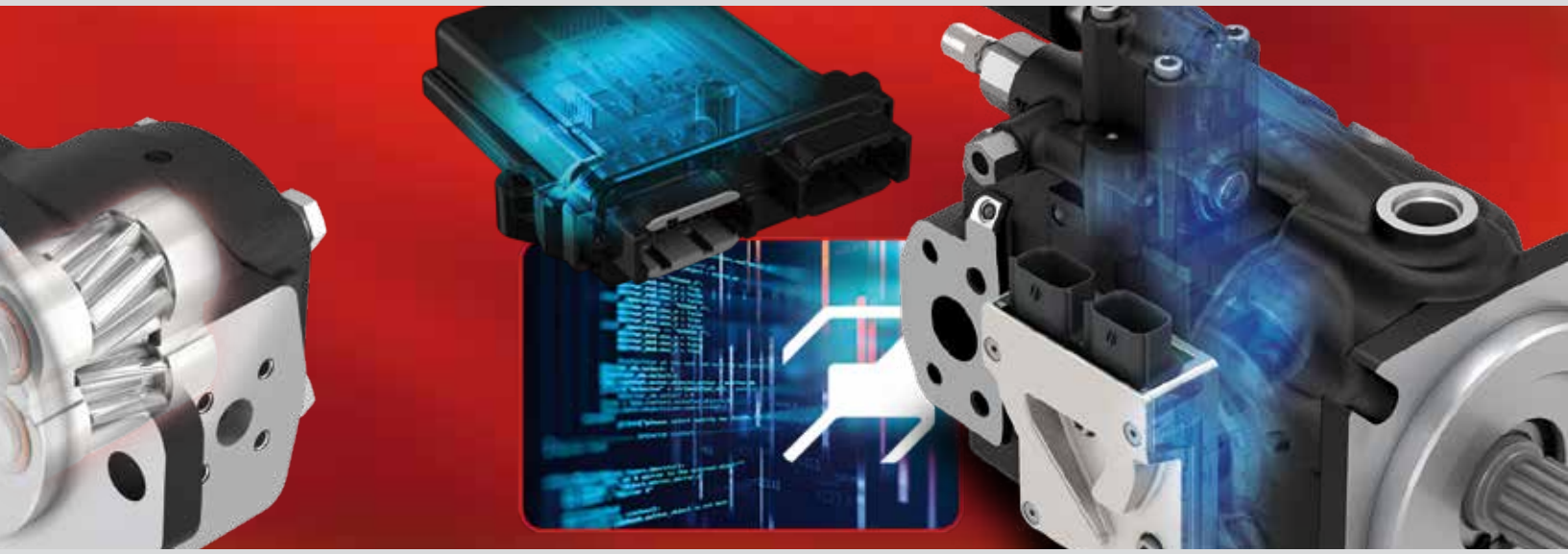
CASAPPA®
FLUID POWER DESIGN



HYDRAULIC PUMPS, MOTORS, ELECTRO-HYDRAULIC SYSTEMS & FILTERS

CASAPPA®
FLUID POWER DESIGN

Our passion for high performance in hydraulic drives us.

Constant evolution and a passion for hydraulics; this has been Casappa's strategy, a privately owned company that has been working for more than sixty years in the field of fluid power transmission.

We design and build the main components for the hydraulic system.
We listen to and work with our customers, from developing a new idea to after-sales service, anywhere around the globe.
As a tight-knit group of highly motivated and professionally qualified people, we are always ready to meet new challenges head on.
Thanks to the use of the most modern design engineering, simulation and lab testing technologies, we are always flexible and ready to quickly modify our offer to meet market demands.
We are convinced that integrating electronics with hydraulics is instrumental to improve hydraulic control circuit performance. For this reason we continuously invest in research & development, increasing the number of electronic control and regulation parts in our system.
Quality is our total commitment: that's why all of our products are thoroughly tested with constant monitoring including data analysis and traceability. Further, specific tests are performed on machines in the field to verify their effectiveness in their actual environment.

Casappa is worldwide recognized as a highly specialised manufacturer of hydraulic components.

We offer:

Fixed and variable displacement hydraulic pumps and motors

Hydraulic valves to control pressure and flow rate

Electro-hydraulic systems

Hydraulic filters, hand pumps, accessories and filtration devices

Some of the major companies that rely on our specialised expertise and choose us as an important supplier of hydraulic components for a wide range of applications include:

AGCO	**CNH**	**HYVA GROUP**	**LINDE**	**SANY**	**YANMAR**
AMMAN APOLLO	**DAIMLER**	**JCB**	**LIUGONG**	**SCANIA**	**ZOOMLION**
ARGO TRACTORS (LANDINI)	**DOOSAN**	**JLG**	**MAN TRUCK & BUS**	**SOOSAN**	
ASTRA Veicoli Industriali	**FARID**	**JOHN DEERE**	**MANITOU GROUP**	**STILL**	
ATLAS COPCO	**FOTON LOVOL**	**JUNGHEINRICH**	**MANITOWOC**	**TEREX**	
BAI	**HAMM**	**KION GROUP**	**MERLO**	**TEXTRON**	
BOBCAT	**HUNAN SUNWARD**	**KOMATSU**	**PALFINGER**	**TORO**	
BROKK	**HUSQVARNA**	**LEEBOY**	**SAME DEUTZ FAHR**	**VOLVO CE**	
CATERPILLAR	**HYUNDAI**	**LIEBHERR**	**SANDVIK**	**XCMG**	

Product range

Aluminium body gear pumps and motors

Cast iron body gear pumps and motors

Cast iron and aluminium body gear pumps helical gear design

Aluminium body gear flow dividers

Cast iron body gear flow dividers

Variable displacement axial piston pumps

A complete range of high quality pumps and motors, the end result of listening carefully to what customers need and of working closely with suppliers.

Headquarters:
CASAPPA S.p.A.
Via Balestrieri,1
43044 Lemignano Di Collecchio
Parma (Italy)
Tel. (+39) 0521 30 41 11
E-mail: info@casappa.com
www.casappa.com

Casappa offers nothing but the best value to its customers thanks to the skills and expertise of its workforce, investments in research and new technologies, cooperation with leading universities and electronics-hydraulics integration.

Casappa offers a wide choice of gear or piston pumps and motors for open-circuit applications. Many functions, such as valves and controls, are built directly into the products to optimise system space and costs.

POLARIS series

Gear pumps and motors built in three pieces with an extruded body in high resistance aluminium alloy. The wide choice of shafts, flanges and ports, in compliance with all international standards (SAE, DIN and EUROPEAN) allow for their use in an infinite variety of applications.
Displacements from 1,07 cm^3/rev (0.07 in^3/rev) to 91,10 cm^3/rev (5.56 in^3/rev) available in groups 10, 20 and 30.
Max. peak pressure up to 300 bar (4350 psi).
Max. speed up to 4000 min^{-1}.

Features

- High efficiencies
- Integrated outboard bearings for heavy duty applications
- Multiple units available in standard version, common inlet and separated stages
- Electro-hydraulic fan drive system
- Custom design

Optional built-in valves

- Anticavitation valves
- Maximum pressure relief valves
- Priority valves
- Load-Sensing priority valves
- Unloading valves
- By-pass electric valves
- Proportional relief valves
- Reverse valves

(◆) Values refer to unidirectional pumps and motors. For reversible rotation please see the respective technical catalogue.

Main characteristics

	Displacement	Max. continuous pressure (◆)	Max. speed
POLARIS 10	cm^3/rev (in^3/rev)	bar (psi)	min^{-1}
PL. 10•1	1,07 (0.07)	260 (3750)	4000
PL. 10•1,5	1,60 (0.10)	260 (3750)	4000
PL. 10•2	2,13 (0.13)	260 (3750)	4000
PL. 10•2,5	2,67 (0.16)	260 (3750)	4000
PL. 10•3,15	3,34 (0.20)	260 (3750)	4000
PL. 10•4	4,27 (0.26)	250 (3600)	4000
PL. 10•5	5,34 (0.33)	250 (3600)	4000
PL. 10•5,8	6,20 (0.38)	230 (3350)	3500
PL. 10•6,3	6,67 (0.41)	230 (3350)	3500
PL. 10•8	8,51 (0.52)	180 (2600)	3500
PL. 10•10	10,67 (0.65)	140 (2050)	3500
POLARIS 20	cm^3/rev (in^3/rev)	bar (psi)	min^{-1}
PL. 20•4	4,95 (0.30)	250 (3600)	4000
PL. 20•6,3	6,61 (0.40)	250 (3600)	4000
PL. 20•7,2	7,29 (0.44)	250 (3600)	4000
PL. 20•8	8,26 (0.50)	250 (3600)	3500
PL. 20•9	9,17 (0.56)	250 (3600)	3500
PL. 20•10,5	10,90 (0.66)	250 (3600)	3500
PL. 20•11,2	11,23 (0.69)	250 (3600)	3500
PL. 20•14	14,53 (0.89)	250 (3600)	3500
PL. 20•16	16,85 (1.03)	250 (3600)	3000
PL. 20•19	19,09 (1.16)	200 (2900)	3000
PL. 20•20	21,14 (1.29)	200 (2900)	3000
PL. 20•24,5	24,84 (1.52)	170 (2450)	2500
PL. 20•25	26,42 (1.61)	170 (2450)	2500
PL. 20•27,8	28,21 (1.72)	130 (1900)	2000
PL. 20•31,5	33,03 (2.01)	130 (1900)	2000
POLARIS 30	cm^3/rev (in^3/rev)	bar (psi)	min^{-1}
PL. 30•22	21,99 (1.34)	250 (3600)	3000
PL. 30•27	26,70 (1.63)	250 (3600)	3000
PL. 30•34	34,55 (2.11)	240 (3500)	3000
PL. 30•38	39,27 (2.40)	240 (3500)	3000
PL. 30•43	43,98 (2.68)	230 (3350)	3000
PL. 30•51	51,83 (3.16)	210 (3050)	2500
PL. 30•61	61,26 (3.74)	190 (2750)	2500
PL. 30•73	73,82 (4.50)	170 (2450)	2500
PL. 30•82	81,68 (4.98)	160 (2300)	2200
PL. 30•90	91,10 (5.56)	150 (2200)	2200

NOTES
PL. : PLP = pump / PLM = motor

POLARIS “PH” series

Gear pumps and motors built in three pieces with cast iron body. The new gear pumps and motors “PH” series is an evolution of the “POLARIS” series. “POLARIS PH” has a new body made of cast iron to have higher operating parameters and keep the full POLARIS versatility regarding shafts, flanges, ports and built-in valves.
This project is targeted for forklifts, skid steer loaders and all those applications where traditional aluminum pumps are being pushed close to their limits. The possibility to mate the body with the cast iron covers further reduces noise levels, in addition to increasing strength.
Displacements from 8,26 cm^3/rev (0.50 in^3/rev) to 33,03 cm^3/rev (2.01 in^3/rev).
Max. peak pressure up to 300 bar (4350 psi).
Max. speed up to 3500 min^{-1}.

Features

- High working pressure also for high displacements
- Long service life
- Low noise level
- High volumetric efficiency also at high temperature
- Inlet & Outlet optimization – High speed
- Combination in multiple pumps
- Built-in Valves simplify circuit design

Optional built-in valves

- Anticavitation valves
- Maximum pressure relief valves
- Priority valves
- Load Sensing priority valves
- Unloading valves
- By pass electric valves
- Proportional relief valves
- Reverse valves

(◆) Values refer to unidirectional pumps and motors. For reversible rotation please see the respective technical catalogue.

Main characteristics

POLARIS PH 20	Displacement cm^3/rev (in^3/rev)	Max. continuous pressure (◆) bar (psi)	Max. speed min^{-1}
PH. 20•8	8,26 (0.50)	250 (3600)	3500
PH. 20•10,5	10,9 (0.66)	250 (3600)	3500
PH. 20•11,2	11,23 (0.68)	250 (3600)	3500
PH. 20•14	14,53 (0.88)	250 (3600)	3500
PH. 20•16	16,85 (1.02)	250 (3600)	3500
PH. 20•18	18,29 (1.11)	250 (3600)	3500
PH. 20•19	19,09 (1.16)	250 (3600)	3500
PH. 20•20	21,14 (1.29)	250 (3600)	3500
PH. 20•23	23,32 (1.42)	250 (3600)	3000
PH. 20•24,5	24,84 (1.52)	230 (3350)	3000
PH. 20•25	26,42 (1.61)	230 (3350)	3000
PH. 20•27,8	28,21 (1.72)	200 (2900)	2500
PH. 20•31,5	33,03 (2.01)	200 (2900)	2500

NOTES
PH. : PHP = pump / PHM = motor

XHP20 series: cast iron body gear pumps
XLP20 series: aluminium body gear pumps
Three pieces pump - Interchangeable with all Casappa's group 2 pumps.
Displacements from 8,06 cm^3/rev (0.49 in^3/rev) to 28,01 cm^3/rev (1.71 in^3/rev) available in group 20.
Max. peak pressure up to 300 bar (4350 psi).
Max. speed up to 4000 min^{-1}.

X technology

Features

- High temperature
- High pressure
- High reliability
- Multiple units available in standard version, common inlet and separated stages

The X technology is a step forward in involute external gear pumps thanks to innovative patented solutions.

Significant increase of pump efficiency.
Both volumetric and hydro-mechanical efficiency are improved over the operating range, thanks to:

- Optimized pump design for higher stiffness
- Improved lubrification by the tip grooves
- Better meshing of helical gears
- Optimized gear machining process

Remarkable reduction of pump noise.
Thanks to the combination of the dual flank meshing and the high helix angle, the pump noise is further reduced compared to the standard dual flank technology.
In addition, the lower number of teeth of the new X technology reduces pump frequencies by 25%. This results in a more pleasant sound quality.

Main characteristics

	Displacement	Max. continuous pressure	Max. speed
XHP20	cm^3/rev (in^3/rev)	bar (psi)	min^{-1}
XHP20•8	8,06 (0.49)	250 (3600)	4000
XHP20•10	10,05 (0.61)	250 (3600)	4000
XHP20•12	12,09 (0.74)	250 (3600)	4000
XHP20•14	14,02 (0.86)	250 (3600)	4000
XHP20•16	16,03 (0.98)	250 (3600)	3500
XHP20•18	18,05 (1.10)	250 (3600)	3500
XHP20•20	20,00 (1.22)	250 (3600)	3500
XHP20•22	22,46 (1.37)	250 (3600)	3500
XHP20•24	24,01 (1.46)	230 (3335)	3000
XHP20•26	26,03 (1.59)	230 (3335)	3000
XHP20•28	28,01 (1.71)	200 (2900)	3000

XLP20	cm^3/rev (in^3/rev)	bar (psi)	min^{-1}
XLP20•8	8,06 (0.49)	250 (3600)	4000
XLP20•10	10,05 (0.61)	250 (3600)	4000
XLP20•12	12,09 (0.74)	250 (3600)	4000
XLP20•14	14,02 (0.86)	250 (3600)	4000
XLP20•16	16,03 (0.98)	250 (3600)	3500
XLP20•18	18,05 (1.10)	250 (3600)	3500
XLP20•20	20,00 (1.22)	250 (3600)	3500
XLP20•22	22,46 (1.37)	230 (3335)	3000
XLP20•24	24,01 (1.46)	200 (2900)	3000
XLP20•26	26,03 (1.59)	200 (2900)	3000
XLP20•28	28,01 (1.71)	170 (2465)	3000

KAPPA series

Gear pumps and motors made of cast iron in two pieces. KAPPA is available with mounting flanges and side or rear ports according to SAE and European standard. The rigidity of assembly ensure reliability and high volumetric efficiency also at high operating pressures.
Displacements from 4,95 cm^3/rev (0.30 in^3/rev) to 33,03 cm^3/rev (2.01 in^3/rev) available in group 20.
Max. peak pressure up to 330 bar (4800 psi).
Max. speed up to 4000 min^{-1}.

Main characteristics

KAPPA 20	Displacement cm^3/rev (in^3/rev)	Max. continuous pressure (◆) bar (psi)	Max. speed min^{-1}
K. 20•4	4,95 (0.30)	285 (4150)	4000
K. 20•6,3	6,61 (0.40)	285 (4150)	4000
K. 20•8	8,26 (0.50)	285 (4150)	3500
K. 20•11,2	11,23 (0.69)	275 (4000)	3500
K. 20•14	14,53 (0.89)	265 (3850)	3500
K. 20•16	16,85 (1.03)	260 (3750)	3000
K. 20•20	21,14 (1.29)	210 (3050)	3000
K. 20•25	26,42 (1.61)	180 (2600)	2500
K. 20•31,5	33,03 (2.01)	140 (2050)	2000

NOTES
K. : KP = pump / KM = motor

Features

- High operating pressures
- High efficiency at high temperature
- Low noise emission

Optional built-in valves

- Priority valves
- Load-Sensing priority valves

(◆) Values refer to unidirectional pumps and motors. For reversible rotation please see the respective technical catalogue.

KAPPA COMPACT series

Gear pumps and motors made of cast iron in two pieces. A rigid and compact structure that makes it possible to incorporate a number of functions in a limited space. The reduced dimensions as well as a large variety of drive shafts, mounting flanges and ports ensure great flexibility in the “Compact” line.
Wide range of displacements: from 19,00 cm^3/rev (1.16 in^3/rev) to 150,79 cm^3/rev (9.20 in^3/rev) available in groups 25, 30, 35 and 40.
Max. peak pressure up to 325 bar (4700 psi).
Max. speed up to 3500 min^{-1}.

Features

- High operating pressures
- Low noise emission
- Exceptional working life expectancy
- Solid and compact design
- Custom design

Optional built-in valves

- Antishock and anticavitation valves
- Priority valves
- Load Sensing priority valves
- By pass electric valves

Main characteristics

	Displacement	Max. continuous pressure (◆)	Max. speed
KAPPA compact 25	cm^3/rev (in^3/rev)	bar (psi)	min^{-1}
K. 25•19	19,00 (1.16)	280 (4050)	3500
K. 25•21	21,07 (1.29)	280 (4050)	3500
K. 25•23	23,06 (1.41)	280 (4050)	3500
K. 25•25	25,04 (1.53)	280 (4050)	3500
K. 25•27	27,03 (1.65)	280 (4050)	3500
K. 25•31	31,09 (1.90)	275 (4000)	3000
K. 25•34	34,03 (2.08)	275 (4000)	3000
K. 25•38	38,00 (2.32)	230 (3350)	3000
K. 25•43	43,01 (2.62)	210 (3050)	3000
KAPPA compact 30	cm^3/rev (in^3/rev)	bar (psi)	min^{-1}
K. 30•22 (CSC-CSL)	21,99 (1.34)	270 (3900)	3000
K. 30•27 (CSC-CSL)	26,70 (1.63)	270 (3900)	3000
K. 30•31 (CSC-CSL)	30,63 (1.87)	250 (3600)	3000
K. 30•34 (CSC-CSL)	34,56 (2.11)	250 (3600)	3000
K. 30•38 (CSC-CSL)	39,27 (2.40)	250 (3600)	3000
K. 30•41 (CSC-CSL)	41,62 (2.54)	250 (3600)	3000
K. 30•43 (CSC-CSL)	43,98 (2.68)	230 (3350)	3000
K. 30•46 (CSC-CSL)	46,34 (2.83)	210 (3050)	3000
K. 30•51 (CSC-CSL)	51,83 (3.16)	210 (3050)	2500
K. 30•56 (CSC-CSL)	56,54 (3.45)	190 (2750)	2500
K. 30•61 (CSC-CSL)	61,26 (3.74)	180 (2600)	2500
K. 30•73 (CSC-CSL)	73,82 (4.50)	170 (2450)	2500
KAPPA compact 35	cm^3/rev (in^3/rev)	bar (psi)	min^{-1}
KP 35•63	63,88 (3.90)	260 (3750)	3000
KP 35•71	72,40 (4.42)	260 (3750)	3000
KP 35•80	80,91 (4.94)	260 (3750)	3000
KP 35•90	91,56 (5.59)	245 (3550)	2500
KP 35•100	100,08 (6.10)	230 (3350)	2500
KAPPA compact 40	cm^3/rev (in^3/rev)	bar (psi)	min^{-1}
K. 40•63	61,43 (3.75)	240 (3480)	2800
K. 40•73	72,60 (4.43)	240 (3480)	2800
K. 40•87	86,56 (5.28)	240 (3480)	2800
K. 40•109	108,90 (6.64)	230 (3350)	2800
K. 40•121	121,80 (7.43)	210 (3050)	2500
K. 40•133	134,03 (8.18)	200 (2900)	2500
K. 40•151	150,79 (9.20)	190 (2755)	2500

(◆) Values refer to unidirectional pumps and motors. For reversible rotation please see the respective technical catalogue.

NOTES
K. : KP = pump / KM = motor

KAPPA 40 Plus series

Large cast iron hydraulic gear pumps for heavy duty applications.
Displacements from 61,43 cm^3/rev (3.75 in^3/rev) to 180,73 cm^3/rev (11.02 in^3/rev) available in group 40.
Max. peak pressure up to 300 bar (4350 psi).
Max. speed up to 2800 min^{-1}.

Main characteristics

KAPPA 40 Plus	Displacement cm^3/rev (in^3/rev)	Max. continuous pressure bar (psi)	Max. speed min^{-1}
KP 40•63	61,43 (3.75)	260 (3770)	2800
KP 40•73	72,60 (4.43)	260 (3770)	2800
KP 40•87	86,56 (5.58)	260 (3770)	2800
KP 40•100	99,79 (6.09)	260 (3770)	2700
KP 40•109	108,90 (6.64)	260 (3770)	2700
KP 40•121	121,80 (7.43)	260 (3770)	2700
KP 40•133	134,03 (8.18)	250 (3625)	2700
KP 40•151	150,79 (9.20)	240 (3480)	2700
KP 40•160	160,77 (9.81)	230 (3350)	2500
KP 40•180	180,73 (11.02)	230 (3350)	2200

Features

- New design
- Nodular cast iron
- High performance
- High strength

FORMULA and FORMULA SFP series

Gear pumps made of cast iron in two pieces, ideal for truck application.
Displacements from 8,26 cm^3/rev (0.50 in^3/rev) to 150,79 cm^3/rev (9.20 in^3/rev) available in groups 20, 30, 35 and 40.
Max. peak pressure up to 325 bar (4700 psi).
Max. speed up to 3000 min^{-1}.

Features

- High performance also at very low speed
- Different ports position availability
- Low noise emission
- Shaft seal system no leakage guarantee
- Modular design
- Direct mounting on the PTOs

Main characteristics

	Displacement	Max. continuous pressure (◆)	Max. speed
FORMULA 20	cm^3/rev (in^3/rev)	bar (psi)	min^{-1}
FP 20•8	8,26 (0.50)	280 (4050)	2000
FP 20•11,2	11,23 (0.69)	280 (4050)	2000
FP 20•16	16,85 (1.03)	280 (4050)	2000
FP 20•20	21,14 (1.29)	260 (3750)	2000
FP 20•25	26,42 (1.61)	220 (3200)	2000
FP 20•31,5	33,03 (2.01)	190 (2750)	1800
FP 20•36	35,94 (2.19)	170 (2450)	1800
FP 20•40	39,64 (2.42)	160 (2300)	1800
FORMULA 30	cm^3/rev (in^3/rev)	bar (psi)	min^{-1}
FP 30•17	17,28 (1.05)	290 (4200)	3000
FP 30•27	26,70 (1.63)	290 (4200)	3000
FP 30•34	34,56 (2.11)	280 (4050)	2800
FP 30•38	39,27 (2.40)	280 (4050)	2800
FP 30•43	43,98 (2.68)	270 (3900)	2500
FP 30•51	51,83 (3.16)	240 (3500)	2500
FP 30•61	61,26 (3.74)	220 (3200)	2000
FP 30•73	73,82 (4.50)	200 (2900)	1800
FP 30•82	81,68 (4.98)	190 (2750)	1800
FP 30•100	100,52 (6.16)	180 (2600)	1800
FP 30•125	125,66 (7.67)	160 (2300)	1800
FORMULA 40	cm^3/rev (in^3/rev)	bar (psi)	min^{-1}
FP 40•63	61,43 (3.75)	290 (4200)	2700
FP 40•73	72,60 (4.43)	280 (4050)	2700
FP 40•87	86,56 (5.28)	260 (3750)	2700
FP 40•109	108,90 (6.64)	240 (3500)	2700
FP 40•133	134,03 (8.18)	220 (3200)	2500
FP 40•151	150,79 (9.20)	180 (2600)	2500
FORMULA SFP 30	cm^3/rev (in^3/rev)	bar (psi)	(rpm)
SFP 30•34	35,43 (2.16)	280 (4050)	2800
SFP 30•43	45,09 (2.75)	270 (3900)	2500
SFP 30•51	53,14 (3.24)	250 (3600)	2500
SFP 30•61	62,80 (3.83)	230 (3350)	2500
SFP 30•73	75,68 (4.62)	205 (2950)	2250
SFP 30•82	83,74 (5.11)	195 (2800)	2250
FORMULA SFP 35	cm^3/rev (in^3/rev)	bar (psi)	(rpm)
SFP 35•90	95,99 (5.86)	230 (3350)	2250
SFP 35•100	104,92 (6.40)	220 (3200)	2250
SFP 35•112	118,31 (7.22)	205 (2950)	2250

(◆) Values refer to unidirectional pumps. For reversible rotation please see the respective technical catalogue.

MAGNUM series

Gear pumps and motors made of cast iron in three pieces. An extremely versatile and reliable design, also in the most extreme operating conditions.
Displacements from 17,28 cm^3/rev (1.05 in3/rev) to 125,63 cm^3/rev (7.66 in^3/rev) available in groups 30 and 35.
Max. peak pressure up to 320 bar (4650 psi).
Max. speed up to 3000 min^{-1}.

Features

- Wide range of drive shafts and flanges in SAE version
- More choices of port locations
- Integrated outboard bearings for heavy duty applications
- Multiple units available in standard version, common inlet and separated stages
- Exceptional working life expectancy

Main characteristics

MAGNUM 30	Displacement cm^3/rev (in^3/rev)	Max. continuous pressure (◆) bar (psi)	Max. speed min^{-1}
HD. 30•17	17,28 (1.05)	280 (4050)	3000
HD. 30•22	21,99 (1.34)	280 (4050)	3000
HD. 30•24	24,03 (1.47)	280 (4050)	3000
HD. 30•27	26,70 (1.63)	280 (4050)	3000
HD. 30•34	34,56 (2.11)	270 (3900)	3000
HD. 30•38	39,27 (2.40)	270 (3900)	3000
HD. 30•43	43,98 (2.68)	260 (3750)	3000
HD. 30•51	51,83 (3.16)	230 (3350)	2500
HD. 30•56	56,55 (3.45)	215 (3100)	2500
HD. 30•61	61,26 (3.74)	200 (2900)	2000
HD. 30•73	73,82 (4.50)	190 (2750)	1700
HD. 30•82	81,68 (4.98)	170 (2450)	1500

MAGNUM 35	cm^3/rev (in^3/rev)	bar (psi)	min^{-1}
HD. 35•40	40,46 (2.47)	270 (3900)	3000
HD. 35•50	51,10 (3.12)	270 (3900)	3000
HD. 35•63	63,88 (3.90)	270 (3900)	3000
HD. 35•71	72,40 (4.42)	250 (3600)	3000
HD. 35•80	80,91 (4.94)	250 (3600)	3000
HD. 35•90	91,56 (5.59)	230 (3350)	2700
HD. 35•100	100,08 (6.10)	210 (3050)	2700
HD. 35•112	112,85 (6.88)	190 (2750)	2700
HD. 35•125	125,63 (7.66)	170 (2450)	2500

NOTES
HD. : HDP = pump / HDM = motor

(◆) Values refer to unidirectional pumps and motors. For reversible rotation please see the respective technical catalogue.

POLARIS series

Gear flow dividers made of high resistance aluminium alloy. These components can be used as flow equalizers, flow dividers and pressure intensifiers.
Displacements from 2,14 cm^3/rev (0.13 in^3/rev) to 33,03 cm^3/rev (2.01 in^3/rev) available in groups 10 and 20.
Max. peak pressure up to 280 bar (4050 psi).

Features

- Modular design
- Accurate division of flow
- Built in relief valves
- Combinations between different groups

Main characteristics

	Displacement	Max. continuous pressure	Max. speed
POLARIS 10	cm^3/rev (in^3/rev)	bar (psi)	min^{-1}
PLD 10•2	2,14 (0.13)	250 (3600)	4200
PLD 10•3,15	3,34 (0.20)	250 (3600)	3990
PLD 10•4	4,27 (0.26)	250 (3600)	3940
PLD 10•5	5,34 (0.33)	250 (3600)	3680
PLD 10•6,3	6,67 (0.41)	250 (3600)	3500

POLARIS 20	cm^3/rev (in^3/rev)	bar (psi)	min^{-1}
PLD 20•4	4,95 (0.30)	250 (3600)	4100
PLD 20•6,3	6,61 (0.40)	250 (3600)	3970
PLD 20•8	8,26 (0.50)	250 (3600)	3850
PLD 20•11,2	11,23 (0.69)	250 (3600)	3660
PLD 20•14	14,53 (0.89)	250 (3600)	3460
PLD 20•16	16,85 (1.03)	200 (2900)	3335
PLD 20•20	21,14 (1.29)	200 (2900)	3125
PLD 20•25	26,42 (1.61)	200 (2900)	2900
PLD 20•31,5	33,03 (2.01)	200 (2900)	2660

MAGNUM series

Gear flow dividers made of cast iron. These components can be used as flow equalizers, flow dividers and pressure intensifiers.
Displacements from 17,28 cm^3/rev (1.05 in^3/rev) to 125,63 cm^3/rev (7.66 in^3/rev) available in groups 30 and 35.
Max. peak pressure up to 320 bar (4650 psi).

Features

- Modular design
- Accurate division of flow
- High flow
- Combinations between different groups

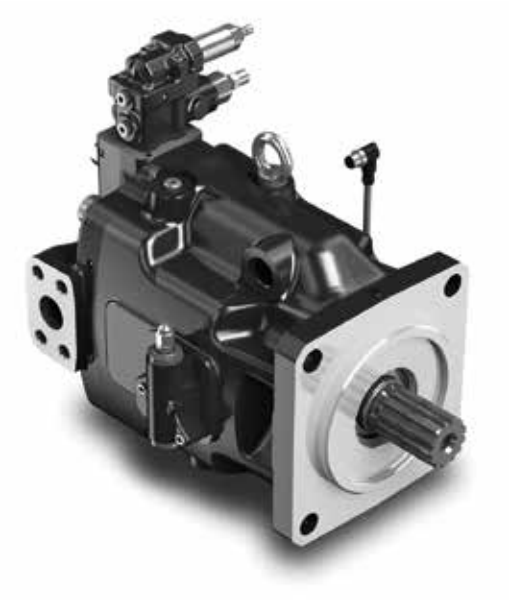
Main characteristics

	Displacement	Max. continuous pressure	Max. speed
MAGNUM 30	cm^3/rev (in^3/rev)	bar (psi)	min^{-1}
HDD 30•17	17,28 (1.05)	280 (4050)	3000
HDD 30•22	21,99 (1.34)	280 (4050)	3000
HDD 30•27	26,70 (1.63)	280 (4050)	3000
HDD 30•34	34,56 (2.11)	270 (3900)	3000
HDD 30•43	43,98 (2.68)	260 (3750)	3000
HDD 30•51	51,83 (3.16)	230 (3350)	2500
HDD 30•61	61,26 (3.74)	200 (2900)	2000
HDD 30•73	73,82 (4.50)	190 (2750)	1700
HDD 30•82	81,68 (4.98)	170 (2450)	1500

MAGNUM 35	cm^3/rev (in^3/rev)	bar (psi)	min^{-1}
HDD 35•50	51,10 (3.12)	270 (3900)	3000
HDD 35•63	63,88 (3.90)	270 (3900)	3000
HDD 35•71	72,40 (4.42)	250 (3600)	3000
HDD 35•80	80,91 (4.94)	250 (3600)	3000
HDD 35•90	91,56 (5.59)	230 (3350)	2700
HDD 35•100	100,08 (6.10)	210 (3050)	2700
HDD 35•112	112,85 (6.88)	190 (2750)	2700
HDD 35•125	125,63 (7.66)	170 (2450)	2500

PLATA LVP series

Variable displacement axial piston pumps swash plate design. PLATA pumps are ideally suited for medium and high pressure open circuit applications.
Displacements from 28,70 cm^3/rev (1.75 in^3/rev) to 160 cm^3/rev (9.76 in^3/rev).
Max. peak pressure up to 350 bar (5075 psi).
Max. speed up to 3000 min^{-1}.



Main characteristics

	Displacement	Max. continuous pressure	Max. speed
PLATA LVP	cm^3/rev (in^3/rev)	bar (psi)	min^{-1}
LVP 30	28,70 (1.75)	280 (4050)	3000
LVP 48	45,40 (2.77)	280 (4050)	2600
LVP 75	73,60 (4.49)	280 (4050)	2600
LVP 90	87,90 (5.37)	250 (3625)	2200
LVP 140	140,00 (8.54)	280 (4050)	2000
LVP 160	160,00 (9.76)	280 (4050)	1800

Features

- Energy savings
- Low noise emission
- Short response time
- Drive shaft bearing suitable for radial and axial loads
- Multiple combinations

Controls

- Pressure compensator
- Flow and pressure compensator (Load Sensing)
- Torque limiter
- Electrohydraulic servocontrols

MVP - MVPD and MVPR series

Variable displacement axial piston pumps swash plate design ideally suited for open circuit in mobile hydraulic applications. “MVP” series: the compact design allows to be mounted directly on engine motors.
The new “MVPD” series allow higher flow rates than traditional pumps with same dimensions, higher machine speeds without affecting the design of the hydraulic system and a high power-to-dimensions ratio.
“MVPR” series piston pump is an evolution of MVP series with higher pressure designed for hoist applications such as truck crane and telehandler for building & construction.A careful analysis of the application working cycle will ensure a long service life of the pump.
Displacements from 14 cm^3/rev (0.85 in^3/rev) to 115 cm^3/rev (7.02 in^3/rev).
Max. peak pressure up to 400 bar (5800 psi).
Max. speed up to 3500 min^{-1}.

Features

- Exceptional working life expectancy
- Low noise emission
- Drive shaft bearing suitable for radial and axial loads
- Multiple combinations
- Short response time

MVPD additional features

- Higher speed
- Higher power-to-weight ratio
- Cost-optimized design

Controls

- Min. and max. displacement limiter
- Pressure compensator
- Flow and pressure compensator (Load Sensing)
- Torque limiter
- Electronic controls

Main characteristics

	Displacement	Max. continuous pressure	Max. speed
MVP	cm^3/rev (in^3/rev)	bar (psi)	min^{-1}
MVP 30.28	28,00 (1.71)	280 (4050)	3500
MVP 30.34	34,80 (2.12)	250 (3600)	2900
MVP 48.45	45,00 (2.75)	280 (4050)	3000
MVP 48.53	53,70 (3.28)	250 (3600)	2500
MVP 60.60	60,00 (3.66)	280 (4050)	3000
MVP 60.72	72,00 (4.39)	280 (4050)	2700
MVP 60.84	84,70 (5.17)	250 (3600)	2300
MVP 100.100	100,00 (6.10)	280 (4050)	2200
MVP 100.115	115,00 (7.02)	250 (3600)	2000

MVPD	cm^3/rev (in^3/rev)	bar (psi)	min^{-1}
MVPD 30.34	34,00 (2.07)	230 (3350)	3200
MVPD 30.45	45,00 (2.75)	230 (3350)	2900
MVPD 30.50	50,00 (3.05)	205 (2973)	2600
MVPD 48.53	53,00 (3.23)	230 (3350)	2800
MVPD 48.65	65,00 (3.97)	230 (3350)	2600

MVPR	cm^3/rev (in^3/rev)	bar (psi)	min^{-1}
MVPR 60.60	60,00 (3.66)	350 (5075)	3000
MVPR 60.72	72,00 (4.39)	350 (5075)	2700
MVPR 60.84	84,70 (5.17)	315 (4568)	2300

MVPe series

Variable displacement axial piston pumps swash plate design ideally suited for open circuit in mobile hydraulic applications. MVPe series piston pump is an evolution of the MVP series and represents the integration in one object of:

- MVP series piston pump
- Angular sensor
- Pressure Electronic Compensator
- Electronic control unit

Displacements from 14 cm^3/rev (0.85 in^3/rev) to 115 cm^3/rev (7.02 in^3/rev).
Max. peak pressure up to 350 bar (5075 psi).
Max. speed up to 3500 min^{-1}.

Main characteristics

	Displacement	Max. continuous pressure	Max. speed
MVPE	cm^3/rev (in^3/rev)	bar (psi)	min^{-1}
MVPE 30.28	28 (1.71)	280 (4050)	3500
MVPE 30.34	34,8 (2.12)	250 (3600)	2900
MVPE 48.45	45,00 (2.75)	280 (4050)	3000
MVPE 48.53	53,70 (3.28)	250 (3600)	2500
MVPE 60.60	60,00 (3.66)	280 (4050)	3000
MVPE 60.72	72,00 (4.39)	280 (4050)	2700
MVPE 60.84	84,70 (5.17)	250 (3600)	2500
MVPE 100.100	100 (6.10)	280 (4050)	2200
MVPE 100.115	115 (7.02)	250 (3600)	2000

Features

- Machine layout simplification
- 2 software types available: smartEASY & smartFULL

Controls

- Min. and max. displacement limiter
- Pressure Electronic Compensator
- Flow compensator (Load-Sensing)

TVP series

Variable displacement axial piston pumps swash plate design ideally suited for open circuit truck applications.
The compact design allows to be mounted directly on the PTOs.
Displacements from 60,0 cm^3/rev (3.66 in^3/rev) to 84,7 cm^3/rev (5.17 in^3/rev).
Max. peak pressure up to 400 bar (5800 psi).
Max. speed up to 3000 min^{-1}.

Main characteristics

	Displacement	Max. continuous pressure	Max. speed
TVP	cm^3/rev (in^3/rev)	bar (psi)	min^{-1}
TVP 60.60	60,00 (3.66)	350 (5100)	3000
TVP 60.72	72,00 (4.39)	350 (5100)	2700
TVP 60.84	84,70 (5.17)	350 (5100)	2500

Features

- Pump internal drain line
- Compensators external drain line
- Direct mounting on the PTOs
- Body width 124,2 mm (4.8898 in)
- Compact design
- Low noise emission

Controls

- Min. and max. displacement limiter
- Flow and pressure compensator (Load Sensing)
- Electro-proportional pressure compensator

CASAPPA SERVICE TOOL SOFTWARE FOR FAN DRIVE & CSP SYSTEM

Real time monitoring & application setup

- Parametrization of electronic control units
- Monitor and diagnostic functions
- Auto detection of the different type of control unit

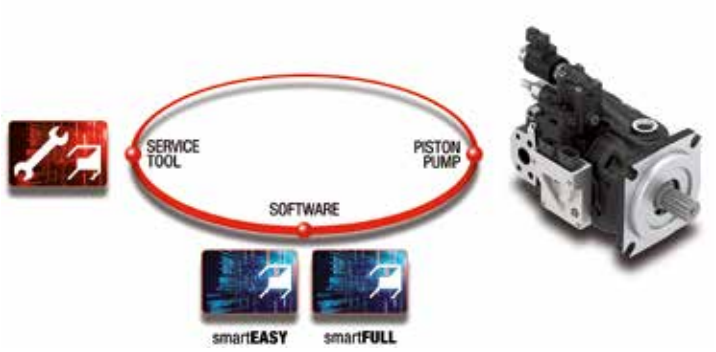
ELECTRO-HYDRAULIC FAN DRIVE SYSTEM

Advantages of the hydraulic system vs other technologies

- More powerful and more effective
- Reverse function available
- Energy savings and low noise level
- Flexibility in cooling system design
- Integrated controls
- Reduced overall dimensions

CASAPPA SMART SYSTEMS

CSP SYSTEM
Casappa Smart Power



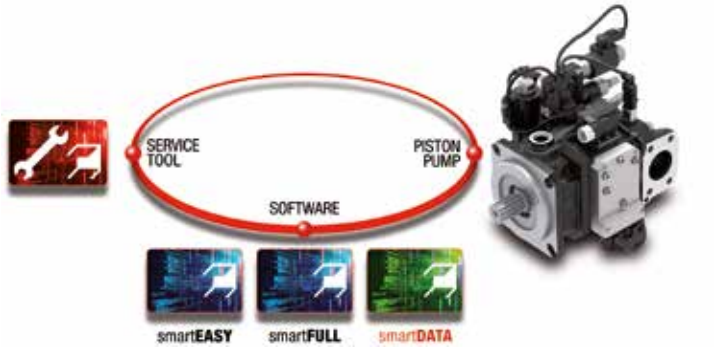
Optimization of the machine power management

Hardware & software technological evolution

- Piston pump MVPe
- Integration of ECU into the pump case

2 software types available
- smartEASY
- smattFULL

CSD SYSTEM
Casappa Smart Data



A step forward in Sensorization and allows to smartly manage the operating data measured by the pump

Hardware & software technological evolution

- Piston pump MVPs
- Integration of ECU into the pump case

Different software types available
- smartEASY
- smartFULL
- smartDATA

IKRON® Fluid Filtration | A CASAPPA COMPANY

Product range

Suction filters

In line filters spin-on

Tank mounted return line filters

In line medium and high pressure filters

Accessories

Hand pumps

Filtration devices

Founded in 1997, Ikron is the natural evolution of Casappa, a company that has always been careful to quality and to new products development. Filters in fact represent a strategic component for safeguarding the hydraulic circuit.

IKRON has been inspired since its birth by the procedures dictated by the ISO 9001 Standard, a guarantee of the care and professionalism that distinguishes its production, from the project to the delivery of the products. An aspect of primary importance for the customers that, every day, contact Ikron.

IKRON S.r.l.
Via Prampolini, 2
43044 Lemignano Di Collecchio
Parma (Italy)
Tel. (+39) 0521 30 49 11
E-mail: info@ikron.it
www.ikron.it

Products design occurs by using virtual simultion instruments and by employing new generation softwares that enable to study and foresee the products behavior once they are mounted in the hydraulic circuit.
Laboratory tests contribute to the confirmation of the products quality and reliability level.
Ikron offers a wide range of filters and accessories.
Suction filters, return filters, in line spin-on filters, medium and high pressure filters, hand pumps.
Clogging indicators, level and temperature gauges, filler breathers, complete plastic reservoirs, flux oil.

Mechanical works and dimensional controls are entrusted to highly trained personnel. After passing all the process inspections, the components move to the assembly lines.

At the end of the process each product is:
- labeled
- packed
- equipped with service instructions

A highly specialized company that offers the best components to safeguard the hydraulic circuit.
Quality improvement, aimed at maximizing our custmers' satisfaction, is a continuous process that involves all company functions and the entire production process.




Suction filters

The tank submerged suction filters are designed to be fitted directly on pump intake and provide versatility to safeguard the hydraulic components from contaminating particles.

HF 410 series

Flow up to 300 lpm (79.3 US gpm)
By-pass valve
Oversized filtering surface

HF 431-434-437 series

External tank connection
Aluminium head
Special version on request
Washable filtering media

Main characteristics

Type	Nominal flow up to l/min (US gpm)	Degree of filtration* MS (µm)	MI (µm)
HF 410	300 (79.3)	90	25-60-125-250
HF 431	220 (58.1)		60-125-250
HF 434	160 (42.3)		60-125-250
HF 437	160 (42.3)		60-125-250

NOTE
(*): MS = zinc plated steel wire mesh / MI = stainless steel wire mesh

In line filters spin-on

These filters are specifically designed to be connected on the suction or in the return line of the hydraulic circuit and provide versatility to safeguard the circuit components from contaminating particles.

HF 620-625 series

Easy filtering elements replacement
Differential visual indicator
Interchangeable with major manufacturers

HF 650 series

Easy filtering elements replacement
High filtration performances
Operating pressure 35 bar (510 psi)
Interchangeable with major manufacturers

Main characteristics

Type	Nominal flow up to l/min (US gpm)	Operating pressure bar (psi)	Degree of filtration* FG (µm)	MS (µm)	SP (µm)	RP (µm)
HF 620	Suction 190 (50)	12 (174)	10-25	60-90	10-25	
	Return 350 (92.5)	12 (174)	10-25	60-90	10-25	
HF 625	225 (59.4)	25 (360)	10-25	60-90	10-25	
HF 650	200 (52.8)	35 (510)	3-6-10-16-25			10-25

NOTE
(*): FG = micro-fibre glass / MS = zinc plated steel wire mesh / SP = cellulose / RP = reinforced cellulose

Tank mounted return line filters

These filters are specifically designed to be directly connected on the hydraulic circuits return line and provide versatility to safeguard the circuit components from contaminating particles.

HF 502 - HF 508 series

Operating pressure 8 bar (115 psi)
Flow up to 1000 lpm (264 US gpm)
Double inlet port
Extension on the oil way out of the pipe union
Fluid-decelerating diffuser

HF 532 series

Plastic body and bowl
360° Adjustable connection

HF 547 series

Air breather (available also with pressurized version)
Antisplash system
Anodized housing
Flange with four holes (only HF 547-20)

Main characteristics

	Nominal flow up to	Operating pressure	Degree of filtration*					
Type	l/min (US gpm)	bar (psi)	FG (µm)	AF (µm)	MS (µm)	MI (µm)	SP (µm)	RP (µm)
HF 502	630 (166.5)	8 (115)	3-6-10-25		90	25-60-125	10-25	10-25
HF 508	1000 (264)	8 (115)	3-6-10-25		90	25-60-125	10-25	10-25
HF 532	50 (13.2)	8 (115)	10-25	10-25				
HF 547	200 (52.8)	8 (115)	3-6-10-25		90	25-60-125	10-25	10-25

NOTE
(*): FG = micro-fibre glass / AF = antistatic micro-fibre glass / MS = zinc plated steel wire mesh / MI = stainless steel wire mesh / SP = cellulose
RP = reinforced cellulose

Tank mounted return line filters

HF 554 series

Air breather (available also with pressurized version) Antisplash system
Anodized housing

HF 570-575-578 series

Inside-to-outside flow direction
Magnetic pre-filtration
Filler cap
Interchangeable with major manufacturers

Main characteristics

	Nominal flow up to	Operating pressure	Degree of filtration*				
Type	l/min (US gpm)	bar (psi)	FG (µm)	MS (µm)	MI (µm)	SP (µm)	RP (µm)
HF 554	630 (166.5)	8 (115)	3-6-10-25	90	25-60-125	10-25	10-25
HF 570	600 (158)	8 (115)	10-25			10-25	
HF 575	1200 (317)	8 (115)	10-25			10-25	
HF 578	1200 (317)	8 (115)	10-25		60-125	10-25	

NOTE
(*): FG = micro-fibre glass / MS = zinc plated steel wire mesh / MI = stainless steel wire mesh / SP = cellulose / RP = reinforced cellulose

In line medium and high pressure filters

The in-line medium and high pressure filters are specifically designed to be connected on the pressure line of the hydraulic circuit and provide versatility to safeguard the circuit components from contaminating particles.

HF 690 series

Operating pressure 150 bar (2175 psi)
Aluminium head and bowl

HF 705 series

Sintered bronze filter element
Bidirectional flow
Aluminium housing

HF 710 series

Aluminium housing
Operating pressure 250 bar G 3600 psi
Compact design and lightness
By-pass valve
Filtration ratio $\beta_x \geq 200$

Main characteristics

Type	Nominal flow up to l/min (US gpm)	Operating pressure bar (psi)	Degree of filtration* FG (µm)	RP (µm)	SB (µm)
HF 690	90 (23.8)	150 (2175)	3-6-10-16-25	10-25	
HF 705	115 (30.4)	350 (5100)			10-25-40-60
HF 710	47 (12.4)	250 (3600)	3-6-10-16-25		

NOTE
(*): FG = micro-fibre glass / RP = reinforced cellulose / SB = sintered bronze

In line medium and high pressure filters

HF 725 series

CETOP 3 connections with reference to ISO4401
Operating pressure 350 bar (5100 psi)
Modular assembly
Compact design
Filtration ratio $ß_x \geq 200$

HF 735 series

Multilayer system
Flanged directly on valve blocks and hydraulic Power-Pack
Filtration ratio $ß_x \geq 200$

Main characteristics

Type	Nominal flow up to l/min (US gpm)	Operating pressure bar (psi)	Degree of filtration* FG (µm)	MI (µm)
HF 725	20 (5.3)	350 (5100)	3-6-10-16-25	10-25
HF 735	150 (39.7)	320 (4650)	3-6-10-16-25	

NOTE
(*): FG = micro-fibre glass / MI = stainless steel wire mesh

IKRON Fluid Filtration

In line medium and high pressure filters

HF 745 - HF 749 series

Interchangeable with major manufacturers
Multilayer system
Filtration ratio $\beta_x \geq 200$

HF 760 series

Multilayer system
Wide range 20 - 30 - 40
Interchangeable with major manufacturers
Filtration ratio $\beta_x \geq 200$

Main characteristics

Type	Nominal flow up to l/min (US gpm)	Operating pressure bar (psi)	Degree of filtration* FG (µm)
HF 745	170 (45)	320 (4650)	3-6-10-16-25
HF 749	105 (27.7)	420 (6100)	3-6-10-16-25
HF 760	450 (120)	420 (6100)	3-6-10-16-25

NOTE
(*): FG = micro-fibre glass

Filters and accessories

Filler breathers - Air filters - Level and temperature gauges - Pressure gauges - Pressure/Vacuum gauges - Clogging indicators: visual, electrical, visual differential and electrical visual differential.

Filler breathers main characteristics

Type	Air flow up to l/min (US gpm)	Degree of filtration* MS (µm)
HB 50	285 (75.3)	10-40
HB 70	480 (126.8)	10-40
HB 110	1400 (369.8)	3-5-10
HB 120	1800 (475.5)	3-5-10

NOTE (*): MS = zinc plated steel wire mesh

Air filters main characteristics

Type	Air flow up to l/min (US gpm)	Degree of filtration* MS (µm)
AF 105	1000 (264.2)	5-10-40
AF 106	3000 (792.6)	3-6-10

NOTE (*): MS = zinc plated steel wire mesh

Level gauges main characteristics

Type	Distance between the mounting screws mm (in)
HL 91	76 (3.00)
	127 (5.00)
	254 (10.00)
HL 98	127 (5.00)
	254 (10.00)

Up Easy series

Double acting hand pumps providing flow in both directions of lever movement.
Displacement from 12 cm^3/cycle (0.73 in^3/cycle) to 45 cm^3/cycle (2.75 in^3/cycle).
Max. pressure 315 bar (4600 psi).

Features

- New interchange modular design for maximum flexibility
- Same pumping group with or without reservoir
- Suitable for auxiliary or emergency applications
- Available TXA aluminium body simplified version

Main characteristics

Type	Displacement cm^3/cycle (in^3/cycle)	Max. pressure bar (psi)
EP 12 (◆)	12 (0.73)	315 (4600)
EP 25	25 (1.53)	250 (3600)
EP 45	45 (2.75)	220 (3200)

(◆) Not available in TXA version

Complete plastic reservoirs

The complete plastic reservoirs combine a solid rotational molded plastic shell with an HF 547-10 filter and an HL 91-10 level indicator. On request, an HF 431-10 / HF 434-10 / HF 437-10 suction filter and an EP hand pump can be added to the reservoir. This module is ready to be installed into the hydraulic circuit without any additional operations, reducing manteinance costs.

R 15-25-50 series

Easy installing
Excellent resistance to corrosion

Main characteristics

Type	Max. Volume l (US gallon)	Max. Temperature °C (°F)
R 15	15 (4.0))	-20 ÷ 80 (-4 ÷ 176)
R 25	25 (6.5)	-20 ÷ 80 (-4 ÷ 176)
R 50	50 (13.2)	-20 ÷ 80 (-4 ÷ 176)

Flux oil

Flux oil units provide a practical off-line portable filtration modality, they are designed for use in mobile installations and equipment to achieve and maintain adequate ISO cleanliness levels.

IK 15 - IK 50 series

Compact frame in welded steel and epoxy painted with carrying handle
Compatible with mineral and synthetic hydraulic oils

Main characteristics

Type	Nominal flow up to l/min (US gpm)	Degree of filtration* FG (µm) multilayer
IK 15	15 (4.0)	3
IK 50	50 (13.2)	3

NOTE (*): FG = micro-fibre glass

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CASAPPA®
FLUID POWER DESIGN

Headquarters:
CASAPPA S.p.A.
Via Balestrieri, 1
43044 Lemignano di Collecchio
Parma (Italy)
Tel. (+39) 0521 30 41 11
E-mail: info@casappa.com
www.casappa.com