



THE COMPLETE SOLUTION
for **COFFEE MACHINES**



SOLENOID VALVES & PUMPS



YOUR GATEWAY
TO EXCELLENCE

THE CONCEPT OF QUALITY HAS ALWAYS BEEN PART OF ODE CULTURE AND MISSION.

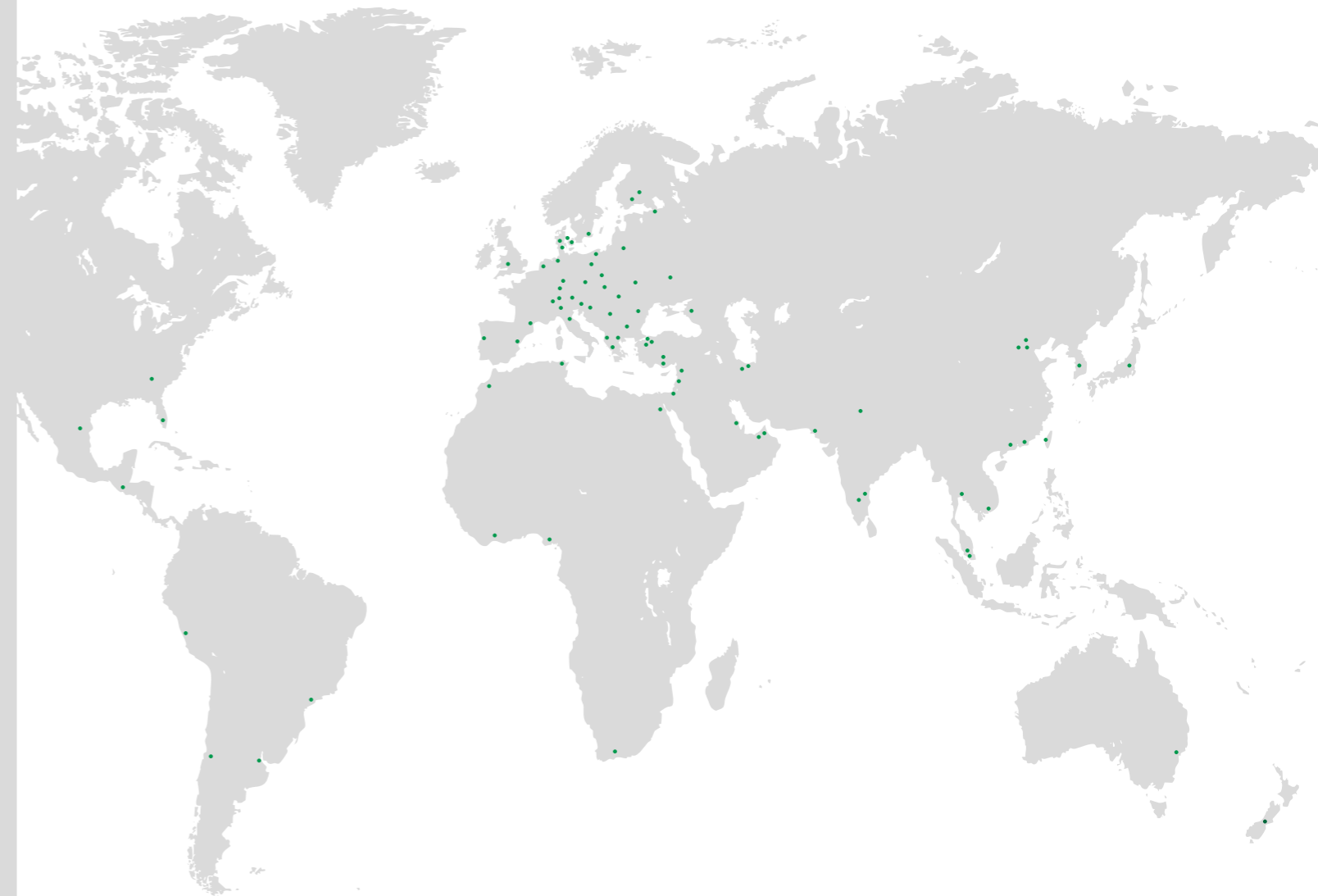
ODE is a leading company since 1960 in designing and manufacturing a complete line of solenoid valves and pumps able to respond to all our customers needs.

ODE is headquartered in Milan, Italy, with the manufacturing plant in Colico, close to the Swiss border. In 2010 we celebrated 50 years of design and manufacturing excellence in the solenoid valves industry. Our general purpose and customized valves are designed to operate very effectively in the coffee machines industry.

ODE's products are manufactured, assembled and tested in our factory in Italy using lean manufacturing techniques driven by Six Sigma quality practices.

ODE quality is based on the platform of process control granting the elimination of variances. It is a computerized integrated system able to guarantee the conformity of products. Moreover the recording of each production step is able to ensure effective data analysis as well as a complete and efficient traceability of both components and finished products, always maintaining standards of high competitiveness in the marketplace.

All the above allowed Ode to obtain the ISO 9001, ISO 14001, OHSAS 18001, UL, VDE, NSF and ATEX certifications.

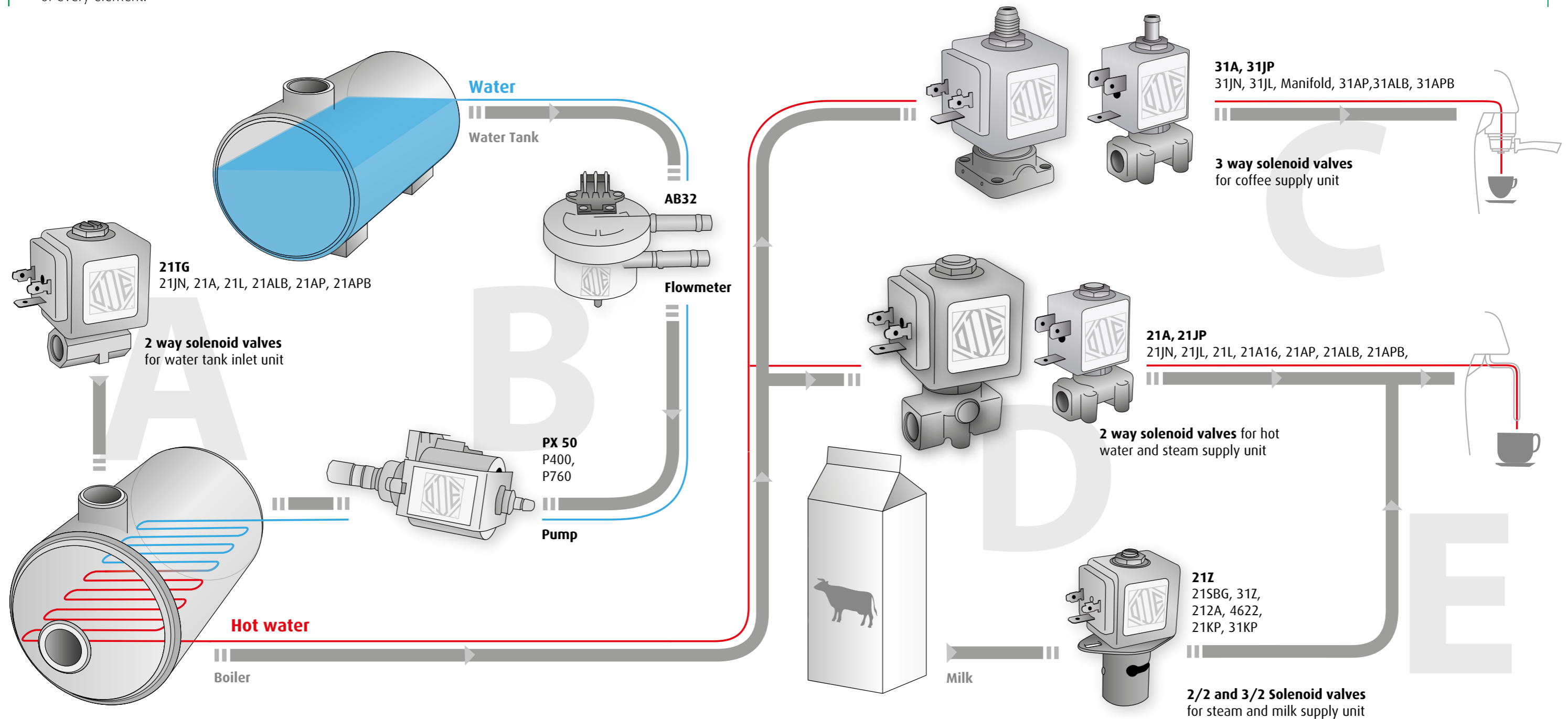


ODE IN THE WORLD Argentina, Australia, Austria, Belgium, Brazil, Bulgaria, Chile, China, Croatia, Czech Republic, Denmark, Egypt, El Salvador, Finland, France, Germany, Greece, Guatemala, Hungary, India, Iran, Israel, Italy, Ivory Coast, Japan, Korea, Lebanon, Lithuania, Malaysia, Mexico, Morocco, Netherlands, New Zealand, Norway, Pakistan, Peru, Poland, Portugal, Romania, Russia, San Marino, Saudi Arabia, Serbia and Montenegro, Singapore, Slovakia, Slovenia, Spain, South Africa, Sweden, Switzerland, Syria, Taiwan, Tunisia, Turkey, Ukraine, United Arab Emirates, United Kingdom, Usa, Vietnam.



THE COFFEE MACHINE SYSTEM

50 years experience allows us to look ahead to the future with optimism: the solutions we offer to your coffee machines are always innovative and customized upon your needs. What lies beneath a tasty cup of coffee? The key factor of excellence is the accurate choice of every element.



LEGEND

Group A - 2/2 way solenoid valves for water tank inlet unit

Group B - pumps + flowmeter

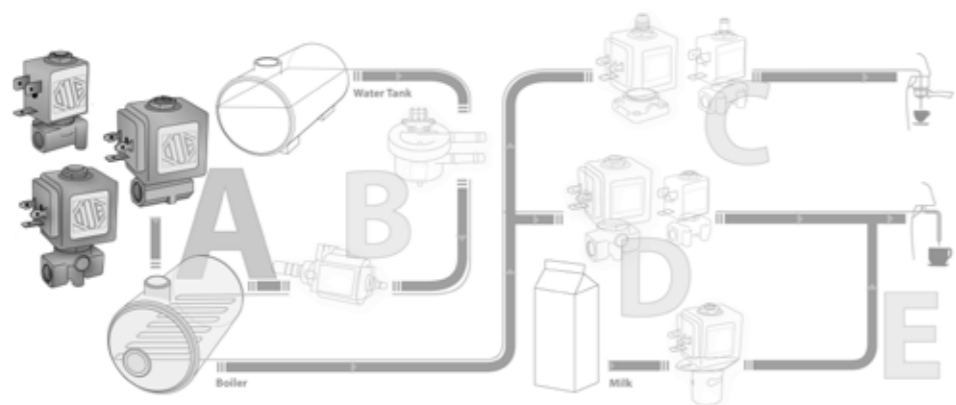
Group C - 3/2 way solenoid valves for coffee supply unit

Group D - 2/2 way solenoid valves for hot water and steam supply unit

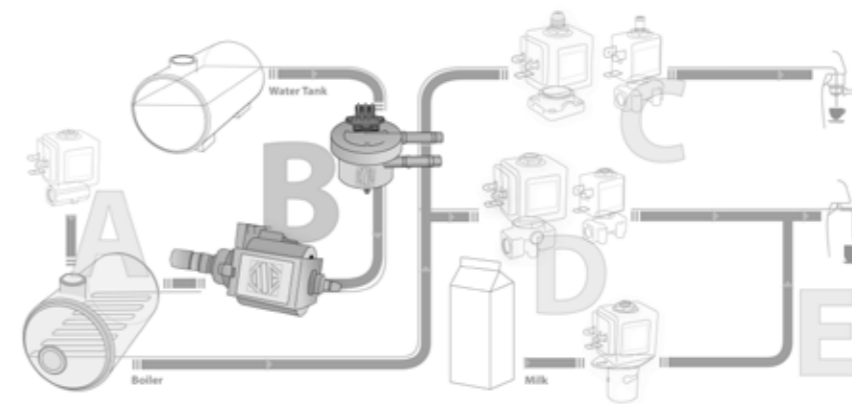
Group E - 2/2 and 3/2 way solenoid valves for steam and milk supply unit



GROUP A - 2/2 WAY SOLENOID VALVES for water tank inlet unit



GROUP B - PUMPS + FLOWMETER



GROUP A					PRESSURE			2/2 WAY SOLENOID VALVES						
SERIES	PORT SIZE	Ø mm	Kv l/mm	POWER [w]	MIN	M.O.P.D		BODY	ARMATURE TUBE	PLUNGER	SEAL	FLUID TEMPERATURE		SUPPORT SYSTEM UNIT
					BAR	AC BAR	DC BAR					-40°C	+180°C	
21A1 *	SUBPLATE MOUNTING	1 - 3	0,45 - 4	8 - 12 - 14	0	10 - 40	4 - 23	BRASS	AISI 300	AISI 400	RUBY - FKM	-40°C	+180°C	A
21A3 *	G 1/8	1,5 - 4,5	1,4 - 6,5	8 - 12 - 14	0	5 - 35	2 - 30	BRASS	AISI 300	AISI 400	RUBY - FKM	-40°C	+180°C	A D
21A2 *	G 1/4	1,5 - 5,5	1,4 - 9	8 - 12 - 14	0	3 - 35	1 - 30	BRASS	AISI 300	AISI 400	RUBY - FKM	-40°C	+180°C	A D
21ALB	SUBPLATE MOUNTING	1,5 - 3	1,4 - 4	8 - 12	0	10 - 16	6 - 16	PPS	AISI 300	AISI 400	FKM	-10°C	+140°C	A
21AP *	PUSH-IN	1,5 - 3	1,4 - 4	8 - 12	0	10 - 16	6 - 16	PPS	AISI 300	AISI 400	FKM	-10°C	+140°C	A
21AP1 *	G 1/8	1,5 - 3	1,1 - 3,4	8 - 12	0	8 - 25	4 - 25	PPS	AISI 300	AISI 300	RUBY	-40°C	+180°C	A
21AP2 *	G 1/4	1,5 - 3	1,1 - 3,4	8 - 12	0	8 - 25	4 - 25	PPS	AISI 300	AISI 300	RUBY	-40°C	+180°C	A
21APB *	SUBPLATE MOUNTING	1,5 - 3	1,4 - 4	8 - 12	0	10 - 16	6 - 16	PPS	AISI 300	AISI 400	FKM	-10°C	+140°C	A
21JL *	G 1/8	1,2 - 2,3	1 - 2,3	2,5 - 5	0	6 - 20	3,5 - 12	AISI 316	AISI 300	AISI 400	FKM	-10°C	+140°C	D
21JN	G 1/8	1,2 - 2,3	1 - 2,3	2,5 - 5	0	6 - 25	3,5 - 12	BRASS	AISI 300	AISI 400	FKM	-10°C	+140°C	A D
21JP1 *	G 1/8	1,2 - 2,3	1 - 2,1	2,5 - 5	0	6 - 15	3,5 - 8 - 12	PPS	AISI 300	AISI 400	FKM	-10°C	+140°C	A D
21JPA *	G 1/8 MALE	1,2 - 2,3	1 - 2,1	2,5 - 5	0	15	3,5 - 8 - 12	PPS	AISI 300	AISI 400	FKM	-10°C	+140°C	A D
21L1 *	G 1/8	2,5 - 4	3,2 - 5	8 - 12 - 14	0	6 - 30	1,7 - 25	AISI 316	AISI 300	AISI 400	FKM - PTFE	-40°C	+180°C	A D
21L2 *	G 1/4	2,5 - 5,5	3,2 - 9	8 - 12 - 14	0	3,5 - 30	1 - 25	AISI 316	AISI 300	AISI 400	FKM - PTFE	-40°C	+180°C	A D
21TG1 *	G 1/8	1,7 - 4	1,5 - 5	8	0	6 - 30	3 - 20	BRASS	BRASS	AISI 400	FKM	-10°C	+140°C	A
21TG2 *	G 1/4	1,7 - 4	1,5 - 5	8	0	6 - 30	3 - 20	BRASS	BRASS	AISI 400	FKM	-10°C	+140°C	A

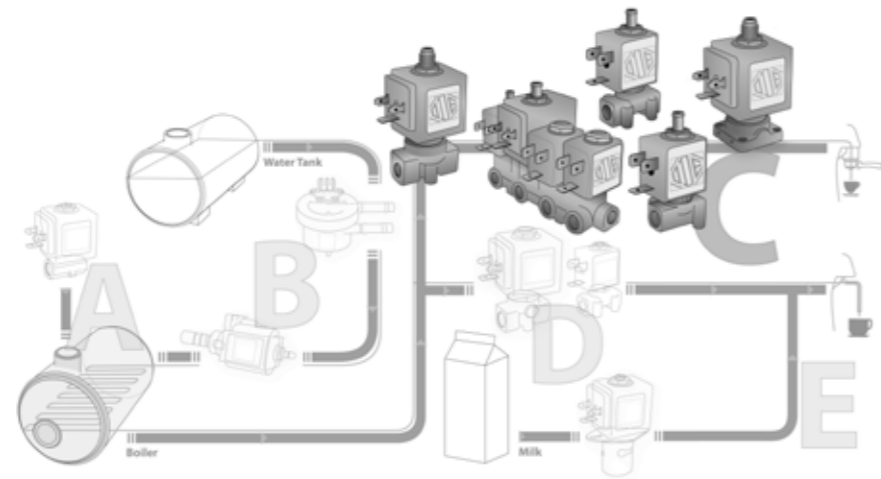
GROUP B					PUMPS					
SERIES	PLUNGER	SEAL	PLASTICS PARTS	FLUIDS	MAX FLUID TEMPERATURE	VOLTAGE FREQUENCY [Hz]	CONSUMPTION [W-A]	MAX PRESSURE (bar)	AGENCY APPROVAL	SUPPLY SYSTEM UNIT
PX50	STAINLESS STEEL	EPDM/Silicon	PA66	TAP AND DISTILLED WATER	35°C	120 - 60	0,78 A	15	LFGB - NSF - UL	B
PX50	STAINLESS STEEL	EPDM/Silicon	PA66	TAP AND DISTILLED WATER	35°C	230 - 50	53 W	15	CE - NSF - VDE	B
P400	STAINLESS STEEL	NBR/EPDM	PA66	WATER	35°C	120 - 60	0,9 A	20	LFGB - NSF - UL	B
P400	STAINLESS STEEL	NBR/EPDM	PA66	WATER	35°C	220/240 - 50	53 W	20	CE - LFGB - NSF - VDE	B
P760	STAINLESS STEEL	NBR	PA66	WATER	35°C	220/240V - 50	35 W	2,5	CE - LFGB - NSF - VDE	B

FLOWMETER											
SERIES	BODY	FLOW RATE	SEAL	CONNECTOR	OPERATING FLUID	OPERATING TEMPERATURE	SUPPLY VOLTAGE (V)	NOZZLE SIZE (mm)	OPERATING PRESSURE	AGENCY APPROVAL	SUPPLY SYSTEM UNIT
AB32	PBT 30%GF	0.033 - 2 l/min	SILICON / EPDM	Ø 6 mm inlet/outlet	WATER	-10°C to 65°C	4.5 - 24VDC	Ø 1	- 1 to 0,3 bar	NSF	B
AB32	PBT 30%GF	0.033 - 2 l/min	Silicon / EPDM	Ø 6 mm inlet/outlet	Water	-10°C to 65°C	4.5 - 24VDC	Ø 1,2	- 1 to 0,3 bar	NSF	B
AB32	PBT 30%GF	0.033 - 2 l/min	Silicon / EPDM	Ø 6 mm inlet/outlet	Water	-10°C to 65°C	4.5 - 24VDC	Ø 1,8	- 1 to 0,3 bar	NSF	B
AB32	PBT 30%GF	0.033 - 2 l/min	Silicon / EPDM	Ø 6 mm inlet/outlet	Water	-10°C to 65°C	4.5 - 24VDC	Ø 2	- 1 to 0,3 bar	NSF	B

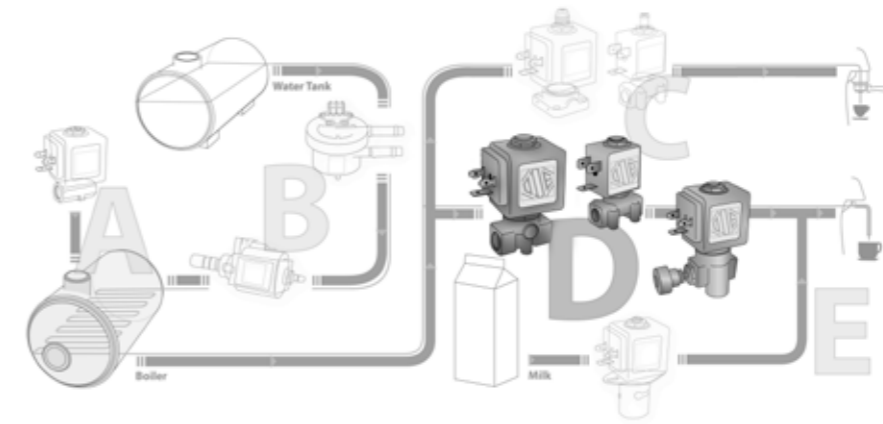
* The above series are available also in NSF certified version, as per the NSF products and service listing



GROUP C - 3/2 WAY SOLENOID VALVES for coffee supply unit



GROUP D - 2/2 WAY SOLENOID VALVES for hot water and steam supply unit



GROUP C					PRESSURE			3/2 WAY SOLENOID VALVES						
SERIES	PORT SIZE	Ø mm	Kv l/mm	POWER [w]	MIN	M.O.P.D		BODY	ARMATURE TUBE	PLUNGER	SEAL	FLUID TEMPERATURE		SUPPORT SYSTEM UNIT
					BAR	AC BAR	DC BAR					-10°C	+140°C	
31A1AV *	SUBPLATE MOUNTING	1-2,5	0,45-3,2	8	0	6-20	6-20	BRASS	AISI 300	AISI 400	FKM	-10°C	+140°C	C
31A1AR *	SUBPLATE MOUNTING	1-2,5	0,45-3,2	8	0	6-20	6-20	BRASS	AISI 300	AISI 400	RUBY	-40°C	+180°C	C
31A3AV *	G 1/8	1-3	0,45-4	8	0	5-20	5-20	BRASS	AISI 300	AISI 400	FMK	-10°C	+140°C	C
31A3AR *	G 1/8	1-2,5	0,45-3,2	8	0	6-20	6-20	BRASS	AISI 300	AISI 400	RUBY	-40°C	+180°C	C
31A2AV *	G 1/4	1-3	0,45-4	8	0	5-20	5-20	BRASS	AISI 300	AISI 400	FKM	-10°C	+140°C	C
31A2AR *	G 1/4	1-2,5	0,45-3,2	8	0	6-20	6-20	BRASS	AISI 300	AISI 400	RUBY	-40°C	+180°C	C
31ALB	SUBPLATE MOUNTING	1,5**	1,4	8	0	15	15	AISI 316	AISI 316	AISI 400	RUBY	-40°C	+180°C	C
31AP1 *	G 1/8	(1,5-3)**	1,1-3,4	8	0	5-15	5-15	PPS	AISI 300	AISI 400	RUBY - FKM	-40°C	+180°C	C
31AP2 *	G 1/4	(1,5-3)**	1,1-3,4	8	0	5-15	5-15	PPS	AISI 300	AISI 400	RUBY - FKM	-40°C	+180°C	C
31AP *	PUSH-IN	(1,5-3)**	1,1-3,4	8	0	5-15	5-15	PPS	AISI 300	AISI 400	RUBY - FKM	-40°C	+180°C	C
31APB *	SUBPLATE MOUNTING	(1-3)**	0,45-4	8	0	4-25	4-25	PPS	AISI 300	AISI 400	RUBY - FKM NBR - EPDM	-40°C	+180°C	C
31JL1XP1 *	G 1/8	1,2**	1	5	0	15	15	AISI 316	AISI 300	AISI 400	FKM	-10°C	+140°C	C
31JN1XP1 *	G 1/8	(1,2-2,3)**	1-2,3	5	0	5-15	-	BRASS	AISI 300	AISI 400	FKM	-10°C	+140°C	C
31JP *	PUSH-IN	(1,2-2,3)***	0,75-2,1	5	0	5-15	5-15	PPS	BRASS	AISI 400	FKM	-10°C	+140°C	C
31JP1 *	G 1/8	1,2-2,3	0,75-2,1	5	0	5-15	5-15	PPS	AISI 300	AISI 400	FKM	-10°C	+140°C	C
31JPA *	G 1/8 MALE	(1,2-2,3)**	0,75-2,1	5	0	5-15	-	PPS	AISI 300	AISI 400	FKM	-10°C	+140°C	C
Manifold *	G 1/8	(2-2,5)**	0	5-8	0	6	6	BRASS	AISI 300	AISI 400	FKM	-10°C	+140°C	C

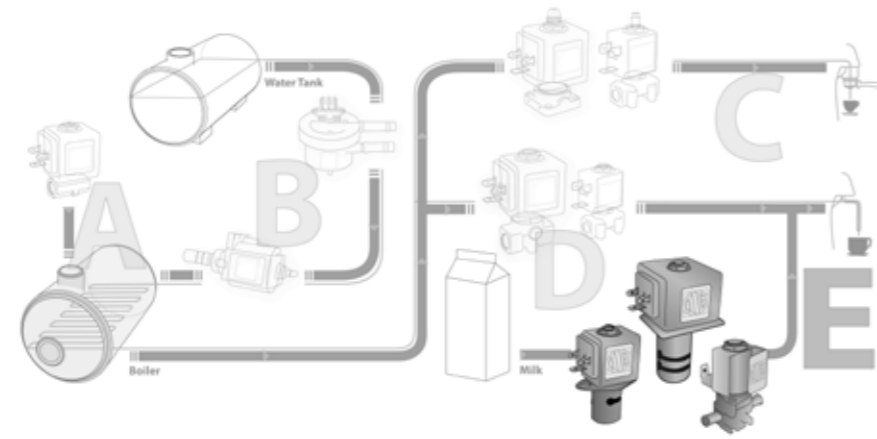
GROUP D					PRESSURE			2/2 WAY SOLENOID VALVES						
SERIES	PORT SIZE	Ø mm	Kv l/mm	POWER [w]	MIN	M.O.P.D		BODY	ARMATURE TUBE	PLUNGER	SEAL	FLUID TEMPERATURE		SUPPORT SYSTEM UNIT
					BAR	AC BAR	DC BAR					-40°C	+180°C	
21A3KR *	G 1/8	1,5-3	1,4-4	8	0	10-35	4-15	BRASS	AISI 300	AISI 400	RUBY	-40°C	+180°C	A D
21A3KV *	G 1/8	1,5-4,5	1,4-6,5	8-12	0	5-35	2-30	BRASS	AISI 300	AISI 400	FKM	-10°C	+140°C	A D
21A2KR *	G 1/4	1,5-3	1,4-4	8	0	10-35	4-15	BRASS	AISI 300	AISI 400	RUBY - PTFE	-40°C	+180°C	A D
21A2KV *	G 1/4	1,5-3	1,4-4	8-12	0	10-16	6-16	BRASS	AISI 300	AISI 400	FKM - EPDM	-10°C	+140°C	A D
21A16	G 1/4	2,5-3	3,2-4	8	0	10-14	4-5	BRASS	AISI 300	AISI 400	FKM - RUBY - PTFE	-40°C	+180°C	D
21AP *	PUSH-IN	1,5-3	1,4-4	8-12	0	8-25	4-25	PPS	AISI 300	AISI 400	FKM - RUBY	-40°C	+180°C	A D
21AP1 *	G 1/8	1,5-3	1,1-4	8-12	0	8-25	4-25	PPS	AISI 300	AISI 400	FKM - RUBY	-40°C	+180°C	A D
21AP2 *	G 1/4	1,5-3	1,5-3,4	8-12	0	8-25	4-25	PPS	AISI 300	AISI 400	FKM - RUBY	-40°C	+180°C	A D
21ALB *	SUBPLATE MOUNTING	1,5-3	1,4-4	8-12	0	10-16	6-16	PPS	AISI 300	AISI 400	FKM	-10°C	+140°C	A D
21APB *	SUBPLATE MOUNTING	1-3	0,45-4	8-12	0	10-25	4-26	PPS	AISI 300	AISI 400	RUBY - PTFE - FKM NBR - EPDM	-40°C	+180°C	A D
21JL *	G 1/8	1,2-2,3	1-2,3	2,5-5	0	6-25	3,5-12	AISI 316	AISI 300	AISI 400	FKM - NBR	-10°C	+140°C	A D
21JN *	G 1/8	1,2-2,3	1-2,3	2,5-8	0	6-25	3,5-18	BRASS	AISI 300	AISI 400	FKM - NBR	-10°C	+140°C	A D
21JP *	PUSH-IN	1,2-2,3	1-2,1	2,5-5	0	6-15	8	PPS	AISI 300	AISI 400	FKM	-10°C	+140°C	A D
21JP1 *	G 1/8	1,2-2,3	1-2,1	2,5-5	0	6-15	8	PPS	AISI 300	AISI 400	FKM	-10°C	+140°C	A D
21JPA *	G 1/8 MALE	1,2-2,3	1-2,1	2,5-5	0	6-15	3,5-12	PPS	AISI 300	AISI 400	FKM	-10°C	+140°C	A D
21L1 *	G 1/8	2,5-4	3,2-5	8-12-14	0	6-30	1,7-25	AISI 316	AISI 300	AISI 400	FKM - PTFE	-40°C	+180°C	A D
21L2 *	G 1/4	2,5-5,5	3,2-9	8-12-14	0	3,5-30	1-25	AISI 316	AISI 300	AISI 400	FKM - PTFE	-40°C	+180°C	A D

* The above series are available also in NSF certified version, as per the NSF products and service listing
 ** 3rd way exhaust= Ø 2,5 mm
 *** 3rd way exhaust= Ø 1,7 mm

* The above series are available also in NSF certified version, as per the NSF products and service listing.



GROUP E - 2/2 and 3/2 WAY SOLENOID VALVES for steam and milk supply unit



GROUP D					PRESSURE			2/2 WAY SOLENOID VALVES						
SERIES	PORT SIZE	Ø mm	Kv l/mm	POWER	MIN	M.O.P.D.		BODY	ARMATURE TUBE	FIXED CORE	SEAL	TEMPERATURE		SUPPORT SYSTEM UNIT
					BAR	AC BAR	DC BAR					-10°C	+140°C	
212A4	G 1/8	2,5 - 3	3,2 - 4	8 - 12 - 14	0	14 - 30	9 - 25	BRASS	AISI 300	AISI 400	FKM	-10°C	+140°C	E
4622 *	G 1/8	1,5	1,4	8	0	30	18	BRASS	AISI 300	AISI 400	FKM	-10°C	+140°C	E

ALL THE VERSIONS ARE AVAILABLE WITH ARMATURE TUBE IN AISI 316 FOR HIGH CORROSION RESISTANCE

TOTAL SEPARATION

SERIES	TUBINGS		PINCH VALVES SERIES						
	Ø INT. (mm)	Ø EXT. (mm)	PINCHING FORCE (g)	POWER (W)	BODY	PINCHING DEVICE	TEMPERATURE		SUPPLY SYSTEM UNIT
21225	3,5	6	650 - 2100	8 - 12 **	ANODIZED ALUMINIUM	POM C	-10°C	+40°C	E
21230	7	12	2600	14	ANODIZED ALUMINIUM	POM C	-10°C	+40°C	E
31230	6,4	9	1250	14	ANODIZED ALUMINIUM	POM C	-10°C	+40°C	E

TOTAL SEPARATION					PRESSURE			VALVES SERIES				
SERIES	PORT SIZE	Ø mm	Kv l/mm	POWER	MIN	M.O.P.D.		BODY	SEAL	TEMPERATURE		SUPPLY SYSTEM UNIT
					BAR	AC BAR	DC BAR			0°C	+95°C	
21SBG54E *	7 mm	3 - 5	4 - 6	7,5	0	-	1	PEI	EPDM	0°C	+95°C	E

* The above series are available also in NSF certified version, as per the NSF products and service listing
 ** With tubings hardness 70 ± 3 shore A





ISO 9001:2008 Quality Management System Certification

ISO 9001 identifies a series of norms and guidelines developed by ISO to provide a system of process quality control, aimed to improving effectiveness and efficiency of the organization with the goal of customer satisfaction. Bureau Veritas certified that the ODE Management System has been audited and found to be in accordance with the requirements of the management system standards of ISO 9001. This certification has been obtained by ODE since September 1997. The ISO 9001:2008 certification is available on website.



UL Certification

The Component Mark UL "Recognised" is used for components that are part of a larger assembly or installation. ODE manufactures products complying with the United States and Canadian Standards, as listed at the public UL Certifications Directory website <http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.html>



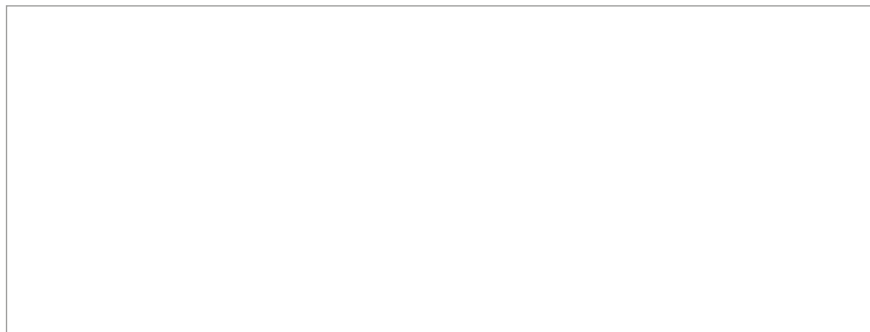
NSF Product Approval

The NSF certification mark on a product means that the product complies with all standard requirements for food safety. The ODE range includes solenoid valves approved NSF for food grade fluids compatibility. The NSF product approval is available on website.



VDE Approval

The Verband Deutscher Elektrotechniker is the Association for Electrical, Electronic and Information Technologies and their related sciences, technologies and applications. The ODE solenoid valve range includes coils VDE certificated. VDE approval is available on VDE website to the link reported in the certifications webpage of download area.



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