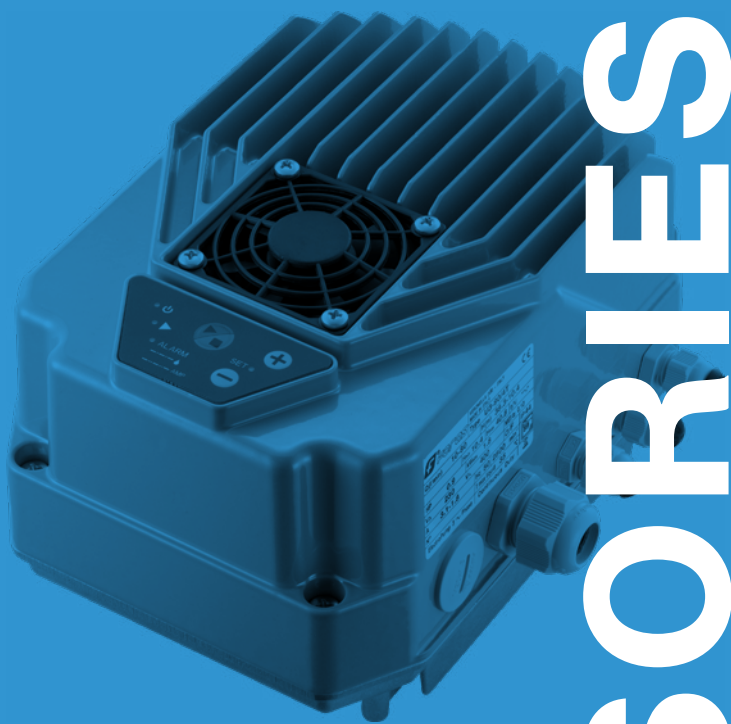


ACCESSORIES



DOMESTIC FILTER

Swimming Pool



Laminated polyester filters with manual side mounted valve, indicated for private and commercial pools, including multiport 6 way valve (filtration, backwash, rinse, recycle, drain and closed), manometer and airbleased system.



Transparent screw cover (on request)

MODEL	Ø mm	Connection	Filtering surface m ²	Flow V=50 m ³ /h	Sand Kg	Weight Kg
PFIL 400	400	1,5"	0,13	6,5	50	12
PFIL 510	510	1,5"	0,20	10,2	100	18
PFIL 620	620	1,5"	0,30	15,1	150	23,5
PFIL 680	680	2"	0,36	18,14	175	27
PFIL 750	750	2"	0,44	22	225	33
PFIL 900	900	2"	0,64	31,8	325	42

FILTRATION KIT

Swimming Pool



Filtration kit including a laminated filter with 6 way valve + swimming pool pump POOL1, ideal for private pool, all mounted on a common base.

MODEL	Ø mm	Connection	Filtering surface m ²	Flow V=50 m ³ /h	Pump HP	Sand Kg	Weight Kg
PFIL EASY KIT 25	400	1,5"	0,13	6,5	0,25	50	19
PFIL EASY KIT 33	400	1,5"	0,13	7,5	0,33	50	19
PFIL EASY KIT 50	510	1,5"	0,20	8,5	0,50	100	26
PFIL EASY KIT 75	510	1,5"	0,20	10,2	0,75	100	26
PFIL EASY KIT 100	620	1,5"	0,30	15,1	0,95	150	29

ELECTRONIC FLOW CONTROL



HIDROMATIC H2

- Complete replacement of the traditional water system set consisting on pressure switch and pressure tank
- Control the starting of the electric pump after a pressure decrease (taps opening) and stopping when the fluid flow interrupt at the maximum pressure level of the electric pumps (taps closing)
- Protection against dry running
- Starting pressure adjustable during the installation
- Standard 1" M hydraulic connections
- Installation in any position - both vertical and horizontal according to the flow direction
- Easily replaceable electronic printed circuit board
- No need of maintenance

TECHNICAL DATA	
Power supply	110-230V ac ± 10% 50/60Hz
Max rated current	12 A
Starting pressure range	1 - 3,5 bar
Max pressure	10 bar
Protection degree	IP65
Max fluid temperature	55 °C
Max ambient temperature	55 °C



HIDROTANK H1

- Automatic start and stop operations of single-phases electric pumps up to 2 HP
- Replacement of the traditional water system set consisting on pressure switch and pressure tank
- Control the starting of the electric pump after a pressure decrease (taps opening) and stopping when the fluid flow interrupt at the maximum pressure level of the electric pumps (taps closing)
- Protection against dry running
- Starting pressure adjustable during the installation
- Standard 1" M hydraulic connections
- Installation in any position-both vertical and horizontal - according to the flow direction
- Easily replaceable electronic printed circuit board.
- No need of maintenance
- Thanks to the 0,4 lt. tank it protects from the frequent start-stop required by small request of water and from any losses into the system
- Protection of the electronic board thanks to the new watertight compartment
- Protection from water-hammer
- New design and new concept
- Built in 0,4 lt. tank
- Built in pressure gauge
- Watertight electronic part

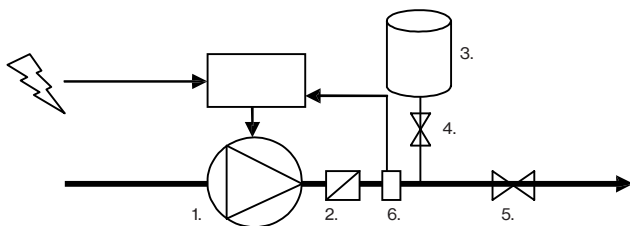
TECHNICAL DATA	
Power supply	110-230V ac ± 10% 50/60Hz
Max rated current	12 A
Starting pressure range	1 - 3,5 bar
Max pressure	10 bar
Protection degree	IP65
Max fluid temperature	35 °C

VARIABLE SPEED DRIVE



Frequency 48-62 Hz
 Max ambient temperature 40°C (104°F)
 Max humidity 50% a 40°C
 Max altitude 1000 m
 PWM configurable 2,5; 8 KHz
 Complies with the electromagnetic conformity directive

V in (±15%)	V out	I line max	I out max	P2	Kg
1-230 V	3-230 V	11 A	7,5 A	2,5 HP	2,5



1. Pump
2. Non return valve
3. Pressure tank
Pressure tank volume suggested: 10% of the capacity of the system
4. Valve-Tap
5. Valve
6. Pressure sensor

VSD Variable Speed Drive	TYPE	up to	
		P2	
		HP	kW
EPIC	JA/JR	2	1,5
	JA 150-300	2	1,5
	JXF	1,5	1,1
	JXM	1,2	0,88
	KBJ	2	1,5
	KM	1,5	1,1
	RA	1	0,74
	SD 2"	2	1,5
	SE	1,5	1,1
	KB	1,5	1,1
	PLUS 3	2,5	1,85
	PLUS 5	2,5	1,85
	PLUS 7	2,5	1,85
PLUS 9	2,5	1,85	
PLUS 18	2,5	1,85	



VARIABLE SPEED DRIVE



It's a frequency changer (inverter); specifically studied for control and protection of electric pumps. Connected to any electric pumps regulates the motor speed in order to manage the pumps performance in relation to the operating conditions and requests of the system. Consists in compact electronic units equipped with microprocessor contained in an aluminium structure that grants compactness, cooling ease, lightness and versatility.

The advantages of the use of IPFC:

- Energy saving
- Simple Installation
- Overload protection
- Dry running protection
- Noise reduction
- Soft Start & Stop
- Protection of a second pump, without Inverter, from dry running and overload
- Installation options: directly on the motor cover of the pump or wall installation.

TYPE	IPFC 109	IPFC 114	IPFC 306	IPFC 309	IPFC 311	IPFC 314	IPFC 318	IPFC 325	IPFC 330	IPFC 338	IPFC 348	IPFC 365	IPFC 375	IPFC 385
Input rated voltage	1 x 230 V ± 15%		3 x 400 V ± 15%											
Output rated voltage	1 x 230 V 3 x 230 V		3 x 400 V											
Output rated current	9 A 1- 7 A 3-	9 A 1- 11 A 3-	6 A 3-	9 A 3-	11 A 3-	14 A 3-	18 A 3-	25 A 3-	30 A 3-	38 A 3-	48 A 3-	65 A 3-	75 A 3-	85 A 3-
Output rated power	1,1 kW 1- 1,5 kW 3-	1,1 kW 1- 3 kW 3-	2,2 kW 3-	4 kW 3-	4 kW 3-	5,5 kW 3-	7,5 kW 3-	11 kW 3-	15 kW 3-	18,5 kW 3-	22 kW 3-	30 kW 3-	37 kW 3-	45 kW 3-
Max motor current	7,2 A 1- 6,3 A 3-	7,2 A 1- 9,9 A 3-	5,4 A 3-	8,1 A 3-	9,9 A 3-	12,6 A 3-	16,2 A 3-	22,5 A 3-	27 A 3-	34,2 A 3-	43,2 A 3-	58,5 A 3-	67,5 A 3-	76,5 A 3-
Input frequency	50 - 60 Hz													
PWM frequency	2,5 - 4 - 6 - 8 - 10 - 12 kHz settable													
Control panel	backlight LCD with 2 x 16 characters and buzzer / Bluetooth® SMART 4,0													
Input analogical signals	4 x 4 - 20 mA													
Input digital signals	2													
Communication	RS485 / Bluetooth SMART 4,0													
2 DOL Auxiliary pump contacts	clean, NO, 230 V, I _{max} , 6 A													
Cooling	Auxiliar built-in cooling fan / mot fan													
Protection degree	IP55 (IP54 for IPFC 338 < > IPFC 385)													
Assembly	on motor fan cover with kit / hang on wall with kit							on motor feet / wall with kit						
Max ambient temperature	40° C													
Max ambient altitude	1000 m slm / de-rate 2% each 100 m													
Input / Output feeding cable	2 x PG 13,5 + 3 x PG 9													
Dimension	181 x 181 x 228 mm					260 x 260 x 180 mm					410 x 680 x 260 mm			



PRESSURE TRANSDUCER

TYPE	Output signal	Input voltage	Working pressure	Maximum pressure
SPD	4... 20 mA	9... 28 V	0 - 25 bar	32 bar

PROTECTION/CONTROL PANEL

Legend

SERIES	ELECTRICITY SUPPLY		N. PUMPS			PUMP TYPE			POWER P2	SPEED		MOTOR STARTER			FEATURE			
	1~	3~	1	2	3	Borehole	Submersible	Surface	Kw	Fixed	Variable	DOL	Y/Δ	Soft start	Impedance start	Switch with overload protection	Electromechanical control panel	Electronic control panel
PML	■	-	■	-	-	■	-	■	0,37 ÷ 2,2	■	-	■	-	-	-	■	-	-
PMC	■	-	■	-	-	■	■	-	1,1 ÷ 1,5	■	-	■	-	-	-	■	-	-
PMLD	■	-	■	-	-	-	-	-	1,1 ÷ 1,5	■	-	■	-	-	-	■	-	-
PT	-	■	■	-	-	■	■	■	0,37 ÷ 15	■	-	■	-	-	-	■	-	-
EQSM	■	-	■	-	-	■	■	■	0,37 ÷ 15	■	-	■	-	-	-	-	-	■
EQSMT	-	■	■	-	-	■	■	■	0,55 ÷ 15	■	-	■	-	-	-	-	-	■
QST	-	■	■	-	-	■	■	■	4,5 ÷ 220	■	-	-	■	-	-	-	■	-
QSS	-	■	■	-	-	■	-	■	7,5 ÷ 220	■	-	-	-	■	-	-	■	-
QRS	-	■	■	-	-	■	-	-	4,5 ÷ 220	■	-	-	-	-	■	-	■	-
EQ2SM	■	-	-	■	-	■	■	■	0,37 ÷ 15	■	-	■	-	-	-	-	-	■
EQ2SMT	-	■	-	■	-	■	■	■	0,55 ÷ 15	■	-	■	-	-	-	-	-	■
Q2ST	-	■	-	■	-	■	■	■	4,5 ÷ 220	■	-	-	■	-	-	-	■	-
EQ3SM	■	-	-	-	■	■	■	■	0,25 ÷ 1,5	■	-	■	-	-	-	-	-	■
EQ3SMT	-	■	-	-	■	■	■	■	0,37 ÷ 5,5	■	-	■	-	-	-	-	-	■

Overload protection unit for 1 single-phase pump with run capacitor



- Power supply 1x230V-50/60Hz
- Electrical switch
- Run capacitor
- Externally resettable thermal relay
- Illuminated 0-1 main switch
- IP55 rated thermoplastic enclosure
- Outputs with cable gland

TYPE	A	RUN CAPACITOR (μF)	POWER	
			HP	kW
PML 5/16-4	4	16	0,5	0,37
PML 5/20-4	4	20	0,5	0,37
PML 7/20-6	6	20	0,75	0,55
PML 7/25-6	6	25	0,75	0,55
PML 10/30-7	7	30	1	0,75
PML 10/35-7	7	35	1	0,75
PML 15/40-10	10	40	1,5	1,1
PML 20/50-13	13	50	2	1,5
PML 20/60-13	13	60	2	1,5
PML 30/75-18	18	75	3	2,2
PML 30/80-18	18	80	3	2,2
PMC 15/35-15	15	35	1,5	1,1
PMC 20/50-18	18	50	2	1,5

PROTECTION/CONTROL PANEL

Overload protection unit for 1 single-phase pump with run capacitor + start capacitor with disjuncter



PMLD

- Power supply 1x230V-50/60Hz
- Electrical switch
- Run + start capacitor with disjuncter
- Externally resettable thermal relay
- Green illuminated main switch
- IP55 rated thermoplastic enclosure
- Outputs with cable gland

TYPE	A	RUN CAPACITOR (μF)	START CAPACITOR (μF)	POWER	
				HP	kW
PMLD 15-35-13	13	35	80	1,5	1,1
PMLD 20/50-15	15	50	80	2	1,5

Overload protection unit for 1 three-phase pump



PT

- Power supply 3x400V-50/60Hz
- ON/OFF switch
- Protective device with thermal relay for motor overload or phase failure
- Thermoplastic enclosure
- IP55 protection level

TYPE	A	POWER	
		HP	kW
PT 5/0,9-1,3	0,9-1,3	0,5	0,37
PT 7/1,3-2,1	1,3-2,1	0,75	0,55
PT 10/1,9-3	1,9-3	1	0,75
PT 15-20/2,9-4,5	2,9-4,5	1,5-2	1,1-1,5
PT 20-30-40/4,3-6,8	4,3-6,8	2-3-4	2,2-3
PT 40-50/5,7-9,1	5,7-9,1	4-5,5	3-4
PT 55-75/8,6-13,5	8,6-13,5	5,5-7,5	4-5,5
PT 100/12,5-16,5	12,5-16,5	10	7,5
PT 125-150-16-21	16-21	12,5-15	9,2-11
PT 200/22-29	22-29	20	15

Electronic control panel for 1-2-3 pumps with direct start-up



- Single-phase version 100-240Vac 50/60Hz
- Three-phase version 310-450Vac 50/60Hz
- LCD display for voltage, current, power factor, hours of operation, number of starts, motor status, alarms, analogue signal and thresholds
- AUTOMATIC - 0 - MANUAL operation buttons
- Voltage and current minimum and maximum electronic control, failure or incorrect phase sequence control on power supply input
- Programmable anti-seize autotest
- Dry running protection through level probes/ floats/ pressure switches and minimum current
- Up to 6 control inputs: floats/pressure switches
- Input for 4-20 mA or 0-10V analogue signal
- Analogue signal cm - m - bar
- Emergency start and stop inputs with analogue signal
- Clickson thermal pad inputs with automatic reset
- Inversion of inputs (from normally open to normally closed)
- Activation delay from mains return
- Manual button operation (fixed or pulse)
- Programmable alarms for voltage, levels, motor overload, minimum motor current, clicson, output contacts, starts/hour
- Automatic reset for minimum current alarm with 4 programmable times
- Auxiliary and motor protection fuses, isolator protection, duty standby protection
- ABS box IP55. Metallic box IP55 for EQ3SMT
- Duty-standby and motor changeover in the case of a fault for two-pump and three-pump control panels
- Predisposition for capacitors for single-phase versions (capacitors are available separately)

TYPE	VERSION	PUMPS N.	A	POWER		WEIGHT (Kg)
				HP	kW	
EQSM	1-	1	0-18	0,5-3	0,37-2,2	1,5
EQSMT 10	3-	1	0-18	0,75-10	0,55-7,5	2,3
EQSMT 15	3-	1	16-25	10-15	7,5-11	2,5
EQSMT 20	3-	1	16-32	15-20	11-15	3
EQ2SM	1-	2	0-18	0,5-3	0,37-2,2	1,5
EQ2SMT 10	3-	2	0-18	0,75-10	0,55-7,5	2,5
EQ2SMT 15	3-	2	16-25	10-15	7,5-11	3
EQ2SMT 20	3-	2	16-32	15-20	11-15	3,5
EQ3SM	1-	3	0-18	0,5-3	0,37-2,2	5
EQ3SMT 10	3-	3	0-18	0,75-10	0,55-7,5	15
EQ3SMT 15	3-	3	16-25	10-15	7,5-11	15
EQ3SMT 20	3-	3	16-32	15-20	11-15	15



RUN CAPACITOR	POWER
	HP
20µF	0,5
25µF	0,75
35µF	1-1,5
40µF	1,5
50µF	2
80µF	3

RUN CAPACITOR + START CAPACITOR WITH DISJUNCTOR	POWER
	HP
35µF + 80µF	1,5
50µF + 80µF	2

PROTECTION/CONTROL PANEL

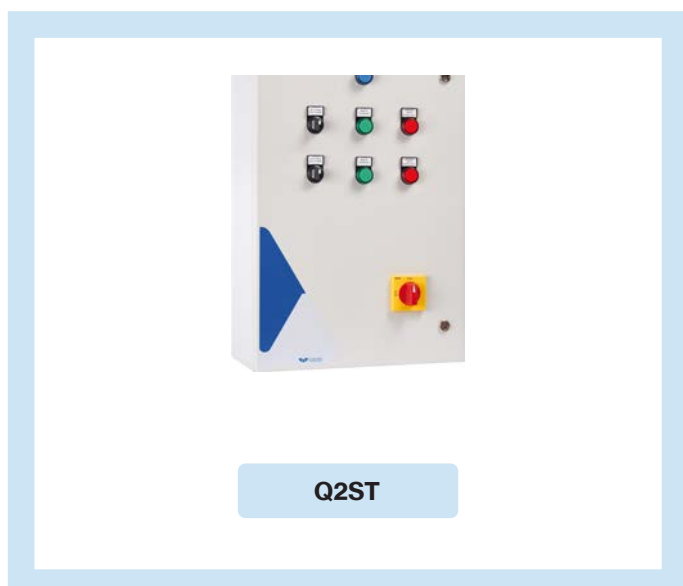
Star/delta control panel for 1 three-phase pump



- Power supply 3x400V-50/60Hz
- 24V transformer for auxiliary circuit
- Low voltage inputs and circuit
- Blue mains supply LED
- Green motor running LED
- Red motor overload alarm LED
- Star/delta line contactors in AC3
- Auxiliary and motor protective devices with fuses
- Main door interlock switch disconnecter
- ABS box up to 11kW, metal box from 15kW

TYPE	A	POWER	
		HP	kW
QST 5	13	5,5	4
QST 7	15	7,5	5,5
QST 10	17	10	7,5
QST 15	24	15	11
QST 20	31	20	15
QST 25	38	25	18,5
QST 30	50	30	22
QST 40	60	40	30
QST 50	75	50	37
QST 60	100	60	45
QST 75	124	75	55
QST 100	135	100	75
QST 125	155	125	92
QST 150	200	150	110
QST 180	241	180	132
QST 220	300	220	162
QST 300	410	300	220

Star/delta control panel for 2 three-phase pumps



- Power supply 3x400V-50/60Hz
- 24V transformer for auxiliary circuit
- Low voltage inputs and circuits
- Blue mains supply LED
- Green motor running LED
- Red motor overload alarm LED
- Star/delta line contactors in AC3
- Auxiliary and motor protective devices with fuses
- Main door interlock switch disconnecter
- Metal box (whole range)

TYPE	A	POWER	
		HP	kW
Q2ST 3	8,5	3	2,2
Q2ST 5	13	5,5	4
Q2ST 7	15	7,5	5,5
Q2ST 10	17	10	7,5
Q2ST 15	24	15	11
Q2ST 20	31	20	15
Q2ST 25	38	25	18,5
Q2ST 30	50	30	22
Q2ST 40	60	40	30
Q2ST 50	75	50	37
Q2ST 60	100	60	45
Q2ST 75	124	75	55
Q2ST 100	135	100	75
Q2ST 125	155	125	92
Q2ST 150	200	150	110
Q2ST 180	241	180	132
Q2ST 220	300	220	162
Q2ST 300	410	300	220

PROTECTION/CONTROL PANEL

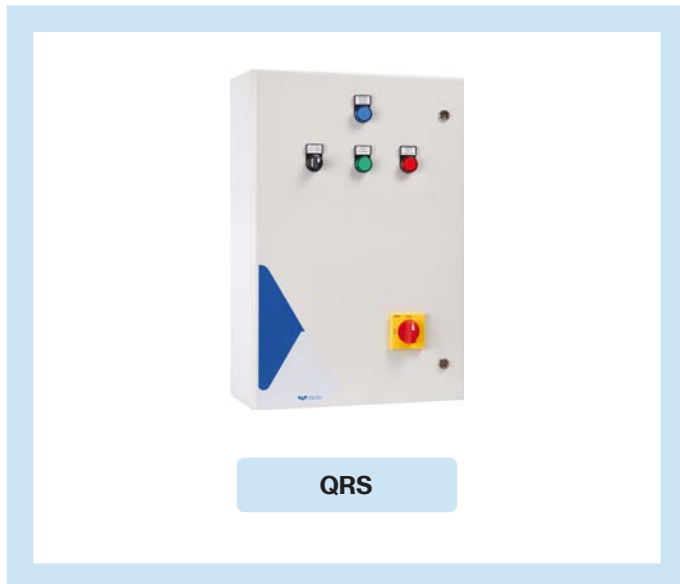
Soft start control panel for 1 three-phase pump



- Power supply 3x400V-50/60Hz
- Blue mains supply LED
- Green motor running LED
- Red motor overload alarm LED
- NA input for start control
- Auxiliary motor protective devices with fuse
- Main door interlock switch disconnecter
- Forced ventilation kit
- IP54 rated metal box
- Ambient temperature $-5 \div +40^{\circ}\text{C}$

TYPE	A	POWER	
		HP	kW
QSS 10	18	10	7,5
QSS 15	25	15	11
QSS 20	30	20	15
QSS 25	37	25	18,5
QSS 30	45	30	22
QSS 40	60	40	30
QSS 50	72	50	37
QSS 60	85	60	45
QSS 75	105	75	55
QSS 80	125	80	59
QSS 100	142	100	75
QSS 125	170	125	92
QSS 150	210	150	110
QSS 180	250	180	132
QSS 220	300	220	162
QSS 300	370	300	220

Control panel with impedance start for 1 three-phase pump



- Power supply 3x400V-50/60Hz
- Blue mains supply LED
- Green motor running LED
- Red motor overload alarm LED
- NA input for start control
- Stator reactance with 4 starts/hour, 2 of which are consecutive
- Adjustable reactance timer
- Line and impedance starter contactors in AC3
- Main door interlock switch disconnecter
- Ambient temperature $-5 \div +40^{\circ}\text{C}$

TYPE	A	POWER	
		HP	kW
QRS 5	13	5,5	4
QRS 7	16	7,5	5,5
QRS 10	20	10	7,5
QRS 15	29	15	11
QRS 20	35	20	15
QRS 25	52	25	18,5
QRS 30	63	30	22
QRS 40	80	40	30
QRS 50	90	50	37
QRS 60	110	60	45
QRS 75	135	75	55
QRS 90	150	90	66
QRS 100	175	100	75
QRS 125	200	125	92
QRS 150	235	150	110
QRS 180	310	180	132
QRS 220	360	220	162
QRS 300	410	300	220

TANKS



UTILIZATION

Interchangeable membrane expansion tanks; the pre-charge pressure in the tank guarantees a water reserve but also reduces the number of startups of the connected pump; the membranes are certified for use with foodstuffs; they may be in EPDM or butyl depending on the model.

CONSTRUCTION CHARACTERISTICS

Flanges in galvanised steel or AISI 304 stainless steel. Tanks in carbon steel coated with powder paint or in AISI 304 stainless steel.

Pre-charge valve with protective cover.

TYPE	DESCRIPTION
AS 24	24 lt. Spherical tank
ACV 24	24 lt. Horizontal tank
ACZ 24	24 lt. Horizontal tank
ACA 24 SS	24 lt. Stainless steel tank
AC 50	50 lt. Horizontal tank
AC 60	60 lt. Horizontal tank
AC 80	80 lt. Horizontal tank
AC 100	100 lt. Horizontal tank
AC 200	200 lt. Horizontal tank
AC 300	300 lt. Horizontal tank
AV 50	50 lt. Vertical tank
AV 60	60 lt. Vertical tank
AV 80	80 lt. Vertical tank
AV 100	100 lt. Vertical tank
AV 200	200 lt. Vertical tank
AV 300	300 lt. Vertical tank
AV 500	500 lt. Vertical tank
AV 750	750 lt. Vertical tank
AV 1000	1000 lt. Vertical tank

MEMBRANES



TYPE	DESCRIPTION
MZ 24	EPDM membrane for ACZ 24 lt.
M 24	membrane for AS 24 - ACV 24
M 50	membrane for AC 50 - AV 50
M 100	membrane for AC 100 - AV 100
M 200	membrane for AC 200 - AV 200
M 300	membrane for AC 300 - AV 300
M 500	membrane for AV 500
M 750 - 2000	membrane for AV 750 - AV 2000

PRESSURE SWITCHES



TYPE	DESCRIPTION	RANGE AT RISING PRESSURE (bar)
PP5	1- / 3-	1-5
PP12	1- / 3-	3-12

PRESSURE GAUGES



TYPE	PHASE
PR 6	0-6 bar rear connection
PR 6 R	0-6 bar radial connection
PR 12	0-12 bar rear connection
PR 10 G	0-10 bar glycerine
PR 12 G	0-12 bar glycerine

FLEXIBLE HOSES



TYPE	DESCRIPTION
FL 530	Flexible hose with bend 1"x530x1"
FL 600	Flexible hose with bend 1"x600x1"
FL 700	Flexible hose with bend 1"x700x1"
FL 850	Flexible hose with bend 1"x850x1"

CONNECTORS



TYPE	DESCRIPTION
R3	3 way 1" brass connector
R5	5 way 1" brass connector



TYPE	DESCRIPTION
R5X 1"	5 way 1" Aisi 304 connector with built-in no return valve
R5X 1" 1/4	5 way 1" 1/4 Aisi 304 connector with built-in no return valve
R5X 1" 1/2	5 way 1" 1/2 Aisi 304 connector with built-in no return valve

VALVES



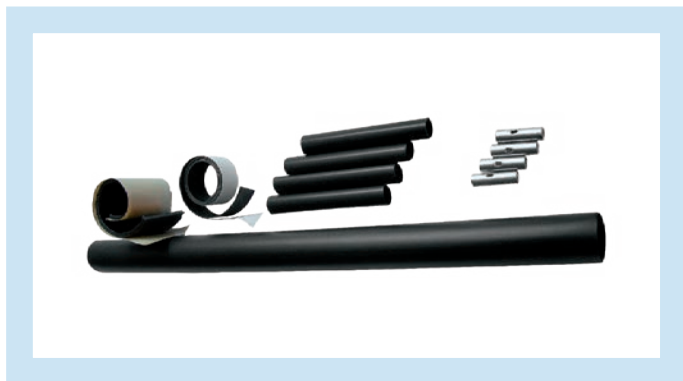
TYPE	DESCRIPTION
VF 1"	foot valve 1"
VF 1" 1/4	foot valve 1" 1/4
VF 1" 1/2	foot valve 1" 1/2
VF 2"	foot valve 1" 1/2
VR1"	check valve 1"
VR 1" 1/4	check valve 1" 1/4
VR 1" 1/2	check valve 1" 1/2
VR 2"	check valve 1"

FLOAT SWITCHES



TYPE	DESCRIPTION
GK 2	Key 2 mt. cable length
GK 3	Key 3 mt. cable length
GK 5	Key 5 mt. cable length
GK 10	Key 10 mt. cable length

CABLES JOINTS



Kit GC series

Junction cable kit with heat - shrinkable tubing.

For a professionally made junction it is recommended to use the "Kit GC", it has excellent requirements in terms of electric, mechanical and water resistance. This kit is composed of: crimp wire connectors in tinplated copper, thin wall heat-shrinkable tubing to cover the conductor of the cable, a strip of Scotch 2547, one of Scotchfil and medium wall heat-shrinkable tubing to cover the junction. It is recommended to seal the two end points of the sheath with a PVC textured insulating tape.

TYPE	Cables section mm ²	Cable number
Kit GC 4/2,5	1/2,5	4
Kit GC 4/6	4/6	4
Kit GC 4/10	10	4
Kit GC 4/16	16	4
Kit GC 4/25	25	4
Kit GC 4/35	35	4
Kit GC 4/50	50	4
Kit GC 1/50	50	1
Kit GC 1/70	70	1
Kit GC 1/95	95	1
Kit GC 1/120	120	1
Kit GC 1/150	150	1

LEVEL PROBES



Kit K3SL series

Level Probes Kit consist of 3 electrodes model K3SL.

Single pole probe used for level control in wells or storage tanks.

It made of an AISI 303 stainless steel electrode, a plastic (PPOX) holder and a cable gland.

A seal ring and the tightening of the cable gland PG7 prevent water from entering the cable terminal connector and causing its oxidation.

Cable connection: screw.

The external cable diameter must be 2.5 to 6mm/Ø0.1 to 0.24" to warrant perfect sealing.

Maximum connection cable section: 2.5mm².

Maximum operating temperature: +60°C.

