## HIDROMA SISTEMS

HYDROMA
UKŁADY HYDRAULICZNE

## 2spw <br> Dast Iron Eear Pump



Long life expectancy
$\square$ High efficiencies
$\square$ High pressure limits
$\square$ Reduced number of componentsReduced overall dimension

Walvoil presents the new range of 2SPW Cast Iron Pumps.
These pumps are particularly suitable for all applications where traditional aluminum pumps are used at the limit of their performance; eg. for installation on mobile equipment intended for heavy duty operating cycles, where pressures or mechanical stresses are typically higher.
Its modular construction allows the same versatility of the Group 2 series with aluminum body, while maintaining the possible configurations in terms of flanges, shafts and integrated valves.

| GENERAL WORKING CONDIIIONS |  |  |
| :---: | :---: | :---: |
| Displacement | up to | from 14 to $31.5 \mathrm{~cm}^{3} / \mathrm{rev}$ from 0.85 to $1.92 \mathrm{in}^{3} / \mathrm{rev}$ |
| Max continuous pressure |  | 250 bar - 3600 psi |
| Fluid |  | hydraulic mineral oil-based |
| Fluid temperature range | with NBR (buna N ) seals | $\begin{aligned} & \text { from }-20 \text { to }+80^{\circ} \mathrm{C} \\ & \text { from }-4 \text { to }+176^{\circ} \mathrm{F} \end{aligned}$ |
|  | with FPM (viton) seals | from -20 to $+100^{\circ} \mathrm{C}$ from -4 to $+212^{\circ} \mathrm{F}$ |
| Viscosity | Recommended | from 15 to $92 \mathrm{~mm}^{2} / \mathrm{s}$ (cSt) |
|  | Permitted for starting | $2000 \mathrm{~mm}^{2} / \mathrm{s}$ (cSt) |
| Max level of contamination | Recommended for operating pressure > 150 bar (2150 psi) | 20/18/15 ISO 4406 class 9 (NAS 1638) |
|  | Recommended for operating pressure < 150 bar (2150 psi) | 21/18/15 ISO 4406 <br> class 10 (NAS 1638) |

## Technical data

| $\begin{aligned} & \text { GROUP } \\ & \text { 2SPW } \end{aligned}$ | Displacement |  | Max continuous pressure |  | Max intermittent pressure |  | Max peak pressure |  | Max rotation speed |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\mathrm{cm}^{3} / \mathrm{rev}$ | in ${ }^{3} / \mathrm{rev}$ | bar | psi | bar | psi | bar | psi | rpm |
| 2SPW 140 | 14.0 | 0.85 | 250 | 3,600 | 280 | 4,060 | 300 | 4,350 | 3500 |
| 2SPW 160 | 16.5 | 1.01 | 250 | 3,600 | 280 | 4,060 | 300 | 4,350 | 3500 |
| 2SPW 190 | 19.5 | 1.19 | 250 | 3,600 | 280 | 4,060 | 300 | 4,350 | 3500 |
| 2SPW 220 | 22.5 | 1.37 | 250 | 3,600 | 270 | 3,900 | 300 | 4,350 | 3500 |
| 2SPW 260 | 26.0 | 1.59 | 230 | 3,330 | 250 | 3,600 | 280 | 4,060 | 3000 |
| 2SPW 310 | 31.5 | 1.92 | 200 | 2,900 | 240 | 3,480 | 250 | 3,600 | 2800 |

## Dimensions

| GROUP <br> 2SPW | A |  | B |  |
| :---: | :---: | :---: | :---: | :---: |
|  | mm | in | mm | in |
| 2SPW 140 | 54.9 | 2.161 | 109.5 | 4.311 |
| 2SPW 160 | 59.1 | 2.326 | 113.7 | 4.476 |
| 2SPW 190 | 64.1 | 2.524 | 118.7 | 4.673 |
| 2SPW 220 | 68.1 | 2.681 | 123.7 | 4.870 |
| 2SPW 260 | 67.9 | 2.673 | 129.5 | 5.098 |
| 2SPW 310 | 68.3 | 2.689 | 137.9 | 5.429 |


Series 2SP - 2SPW comparison
Continuous max. pressure vs. displacement


## N=W

| $\begin{aligned} & \text { GROUP } \\ & \text { 2SPW } \end{aligned}$ | Ports Threading |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | BSP |  |  |  |  | UN-UNF |  |  |  |  |
|  | IN | OUT | IN* | OUT* | DRAIN* | IN | OUT | IN* | OUT* | DRAIN* |
| 140 | G3/4 | G1/2 | G3/4 | G3/4 | G1/4 | SAE12 | SAE10 | SAE12 | SAE12 | SAE6 |
| 160 | G3/4 | G1/2 | G3/4 | G3/4 | G1/4 | SAE12 | SAE10 | SAE12 | SAE12 | SAE6 |
| 190 | G3/4 | G1/2 | G3/4 | G3/4 | G1/4 | SAE12 | SAE10 | SAE12 | SAE12 | SAE6 |
| 220 | G1 | G1/2 | G3/4 | G3/4 | G1/4 | SAE16 | SAE10 | SAE12 | SAE12 | SAE6 |
| 260 | G1 | G1/2 | G3/4 | G3/4 | G1/4 | SAE16 | SAE10 | SAE12 | SAE12 | SAE6 |
| 310 | G1 | G1/2 | G3/4 | G3/4 | G1/4 | SAE16 | SAE10 | SAE12 | SAE12 | SAE6 |

NOTE(*): Only f or reversible motor/pump configuration

## Dimensions: configuration with priority walve



## Configuration with priority valve built in the back cover of the pump



Combinations available with cast iron flanges

|  |  | Shaft type |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | GROUP <br> 2SPW | $\begin{gathered} 10 \\ \text { Tapered } \\ 1: 8 \end{gathered}$ | $\begin{gathered} \mathbf{1 1} \\ \text { Tapered } \\ 1: 5 \end{gathered}$ | $\begin{aligned} & 12 \\ & \text { EUR } \\ & \text { Parallel } \\ & \text { shaft } \end{aligned}$ | $\begin{gathered} 13 \\ \text { SAEA } \\ \text { Parallel } \\ \text { shaft } \end{gathered}$ | $\begin{gathered} \mathbf{1 4} \\ \text { SAEA } \\ \text { 9T splined } \end{gathered}$ | $\begin{gathered} 15 \\ \text { DIN5482 } \\ \text { 9T splined } \\ (26 / 24) \end{gathered}$ | $\begin{aligned} & 16 \\ & \text { DIN5482 } \\ & \text { 9T splined } \\ & (20) \end{aligned}$ | 40 SAE $10 T$ splined (52) | 41 <br> SAE $10 T$ <br> splined <br> (37.5) | $\begin{aligned} & 42 \\ & \text { SAEA 11T } \\ & \text { splined } \\ & (55.6) \end{aligned}$ | $\begin{aligned} & 43 \\ & \text { SAEA } 111 \mathrm{~T} \\ & \text { splined } \\ & \text { (31.5) } \end{aligned}$ | 44 <br> SAEA $11 T$ splined (13.5) |
| $\underset{\underset{\sim}{\sim}}{\underline{\sim}}$ |  | $\diamond$ | $\bullet$ | $\diamond$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ |  |  |  |  |  |
| 岕 |  | $\bullet$ | $\bullet$ | $\bullet$ | $\rangle$ | $\rangle$ | - | - | $\bullet$ | - | $\bullet$ | $\bullet$ | $\bullet$ |
| 思 |  | $\bullet$ | - | - | $\rangle$ | $\diamond$ | $\bullet$ | $\bullet$ | $\bullet$ | - | - | $\bullet$ | - |

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\begin{aligned}
& \diamond=\text { STANDARD COMBINATION } \\
& \bullet=\text { AVAILABLE COMBINATION }
\end{aligned}
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