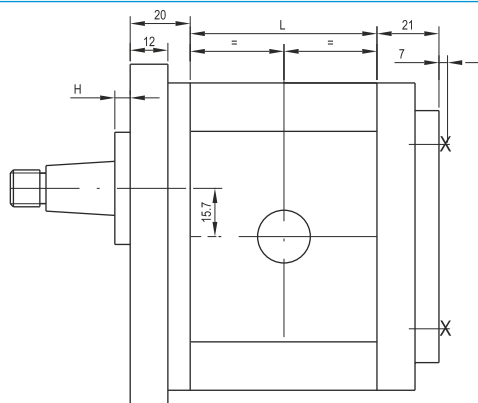
"0" dacă aspirația și refularea nu sunt pe corpul pompei
"0" if inlet or outlet ports are not on the body of the pump.

Exemplu - Example

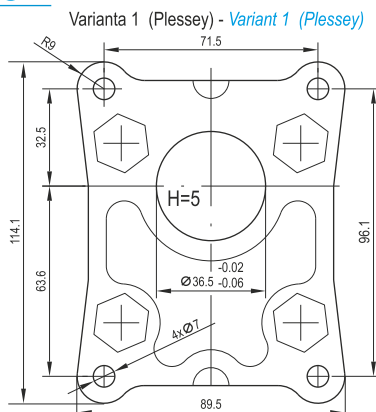
| | | | | | | | | | | | | |
|------|---|------|---|---|---|---|---|---|---|---|---|---|
| HP 2 | - | 11.3 | - | 3 | - | 3 | - | 1 | - | 1 | - | A |
|------|---|------|---|---|---|---|---|---|---|---|---|---|

POMPE SIMPLE CU ROȚI DINȚATE HP2 - **SIMPLE GEAR PUMPS HP2**

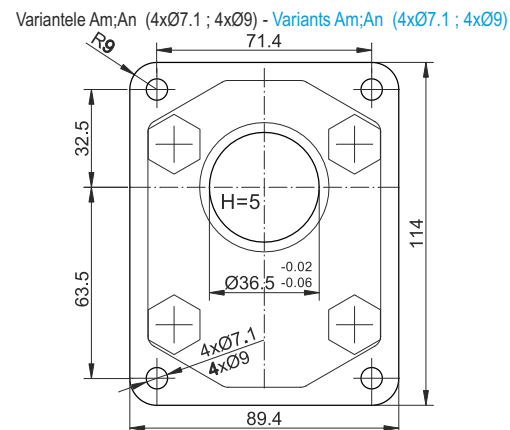
Flanșe de prindere - **Fastening Flanges**



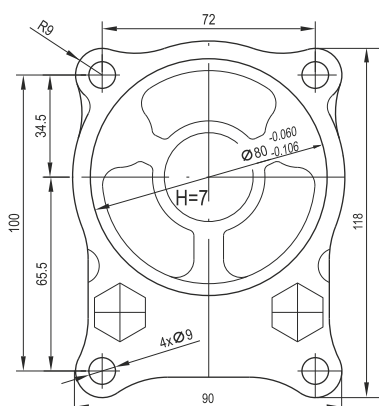
Varianta 2 (DIN) - **Variant 2 (DIN)**



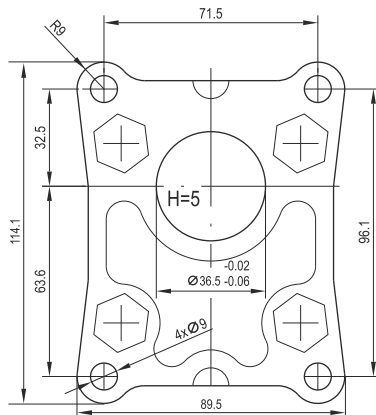
Varianta 3 (Plessey) - **Variant 3 (Plessey)**



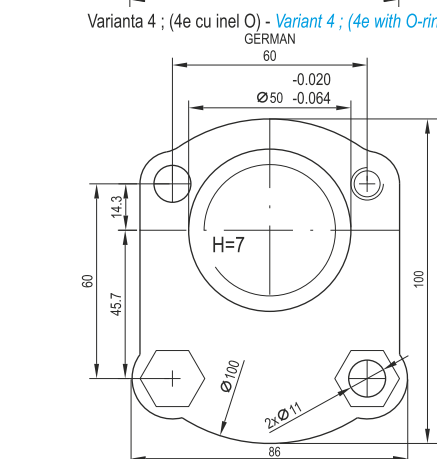
Varianta 4 ; (4e cu inel O) - **Variant 4 ; (4e with O-ring)**



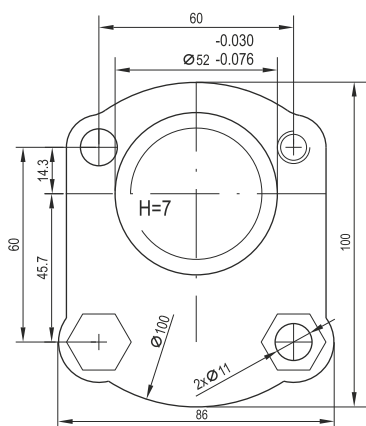
Varianta 5 ; (5e cu inel O) - **Variant 5 ; (5e with O-ring)**



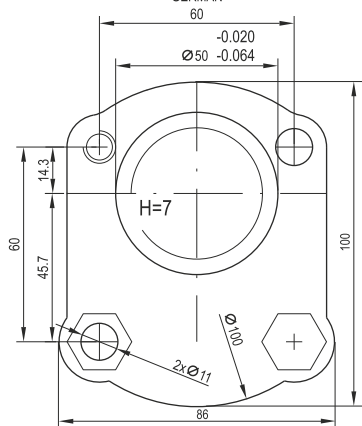
Varianta 6 ; (6e cu inel O) - **Variant 6 ; (6e with O-ring)**



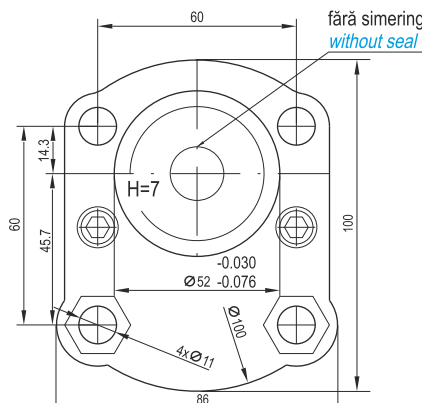
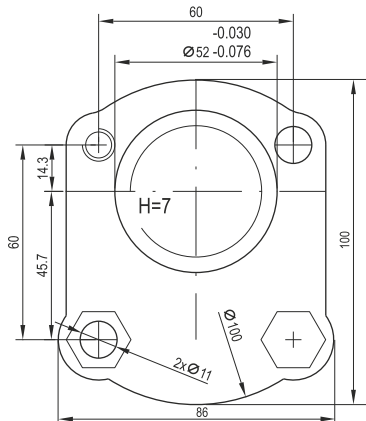
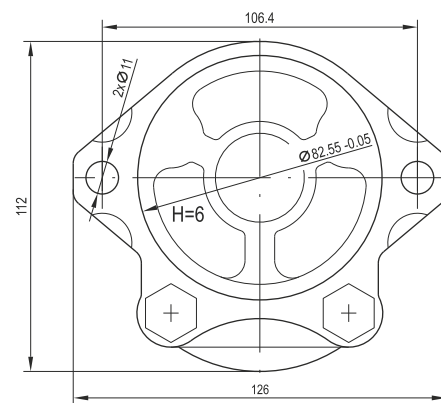
Varianta 7 (SAE "A") - **Variant 7 (SAE "A")**



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



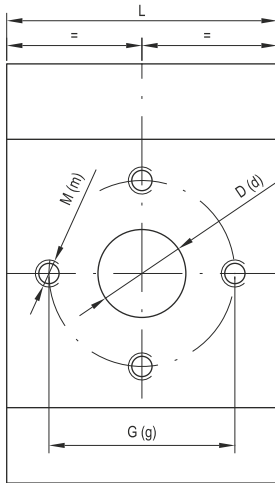
Varianta 9 (cu inel O) - **Variant 9 (with O-ring)**



POMPE SIMPLE CU ROȚI DINȚATE HP2 - *SIMPLE GEAR PUMPS HP2*

Flanșe aspirație-refulare - *Inlet-outlet ports*

Variante PLESSEY - *PLESSEY variants*



| Vg cm ³ /rev | L mm |
|----------------------------|---------|
| 4 | 44.7 |
| 4.5 | 45.6 |
| 5.5 | 47.2 |
| 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 |

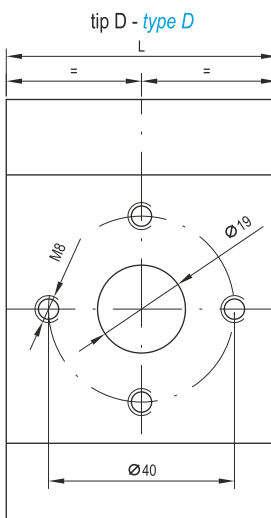
| tip 3 - <i>type 3</i> | | | | | |
|-----------------------|------|----|--------|------|----|
| inlet | | | outlet | | |
| D | G | M | d | g | m |
| 13.1 | 30.2 | M6 | 13.1 | 30.2 | M6 |
| 19 | 39.7 | M8 | 14.2 | 30.2 | M6 |
| 22 | 39.7 | M8 | 16 | 39.7 | M8 |

| tip 8 - <i>type 8</i> | | | | | |
|-----------------------|------|----|--------|------|----|
| inlet | | | outlet | | |
| D | G | M | d | g | m |
| 13 | 30.2 | M6 | | | |
| 19 | 39.7 | M8 | 13 | 30.2 | M6 |
| 22 | 39.7 | M8 | | | |

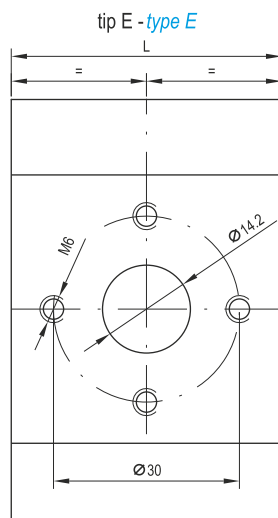
| tip M - <i>type M</i> | | | | | |
|-----------------------|----|----|--------|----|---|
| inlet | | | outlet | | |
| D | G | M | d | g | m |
| 13 | 30 | M6 | 30 | M6 | |
| 19 | 40 | M8 | 40 | M8 | |
| | | | 19 | | |

| tip 4 - <i>type 4</i> | | | | | |
|-----------------------|------|----|--------|------|----|
| inlet | | | outlet | | |
| D | G | M | d | g | m |
| 15 | 30.2 | M6 | | | |
| 20 | 39.7 | M8 | 15 | 30.2 | M6 |

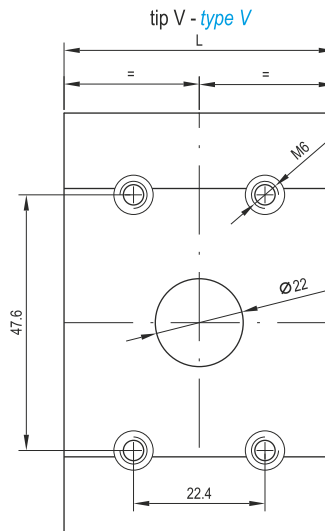
Variante SAE - *SAE variants*



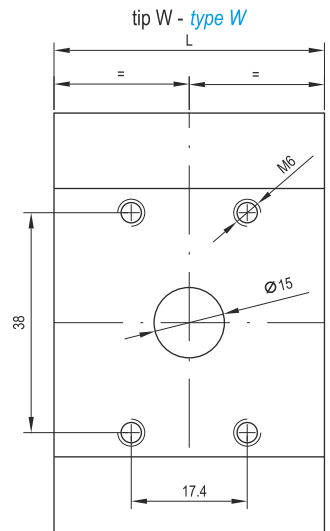
tip D - *type D*



tip E - *type E*

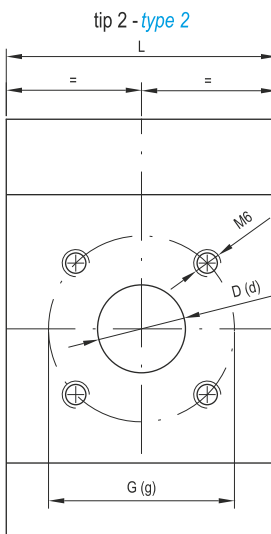


tip V - *type V*



tip W - *type W*

Numai pentru Vg = 11,3 – 27,9 cm³/rot.
Only for Vg = 11,3– 27,9 cm³/rev.

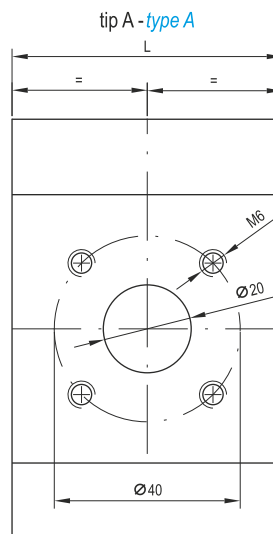


tip 2 - *type 2*

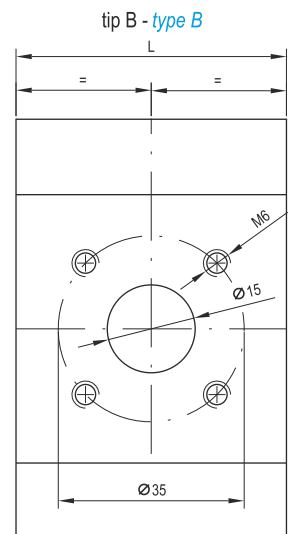
Variante DIN - *DIN variants*

| Vg cm ³ /rev | L mm |
|----------------------------|---------|
| 4 | 44.7 |
| 4.5 | 45.6 |
| 5.5 | 47.2 |
| 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 - <i>type 2</i> | | | |
|-----------------------|----|--------|----|
| inlet | | outlet | |
| D | G | d | g |
| 15 | | 12 | |
| | 40 | | 35 |
| 20 | | 15 | |



tip A - *type A*



tip B - *type B*

Notă: Aspirația trebuie să fie suficient de mare în conformitate cu volumul geometric și turația
Note: Inlet should be large enough, in conformity with displacement and speed.



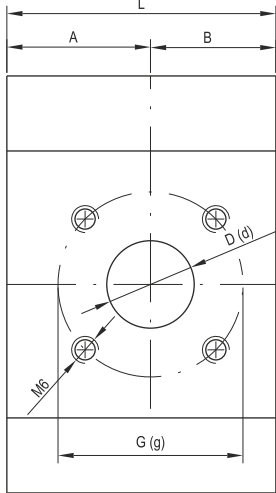
Str. Dr. C-tin. Istrati nr.1, Sector 4, Cod 040542, BUCUREȘTI
Tel: +4021.336.23.52; +4021.335.10.50; +40722.562.899; Fax +4021.337.24.60;
Email: hesper@hesper.ro; www.hesper.ro

POMPE SIMPLE CU ROȚI DINȚATE HP2 - *SIMPLE GEAR PUMPS HP2*

Flanșe aspirație-refulare - *Inlet-outlet ports*

Variante asimetrice - *Asymmetrical variants*

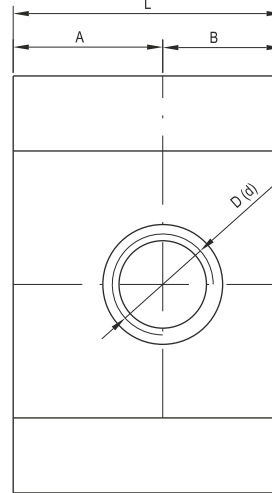
tip 5 - *type 5*



| Vg cm3/rev | L mm | tip 5 - <i>type 5</i> | | | | A mm | B mm |
|---------------|---------|-----------------------|----|--------|----|---------|---------|
| | | inlet | | outlet | | | |
| | | D | G | d | g | | |
| 4 | 44.7 | | | | | 24.7 | 20 |
| 4.5 | 45.6 | | | | | 25.6 | |
| 5.5 | 47.2 | 15 | | 12 | | 27.2 | |
| 6.3 | 48.6 | | | | | 28.6 | |
| 8.2 | 51.7 | | | | | 30.1 | 21.6 |
| 11.3 | 56.8 | | 40 | | 35 | | 22.3 |
| 14 | 61.3 | | | | | | 26.8 |
| 16 | 64.7 | 20 | | 15 | | 34.5 | 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.

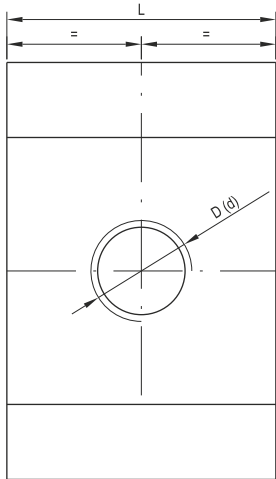
tip C - *type C*



| Vg cm3/rev | L mm | tip C - <i>type C</i> | | A mm | B mm |
|---------------|---------|-----------------------|--------|---------|---------|
| | | inlet | outlet | | |
| | | D | d | | |
| 4 | 44.7 | | | | |
| 4.5 | 45.6 | | | | |
| 5.5 | 47.2 | | | | |
| 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 | | | | |

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

Variante filetate BSPP - *BSPP threaded variants*



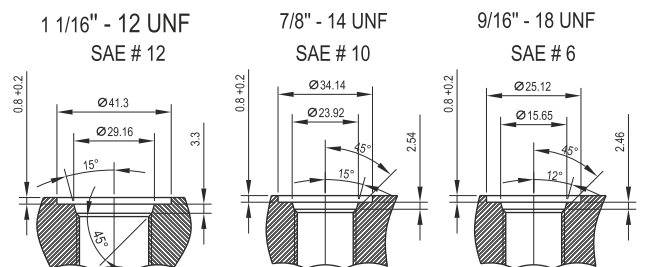
| Vg cm3/rev | L mm | tip 1 - <i>type 1</i> | | tip 9 - <i>type 9</i> | | tip H - <i>type H</i> | | tip F - <i>type F</i> | | tip G - <i>type G</i> | | tip J - <i>type J</i> | | tip T - <i>type T</i> | |
|---------------|---------|-----------------------|--------|-----------------------|--------|-----------------------|--------|-----------------------|--------|-----------------------|--------|-----------------------|--------|-----------------------|--------|
| | | inlet | outlet | inlet | outlet | inlet | outlet | inlet | outlet | inlet | outlet | inlet | outlet | inlet | outlet |
| | | D | d | D | d | D | d | D | d | D | d | D | d | D | d |
| 4 | 44.7 | | | | | | | | | | | | | | |
| 4.5 | 45.6 | | | | | | | | | | | | | | |
| 5.5 | 47.2 | G1/2" | | G3/4" | G1/2" | | | | | | | G3/8" | | Rc1/2" | Rc1/2" |
| 6.3 | 48.6 | | | | | | | | | | | | | | |
| 8.2 | 51.7 | | G1/2" | | | G3/4" | G1/2" | G3/4" | G3/4" | G1/2" | G1/2" | | G3/8" | | |
| 11.3 | 56.8 | | | | | | | | | | | | | | |
| 14 | 61.3 | | | | | | | | | | | | | | |
| 16 | 64.7 | G3/4" | | | | | | | | | | | | | |
| 19 | 69.7 | | | G1" | G3/4" | | | | | | | | | | |
| 22.5 | 75.1 | | | | | | | | | | | | | | |
| 25 | 79.2 | G1" | G3/4" | | | | | | | | | | | Rc3/4" | Rc1/2" |
| 27.9 | 84 | | | | | | | | | | | | | | |

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

| Vg cm3/rev | L mm | tip 7 - <i>type 7</i> | | tip P - <i>type P</i> | | tip K - <i>type K</i> | | tip N - <i>type N</i> | | tip Q - <i>type Q</i> | | tip R - <i>type R</i> | |
|---------------|---------|-----------------------|-----------|-----------------------|-----------|-----------------------|-----------|-----------------------|-----------|-----------------------|-----------|-----------------------|-----------|
| | | inlet | outlet | inlet | outlet | inlet | outlet | inlet | outlet | inlet | outlet | inlet | outlet |
| | | D | d | D | d | D | d | D | d | D | d | D | d |
| 4 | 44.7 | | | | | | | | | | | | |
| 4.5 | 45.6 | | | | | | | | | | | | |
| 5.5 | 47.2 | | | | | | | | | | | | |
| 6.3 | 48.6 | | | | | | | | | | | | |
| 8.2 | 51.7 | | | | | | | | | | | | |
| 11.3 | 56.8 | 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 |
| 14 | 61.3 | | | | | | | | | | | | |
| 16 | 64.7 | | | | | | | | | | | | |
| 19 | 69.7 | | | | | | | | | | | | |
| 22.5 | 75.1 | M22 x 1.5 | M20 x 1.5 | | | | | | | | | | |
| 25 | 79.2 | | | | | | | | | | | | |
| 27.9 | 84 | | | | | | | | | | | | |

Variante filetate SAE - *SAE threaded variants*

| Vg cm3/rev | L mm | tip 6 - <i>type 6</i> | | tip S - <i>type S</i> | | tip U - <i>type U</i> | | tip Y - <i>type Y</i> | |
|---------------|---------|-----------------------|--------|-----------------------|--------|-----------------------|--------|-----------------------|--------|
| | | inlet | outlet | inlet | outlet | inlet | outlet | inlet | outlet |
| | | D | d | D | d | D | d | D | d |
| 4 | 44.7 | | | | | | | | |
| 4.5 | 45.6 | | | | | | | | |
| 5.5 | 47.2 | | | | | | | | |
| 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 | | | | | | | | |



Notă: Aspirația trebuie să fie suficient de mare în conformitate cu volumul geometric și turația
Note: Inlet should be large enough, in conformity with displacement and speed.

POMPE SIMPLE CU ROȚI DINȚATE HP2 - *SIMPLE GEAR PUMPS HP2*

CARACTERISTICI TEHNICE - *TECHNICAL CHARACTERISTICS*

| Vg cm ³ /rot <i>ccm/rev</i> | L mm | η_v % | η_m % | Presiune - <i>Pressure</i> (bar) | | Presiune aspirație <i>Inlet pressure</i> (bar) | Turație (rot/min) <i>Speed (rev/min)</i> | | | Temperatura <i>Temperature</i> (°C) | Vâscozitate <i>Viscosity</i> (cSt) | Filtrare <i>Filtration</i> (μm) | |
|--|---------|---------------|---------------|-------------------------------------|------|---|---|------|------|--|--|--|---------|
| | | | | Pn | Pmax | | nominal | min. | max. | | | | |
| 4 | 44,7 | 88 | 86 | 250 | 280 | min. - 0,3 max. 2 | 1500 | | 1000 | 4500 | -15...+ 80 | 12...2000 | max. 25 |
| 4,5 | 45,6 | 89 | | | | | | | | | | | |
| 5,5 | 47,2 | 90 | | | | | | | | | | | |
| 6,3 | 48,6 | 91 | | | | | | | | | | | |
| 8,2 | 51,7 | 92 | | | | | | | | | | | |
| 11,3 | 56,8 | 93 | | | | | | | | | | | |
| 14 | 61,3 | 94 | | | | | | | | | | | |
| 16 | 64,7 | 95 | | | | | | | | | | | |
| 19 | 69,7 | 95 | | | | | | | | | | | |
| 22,5 | 75,1 | 96 | | | | | | | | | | | |
| 25 | 79,2 | 97 | 90 | 210 | 230 | 500 | | | 3000 | recomandat <i>recommended</i> 0...+ 60 | recomandat <i>recommended</i> 25...200 | recomandat <i>recommended</i> 16 | |
| 27,9 | 84 | 98 | | 190 | 210 | | | | | | | | 2500 |
| | | | | 170 | 185 | | | | | | | | |

Notă:

- Pn: presiunea nominală la care se garantează funcționarea continuă, durabilitatea și randamentul volumic.
- Randamentele volumice η_v se garantează în condiții nominale și la o vâscozitate a uleiului de 30 40 mm²/s.
- Caracteristicile de mai sus sunt valabile și pentru pompele duble (pentru fiecare treaptă)
- 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.
- Vă rugăm să contactați HESPER în cazul în care chiar și una dintre limitele parametrilor de funcționare indicate în tabel (temperatură, presiune, turație) sunt depășite.

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 mm²/s.*
- *The characteristics mentioned above are valid also for double pumps (for every stage).*
- *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.*
- *Please contact HESPER if even one of the operating limits indicated in the table (temperature, pressure, speed) are exceeded.*

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