## Standard hydraulic power packs type ASH

vertical motor, submersed pump - reservoir capacity 10, 25,50 and 100 liters


ASH hydraulic power packs are compact design standard units made according to machinery directive 2006/42/CE with vertical motor pump unit.
Electric motors and pumps are available in different variants, modular subplates type BA-243/A, to realize customized hydraulic circuits with modular and directional valves (ISO 4401 size 06), can be assembled on the cover.
Basic version is composed by:
(1) electric motor coupled with hydraulic pump (2);
(3) suction submersed filter;
(4) return filter with visual clogging indicator;
(5) pressure relief valve;
(6) glycerine filled pressure gauge $\varnothing$ 60 with shut-off valve (7);
(8) reservoir with visual oil level (9, filling plug with air filter (10) and emptying (11).

1 MODEL CODE

| ASH | 25 | / G |  | 142 | - 1, | S | /E | ** |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Type of hydraulic |  |  |  |  |  |  |  | Design number |
| $\begin{aligned} & \text { Reservoir capacity: } \\ & 10=10 \text { liters } \\ & 25=25 \text { liters } \\ & 50=50 \text { liets } \\ & 100=100 \text { liters } \end{aligned}$ |  |  |  |  |  | Options: <br> /EA = air-oil heat exchanger, see section 3 <br> /EW = water-oil heat exchanger, see section 3 <br> $/ \mathbf{V}=$ reservoir with oil collecting bottom lip. <br> Options /EA and /EW are not available for ASH-10 <br> Eventual suffix <br> $\mathbf{S}=$ without electric motor |  |  |
| Type of pump: <br> $\mathbf{E}=$ vane pump type PFE (see tab. A005) <br> $\mathbf{R}=$ radial piston pump type PFR (see tab. A045) <br> $\mathbf{G}=$ gear pump type PFG (see tab. A055) |  |  |  |  |  |  |  |  |
| Pump displacement, see for PFE <br> $31016=16,5 \mathrm{~cm}^{3} / \mathrm{rev}$ <br> $31022=21,6 \mathrm{~cm}^{3} / \mathrm{rev}$ <br> $31028=28,1 \mathrm{~cm}^{3} / \mathrm{rev}$ | section 4 for availa for PFR <br> $202=1,7 \mathrm{~cm}^{3} / \mathrm{rev}$ <br> $203=3,7 \mathrm{~cm}^{3} / \mathrm{rev}$ | comb for P 114 128 128 160 174 | ns: <br> $\mathrm{cm}^{3} \mathrm{rev}$ <br> $\mathrm{cm}^{3} / \mathrm{rev}$ <br> $\mathrm{cm}^{3} / \mathrm{rev}$ <br> $\mathrm{cm}^{3} / \mathrm{rev}$ <br> $\mathrm{cm}^{3} / \mathrm{rev}$ | $\begin{aligned} & \mathbf{1 8 7}=9,1 \mathrm{~cm}^{3} / \mathrm{rev} \\ & \mathbf{1 9 9}=10,8 \mathrm{~cm}^{3} / \mathrm{rev} \\ & \mathbf{2 1 4}=14 \mathrm{~cm}^{3} / \mathrm{rev} \\ & \mathbf{2 1 8}=17,8 \mathrm{~cm}^{3} / \mathrm{rev} \\ & \mathbf{2 2 1}=20,8 \mathrm{~cm}^{3} \mathrm{rev} \end{aligned}$ | Electri $0,4=$ 0,7 1,1 1,5 2,5 Supply S | r motor <br> W <br> W <br> V <br> ges, see | $\begin{gathered} \text { ection } 4 \\ =3 \mathrm{~kW} \\ =4 \mathrm{~kW} \\ 5=5,5 \mathrm{~kW} \\ 5 \end{gathered}=7,5 \mathrm{~kW} .$ <br> n 4. |  |

## 2 HYDRAULIC SKETCHES



NOTE: on ASH-10 the oil filter on return line is not included and the optional mounting of heat exchanger is not available.

| Installation position | Horizontal: electric motor with vertical axis. |
| :---: | :---: |
| Ports | Ports P = G $1 / 2^{\prime \prime}$ on subplate BA-243/MP/** <br> Ports T = G 1/2" on subplate BA-243/MP/** |
| Customized circuits | Customized circuits can be easily realized by means of modular plates type BA-243/A, molar valves size ISO 4401 size 06, solenoid valves and directional valves type $\mathrm{DH}^{*}$. <br> In particular: <br> - intermediate plates type BA-243/A must be assembled between the basic plate BA-243/M* and the closing element BA-243/T, mounted on the cover of the power packs; <br> - modular control valves type HMP, HM, HS, HG, HC, HQ, HR, solenoid valves and direction valves type $\mathrm{DH}^{*}$ can be mounted on these intermediate plates according to the requested hydraulic sketch. |
| Fluid | Hydraulic oil as per DIN 51524...535; for other fluids contact our technical office |
| Recommmended viscosity | $15 \div 100 \mathrm{~mm}^{2} / \mathrm{s}$ at $40^{\circ} \mathrm{C}$ (ISO VG $15 \div 100$ |
| Fluid contamination class | ISO 19/16, achieved with in line filters at $25 \mu \mathrm{~m}$ and $\beta 25 \geq 75$ (recommended) |
| Fluid temperature | $-20^{\circ} \mathrm{C}+60^{\circ} \mathrm{C}$ (standard and /WG seals) $-20^{\circ} \mathrm{C}+80^{\circ} \mathrm{C}$ (/PE seals) <br> On request, water-oil (option /EW) or air-oil (option /EW) heat exchangers are available, connected as indicated on section 2. Air-oil exchanger are equipped with electroimpellers supplied at $230 / 400 \mathrm{~V}-50 / 60 \mathrm{~Hz}$. <br> On power packs type ASH-10 the heat exchangers is not available. |
| Ambient temperature | From $-20^{\circ} \mathrm{C}$ to $+70^{\circ} \mathrm{C}$ |

Note: On the SSH-10-HPU- the return filter is not present and assembly of heat exchangers is not expected.

## 4 HYDRAULIC CHARACTERISTICS

| Model | Pump type | Flow rate at 1450 rpm and 7 bar [ $1 / \mathrm{min}$ ] | Maximum pressure [bar] with motor's power: |  |  |  |  |  |  |  |  | Capacity of reservoir [liters] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | $\begin{gathered} 0,37 \text { kW } \\ \text { UNEL size } \\ 71 \\ (1) \end{gathered}$ | $\begin{gathered} 0,75 \mathrm{~kW} \\ \text { UNEL size } \\ \mathbf{8 0}(1) \end{gathered}$ | $\begin{gathered} \mathbf{1 , 1} \mathbf{~ k W} \\ \text { UNEL size } \\ 90(1) \end{gathered}$ | $\begin{gathered} 1,5 \mathrm{~kW} \\ \text { UNEL size } \\ 90(1) \end{gathered}$ | $\begin{gathered} \text { 2,2 kW } \\ \text { UNEL size } \\ 100(1) \end{gathered}$ | $\begin{aligned} & 3 \text { kW } \\ & \text { UNEL size } \\ & 100 \text { (1) } \end{aligned}$ | $\begin{gathered} 4 \text { kW } \\ \text { UNEL size } \\ 112(1) \end{gathered}$ | $5,5 \mathrm{~kW}$ UNEL size 132 (1) | $7,5 \mathrm{~kW}$ UNEL size 132 (1) |  |
| Motor Mass[Kg] | - | - | 7,5 | 9 | 13,5 | 14 | 23 | 23 | 30 | 41 | 52 | - |
| ASH-10/G114 | PFG-114 | 2,1 | 80 (4) | - | - | - | - | - | - | - | - | 10 |
| ASH-10/G128 | PFG-128 | 4,2 | 45 (3) | - | - | - | - | - | - | - | - | 25 |
| ASH-25/G114 | PFG-114 | 2,1 | - | 160 (5) | - | - | - | - | - | - | - |  |
| ASH-25/G128 | PFG-128 | 4,2 | - | 90 (4) | 130 (4) | 180 (5) | - | - | - | - | - |  |
| ASH-25/G142 | PFG-142 | 6,3 | - | 60 (3) | 90 (4) | 120 (4) | - | - | - | - | - |  |
| ASH-25/G160 | PFG-160 | 9 | - | 40 (3) | 60 (3) | 80 (4) | - | - | - | - | - |  |
| ASH-25/G174 | PFG-174 | 11 | - | 30 (3) | 50 (3) | 65 (3) | - | - | - | - | - | 50 |
| ASH-50/R202 | PFR-202 | 2,4 | - | - | - | - | 350 (6) | - | - | - | - |  |
| ASH-50/R203 | PFR-203 | 5 | - | - | - | - | 250 (6) | 320 (6) | 350 (6) | - | - |  |
| ASH-50/G160 | PFG-160 | 8,5 | - | - | - | - | 120 (4) | 170 (5) | - | - | - |  |
| ASH-50/G174 | PFG-174 | 10,5 | - | - | - | - | 100 (4) | 130 (5) | - | - | - |  |
| ASH-50/G187 | PFG-187 | 13 | - | - | - | - | 80 (4) | 110 (4) | 150 (5) | - | - |  |
| ASH-50/G199 | PFG-199 | 15,2 | - | - | - | - | 70 (3) | 90 (4) | 120 (4) | - | - | 100 |
| ASH-100/G214 | PFG-214 | 19,5 | - | - | - | - | - | - | - | 130 (4) | 180 (5) |  |
| ASH-100/G218 | PFG-218 | 24,6 | - | - | - | - | - | - | - | 100 (4) | 130 (5) |  |
| ASH-100/G221 | PFG-221 | 29 | - | - | - | - | - | - | - | 90 (4) | 120 (4) |  |
| ASH-100/E016 | PFE-31016 | 23 | - | - | - | - | - | - | - | 120 (5) | 170 (5) |  |
| ASH-100/E022 | PFE-31022 | 30 | - | - | - | - | - | - | - | 90 (4) | 125 (5) |  |
| ASH-100/E028 | PFE-31028 | 40 | - | - | - | - | - | - | - | 70 (3) | 95 (4) |  |

(1) Electric motor is: three phases, 4 poles, $V 220 / 380-50 / 60 \mathrm{~Hz}$ (other voltages available on request), closed and ventilated, construction shape V1
(2) Electric motor is: three phases, 4 poles, $V 400 / 660-50 / 60 \mathrm{~Hz}$ (other voltages available on request), closed and ventilated, construction shape V 1 .
(3) Pressure relief valves type BA-243/MP/75 and manometers type X-MAN-60/100.
(4) Pressure relief valves type BA-243/MP/150 and manometers type X-MAN-60/250.
(5) Pressure relief valves type BA-243/MP/250 and manometers type X-MAN-60/250.
(6) Pressure relief valves type BA-243/M/350 and manometers type X-MAN-60/400.

## 5 MAIN COMPONENTS

| Model | UNEL size of electric motor | Coupling | Bell housing | Suction filter | Return filter | Cartridge of return filter | Filling cap | Air-oil heat exchanger (option /EA) | Water-oil heat exchanger (option /EW) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ASH-10/G | 71 | Y-GA-11 | Y-LMC1G1 | X-FUI-25/125 | - | - | Y-FAC-30 | - | - |
| ASH-25/G | 80 | Y-GA-21 | Y-LMC2G1 | X-FUI-25/125 | Y-FPF-030/25/V1 | SP-PF-030/A25 | Y-FAC-70 | Y-CS-AIR-2010K/380 | Y-T60-CB-2 |
| ASH-25/G | 90 | Y-GA-41 |  |  |  |  |  |  |  |
| ASH-50/R | 100 |  | Y-LS4P2 |  | Y-FPF-100/25/V1 | SP-PF-100/A25 | Y-FAC-70 | Y-CS-AIR-2020K/380 |  |
| ASH-50/R | 112 | (7) | Y-LS4P | - |  |  |  |  |  |
| ASH-50/G | 100 | Y-GA-61 | Y-LMC4G1 | X-FUI-40/125 |  |  |  |  |  |
| ASH-50/G | 112 |  |  |  |  |  |  |  |  |
| ASH-100/G | 132 | Y-GA-122 | Y-LMC6G2 | X-FUI-100/125 | Y-FPF-102/25/V1 | SP-PF-102/A25 | Y-FAC-70 | Y-CS-AIR-2020K/380 | Y-T80-CB-2 |
| ASH-100/E | 132 | Y-GA-09V31 | Y-LMC6V3 |  |  |  |  |  |  |

[^0]

## Option /EW

With water-oil heat exchanger


Option /EA
With air-oil heat exchanger


| Model | HW | KW | JW | Mass (2) [kg] | Model | HA | KA | JA | Mass (2) [kg] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ASH-25/EW | 92 | 143 | 20 | 26,5 | ASH-25/EA | 275 | 390 | 45 | 32,5 |
| ASH-50/EW | 92 | 143 | 70 | 45,5 | ASH-50/EA | 255 | 445 | 65 | 55 |
| ASH-100/EW | 112 | 143 | 50 | 92,5 | ASH-100/EA | 272 | 440 | 0 | 105 |

[^1](2) The mass refers to the unit without electric motor and without oil.


[^0]:    (7) The code must be completed with the pump diplacement.

[^1]:    (1) The dimension refers to the assembly with the standard electric motor of the bigger available size (see section 4 )

