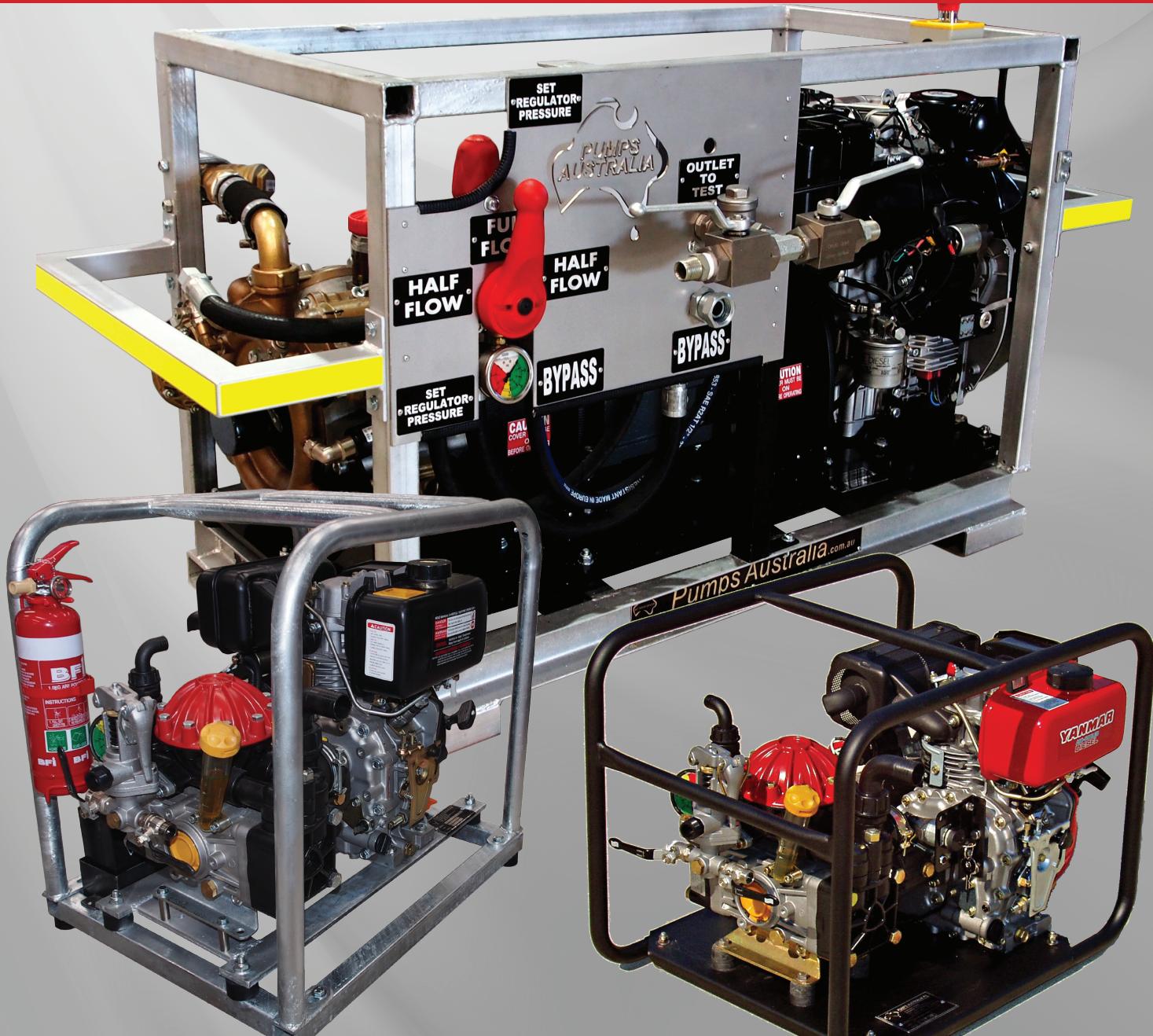


# HYDRA

## USER MANUAL

Models: HYDRA 25, 30, 50, 100, 200



**PUMPS AUSTRALIA**  
**BETTER BY DESIGN**

1800 790 915

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# USER MANUAL

Thank you for purchasing a quality Pumps Australia Hydrostatic (HYDRA). We reserve the right to make changes at any time without incurring any obligation.

**Owner/User Responsibility:** The owner and/or user must have an understanding of the manufacturer's operating instructions and warnings before using this pressure washer. Warning information should be emphasized and understood. If the operator is not fluent in English, the manufacturer's instructions and warnings shall be read to and discussed with the operator in the operator's native language by the purchaser/owner, making sure that the operator comprehends its contents.

Owner and/or user must study and maintain for future reference the manufacturers' instructions.

The operator must know how to stop the machine quickly and understand the operation of all controls. Never permit anyone to operate the engine without proper instructions.

This manual should be considered a permanent part of the machine and should remain with it if machine is resold. When ordering parts, please specify model and serial number. Use only identical replacement parts. This machine is to be used only by trained operators.

## IMPORTANT SAFETY INFORMATION



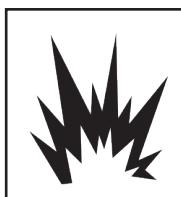
### **WARNING: To reduce the risk of injury, read operating instructions carefully before using.**

1. Read the owner's manual thoroughly. Failure to follow instructions could cause malfunction of the machine and result in death, serious bodily injury and/or property damage.
2. Know how to stop the machine and bleed pressure quickly. Be thoroughly familiar with the controls.
3. Stay alert — watch what you are doing.
4. All installations must comply with local codes. Contact your electrician, plumber, utility company or the selling distributor for specific details. If your machine is rated 250 volts or less, single phase will be provided with a ground fault circuit interrupter (GFCI). If rated more than 250 volts, or more than single phase this product should only be connected to a power supply receptacle protected by a GFCI



### **WARNING: Keep hose, and water spray away from electric wiring or fatal electric shock may result.**

5. To protect the operator from electrical shock, the machine must be electrically grounded. It is the responsibility of the owner to connect this machine to a UL grounded receptacle of proper voltage and amperage ratings. Do not spray water on or near electrical components. Do not touch machine with wet hands or while standing in water. Always disconnect power before servicing.



### **WARNING: Flammable liquids can create fumes which can ignite, causing property damage or severe injury.**

### **WARNING: Risk of explosion — Operate only where open flame or torch is permitted.**

6. In oil burning models, use only kerosene, No. 1 home heating fuel, or diesel. If diesel is used, add a soot remover to every tankful.



### **WARNING: Risk of fire — do not add fuel when the product is operating or still hot.**

### **WARNING: Do not use gasoline crankcase draining or oil containing gasoline, solvents or alcohol. Doing so will result in fire and/or explosion.**

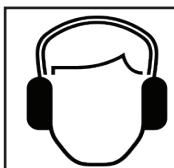
7. Oil burning appliances shall be installed only in locations where combustible dusts and flammable gases or vapours are not present. Do not store or use gasoline near this machine.

8. Do not allow acids, caustic or abrasive fluids to pass through the pump.
9. Never run pump dry or leave spray gun closed longer than 1-2 minutes.
10. Keep operating area clear of all persons.



### **WARNING: High pressure spray can cause paint chips or other particles to become air-borne and fly at high speeds. To avoid personal injury, eye, hand and foot safety devices must be worn.**

11. Eye, hand, and foot protection must be worn when using this equipment.



**WARNING:** This machine can exceed 85 dB, appropriate ear protection must be worn.



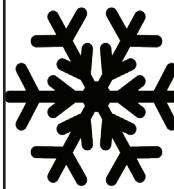
**WARNING:** Risk of injury. Hot surfaces can cause burns. Use only designated gripping areas of spray gun and wand. Do not place hands or feet on non-insulated areas of the pressure washer.

12. To reduce the risk of injury, close supervision is necessary when a machine is used near children.

Do not allow children to operate the pressure washer. This machine must be attended during operation.



**WARNING:** High pressure developed by these machines will cause personal injury or equipment damage. Keep clear of nozzle. Use caution when operating. Do not direct discharge stream at people, or severe injury or death will result.



**WARNING: Protect machine from freezing.**

15. To keep machine in best operating conditions, it is important you protect machine from freezing. Failure to protect machine from freezing could cause malfunction of the machine and result in death, serious bodily injury, and/or property damage. Follow storage instructions specified in this manual.

16. Inlet water must be clean fresh water and no hotter than 90°F.



**WARNING: Risk of asphyxiation. Use this product only in a well ventilated area.**

17. Avoid installing machines in small areas or near exhaust fans. Adequate oxygen is needed for combustion or dangerous carbon monoxide will result.

18. Manufacturer will not be liable for any changes made to our standard machines or any components not purchased from Pumps Australia Pty Ltd.

19. The best insurance against an accident is precaution and knowledge of the machine.



**WARNING: Be extremely careful when using a ladder, scaffolding or any other relatively unstable location. The cleaning area should have adequate slopes and drainage to reduce the possibility of a fall due to slippery surfaces.**

20. Do not overreach or stand on unstable support. Keep good footing and balance at all times.

21. Do not operate this machine when fatigued or under the influence of alcohol, prescription medications, or drugs.



## OPERATION INSTRUCTIONS

### Before Starting

**WARNING:** Check hoses, valves, fittings, and fuel connections (If powered by diesel or petrol) daily for signs of wear, cracks and looseness, and replace as required.

1. Read all manuals provided with this Hydrostatic Tester. Become familiar with location and function of all operating and safety controls.
2. Connect water supply hose to the inlet of the pump. The water source and supply hose must be capable of providing at least twice the output, for example an AR30 uses 32LPM (Litres Per Minute), a water source of 60 LPM is highly recommended.

### \*\*\* DO NOT USE MAINS WATER AS A FEED \*\*\*

3. Fill fuel tank (If applicable). Use the correct fuel type for your engine.
4. Check pump and engine oil levels.

**IMPORTANT:** If the Hydrostatic Tester has not been used for an extended period of time, change the regulator from pressure to by-pass and turn on water supply. Allow water to run from by-pass until clear.

### To Start

**IMPORTANT:** The water must be turned on before starting. Running the pump dry will cause damage to pump seals and void warranty.

**IMPORTANT: DO NOT allow the machine to run in bypass for more than 10 minutes at any one time or damage to pump may occur.**

1. Open the Regulator's valves to allow full flow without pressure.
2. Connect your water source and allow the water to start flowing
3. Start your Engine or Motor
4. Adjust pressure, first loosen the locknut. Turn the T-handle/Knob clockwise to increase and counterclockwise to decrease the pressure.
5. Upon reaching desired pressure setting, tighten locknut and prepare to begin test.

### To Stop

1. Turn the key on the engine to OFF.
2. Turn OFF water supply.
3. Open valves to relieve system pressure.

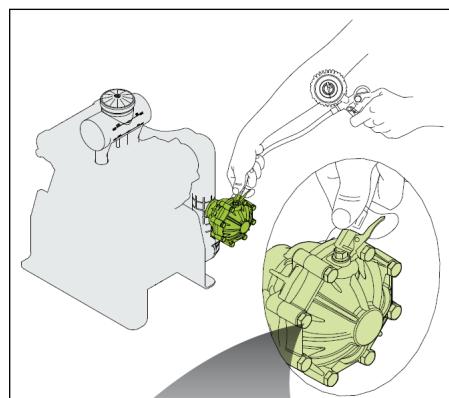
## ACCUMULATOR FILLING INSTRUCTIONS

### Before Starting

**IMPORTANT: CHECK THE ACCUMULATOR'S PRESSURE.**

If the pump has a pressure accumulator (at the top of the pump, usually red in colour) check its level of inflation. With the pump at a standstill, use an air gun fitted with a pressure gauge. The accumulator chamber may not be filled up to your required working pressure.

Please see the chart to find what pressure you need to set the accumulator to for the desired pressure.



Spraying/ Testing Pressure		Accumulator Pressure	
bar	psi	bar	psi
1-3	15-44	1	15
3-12	44-174	1-3	15-44
12-20	174-290	3-5	44-73
20-50	290-725	5-7	73-102

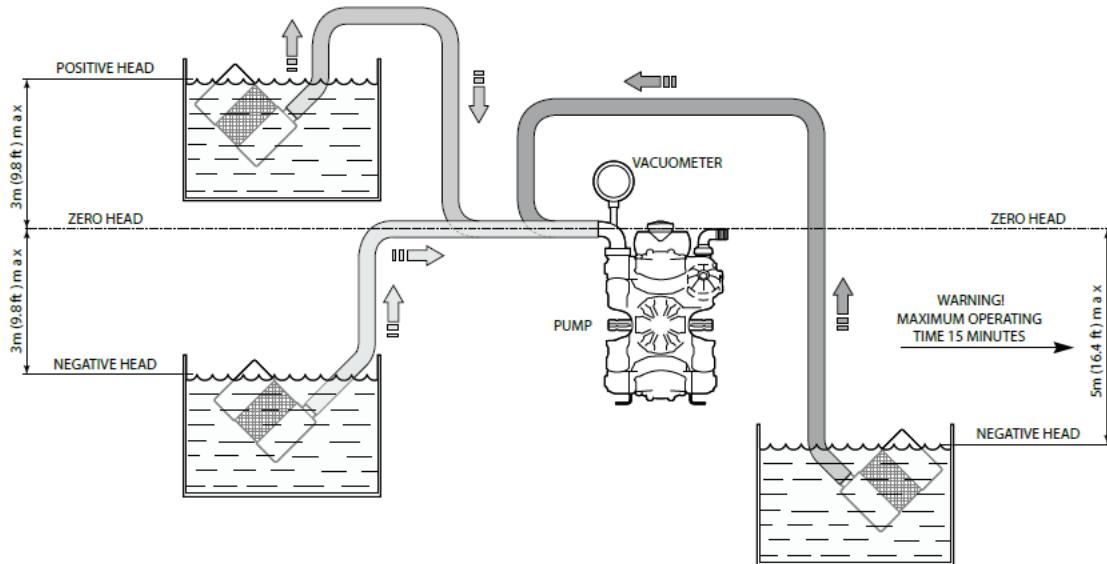


## General guidelines on water supply

To Operate correctly, the diaphragm pump must draw liquids from a container at atmospheric pressure.

### DO NOT SUPPLY THE PUMP WITH PRESSURISED LIQUIDS!

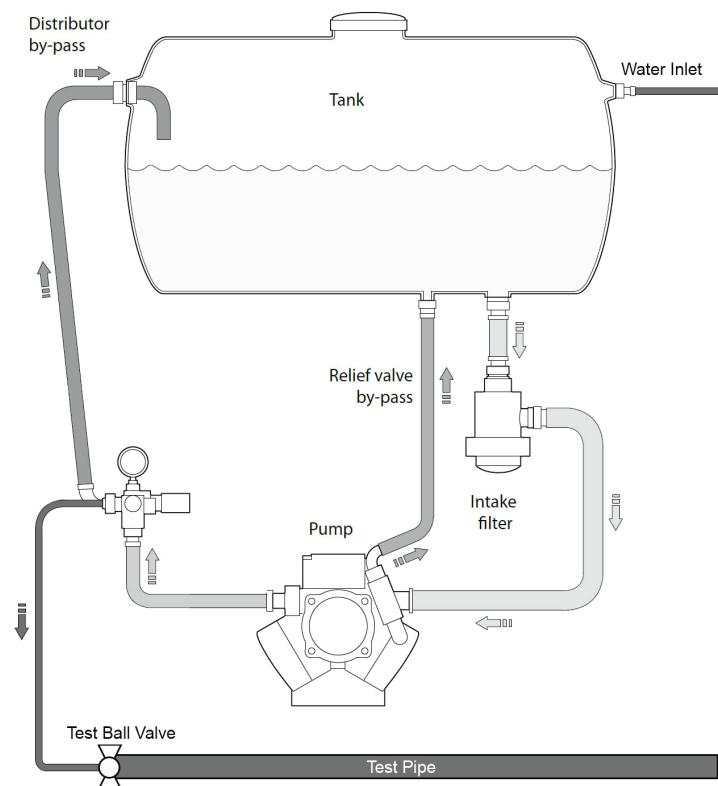
for continuous duty, the pump should not draw in water by gravity from containers with liquid level at heights of above 3metres.



For continuous duty, the pump should not draw in liquids by vacuum from containers with liquid level more than 3 metres below the pump intake fitting and the circuit must consist of hoses of length and diameter appropriate to the pump intake fitting free from restrictions and elbows and with a filter of suitable capacity.

For occasional duty, such as filling water supply tanks, the pump can be operated at a vacuum drawing in liquids from reservoirs having the surface of the liquid to 5 metres below the pump intake fitting, for periods of no more than 15 minutes.

**Drawing in liquids from lower levels or for longer times causes cavitation in the pump circuit and reduces the lifetime of the diaphragms, valves and mechanical parts.**



## TYPICAL HYDROSTATIC TEST SET-UP

The Following is a simplified illustration of the typical installation layout and is purely a guideline.

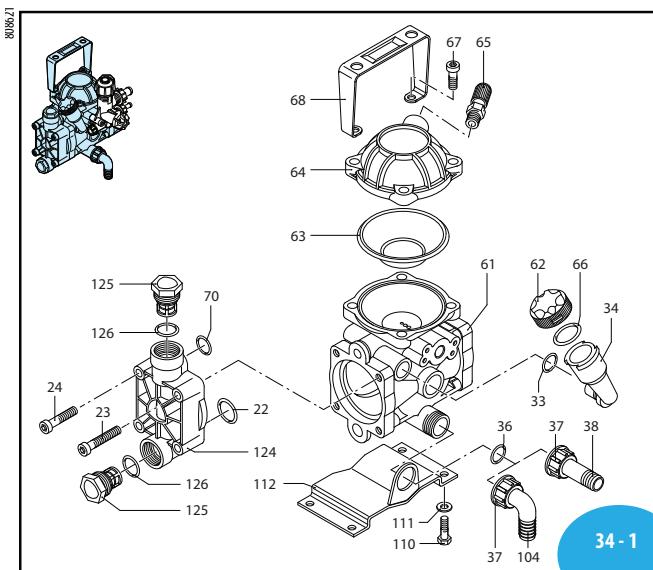


## TROUBLESHOOTING

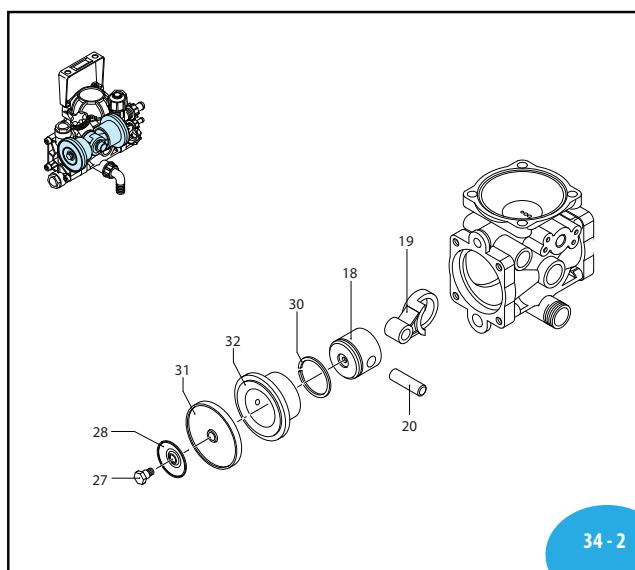
Sympton	Possible Cause	Solution
The pump does not prime properly	Intake circuit not airtight	Tighten, repair or replace hoses and fitting as necessary.
	Control Valve lever on "pressure" setting.	Move the lever to by-pass mode
Pressure Gauge needle wobbles, pressure throbbing	Water inlet hose / feed is not airtight	assure all fittings are screwed tightly and there's thread tape on all threaded fittings
	Residual air left inside of pump (airlock)	discharge the air by opening a ball valve connected to the outlet side of the pump
	Valve plate stuck to it's seat	Tighten, repair or replace hoses and fittings as necessary
	Pressure Accumulator deflated	Inflate accumulator to correct pressure (as per previous page)
Uneven flow of liquid to nozzle	Pressure Accumulator deflated	Inflate accumulator to correct pressure (as per previous page)
Increase in noise and simultaneous drop in oil level (Pump Cavitation)	Restriction on intake of pump	Remove any debris found or kinks in feed hose
	Intake filter is fouled	clean the filter cartridge
	Pump is drawing in liquid from too low a water level	Check water source
Water is flowing through both water outlet and bypass	Water Source is too pressurised for pump Inlet.	Remove from any feed lines that are pressurised. The pump must suck from a tank or unpressurised water source.
Pressure gauge fluctuates	Valves worn or blocked by foreign bodies	Clean or replace valves
	Seals worn	Replace Seals
The pump does not require the required pressure.	Worn nozzle	Replace with nozzle of proper size
	Belt slippage	Tighten or replace with correct belt
	Air leak in inlet plumbing	Disassemble, reseal and reassemble
	Relief valve stuck, partially plugged or improperly adjusted valve seat worn	Clean and adjust relief valve; check for worn or dirty valve seats
	Intake filter is fouled	clean the filter cartridge
	Worn inlet, discharge valve blocked or dirty	Replace inlet and discharge valve
Pump runs extremely rough, pressure very low	Inlet restrictions and/or air leaks	Clean out foreign material
	Stuck inlet or discharge valve	Replace worn valves
Water leakage from under manifold	Worn packing or cracked plunger	Install new packing or plunger
Slight leak, oil leaking in the area of crankshaft	Worn crankshaft seal or improperly installed oil seal o-ring	Remove oil seal retainer and replace damaged O-ring and/or seals
	Bad bearing	Replace bearing
Excessive play at the end of the crankshaft pulley	Worn the main bearing from excessive tension on drive belt	Replace crankcase bearing and/or tension drive belt
Oil on pump body or base.	Oil seal on pump shaft worn.	Prelace the worn oil seal
	Oil pressure inside of pump is too high	Restore correct oil level in tank
Pump using too much oil (oil flowing from delivery port)	One or more diaphragms ruptured	Stop the pump at once. Replace the diaphragms



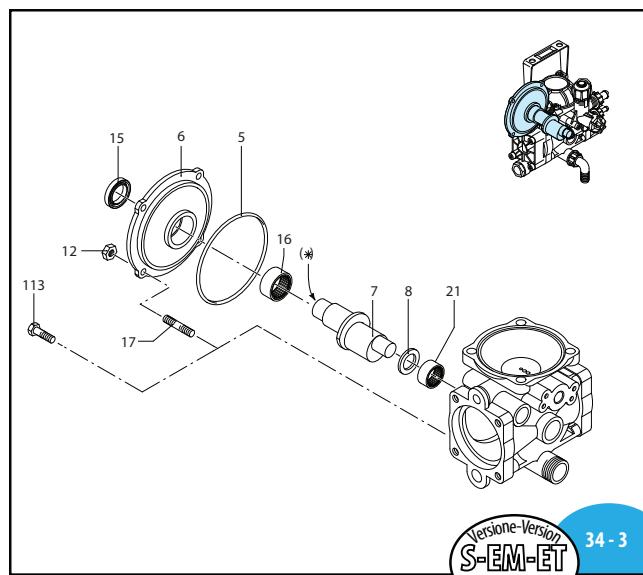
## HYDRA25



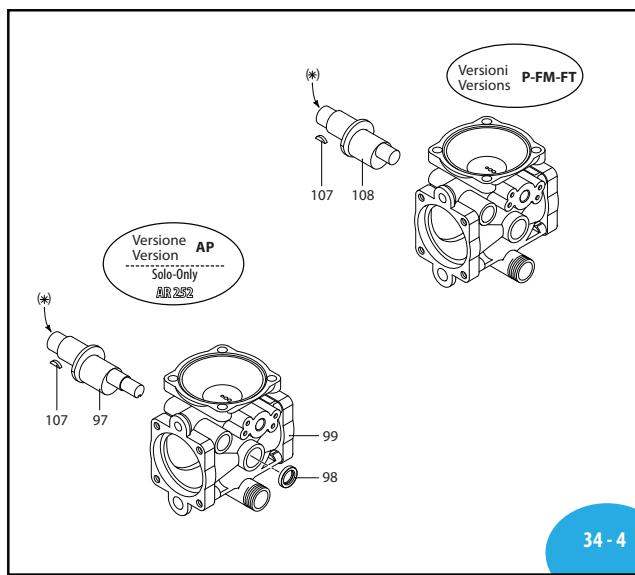
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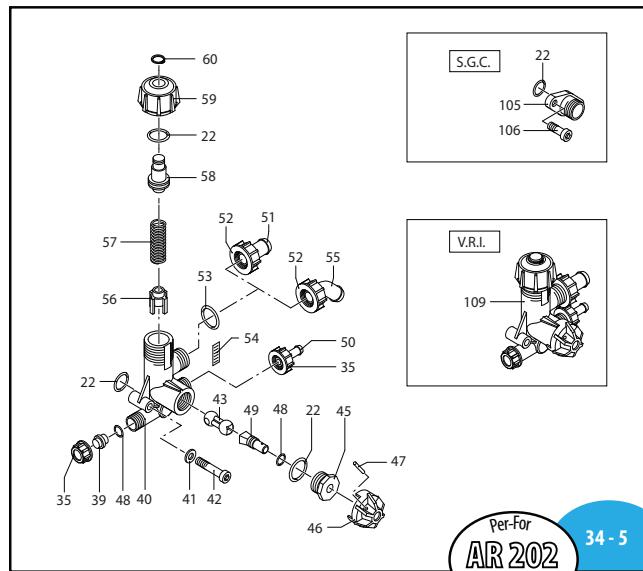
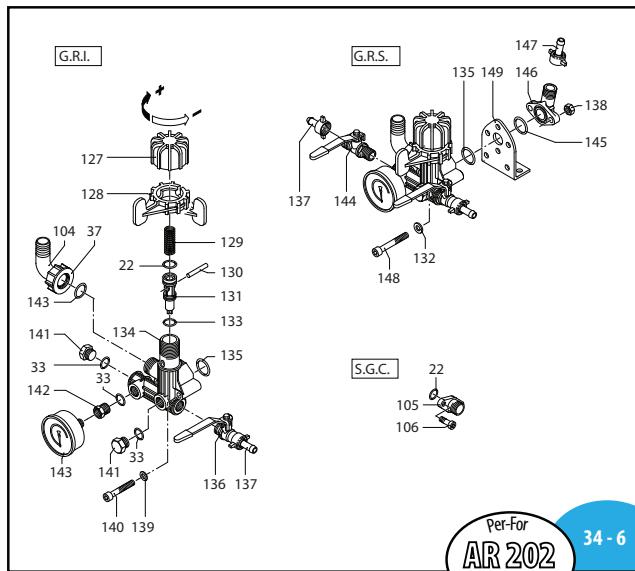
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UN990016-LE



SL000110-FY

Per-For  
AR 202Per-For  
AR 202



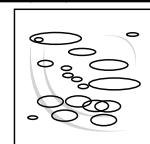
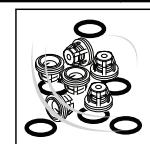
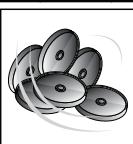
# USER MANUAL

HYDRA25

sp\_ar202\_ar252.pdf

Pos.	Cod.	Descrizione	Description	Q.ty	Note
5	800380	OR Ø 97x1,6	O-Ring	1	
6	800020	Flangià supp. albero	Flange	1	
7	800174	Albero ecc.“S-EM-ET”	“S-EM-ET” shaft	1	AR 202 (G)
7	800170	Albero ecc.“S-EM-ET”	“S-EM-ET” shaft	1	AR 252 (C)
8	800160	Distanziale	Spacer	1	
12	390440	Dado M 6	Nut	4	
15	800200	Anello tenuta	Seal	1	
16	800180	Boccola a rullini	Roller bushing	1	
17	550330	Prigioniero M 6x34	Stud	4	
18	802070	Pistone	Piston	2	C <sub>20</sub>
19	800140	Biella	Connecting rod	2	
20	800130	Spinotto	Piston pin	2	
21	480370	Boccola a rullini	Roller bushing	1	
22	480440	OR Ø 17,13x2,62	O-Ring	5	►
23	680360	Vite TCEI M 8x50	Bolt	1	▀ C <sub>20</sub>
24	800220	Vite TCEI M 8x45	Bolt	7	C <sub>20</sub>
27	800090	Perno membrana	Diaphragm pin	2	○
	800091	Perno membrana	Diaphragm pin	2	Per / For Viton C <sub>20</sub>
28	800350	Piatello	Plate	2	
30	802080	Segmento	Piston ring	2	
11	800080	Membrana	Diaphragm	2	Gomma
	800081	Membrana	Diaphragm	2	Viton
	800085	Membrana	Diaphragm	2	Desmopan
	800086	Membrana	Diaphragm	2	H.P.D.S.
	802060	Camicia	Sleeve	2	AR 202
	802061	Camicia	Sleeve	2	AR 202 (Viton)
	802050	Camicia	Sleeve	2	AR 252
	802051	Camicia	Sleeve	2	AR 252 (Viton)
33	740290	OR Ø 14x1,78	O-Ring	4	►
34	801960	Serbatoio olio	Oil tank	1	
35	800520	Girello 3/8" G	Ring nut	2	
36	390180	OR Ø 18,72x2,62	O-Ring	1	►
37	550450	Girello 3/4" G	Ring nut	2	
38	800340	Portagomma Ø 20	Hose	1	
39	800540	Tappo	Plug	1	
40	800400	Corpo valvola reg.	Valve body	1	
41	550331	Rosetta Ø 6,5	Washer	2	
42	800410	Vite TCEI M 6x40	Bolt	2	
43	800430	Valvola	Valve	1	
45	800500	Ghiera	Ring nut	1	
46	800510	Manopola apertura	Knob	1	
47	390330	Spina elast.spir.	Pin	1	
48	800560	OR Ø 8,73x1,78	O-Ring	2	
49	800490	Perno ruotismo	Pivot	1	
50	800530	Tubetto Ø 8	Hose	1	
51	800670	Tubetto Ø 15	Hose	1	
52	800680	Girello M 22x1,5	Ring nut	1	
53	740290	OR Ø 14x1,78	O-Ring	1	
54	800480	Adesivo scala atm	Atm scale adhesive	1	
55	1200860	Curva 45° Ø 13	45° Elbow	1	
56	800440	Guida inferiore molla	Lower spring guide	1	
57	800450	Molla	Spring	1	
58	800460	Guida superiore molla	Upper spring guide	1	
59	800470	Manopola regolazione	Adjustment knob	1	

Pos.	Cod.	Descrizione	Description	Q.ty	Note
60	480550	Anello seeger	Circlip	1	
61	800010	Corpo pompa "SP"	Pump body "SP"	1	
62	550057	Tappo serbatoio olio	Oil tank cap	1	
63	800190	Semicamera aria inf.	Semi air chamber	1	Gomma
64	800191	Semicamera aria inf.	Semi air chamber	1	Viton
65	800230	Semisfera superiore	Upper air chamber	1	Nera / Black
66	800232	Semisfera superiore	Upper air chamber	1	Rossa / Red
67	800650	Valvola di gonfiaggio	Valve	1	
68	550040	OR Ø 26,65x2,62	O-Ring	1	►
69	540290	Vite TCEI M 8x25	Bolt	4	C <sub>23</sub>
70	800390	Maniglia	Handle	1	
71	800210	OR Ø 13,10x2,62	O-Ring	2	►
72	800173	Albero ecc. passante	Through-shaft	1	AR 252 (F)
73	800960	Anello tenuta	Seal ring	1	
74	800011	Corpo pompa "AP/SP"	Pump body "AP/SP"	1	
75	550460	Curva ø 18	Elbow	2	
76	800692	Flangia mand. 1/2" G	Flange	1	
77	880280	Vite TCEI M 6x18	Bolt	2	
78	800590	Linguetta 4x5	Key	1	
79	800175	Albero ecc. "P-FM-T"	"P-FM-T" shaft	1	AR 202 (H)
80	800171	Albero ecc. "P-FM-T"	"P-FM-T" shaft	1	AR 252 (D)
81	1912	Valvola regolazione	Regulating valve	1	
82	180431	Vite TE M 8x16	Bolt	2	C <sub>23</sub>
83	380241	Rossetta øi 8,5	Washer	2	
84	800311	Piede puleggia	Pulley base	1	
85	320350	Vite TE M 6x12	Bolt	4	C <sub>10</sub>
86	801940	Testa	Head	2	
87	809060	Valvola completa	Valve assembly	4	
88	880830	OR Ø 15,54x2,62	O-Ring	4	
89	1880220	Manopola	Adjustment knob	1	
90	1880210	Ghiera sgancio press.	Ring nut	1	
91	1880331	Molla	Spring	1	
92	1880240	Spinotto	Pin	1	
93	1889201	Otturatore	Jet	1	
94	390311	Rosetta 8,5x17x1,5	Washer	2	
95	1880260	OR Ø 15,08x2,62	O-Ring	1	
96	1880200	Corpo valvola	Valve body	1	
97	1140450	OR Ø 20,24x2,62	O-Ring	1	
98	130491	Rub. 3/8"-1/2" G (M) DX	Right valve	1	ex 30491
99	110131	Racc. 1/2"G+tub. ø10	Fitting 1/2" G+hose ø10	2	ex 10131
100	390270	Dado M 8	Nut	2	
101	550331	Rosetta 6,5	Washer	2	
102	801080	Vite TCEI M 6x50	Bolt	2	
103	130171	Tappo 3/8"G	Plug	1	
104	1880250	Riduzione manometro	Pipe reducer	1	
105	1880340	Manometro	Pressure gauge	1	
106	130492	Rub. 3/8"-1/2" G (M) SX	Left valve	1	ex 30492
107	550350	OR Ø 23,81x2,62	O-Ring	1	
108	450145	Flangia raccordo	Flange	1	
109	110130	Racc. 1/2"G+tub. ø13	Fitting 1/2" G+hose ø13	1	ex 10130
110	1880310	Vite TCEI M 8x65	Bolt	2	
111	320406	Staffa GS	Bracket	1	
112	880830	OR Ø 15,54x2,62	O-Ring	1	►



**KIT 1927**  
Membrane gomma  
Buna diaphragms

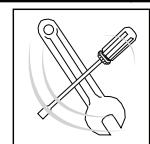
**KIT 2408**  
Valvole  
Valves

**KIT 2409**  
OR  
**O-Rings**

KIT 2409			
OR			
O-Rings			
Pos.	Q.ty	Pos.	Q.ty
5	1	135	1
22	5	145	1
33	4		
36	1		
48	2		
53	1		
66	1		
70	2		
126	4		
133	1		

**KIT 2410**  
Pronto intervento  
Maintenance repair

KIT 210			
Pronto intervento			
Maintenance repair			
Pos.	Q.ty	Pos.	Q.ty
5	1	62	1
22	5	63	1
27	1	70	2
28	1	125	4
31	2	126	4
33	1		
34	1		
36	1		
48	2		
53	1		



**KIT 1910**  
Pronto intervento VR  
VR Maintenance repair

**KIT 2411**  
Pronto intervento GR 30  
R 30 Maintenance repair

Pos.	Qty
5	1
22	5
33	4
36	1
48	2
53	1
70	2
126	4
133	1
135	1
145	1

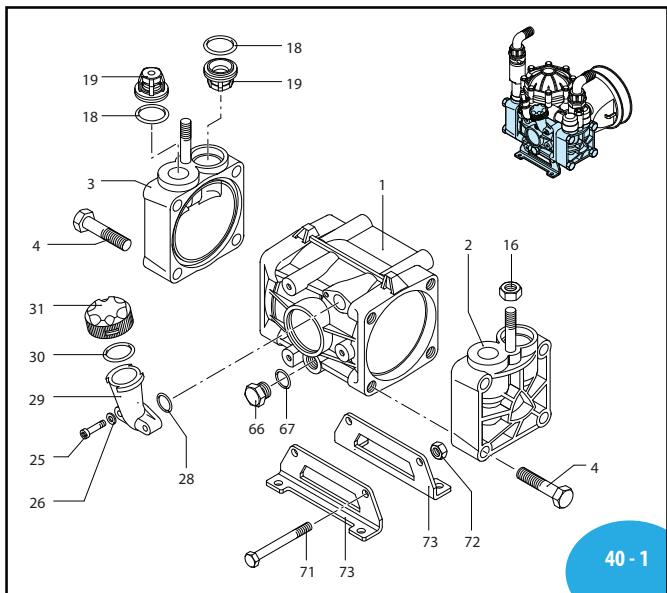


**Olio utilizzato**  
Used oil

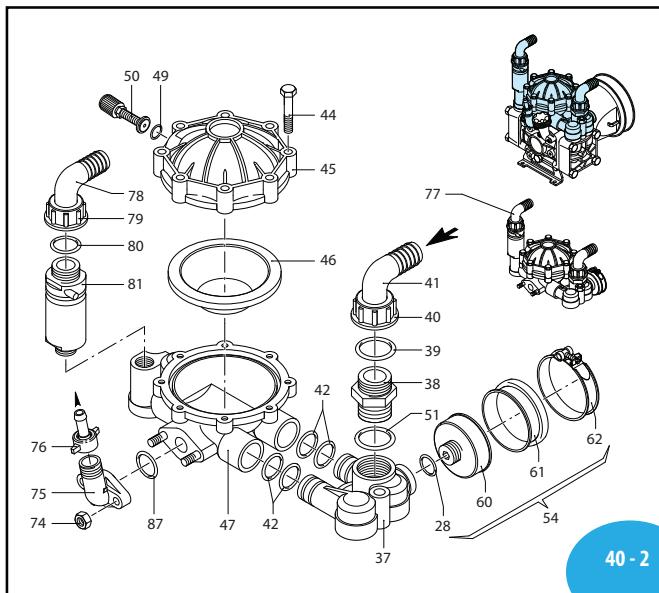
<b>Tipo - Type</b>	<b>Kg</b>
SAE 30	0,34



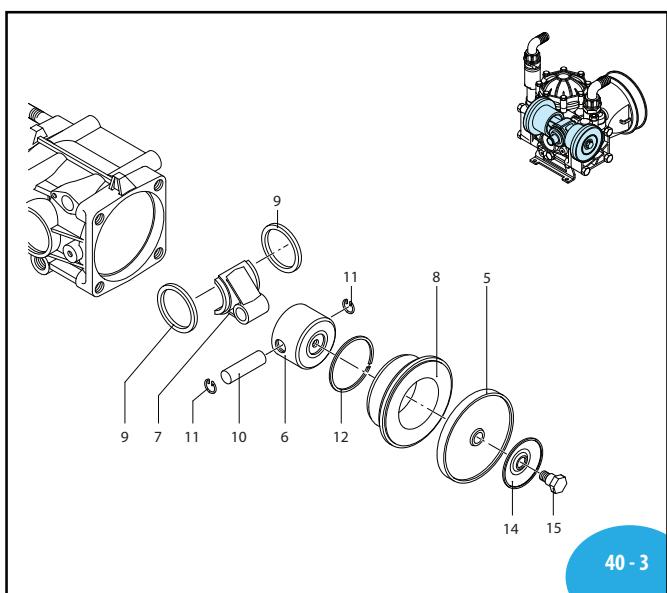
HYDRA30



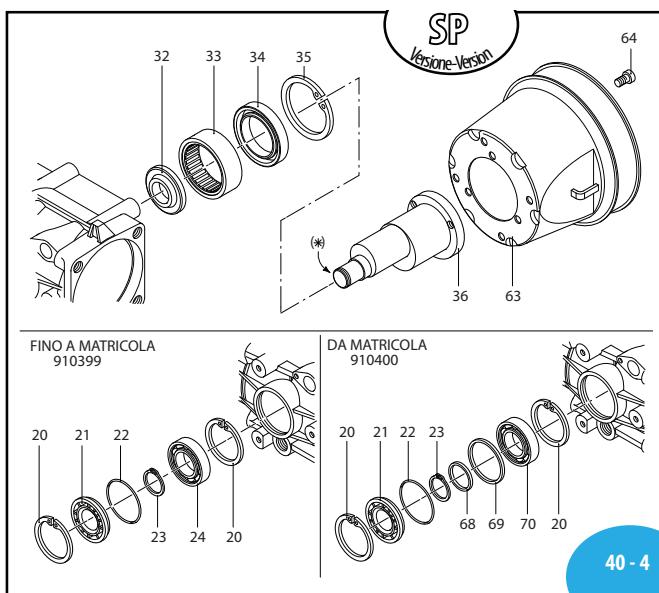
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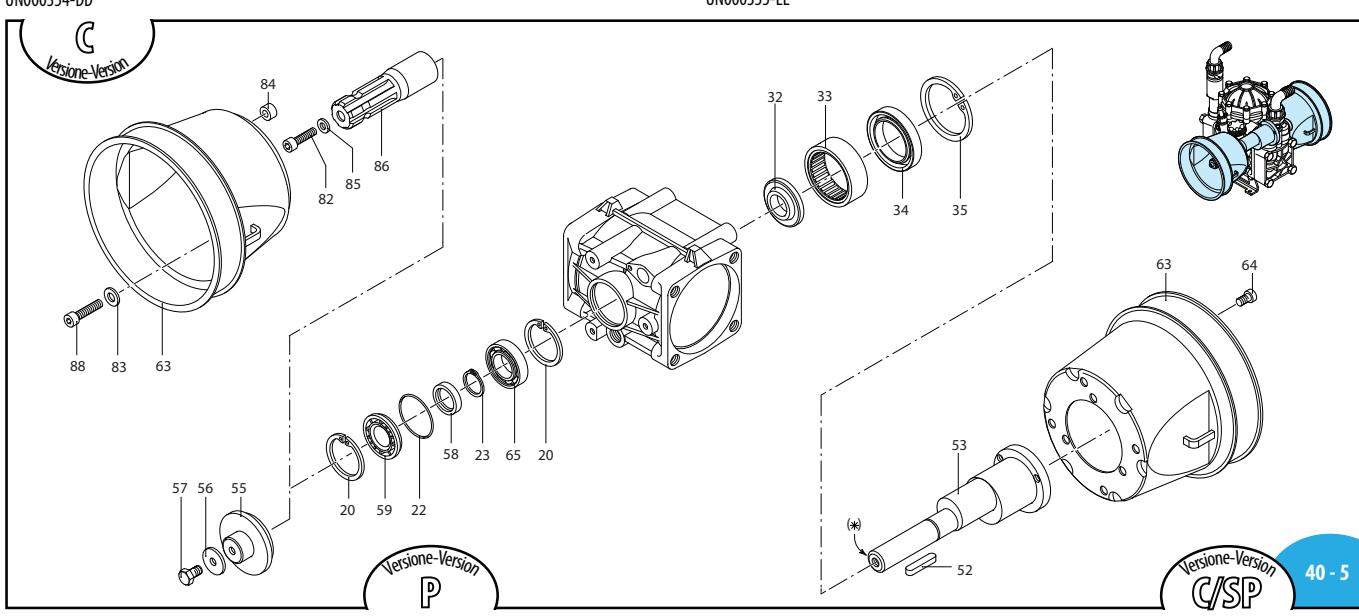
40 - 2



UN000354-DD



40 - 4



UN000356-DD



# USER MANUAL

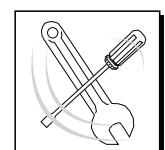
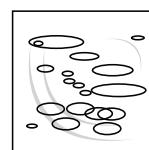
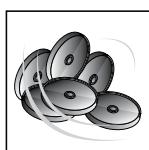
sp-230.pdf

## HYDRA30

Pos.	Cod.	Descrizione	Description	Q.ty	Note
1	620011	Corpo pompa	Pump body	1	
2	620101	Testa DX	Right head	1	
3	620102	Testa SX	Left head	1	
4	621430	Vite TE M 12x55	Bolt	8	C <sub>50</sub>
5	620080	Membrana	Diaphragm	2	Gomma
6	620081	Membrana	Diaphragm	2	Viton
7	620085	Membrana	Diaphragm	2	Desmopan
8	620120	Pistone	Piston	2	
9	620140	Biella	Connecting rod	2	
10	620110	Camicia	Sleeve	2	
11	580470	Anello biella	Con rod pin	2	
12	380300	Spinotto	Piston pin	2	
13	380080	Anellino spinotto	Pin ring	4	
14	160230	Segmento	Piston ring	2	
15	1040180	Piastre di richiamo	Plate	2	O C <sub>20</sub>
16	580360	Perno membrana	Diaphragm pin	2	
17	180150	Dado M 10	Nut	2	
18	620030	OR Ø 25,80x3,53	O-Ring	4	►
19	620031	OR Ø 25,80x3,53	O-Ring	4	Viton
20	629050	Valvola completa	Complete valve	4	
21	111120	Anello seeger	Circlip	2	
22	620020	Coperchietto chiuso	Cover	1	
23	620210	OR Ø 40,95x2,62	O-Ring	1	►
24	620291	Anello seeger	Circlip	1	
25	620191	Cuscinetto	Bearing	1	
26	850850	Vite TCEI M 6x30	Bolt	2	C <sub>10</sub>
27	550331	Rosetta øi 6,5	Washer	2	
28	180101	OR Ø 17,5x2	O-Ring	2	►
29	550030	Serbatoio olio	Oil tank	1	
30	550040	OR Ø 26,65x2,62	O-Ring	1	►
31	550050	Tappo serbatoio olio	Oil tank cap	1	
32	620160	Distanziale	Spacer	1	
33	550060	Boccia a rullini	Roller bushing	1	
34	620130	Anello tenuta	Seal ring	1	►
35	620330	Anello seeger	Circlip	1	
36	620170	Albero eccentrico "SP"	"SP" shaft	1	(N)
37	620150	Attacco aspirazione	Suction manifold	1	
38	550340	Nipples 1"G(M)-1"G(M)	Threaded adapter	1	
39	550350	OR Ø 23,81x2,62	O-Ring	1	►
40	550242	Girello 1"G	Ring nut	1	
41	550370	Curva ø 25	Elbow	1	
42	390060	OR Ø 20,63x2,62	O-Ring	4	►
43	621780	Vite TE M 8x40	Bolt	8	C <sub>20</sub>
44	620230	Semisfera superiore	Upper air chamber	1	
45	550190	Semicamera aria	Semi air chamber	1	Gomma
46	550191	Semicamera aria	Semi air chamber	1	Saturnflon
47	550192	Semicamera aria	Semi air chamber	1	Viton
	620180	Semicamera inf.	Lower air chamber	1	

Pos.	Cod.	Descrizione	Description	Q.ty	Note
47	629209	Semicamera inf.compl.	Compl.lower air chamb.	1	Vedi / See ●
49	650542	Guarnizione	Gasket	1	►
50	180020	Valvola di gonfiaggio	Air valve	1	
51	390290	OR Ø 29x3	O-Ring	1	►
52	620680	Linguetta	Key	1	
53	620172	Albero passante "C/SP"	Through-shaft "C/SP"	1	Per / For 620172 Ø 20 mm (P)
53	620174	Albero passante "C/SP"	Through-shaft "C/SP"	1	Ø 3/4" (R)
54	659209	Prem. membranina asp.	Suct. diaphragm assembly	1	
55	620661	Flangia	Flange	1	
56	620670	Rosetta øi 8,5	Washer	1	
57	180370	Vite TE M 8x25	Bolt	1	C <sub>20</sub>
58	620630	Anello tenuta	Seal ring	1	
59	620021	Coperchietto passante	Cover	1	■
60	650660	Porta membrana	Diaphragm holder	1	
61	650670	Membranina asp.	Suction diaphragm	1	
62	651670	Fascetta	Clamp	1	
63	1500350	Protezione cardano	Cardan protection	1	
64	820670	Vite TCEI M 10x16	Bolt	4	C <sub>10</sub>
65	620190	Cuscinetto	Bearing	1	
66	880530	Tappo 3/8"G	Plug	1	C <sub>20</sub>
67	740290	OR Ø 14x1,78	O-Ring	1	►
68	620930	Distanziale cuscinetto	Spacer	1	
69	620940	Distanziale cuscinetto	Spacer	1	
70	380230	Cuscinetto	Bearing	1	
71	380210	Vite TE M 8x75	Bolt	2	C <sub>30</sub>
72	380240	Dado M 8	Nut	2	
73	380200	Piede	Base	2	
74	390270	Dado M 8	Nut	2	C <sub>20</sub>
75	450145	Flangia raccordo	Flange	1	
76	110130	Racc.1/2"G+tub. ø13	Fitting 1/2"G+hose ø13	1	
77	1522	Camera aria completa	Complete air chamber	1	
78	550460	Curva ø 18	Elbow	1	
79	550450	Girello 3/4"G	Ring nut	1	
80	880831	OR Ø 15,54x2,62	O-Ring	1	Viton ►
81	1609001	Valvola di sicurezza	Safety valve	1	●
82	680350	Vite TCEI M 8x35	Bolt	1	C <sub>20</sub>
83	380241	Rosetta øi 8,5	Washer	3	
84	1200521	Distanziale	Spacer	3	
85	961340	Rosetta øi 8,5	Washer	1	
86	621370	Giunto	Universal joint	1	Per / For 620172
87	550350	OR Ø 23,81x2,62	O-Ring	1	☒
88	680350	Vite TCEI M 8x35	Bolt	3	C <sub>10</sub>

● Completa di tappo ed or per versioni senza valvola di sicurezza.  
With plug and o-ring for version without safety valve.



KIT 1930	
Membrane gomma Buna diaphragms	
Pos.	Q.ty
5	
2	

KIT 1917	
Valvole Valves	
Pos.	Q.ty
18	4
19	4

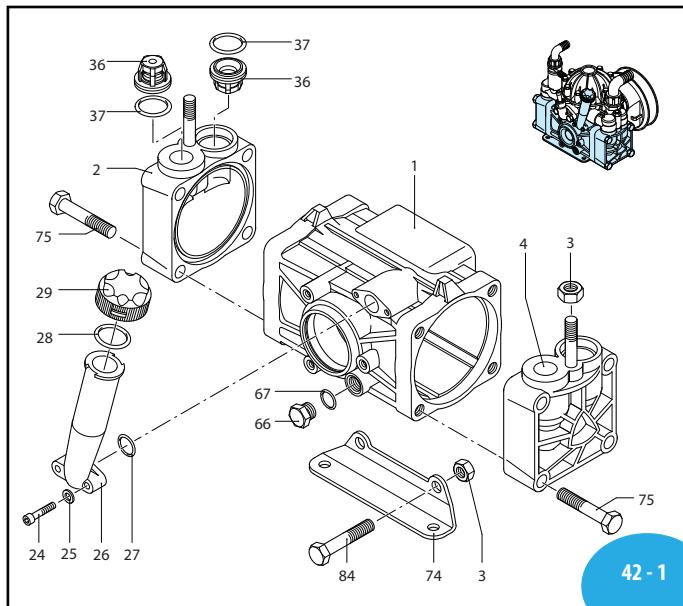
KIT 1916	
OR O-Rings	
Pos.	Q.ty
18	4
22	1
28	2
39	2
42	4
49	1
51	1
67	1

KIT 1915					
Pronto intervento Maintenance repair					
Pos.	Q.ty	Pos.	Q.ty	Pos.	Q.ty
5	2	40	1		
13	1	41	1		
14	1	42	4		
15	1	46	1		
18	4	49	1		
19	4	51	1		
22	1	61	1		
28	2	67	1		
29	1				
39	2				

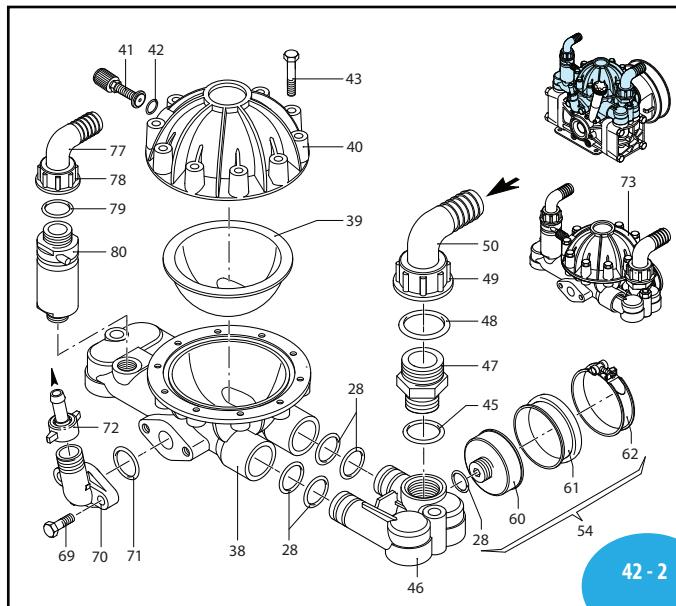
Olio utilizzato	
Used oil	
Tipo - Type	Kg
SAE 30	0,7



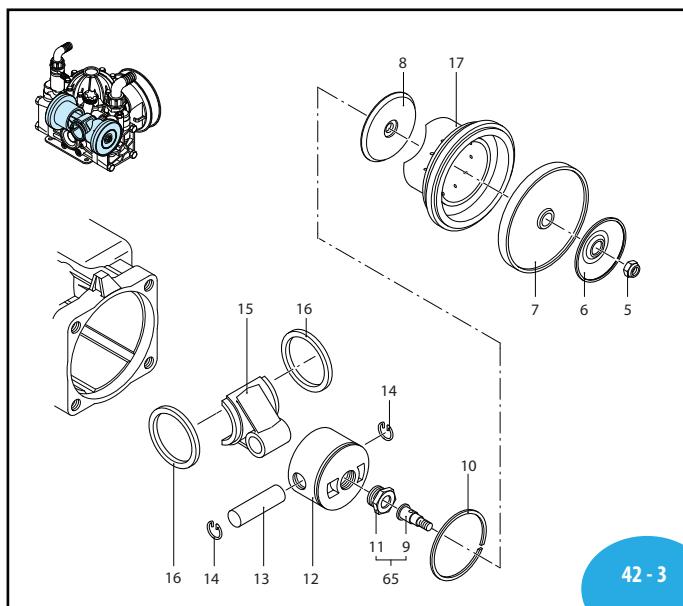
## HYDRA50



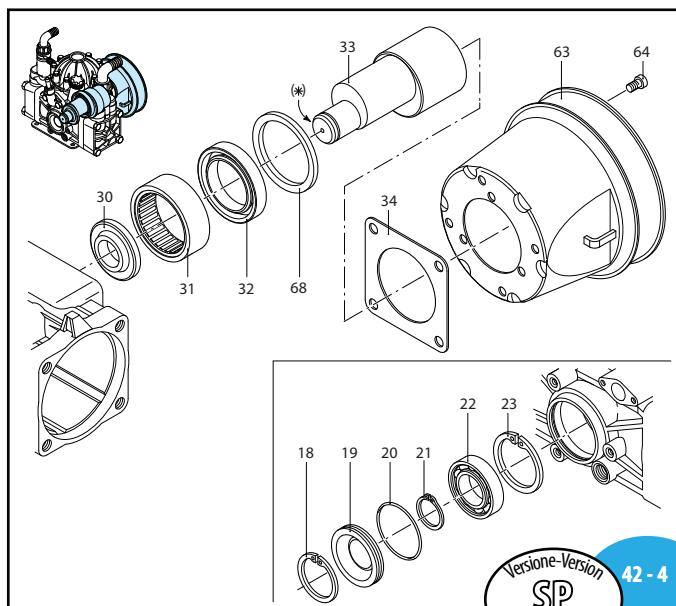
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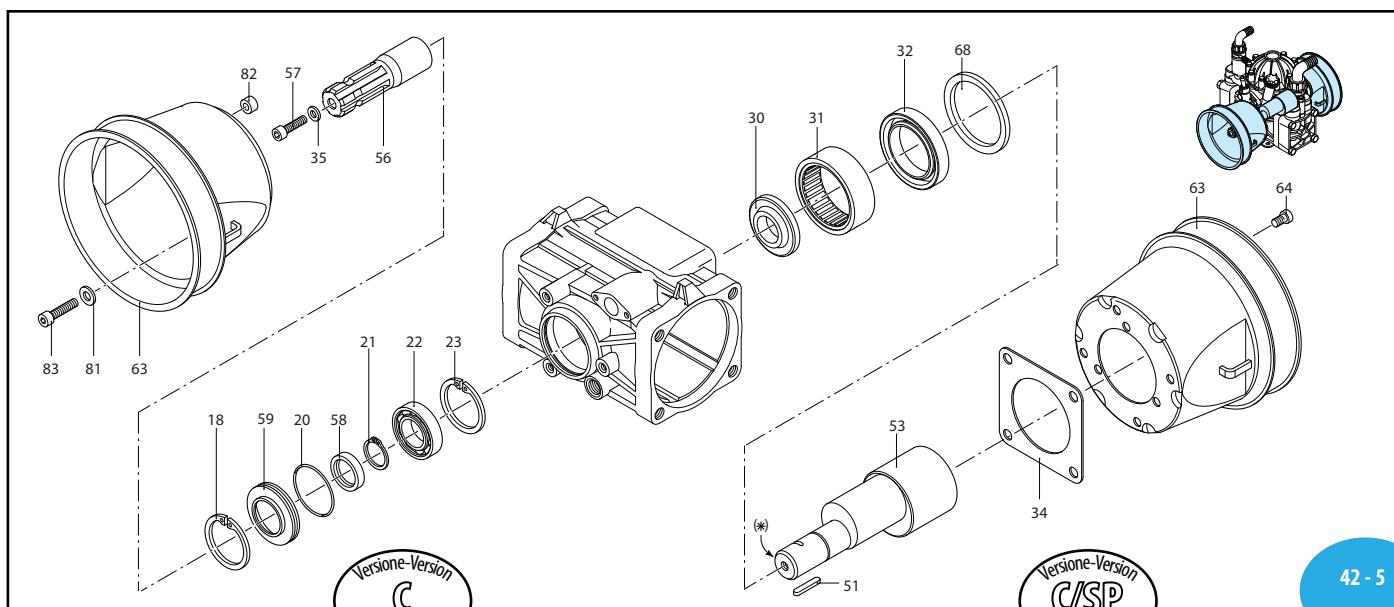
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UN000359-BE



UN000360-LE



UN000361-LE



# USER MANUAL

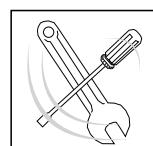
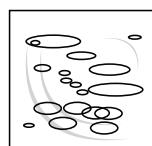
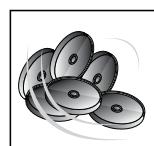
## HYDRA50

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Pos.	Cod.	Descrizione	Description	Q.ty	Note
1	650011	Corpo pompa	Pump body	1	
2	650102	Testa SX	Left head	1	
3	320130	Dado M 12	Nut	4	C <sub>50</sub>
4	650101	Testa DX	Right head	1	
5	160311	Dado M 8 H 10	Nut	2	C <sub>20</sub>
6	650390	Piastra di richiamo	Plate	2	
7	650081	Membrana	Diaphragm	2	Viton
8	650082	Membrana	Diaphragm	2	Gomma
9	650085	Membrana	Diaphragm	2	Desmopan
10	650090	Piastra di spinta	Plate	2	
11	650320	Perno membrana	Diaphragm pin	2	
12	650190	Segmento	Piston ring	2	
13	650061	Bussola di richiamo	Bushing	2	
14	650121	Pistone	Piston	2	
15	650071	Spinotto	Piston pin	2	
16	160691	Anellino spinotto	Pin ring	4	
17	650142	Biella	Connecting rod	2	
18	650130	Anello biella	Con rod pin	2	
19	650111	Camicia	Sleeve	2	
20	200390	Anello seeger	Circclip	1	
21	650040	Coperchio corpo	Pump body cover	1	
22	650920	OR Ø 53,65x2,62	O-Ring	1	►
23	650480	Anello seeger	Circclip	1	
24	230330	Cuscinetto	Bearing	1	
25	161050	Anello seeger	Circclip	1	
26	850850	Vite TCEI M 6x30	Bolt	2	C <sub>10</sub>
27	550331	Rosetta Ø 6,5	Washer	2	
28	650030	Serbatoio olio	Oil tank	1	
29	180101	OR Ø 17,5x2	O-Ring	2	►
30	550040	OR Ø 26,65x2,62	O-Ring	5	►
31	550050	Tappo serbatoio olio	Oil tank cap	1	
32	650160	Distanziale	Spacer	1	
33	650200	Cuscinetto a rullini	Roller bearing	1	
34	1400150	Anello tenuta	Seal ring	1	►
35	650170	Albero ecc.universale	"SP" shaft	1	(S)
36	1400140	Flangia anello tenuta	Flange	1	
37	961340	Rosetta Ø 8,5	Washer	1	
38	659050	Valvola completa	Complete valve	4	
39	320030	OR Ø 31,5x4,5	O-Ring	4	►
40	650180	Semicamera inf.	Lower air chamber	1	►
41	659204	Semicamera inf.compl.	Compl.lower air chamb.	1	Vedi / See ●
42	650520	Semicamera aria inf.	Semi air chamber	1	
43	650230	Semicamera sup.	Upper air chamber	1	
44	180020	Valvola di gonfiaggio	Air valve	1	
45	650542	Guarnizione	Gasket	1	►
46	621780	Vite TE M 8x40	Bolt	10	C <sub>20</sub>
47	390290	OR Ø 29x3	O-Ring	1	►
48	650150	Attacco aspirazione	Suction manifold	1	

Pos.	Cod.	Descrizione	Description	Q.ty	Note
47	450120	Nipples 1"-1 1/4 G (M)	Threaded adapter	1	
48	390290	OR Ø 29x3	O-Ring	1	
49	580060	Girello 1"1/4 G	Ring nut	1	
50	580040	Curva Ø 30	Elbow	1	
51	650250	Linguetta	Key	1	Per / For 650171
52	650171	Albero passante "C/SP"	Ø 25 mm (T)	1	
53	650178	Albero passante "C/SP"	Ø 25,4 mm (U)	1	
54	650179	Albero passante "C/SP"	Ø 30 mm (V)	1	
55	650209	Prem. membranina asp.	Suct. diaphragm assembly	1	
56	650300	Giunto cardano	Universal joint	1	Per / For 650171
57	680350	Vite TCEI M 8x35	Bolt	1	C <sub>20</sub>
58	650490	Anello tenuta	Seal ring	1	
59	650041	Coperchietto	Cover	1	
60	650660	Porta membrana	Diaphragm holder	1	■
61	650670	Membranina asp.	Dampener diaphragm	1	
62	651670	Fascetta	Clamp	1	
63	1500350	Protezione cardano	Cardan protection	2	
64	820670	Vite TCEI M 10x16	Bolt	4	C <sub>10</sub>
65	659080	Bussola completa	Complete bushing	2	
66	880530	Tappo 3/8" G	Plug	1	C <sub>20</sub>
67	740290	OR Ø 14x1,78	O-Ring	1	►
68	1400110	Centraggio flangia "C/SP"	"C/SP" flange spigot	1	
69	540290	Vite TCEI M 8x25	Bolt	2	C <sub>20</sub>
70	450145	Flangia raccordo	Flange	1	
71	550350	OR Ø 23,81x2,62	O-Ring	1	☒
72	110130	Racc.1/2" G+tub. Ø 13	Fitting 1/2" G+hose Ø 13	1	
73	1523	Camera aria completa	Complete air chamber	1	
74	320392	Piede	Base	2	
75	750060	Vite TE M 12x65	Bolt	8	C <sub>50</sub>
76	550460	Curva Ø 18	Elbow	1	
77	550450	Girello 3/4" G	Ring nut	1	
78	880831	OR Ø 15,54x2,62	O-Ring	1	Viton ►
79	1609001	Valvola di sicurezza	Safety valve	1	●
80	380241	Rosetta Ø 8,5	Washer	3	
81	1200521	Distanziale	Spacer	3	
82	680350	Vite TCEI M 8x35	Bolt	3	C <sub>10</sub>
83	750060	Vite TE M 12x65	Bolt	2	C <sub>30</sub>
84	750060	Vite TE M 12x65	Bolt	2	

● Completa di tappo ed or per versioni senza valvola di sicurezza.  
With plug and o-ring for version without safety valve.



Pos.	Q.ty	KIT 1931 Membrane gomma Buna diaphragms
7		
2		

Pos.	Q.ty	KIT 1920 Valvole Valves
36	4	
37	4	

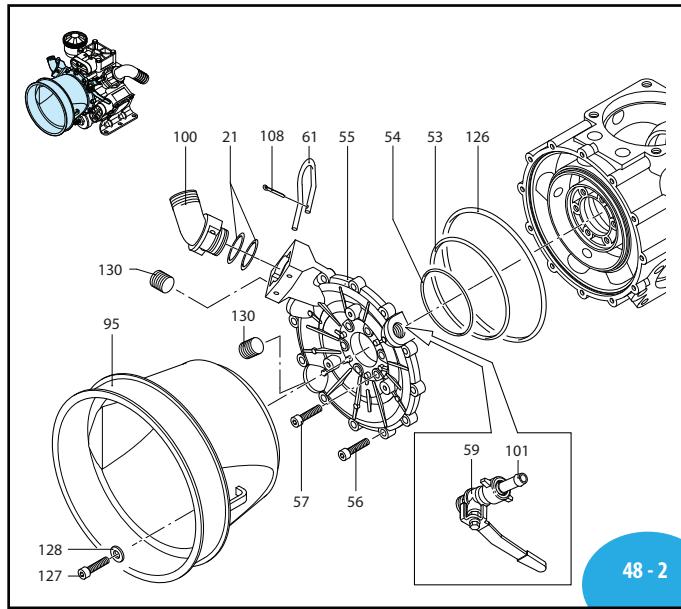
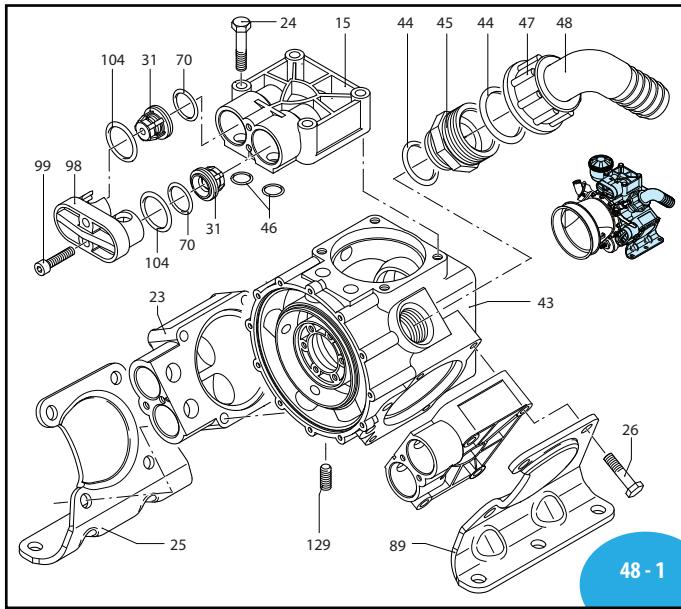
Pos.	Q.ty	KIT 1919 OR O-Rings
20	1	
27	2	
28	5	
37	4	
42	1	
45	1	
67	1	
71	1	

Pos.	Q.ty	KIT 1918 Pronto intervento Maintenance repair
5	1	
6	1	
7	2	
8	1	
9	1	
11	1	
20	1	
26	1	
27	2	
28	5	
36	4	
37	4	
39	1	
42	1	
45	1	
49	1	
50	1	
61	1	
67	1	
71	1	

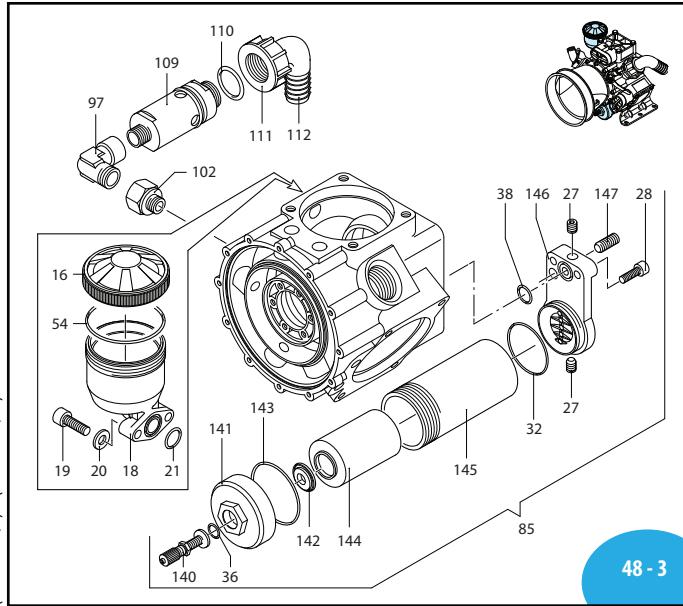
Tipo - Type	Kg
SAE 30	1



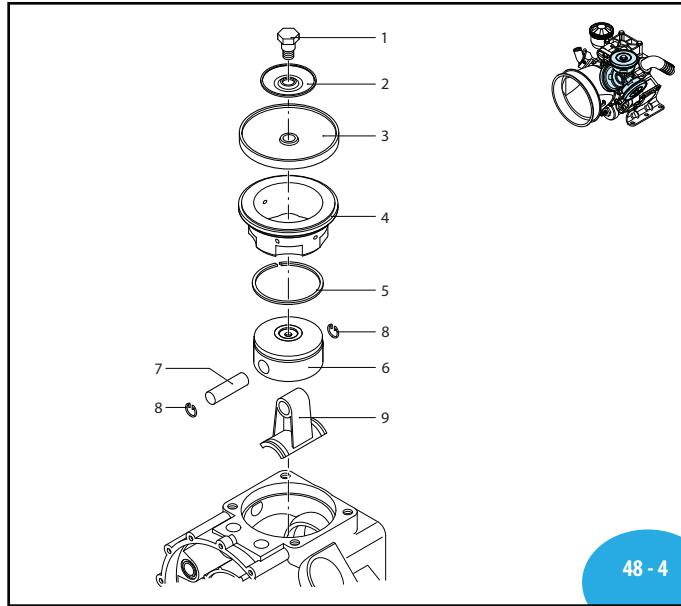
## HYDRA80



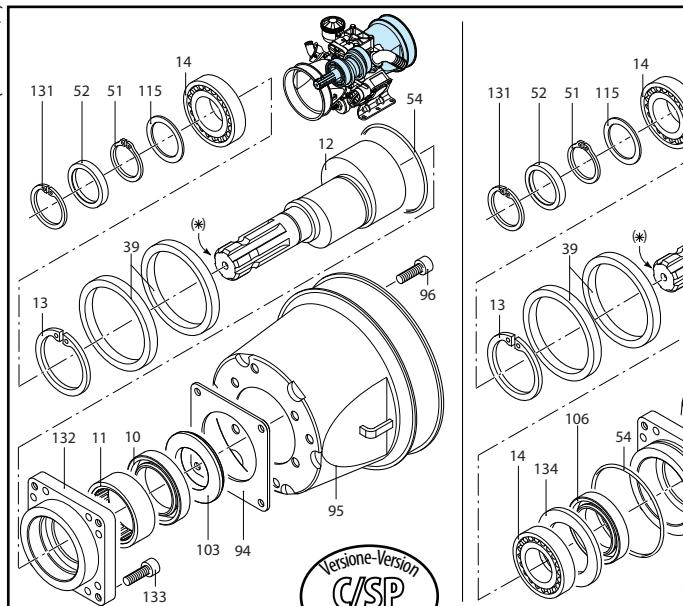
UN970229-BD



UN970230-BD



UN970231-BD



UN970249-BD

UN970170-BD



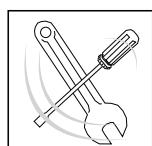
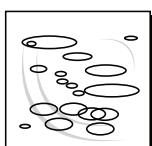
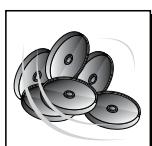
# USER MANUAL

HYDRA80

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Pos.	Cod.	Descrizione	Description	Q.ty	Note
1	580361	Perno membrana	Diaphragm pin	3	● C <sub>30</sub>
2	1040180	Piastra di richiamo	Plate	3	
3	1040080	Membrana	Diaphragm	3	Desmopan
3	1040081	Membrana	Diaphragm	3	Gomma
4	1500080	Camicia	Sleeve	3	
5	650190	Segmento	Piston ring	3	
6	1040120	Pistone	Piston	3	
7	1040070	Spinotto	Piston pin	3	
8	1040270	Anellino spinotto	Pin ring	6	
9	1800050	Biella	Connecting rod	3	
10	1400150	Anello tenuta	Seal ring	1	
11	650200	Cuscinetto a rullini	Roller bearing	1	
12	1800200	Albero eccentrico "C/SP"	"C/SP" shaft	1	(34)
13	161050	Anello seeger	Circlip	1	
14	161060	Cuscinetto	Bearing	2	
15	1040551	Testa DX	Right head	2	
16	1800060	Tappo serbatoio nero	Black oil tank cap	1	
18	680031	Serbatoio olio	Oil tank	1	
19	680350	Vite TCEI M 8x35	Bolt	2	C <sub>10</sub>
20	380241	Rosetta øi 8,5	Washer	2	
21	390180	OR ø 18,72x2,62	O-Ring	3	►
23	1040552	Testa SX	Left head	1	
24	1480040	Vite TE M 12x60	Bolt	4	C <sub>50</sub>
25	1800440	Piede SX	Left base	1	
26	750060	Vite TE M 12x65	Bolt	8	● C <sub>50</sub>
27	1040470	Grano M 10x8	Dowel	2	C <sub>10</sub>
28	320360	Vite TCEI M 8x22	Bolt	2	C <sub>20</sub>
31	1409050	Valvola completa	Complete valve	6	
32	540360	OR ø 44,12x2,62	O-Ring	1	►
36	650542	Guarnizione	Gasket	1	►
38	640070	OR ø 13,95x2,62	O-Ring	1	►
39	1040340	Anello biella	Con rod ring	2	
43	1800140	Corpo pompa	Pump body	1	
44	250310	OR ø 36,14x2,62	O-Ring	2	►
45	540530	Nipples 1"1/4"-1"3/4 G (M)	Threaded adapter	1	
46	770571	OR ø 18,77x1,78	O-Ring	6	Viton ►
47	540540	Girello 1"3/4 G	Ring nut	1	
48	540550	Curva ø 40	Elbow	1	
51	1040570	Anello seeger	Circlip	1	
52	1040050	Anello tenuta	Seal ring	1	
53	1800161	OR ø 113,97x2,62	O-Ring	1	Viton ►
54	1040060	OR ø 72,69x2,62	O-Ring	3	►
55	1800150	Condotto mandata	Manifold	1	
56	1040370	Vite TCEI M 6x22	Bolt	12	C <sub>10</sub>
57	780060	Vite TCEI M 6x25	Bolt	6	C <sub>10</sub>
59	130491	Rub. 3/8"-1/2" G (M) DX	Right valve	1	ex 30491
61	1040690	Forcella	Fork	1	
70	620030	OR ø 25,80x3,53	O-Ring	6	►

Pos.	Cod.	Descrizione	Description	Q.ty	Note
84	1800180	Albero eccentrico "C/C"	"C/C" shaft	1	(W)
85	1536	Camera aria completa	Complete air chamber	1	
89	1800430	Piede DX	Right base	1	
94	1400140	Flangia anello tenuta	Flange	1	
95	1500350	Protezione cardano	Cardan protection	2	ø 199 mm
	1500470	Protezione cardano	Cardan protection	2	ø 239 mm
96	820670	Vite TCEI M 10x16	Bolt	4	C <sub>10</sub>
97	881560	Gomito 90° 1/2" G (M)-(F)	Elbow	1	■
98	1300190	Tappo valvola	Valve cap	3	
99	620610	Vite TCEI M 8x30	Bolt	6	C <sub>50</sub>
100	1040760	Attacco 3/4" G	Coupling	1	
101	110131	Racc.1/2" G+tub. ø10	Fitting 1/2" G+ hose ø10	1	ex 10131
102	881461	Manic. 3/8"-1/2" G (M)-(F)	Threaded adapter	1	■
103	1400110	Centraggio flangia "C/SP"	"C/SP" flange spigot	1	
104	540361	OR ø 33,05x1,78	O-Ring	6	►
106	160740	Anello tenuta	Seal ring	1	
108	1040950	Copiglia	Split pin	1	
109	1609002	Valvola di sicurezza	Safety valve	1	■
110	880831	OR ø 15,54x2,62	O-Ring	1	Viton ►
111	550450	Girello 3/4" G	Ring nut	1	
112	550460	Curva ø 18	Elbow	1	
115	1040850	Anello	Ring	1	
126	1400120	OR ø 145,72x2,62	O-Ring	1	►
127	1343510	Vite TCEI M 6x14	Bolt	3	C <sub>10</sub>
128	881710	Rosetta øi 6	Washer	3	
129	1040260	Grano M 10x25	Dowel	1	⊕ C <sub>10</sub>
130	1800240	Grano 3/8" G	Dowel	2	⊕ C <sub>10</sub>
131	1460490	Anello seeger	Circlip	1	
132	1800210	Flangia albero "C/SP"	Flange "C/SP" version	1	
133	180030	Vite TCEI M 8x20	Bolt	8	⊕ C <sub>10</sub>
134	1800230	Distanziale	Spacer	1	
135	1800220	Flangia albero "C/C"	Flange "C/C" version	1	
136	1800190	Albero eccentrico "C/F"	"C/F" shaft	1	(Q)
137	230310	Cuscinetto	Bearing	1	
138	200150	Anello tenuta "C/F"	Seal ring "C/F"	1	
139	1800120	Flangia albero "C/F"	Flange "C/F" version	1	
140	1800350	Valvola di gonfiaggio	Air valve	1	
141	1800270	Coperchio camera aria	Air chamber cover	1	
142	1800311	Disco	Plate	1	
143	650560	OR ø 56,82x2,62	O-Ring	1	►
144	1800300	Semicamera aria	Semi air chamber	1	
145	1800280	Tubo camera aria	Air chamber tube	1	
146	1800290	Attacco camera aria	Air chamber connector	1	
147	1040260	Grano M 10x25	Dowel	1	C <sub>10</sub>



<b>KIT 1952</b>
Membrane gomma
Buna diaphragms

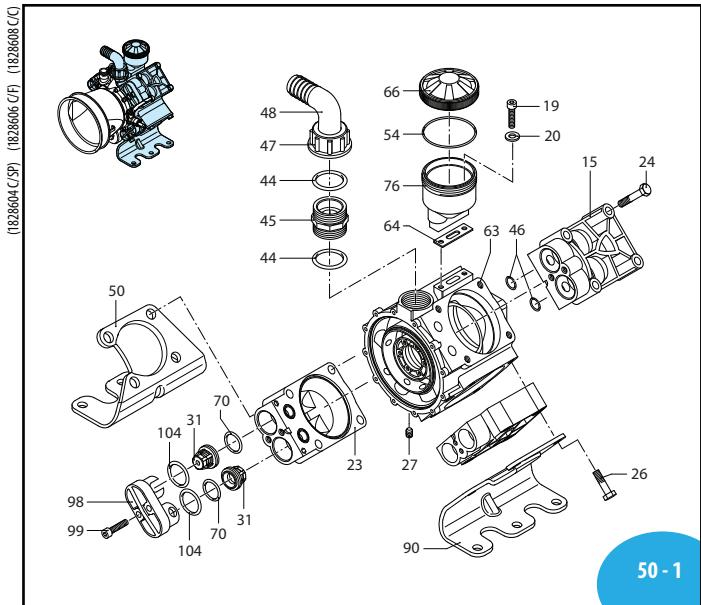
<b>KIT 2376</b>			
OR			
O-Rings			
<b>Pos.</b>	<b>Q.ty</b>	<b>Pos.</b>	<b>Q.ty</b>
21	3	126	1
32	1	143	1
38	1		
44	2		
46	6		
53	1		
54	3		
70	6		
104	6		
110	1		

KIT 2377					
Pronto intervento					
Maintenance repair					
Pos.	Q.ty	Pos.	Q.ty	Pos.	Q.ty
1	3	44	2	106	1
3	3	46	6	108	1
10	1	47	1	126	1
16	1	48	1	144	1
18	1	52	1		
21	3	53	1		
31	6	54	3		
32	1	61	1		
36	1	70	6		
29	1	104	6		

<b>Olio utilizzato</b>	Used oil
<b>Tipo - Type</b>	<b>Kg</b>

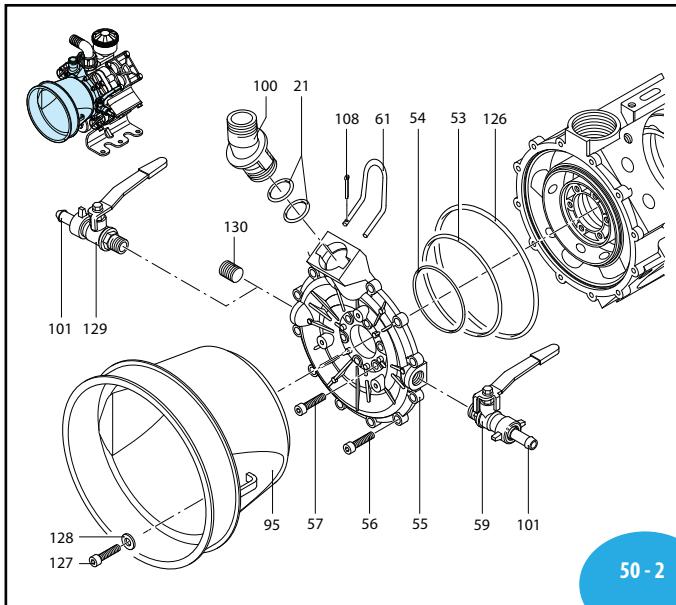


## HYDRA100



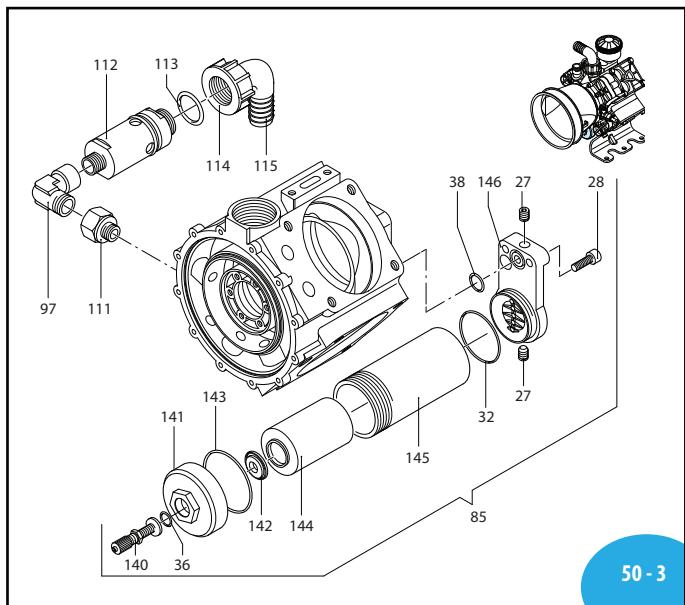
50 - 1

UN000303-NF



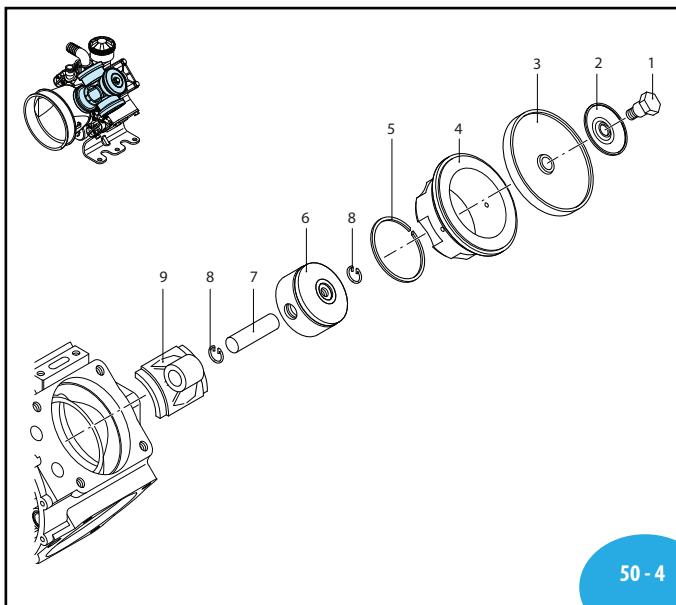
50 - 2

SL000329-EU



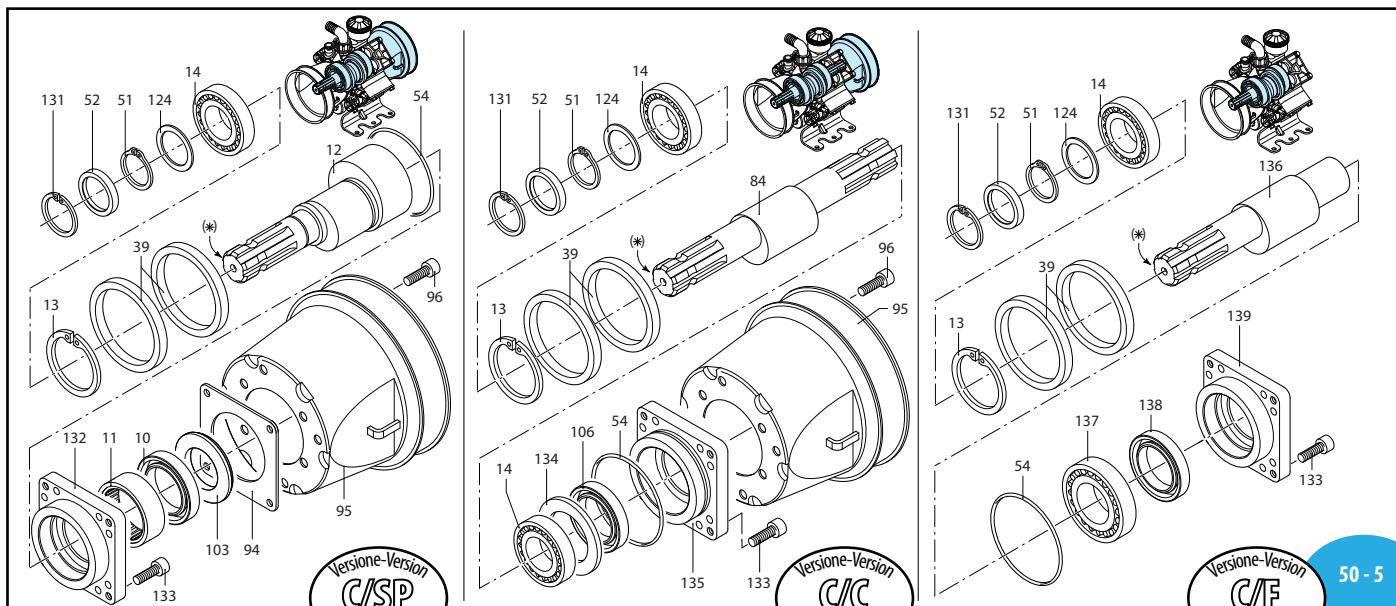
50 - 3

UN000305-NF



50 - 4

UN000306-NF



50 - 5

UN000307-LE



# USER MANUAL

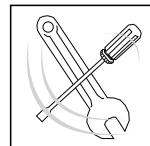
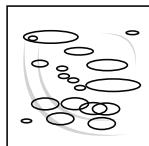
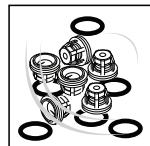
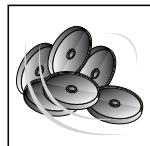
HYDRA100

sp ar1064.pdf

Pos.	Cod.	Descrizione	Description	Q.ty	Note
1	580361	Perno membrana	Diaphragm pin	4	● C <sub>30</sub>
2	1040180	Piastra di richiamo	Plate	4	
3	1040081	Membrana	Diaphragm	4	Gomma
	1040080	Membrana	Diaphragm	4	Desmopan
4	1500080	Camicia	Sleeve	4	
5	650190	Segmento	Piston ring	4	
6	1040120	Pistone	Piston	4	
7	1040070	Spinotto	Piston pin	4	
8	1040270	Anellino spinotto	Pin ring	8	
9	1800050	Biella	Connecting rod	4	
10	1400150	Anello tenuta	Seal ring	1	
11	650200	Cuscinetto a rullini	Roller bearing	1	
12	1800200	Albero eccentrico "C/SP"	"C/SP" shaft	1	(34) ►
13	161050	Anello seeger	Circlip	1	
14	1800170	Cuscinetto	Bearing	2	
15	1040551	Testa DX	Right head	2	
19	680350	Vite TCEI M 8x35	Bolt	2	C <sub>10</sub>
20	380241	Rosetta ø 8,5	Washer	2	
21	390180	OR ø 18,72x2,62	O-Ring	2	►
23	1040552	Testa SX	Left head	2	
24	1480040	Vite TE M 12x60	Bolt	8	C <sub>50</sub>
26	750060	Vite TE M 12x65	Bolt	8	● C <sub>50</sub>
27	1040470	Grano M 10x8	Dowel	3	● C <sub>20</sub>
28	320360	Vite TCEI M 8x22	Bolt	2	C <sub>20</sub>
31	1409050	Valvola completa	Complete valve	8	
32	540360	OR ø 44,12x2,62	O-Ring	1	►
36	650542	Guarnizione	Gasket	1	
38	640070	OR ø 13,95x2,62	O-Ring	1	►
39	1040310	Anello biella	Con rod ring	2	
44	250310	OR ø 36,14x2,62	O-Ring	2	►
45	540530	Nipples 1"1/4-1"3/4 G (M)	Threaded adapter	1	
46	770571	OR ø 18,77x1,78	O-Ring	8	Viton ►
47	540540	Girello 1"3/4 G	Ring nut	1	
48	540550	Curva ø 40	Elbow	1	
50	1820080	Piede SX	Left base	1	Vedi / See ●
51	1040570	Anello seeger	Circlip	1	
52	1040050	Anello tenuta	Seal ring	1	
53	1800161	OR ø 113,97x2,62	O-Ring	1	Viton ►
54	1040060	OR ø 72,69x2,62	O-Ring	3	►
55	1800150	Condotto mandata	Manifold	1	
56	1040370	Vite TCEI M 6x22	Bolt	12	C <sub>10</sub>
57	780060	Vite TCEI M 6x25	Bolt	6	C <sub>10</sub>
59	130491	Rub. 3/8"-1/2" G (M) DX	Right valve	1	● C <sub>20</sub>
61	1040690	Forcella	Fork	1	
63	1820040	Corpo pompa	Pump body	1	
64	750040	Guarnizione serbatoio	Gasket	1	■
66	1800060	Tappo serbatoio nero	Black oil tank cap	1	
70	620030	OR ø 25,80x3,53	O-Ring	8	►

Pos.	Cod.	Descrizione	Description	Q.ty	Note
76	750030	Serbatoio olio	Oil tank	1	
84	1800180	Albero eccentrico "C/C"	"C/C" shaft	1	(W)
85	1538	Camera aria completa	Complete air chamber	1	
90	1820070	Piede DX	Right base	1	Vedi / See ●
94	1400140	Flangia anello tenuta	Flange	1	
95	1500350	Protezione cardano	Cardan protection	2	ø 199 mm
	1500470	Protezione cardano	Cardan protection	2	ø 239 mm
96	820670	Vite TCEI M 10x16	Bolt	4	C 10
97	881560	Gomito 90° 1/2" G (M)-(F)	Elbow	1	■
98	1300190	Tappo valvola	Valve cap	4	
99	620610	Vite TCEI M 8x30	Bolt	8	C 20
100	1040760	Attacco 3/4" G	Coupling	1	
101	110131	Racc.1/2" G+tub. ø10	Fitting 1/2" G+hose ø10	2	
103	1400110	Centraggio flangia "C/SP"	"C/SP" flange spigot	1	
104	540361	OR ø 33,05x1,78	O-Ring	8	►
106	160740	Anello tenuta	Seal ring	1	
108	1040950	Copiglia	Split pin	1	
111	881461	Manic. 3/8"-1/2" G (M)-(F)	Threaded adapter	1	■ C 20
112	1609002	Valvola di sicurezza	Safety valve	1	■ C 20
113	880831	OR ø 15,54x2,62	O-Ring	1	Viton ►
114	550450	Girello 3/4" G	Ring nut	1	
115	550460	Curva ø 18	Elbow	1	
124	1040850	Anello	Ring	1	
126	1400120	OR ø 145,72x2,62	O-Ring	1	►
127	1343510	Vite TCEI M 6x14	Bolt	3	
128	881710	Rosetta ø 6	Washer	3	
129	130492	Rub. 3/8"-1/2" G (M) SX	Left valve	1	● C 20
130	1800240	Grano 3/8" G	Dowel	1	● C 20
131	1460490	Anello seeger	Circlip	1	
132	1800210	Flangia albero "C/SP"	Flange "C/SP" version	1	
133	180030	Vite TCEI M 8x20	Bolt	8	● C 20
134	1800230	Distanziale	Spacer	1	
135	1800220	Flangia albero "C/C"	Flange "C/C" version	1	
136	1800190	Albero eccentrico "C/F"	"C/F" shaft	1	(Q)
137	230310	Cuscinetto	Bearing	1	
138	200150	Anello tenuta "C/F"	Seal ring "C/F"	1	
139	1800120	Flangia albero "C/F"	Flange "C/F" version	1	
140	1800350	Valvolà di gonfiaggio	Air valve	1	
141	1800270	Coperchio camera aria	Air chamber cover	1	C 20
142	1800311	Disco	Plate	1	
143	650560	OR ø 56,82x2,62	O-Ring	1	►
144	1800300	Semicamera aria	Semi air chamber	1	
145	1800280	Tubo camera aria	Air chamber tube	1	
146	1800320	Attacco camera aria	Air chamber connector	1	

- Da matricola N° 000501 - From serial number N° 000501



<b>KIT 1953</b>
Membrane gomma
Buna diaphragms

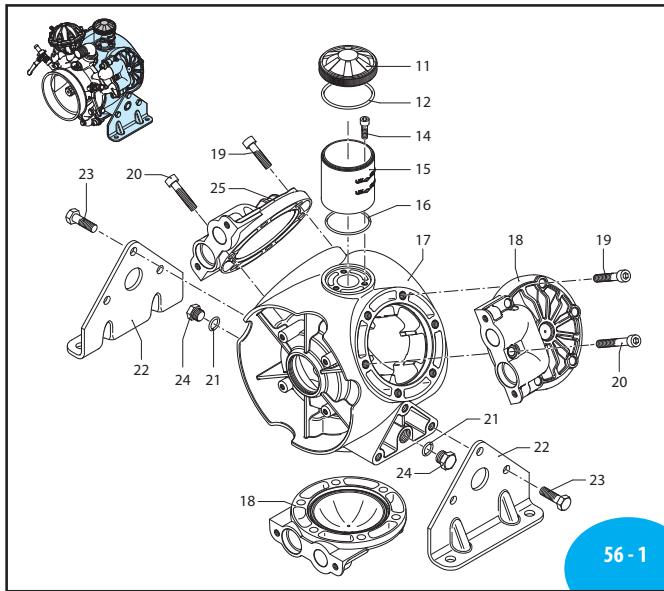
<b>KIT 2378</b>			
OR			
O-Rings			
<b>Pos.</b>	<b>Q.ty</b>	<b>Pos.</b>	<b>Q.ty</b>
21	2	126	1
32	1	143	1
38	1		
44	2		
46	8		
53	1		
54	3		
70	8		
104	8		
112	1		

KIT 2379					
Pronto intervento					
Maintenance repair					
Pos.	Qty	Pos.	Qty	Pos.	Qty
1	4	47	1	106	1
3	4	48	1	108	1
10	1	52	1	126	1
21	2	53	1	138	1
31	8	54	3	144	1
32	1	61	1		
36	1	66	1		
38	1	70	8		
44	2	76	1		
46	8	104	8		

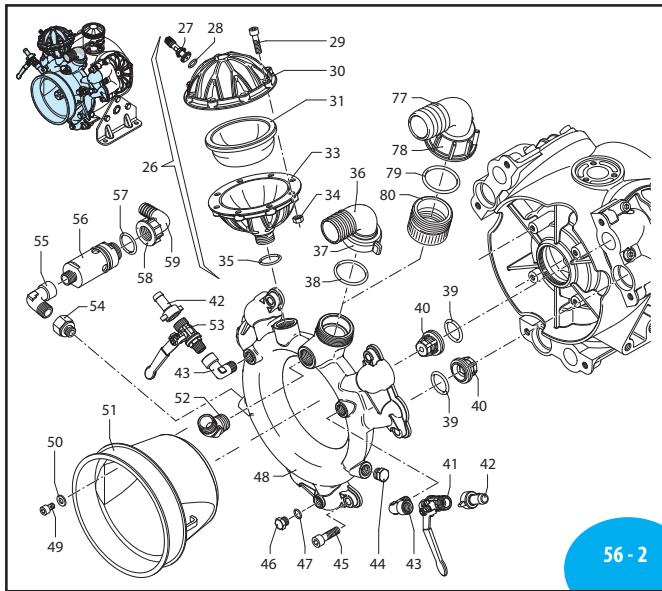
<b>Olio utilizzato</b>	Used oil
<b>Tipo - Type</b>	<b>Kg</b>



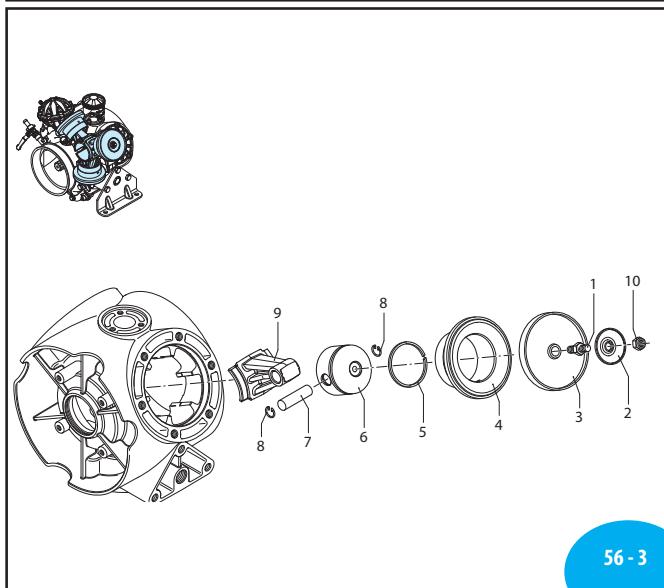
## HYDRA150



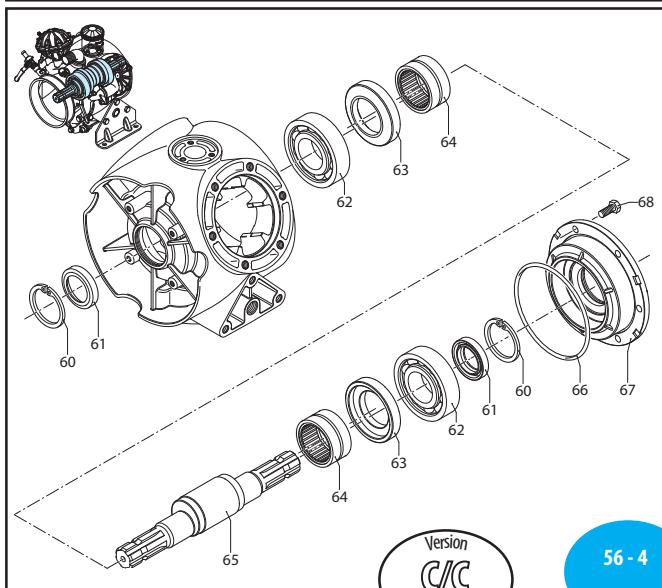
56 - 1



56 - 2



56 - 3



56 - 4



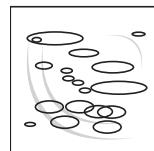
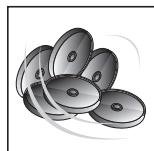
# USER MANUAL

## HYDRA150

1	2240100	Hub pin	3	T265*
2	580090	Wobble plate	3	
3	2240080	Diaphragm	3	NBR
3	2240085	Diaphragm	3	Desmopan
3	2240081	Diaphragm	3	BlueFlex™
4	2240560	Sleeve	3	BHS 130
4	2240520	Sleeve	3	BHS 150
5	2240570	Piston ring	3	BHS 130
5	2240360	Piston ring	3	BHS 150
6	2240550	Piston	Ø 76	BHS 130
6	2240350	Piston	Ø 82	BHS 150
7	2240580	Pin	3	BHS 130
8	540070	Pin	3	BHS 150
9	160691	Ring	circlip Øi 18	6
9	2240090	Connecting-rod	3	
10	2240110	Nut	M10	3 SST265*
11	1800060	Plug	black	1 BHS 130
11	750050	Plug	red	1 BHS 150
12	1040060	O-ring	Ø 72.69x2.62	1
14	540290	Screw	TCEI M8x25	3 T90*
15	2240070	Tank		1
16	2240270	O-ring	Ø 67.95x2.62	1
17	2240011	Pump body		1
18	2240030	Head	marked DX	2
19	2240180	Screw	TE M12x50	15 T445*
20	2240220	Screw	TE M12x65	3 T445*
21	180101	O-ring	Ø 17.5x2	2
22	2240190	Foot		2
23	540100	Screw	TE M12x40	6 T445*
24	820361	Plug	1/2" G brass	2 T180*
25	2240031	Head	marked SX	1
26	1529	Air chamber		1
27	180020	Air valve		1 T35*
28	650542	Gasket		1
29	680350	Screw	TCEI M8x35	8 T180*
30	2240300	Semi air chamber	upper	1
31	550190	Semi air chamber		1 NBR
31	550194	Air chamber		1 BlueFlex™
33	2240310	Semi air chamber	lower	1
34	380240	Nut	M8	8 T180*
35	720030	O-ring	Ø 22.22x2.62	1
36	2240211	Elbow	Ø 40	1
37	2240200	Ring nut	1" 3/4 G	1
38	390210	O-ring	Ø 39.69x3.53	1
39	680070	O-ring	Ø 31.5x4.25	6
40	759051	Valve		6
41	130491	Ball valve	3/8" G - 1/2" G M-M DX	1 T180*
42	110130	Ring nut	1/2"	2
43	2240260	Fitting	3/8" G M-F	2
44	880530	Plug	3/8" G	1 T180*

45	650330	Screw	TCEI M10x35	6	T355*
46	880581	Plug	1/4" G	1	T180*
47	820510	O-ring	Ø 10.82x1.78	1	
48	2240040	Line	asp./manifold	1	
49	850250	Screw	TCEI M8x12	4	T90*
50	390311	Washer		4	
51	1500470	Shield		1	
52	851650	Elbow	manifold	1	
53	130492	Ball valve	3/8" G - 1/2" G M-M SX	1	T180*
54	881461	Threaded adapter	3/8" G - 1/2" G	1	
55	881560	Fitting	1/2" G M-F	1	
56	1609002	Safety valve		1	
57	880831	O-ring	Ø 15.54x2.62	1	Viton
58	550450	Ring nut	3/4" G	1	
59	550460	Elbow	3/4"	1	
60	2240160	Ring	circlip Øi 62	2	
61	2240150	Ring	seal	2	
62	2240430	Bearing		2	
63	2240121	Ring	connecting rod	2	
64	850320	Bearing		2	
65	2240173	Shaft	C/C m-BE	1	
66	2240290	O-ring	Ø 152.7x2.62	1	
67	2240020	Flange		1	
68	160670	Screw	TE M10x25	6	T355*
71	2240390	Ring	connecting rod	1	
72	2240400	Plate		1	
73	2240440	Bearing		1	
74	1800090	Ring	seal	1	
75	620330	Ring	circlip Øi 65	1	
76	2240610	Flange		1	ø 32
76	2240370	Flange		1	ø 1"3/8
77	760020	Elbow	2"	1	Optional
78	760040	Ring nut	2" G	1	Optional
79	620210	O-ring	Ø 40.95x2.62	1	Optional
80	2380080	Fitting	2" G - 1"3/4 G M-F	1	Optional

\* Torque: in-lbs +/- 10%



<b>AR 43318</b>	Buna diaphragms
<b>AR 43320</b>	BlueFlex™ diaphragms
<b>AR 43319</b>	Desmopan diaphragms
<b>Pos.</b>	<b>Qty</b>
3	3
31	1
39	6

<b>AR 2445</b>	Valves
<b>Pos.</b>	<b>Qty</b>
39	6
40	6

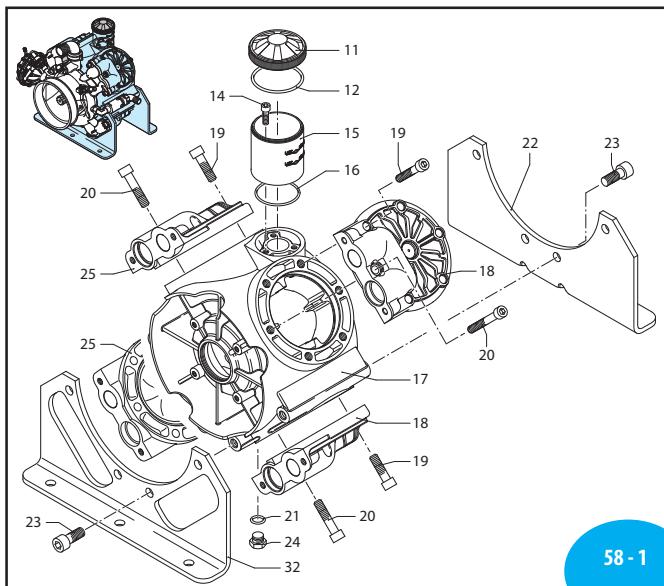
<b>AR 2446</b>	O-Rings
<b>Pos.</b>	<b>Qty</b>
12	1
16	1
21	2
35	1
38	1
39	6
47	1
57	1
66	1

<b>Suggested oil</b>
Tipo - Type      Oz
AR64516      16

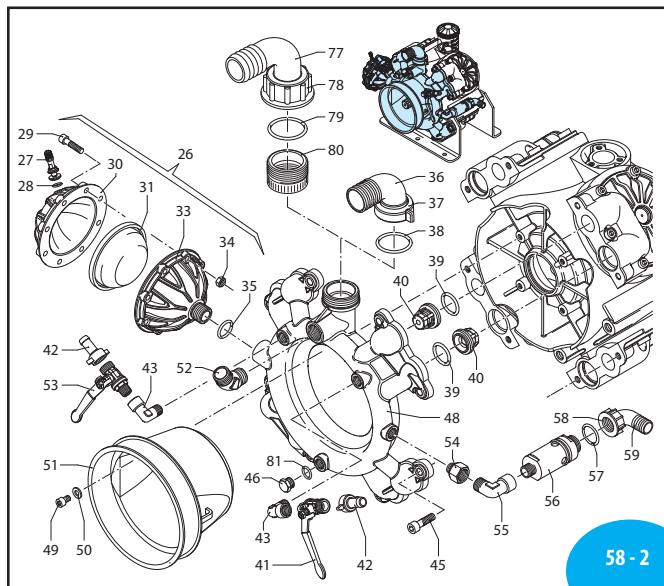
Crankcase Oil  
Capacity 89 oz



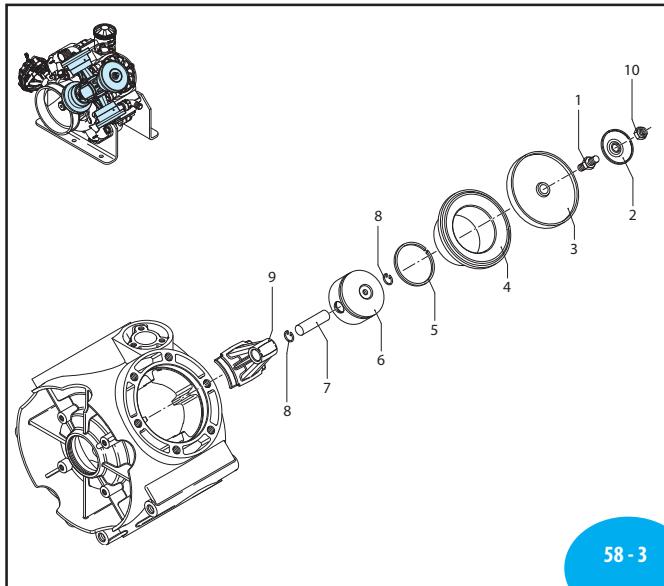
## HYDRA200



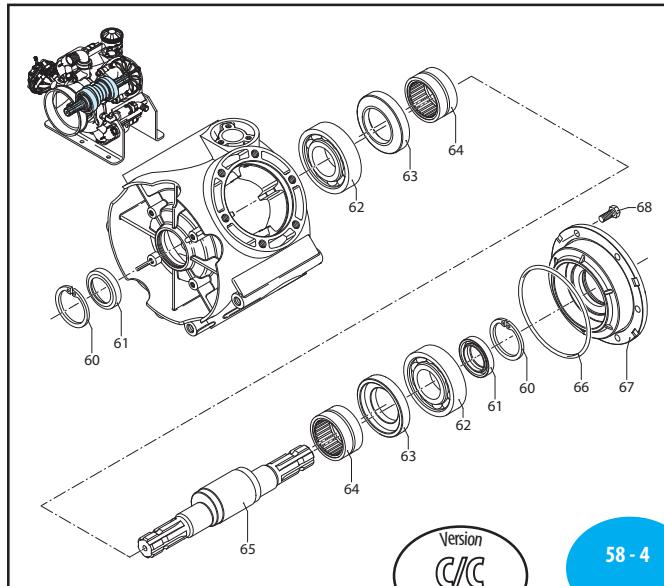
58 - 1



58 - 2



58 - 3



58 - 4



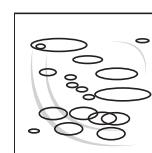
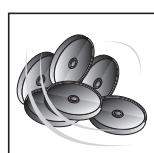
# USER MANUAL

## HYDRA200

Pos	Code	Description	Qty	Note	
1	2240100	Hub pin	4	T265*	
2	580090	Wobble plate	4		
3	2240080	Diaphragm	4	NBR	
3	2240085	Diaphragm	4	Desmopan	
4	2240560	Sleeve	4	BHS 170	
4	2240520	Sleeve	4	BHS 200	
5	2240570	Piston ring	4	BHS 170	
	2240360	Piston ring	4	BHS 200	
6	2240550	Piston	Ø 76	4	BHS 170
	2240350	Piston	Ø 82	4	BHS 200
7	2240580	Pin	4	BHS 170	
	540070	Pin	4	BHS 200	
8	160691	Ring	circlip Øi 18	8	
9	2380050	Connecting-rod		4	
10	2240110	Nut	M10	4	SS T265*
11	1800060	Plug	black	1	BHS 170
	750050	Plug	red	1	BHS 200
12	1040060	O-ring	Ø 72.69x2.62	1	
14	540290	Screw	TCEI M8x25	3	T90*
15	2240070	Tank		1	
16	2240270	O-ring	Ø 67.95x2.62	1	
17	2380011	Pump body		1	
18	2240030	Head	marked DX	2	
19	2240180	Screw	TE M12x50	20	T445*
20	2240220	Screw	TE M12x65	4	T445*
21	180101	O-ring	Ø 17.5x2	1	
22	2380040	Foot		1	
23	2380060	Screw	TCEI M14x35	8	T445*
24	820361	Plug	1/2" G brass	1	T180*
25	2240031	Head	marked SX	2	
26	1529	Air chamber		1	
27	180020	Air valve		1	T35*
28	650542	Gasket		1	
29	680350	Screw	TCEI M8x35	8	T180*
30	2240300	Semi air chamber	upper	1	
31	550190	Semi air chamber		1	NBR
32	2380030	Foot		1	
33	2240310	Semi air chamber	lower	1	
34	380240	Nut	M8	8	T180*
35	720030	O-ring	Ø 22.22x2.62	1	
36	2240211	Elbow	1 1/2"	1	
37	2240200	Ring nut	1" 3/4 G	1	
38	390210	O-ring	Ø 39.69x3.53	1	
39	680070	O-ring	Ø 31.5x4.25	8	
40	759051	Valve		8	
41	130491	Ball valve	3/8" G - 1/2" G M-M DX	1	T180*
42	110130	Ring nut	1/2"	2	
43	2240260	Fitting	3/8" G M-F	2	T180*
45	650330	Screw	TCEI M10x35	8	T355*
46	880530	Plug	3/8" G	1	T180*

Pos	Code	Description	Qty	Note	
48	2380020	Line	asp./manifold	1	
49	850250	Screw	TCEI M8x12	4	T90*
50	390311	Washer		4	
51	1500470	Shield		1	
52	851650	Elbow	manifold	1	
53	130492	Ball valve	3/8" G - 1/2" G M-M SX	1	T180*
54	881461	Threaded adapter	3/8" G - 1/2" G	1	
55	881560	Fitting	1/2" G M-F	1	
56	1609002	Safety valve		1	
57	880831	O-ring	Ø 15.54x2.62	1	Viton
58	550450	Ring nut	3/4" G	1	
59	550460	Elbow	3/4"	1	
60	2240160	Ring	circlip Øi 62	2	
61	2240150	Ring	seal	2	
62	2240430	Bearing		2	
63	2240121	Ring	connecting rod	2	
64	850320	Bearing		2	
65	2240173	Shaft	C/C m-BE	1	
66	2240290	O-ring	Ø 152.7x2.62	1	
67	2240020	Flange		1	
68	160670	Screw	TE M10x25	6	T355*
71	2240390	Ring	connecting rod	1	
72	2240400	Plate		1	
73	2240380	Bearing		1	
74	1800090	Ring	seal	1	
75	620330	Ring	circlip Øi 65	1	
76	2240610	Flange		1	Ø 32
	2240370	Flange		1	Ø 1" 3/8"
77	760020	Elbow	2"	1	Optional
78	760040	Ring nut	2" G	1	Optional
79	620210	O-ring	Ø 40.95x2.62	1	Optional
80	2380080	Fitting	2" G - 1" 3/4 G M-F	1	Optional
81	740291	O-ring	Ø 14x1.78	1	Viton

\* Torque: in-lbs +/- 10%



<b>AR 43321</b>	Buna diaphragms
<b>AR 43323</b>	BlueFlex™ diaphragms
<b>AR 43322</b>	Desmopan diaphragms
<b>Pos.</b>	<b>Qty</b>
3	4
31	1
39	8

<b>AR 2374</b>	Valves
<b>Pos.</b>	<b>Qty</b>
39	8
40	8

<b>AR 2457</b>	O-Rings
<b>Pos.</b>	<b>Qty</b>
12	1
16	1
21	1
35	1
38	1
39	8
57	1
66	1

<b>Suggested oil</b>
Type
AR64516
Oz
16

Crankcase Oil  
Capacity 119 oz



## OPERATION INSTRUCTIONS FOR CONTROL VALVES



### VR20 (Commonly Used with HYDRA 25)

- 1) Turn Red Knob at front to Enable High Pressure Mode. (Water should come out of the bronze end)
- 2) Once you've activated, Adjust the Pressure Knob down (Located at top of Controller)
- 3) Once desired pressure is achieved. Turn the Red Knob to Bypass Mode.
- 4) Water should be coming through the Top Black Outlet.



### GI40 Instructions (Commonly Used with HYDRA 30, HYDRA 50, HYDRA 80)

The GI40 has 4 Pre-set notches with Different Pressure Ratings.

- 1) Simply lift the release handle to move from notch to notch until you reach desired pressure.
- 2) If the notches do not provide the desired pressure, find the closest notch.
- 3) Adjust the brass ring on top of the spring to adjust the pressure to suit your application
- 4) Shut both valves off.
- 5) Bypass will active when both outlet valves are shut off.



### RM40 Instructions (Commonly Used with HYDRA 30, HYDRA 50, HYDRA 80)

- 1) Lower the red knob down to change the mode. Left is Bypass, Right is Pressure adjustment.
- 2) Once you've activated the Pressure Adjustment side, Lift the Red Knob up to start adjusting pressure.
- 3) Left (Clockwise) is to decrease the pressure. Right (Anti-Clockwise) is the increase the pressure.
- 4) Once Pressure has been achieved, shut valves to the off position.
- 5) Then manually activate the bypass mode by repeating step 1



### BY MATIC 50 Instructions (Commonly Used with HYDRA 100,150 & 200)

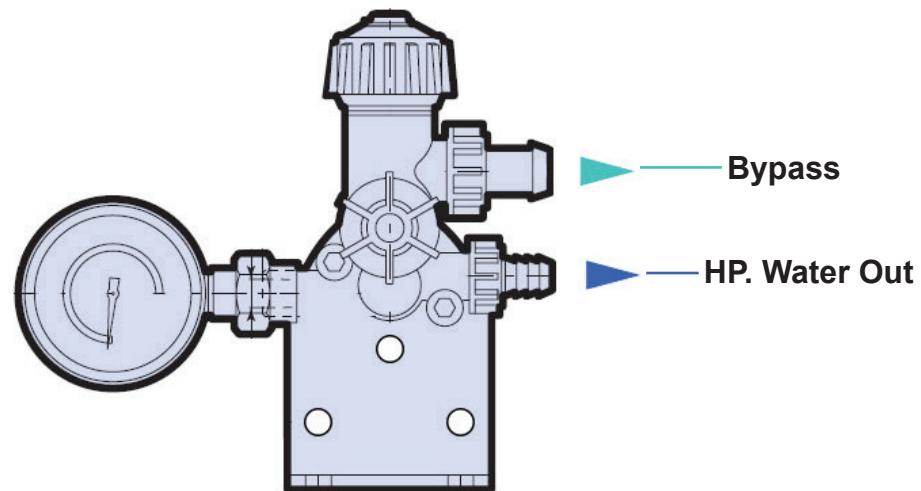
- 1) Make sure the Lever is in the 12 O'clock Position – This is the Full Flow Position
- 2) Turn lever to two clicks Anti-Clockwise (Left) to enable Pressure Adjustment Mode
- 3) Using the Black Knob on top while reading the gauge, adjust the pressure to meet your needs
- 4) Once Flow has been achieved, move the Knob back to Full Flow at the 12 O'clock position
- 5) Should you only require half the flow turn the level to either 11 O'clock Position or 1 O'clock
- 6) Once Pressure has been achieved, move the level to 5 O' Clock Position, this is the Bypass mode.



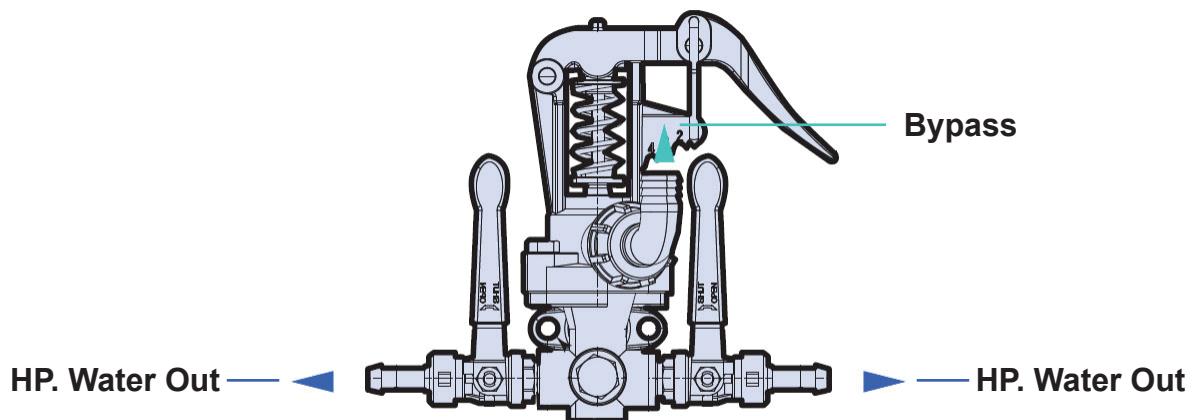
# USER MANUAL

## CONTROL VALVE OUTLETS (FOR PIPING)

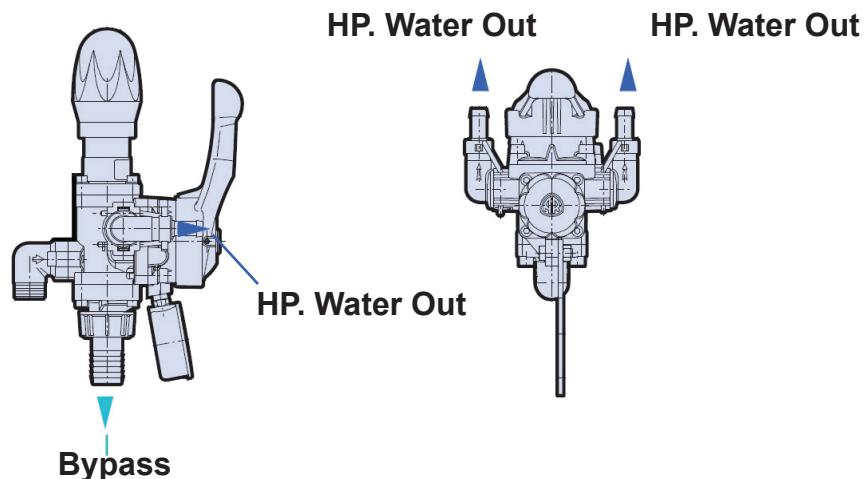
VR20 (Commonly Used with HYDRA 25)



GI40 Instructions (Commonly Used with HYDRA 30, HYDRA 50, HYDRA 80)

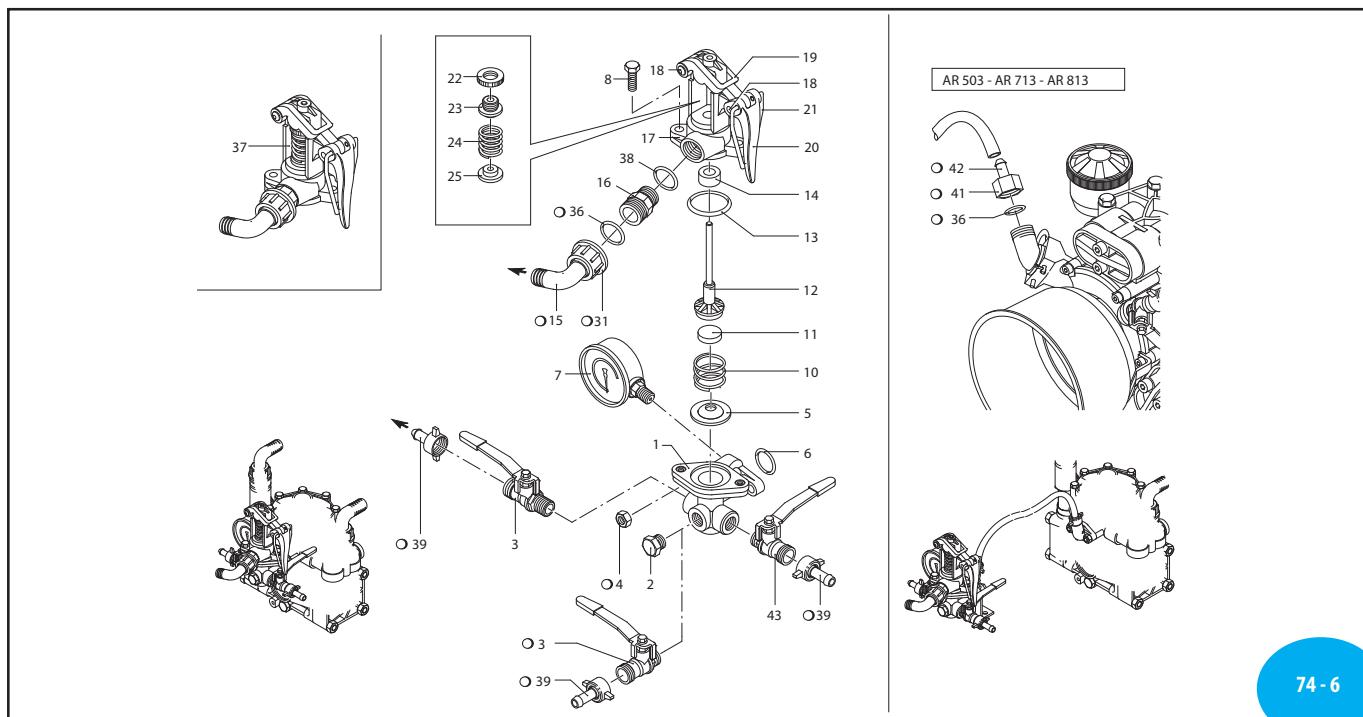


BY MATIC 50 Instructions (Commonly Used with HYDRA 100,150 & 200)





## GI40 - Compatible with: HYDRA30, HYDRA50, HYDRA 80

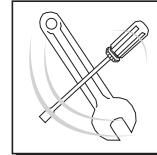
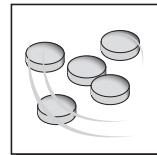


74-6

Pos	Code	Description	Qty	Note
1	620220	Control unit	1	
2	130171	Plug 3/8"G	1	T180*
3	130491	Ball valve 3/8"G - 1/2"G M-M DX	2	
4	390270	Nut M8	2	T180*
5	450110	Seat	1	
6	550350	O-ring Ø 23.81x2.62	2	
7	550545	Pressure gauge	1	0-1150 PSI
8	180370	Screw TE M8x25	2	T180*
10	320420	Spring	1	
11	110121	Plug	1	Desmopan
11	110120	Plug	1	Buna
11	110122	Plug	1	Viton
12	320433	Stem	1	
13	320511	O-ring Ø 37.8x4	1	
14	390140	Gasket	1	
14	390141	Gasket	1	Viton
15	550460	Elbow Ø 18	1	o
16	550440	Fitting 1/2"G - 3/4"G M-M	1	
17	320410	Body valve	1	
18	320480	Hub pin	2	
19	320460	Fork	1	
20	320470	Lever	1	
21	320490	Support	1	
22	320450	Wobble plate	1	
23	320440	Ring nut	1	
24	110190	Spring	1	
25	230120	Wobble plate	1	
28	320406	Bracket	1	o
30	450145	Flange	1	o
31	550450	Ring nut 3/4"G	1	o
32	110130	Ring nut 1/2"	1	o
33	160660	Screw TE M8x35	2	oT90*
36	880830	O-ring Ø 15.54x2.62	2	o
37	1923	Valve kit adjustment	1	
38	180101	O-ring Ø 17.5x2	1	
39	110131	Ring nut 1/2"	3	o
41	1040790	Ring nut 3/4"G	1	o
42	1150580	Hose tail Ø 13	1	o
43	130492	Ball valve 3/8"G - 1/2"G M-M SX	1	

o Not part of GI 40

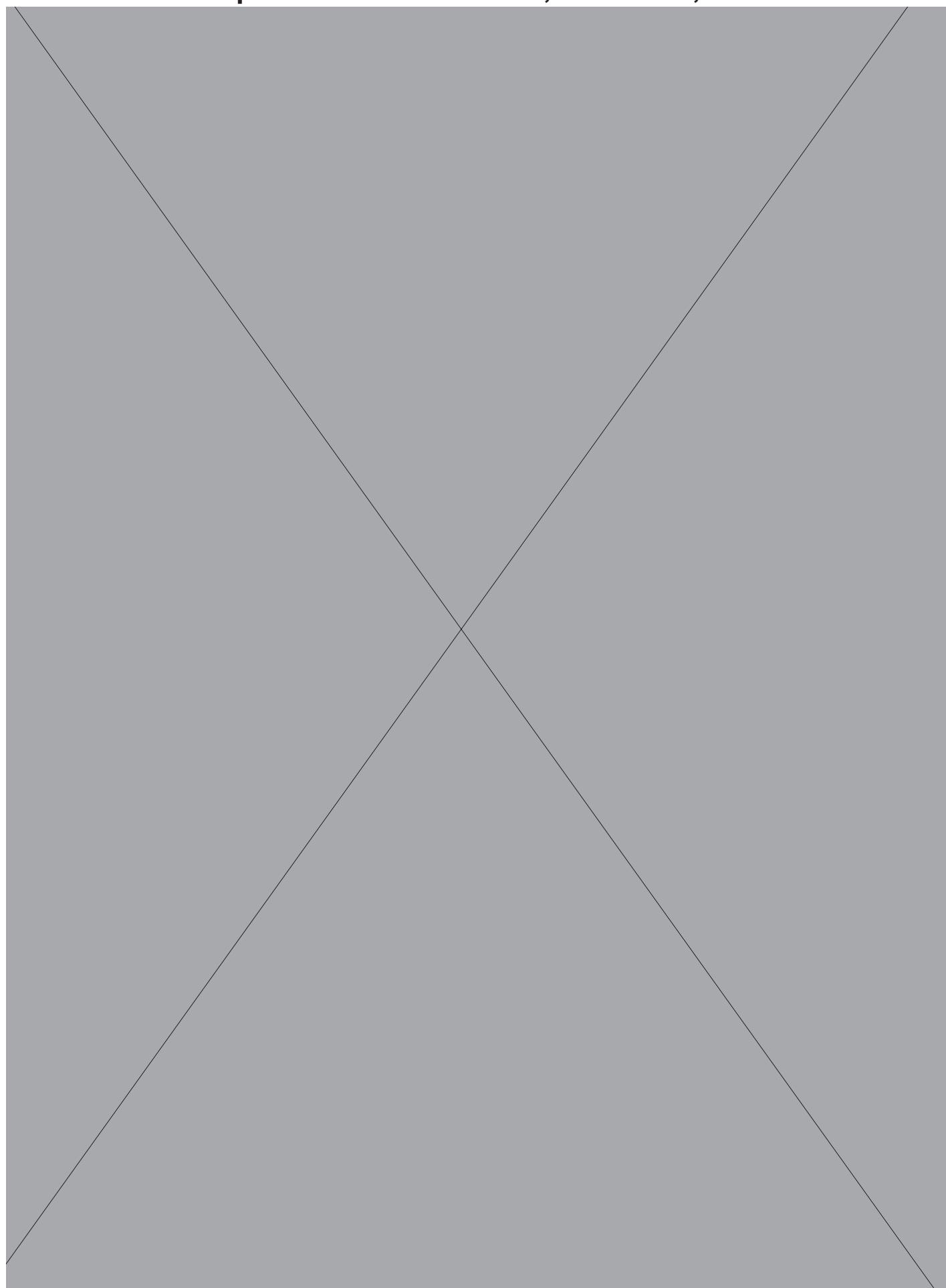
\* Torque: in-lbs +/- 10%



AR 1921 Buna valve seats		AR 1922 Desmopan valve seats		AR 1925 Maintenance repair			
Pos.	Qty	Pos.	Qty	Pos.	Qty	Pos.	Qty
11	5	11	5	5	1		
				10	1		
				11	1		
				12	1		
				13	1		
				14	1		



**RM - Compatible with: HYDRA30, HYDRA50, HYDRA 80**





**BMS50 - Compatible with: HYDRA100**

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