

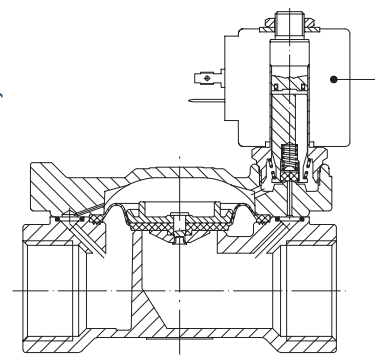
21WA-W - 21X SERIES

General Purpose, 2-way, Indirect Acting

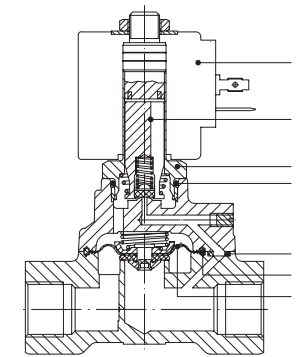
21WA-W and **21X** are indirect acting solenoid valves. A minimum operating pressure differential of 0,1-0,2 bar is required for correct operation. A large selection of seal materials provides wide chemical compatibility. AC/DC interchangeability of the coil is possible for both NC and NO configurations. Slow closing, manual operator, NSF/ANSI 61-G versions are available on request.



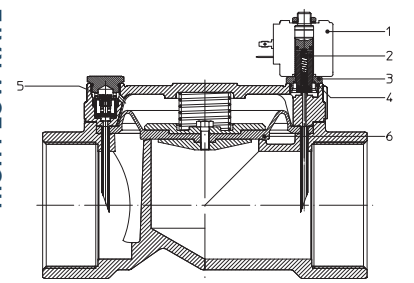
NC, BRASS



NC, STAINLESS STEEL, UP TO 3/4



NC, BRASS, HIGH FLOW RATE



Solenoid Valves ■ General purpose ■ 2-way ■ Indirect Acting ■ 21WA-W - 21X SERIES

TECHNICAL DATA

PORT CONNECTION	G 3/8 : 3				
SEALING MATERIALS	W, WA, X series		W, WA series		X series
	FKM	EPDM	NBR	HNBR	PTFE
FLUID TEMPERATURE	-10°C +140°C	-10°C +140°C	-10°C +90°C	-30°C +130°C	+60°C +180°C *
FLUIDS	oils, gasoline, diesel	water, steam	air, inert gases, water	air, inert gases, glycol	hot water, steam
VISCOSITY	max 12 cSt				
TUBE Ø - COIL WIDTH - SERIES	ø 10 mm - 22 mm		LB*2X (class F)		
	ø 10 mm - 22 mm		LB*05, LTA05 (class F), LBV05 (class H)		
	ø 13 mm - 30 mm		BDA08, BVA08 (class F), BDV08 (class H)		
INSTALLATION	as required, preferably with actuator upright				
PROTECTION DEGREE	IP65 EN 60529 (DIN 40050) with plug connector				

* For a proper functioning of the solenoid valve the minimum temperature should not be less than +60°C; in order to ensure a long diaphragm life, steam filtration is recommended.

MATERIALS

BODY, ORIFICE	Brass UNI EN 12165 CW617N or stainless steel AISI 316
ARMATURE TUBE	Low lead brass for NSF 61 versions
FIXED CORE	Stainless steel AISI Series 300
PLUNGER	Stainless steel AISI Series 400
PHASE DISPLACEMENT RING	Copper (Cu 99,9%) or gold plated copper
SPRING	Stainless steel AISI Series 300
SEALING	B=NBR, V=FKM, E=EPDM, F=HNBR, T=PTFE

CE

- 2014/35/EU (LVD)
- 2014/30/EU (EMC)
- 2014/68/EU (PED)
art. 4.3 - up to 1",
cat. I module A - above 1" up to 2"
cat. I module A (use only with gases of Group 2 or liquids) - above 2"

INDUSTRIAL OXYGEN

Special versions suitable for contact with industrial oxygen are available. Please refer to codification options.

UL recognized and VDE, CSA

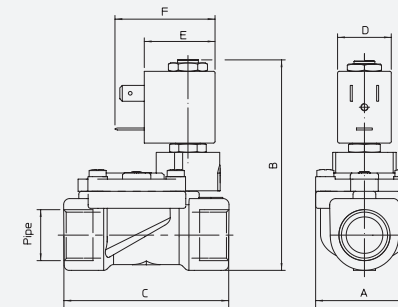
approved coils are available for this series, please refer to coil section.

EXPLOSION PROOF COILS

suitable for zone 2-22 are available for this series. Please refer to ATEX coil section for further details.

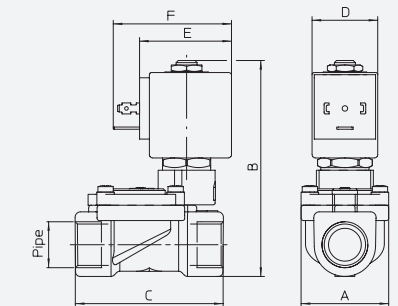
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DRAWING 1



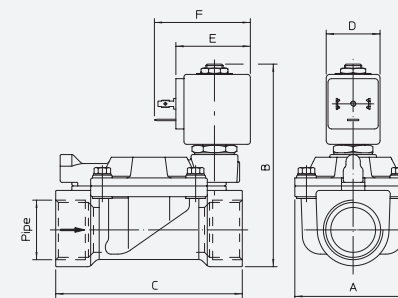
PIPE ISO 228/1	DIMENSIONS [mm]					
	A	B	C	D	E	F
G3/8	40	84,5	60	22	28±1	39,5
G1/2			66			

DRAWING 2



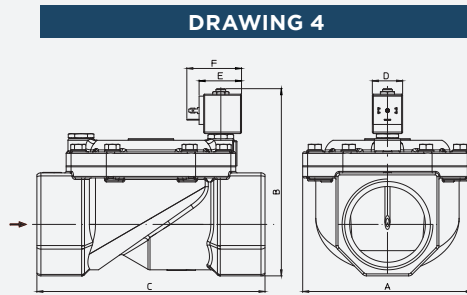
PIPE ISO 228/1	DIMENSIONS [mm]					
	A	B	C	D	E	F
G3/8	40	97	60	30	42	54
G1/2			66			

DRAWING 3

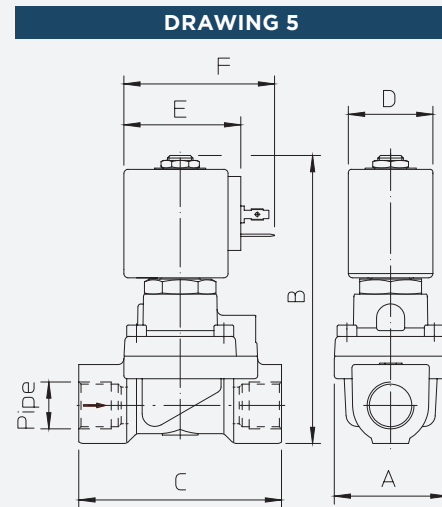


PIPE ISO 228/1	DIMENSIONS [mm]					
	A	B	C	D	E	F
G3/4	65	105	104	30	42	54
G1		112				
G1 1/4	98	125	144			
G1 1/2	118	141	172			

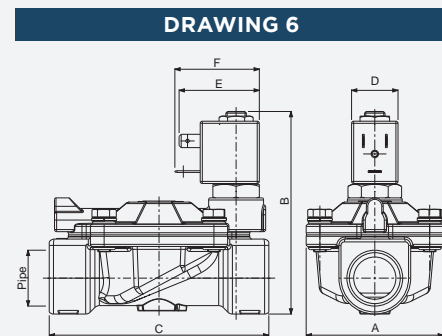
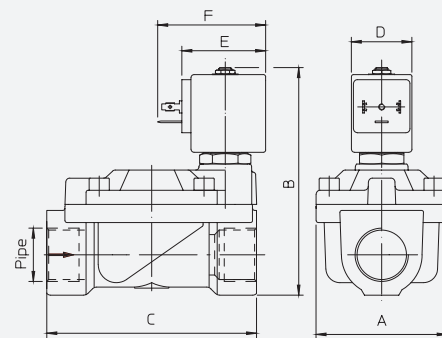
■ The fluids listed in the "technical data" tables should be considered as a recommendation. Please check the chemical compatibility of the fluids with the materials of the valve at RFQ stage.
■ Operation with gases at high differential pressure can reduce the life of the diaphragm.
■ For spare parts list please refer to the dedicated chapter.



PIPE ISO 228/1	DIMENSIONS [mm]					
	A	B	C	D	E	F
G2 1/2	168	187	226	30	42	54
G3						



PIPE ISO 228/1	DIMENSIONS [mm]					
	A	B	C	D	E	F
G1/2	40	103	73	30	42	54
G3/4	65	115	104			
G1						



PIPE ISO 228/1	DIMENSIONS [mm]					
	A	B	C	D	E	F
G3/4	65	96	104	22	28±1	39,5
G1		105				

PIPE ISO 228/1	ORIFICE SIZE Ø [mm]	Kv [l/min]	COIL SERIES	PRESSURE [bar]			CODE		DRAWING REFERENCE	
				MIN	MOPD (AIR, GASES)		PS	BRASS		STAINLESS STEEL
					AC	DC				
G3/8	13	60	L**05	0,2	12	12	25	21WA3ROB130	-	1
				B**08	0,2	16	16	25	21WA3KOB130	-
G1/2	12	35	B**08	0,1	20	20	25	-	21X2KV120	5
				L**05	0,2	12	12	25	21WA4ROB130	-
	13	70	B**08	0,2	16	16	25	21WA4KOB130	-	2
G3/4	19			130	B**08	0,1	16	16	22	-
		LB*2X	0,2			10	4	25	21W3RB190	-
		140	L**05	0,2	16	16	25	21W3RB190	-	6
				B**08	0,2	16	16	23	21W3KB190	-
G1	25	160	B**08	0,1	16	16	22	-	21X4KV250	5
				LB*2X	0,2	10	4	25	21W4RB250	-
		190	L**05	0,2	16	16	25	21W4RB250	-	6
				B**08	0,2	16	16	23	21W4KB250	-
G1 1/4	35	400	B**08	0,2	10	10	16	21W5KB350	-	3
G1 1/2	40	520	B**08	0,2	10	10	16	21W6KB400	-	3
G2	50	750	B**08	0,2	10	10	16	21W7KB500	-	3

■ For sealing different from NBR and FKM, replace the letter "B" and "V" with the ones corresponding to the other materials.
 Brass Body: V=FKM, B=NBR, E=EPDM, F=HNBR.
 Stainless Steel Body: V=FKM, E=EPDM.

PIPE ISO 228/1	ORIFICE SIZE Ø [mm]	Kv [l/min]	COIL SERIES	PRESSURE [bar]			CODE		DRAWING REFERENCE	
				MIN	MOPD (AIR, GASES)		PS	BRASS		STAINLESS STEEL
					AC	DC				
G2 1/2	65	1250	B**08	0,3	5	5	20	21W8KB650	-	4
				3	15	15	20	21W8KB650-HP	-	4
G3	75	1400	B**08	0,3	5	5	20	21W9KB750	-	4
				3	15	15	20	21W9KB750-HP	-	4

■ The valve is delivered with assembled Ø1.2 mm nozzles.
 ■ Additional undersized and oversized nozzles are supplied to adjust opening and closing times.
 ■ High flow rate versions are available only with NBR diaphragm.

PIPE ISO 228/1	ORIFICE SIZE Ø [mm]	Kv [l/min]	COIL SERIES	PRESSURE [bar]			CODE		DRAWING REFERENCE	
				MIN	MOPD (AIR, GASES)		PS	BRASS		STAINLESS STEEL
					AC	DC				
G1/2	12	35	B**08	0,5	10	10	25	-	21X2KT120	5
G3/4	19	120	B**08	0,5	10	10	22	-	21X3KT190	5
G1	25	130	B**08	0,5	10	10	22	-	21X4KT250	5

■ Steam versions are available only with PTFE diaphragm.
 ■ *For a proper functioning of the solenoid valve the minimum temperature should not be less than +60°C; in order to ensure a long diaphragm life, steam filtration is recommended.

2/2 NC

2/2 NC
HIGH FLOW RATE

2/2 NC
FOR STEAM

2/2 NO

PIPE ISO 228/1	ORIFICE SIZE Ø [mm]	Kv [l/min]	COIL SERIES	PRESSURE [bar]			CODE		DRAWING REFERENCE	
				MIN	MOPD (AIR, GASES)		BRASS	STAINLESS STEEL		
					AC	DC				PS
G3/8	13	60	L**05	0,2	12	11	20	21WA3I0B130	-	1
			B**08	0,2	16	16	25	21WA3Z0B130	-	2
G1/2	12	35	B**08	0,1	20	20	25	-	21X2Z1V120D	5
	13	70	L**05	0,2	12	11	20	21WA4I0B130	-	1
G3/4	19	140	B**08	0,2	16	16	25	21WA4Z0B130	-	2
			B**08	0,1	16	16	25	-	21X3Z1V190D	5
G1	25	160	B**08	0,2	16	16	25	21W3ZB190	-	3
			B**08	0,1	16	16	25	-	21X4Z1V250D	5
G11/4	35	400	B**08	0,2	16	16	25	21W4ZB250	-	3
			B**08	0,2	10	10	16	21W5ZB350	-	3
G11/2	40	520	B**08	0,2	10	10	16	21W6ZB400	-	3
			B**08	0,2	10	10	16	21W7ZB500	-	3

For other sealing materials, replace the letter B or V with the ones corresponding to the required material.
 Brass Body: V=FKM, B=NBR, E=EPDM, F=HNBR.
 Stainless Steel Body: V=FKM, E=EPDM.

2/2 NC
VALVES FOR
DRINKING WATER
SYSTEMS

PIPE ISO 228/1	ORIFICE SIZE Ø [mm]	Kv [l/min]	COIL SERIES	PRESSURE [bar]			CODE		DRAWING REFERENCE		
				MIN	MOPD (AIR, GASES)		BRASS	STAINLESS STEEL			
					AC	DC				PS	
G3/8	13	60	B**08	0,2	16	16	25	21WA3K1E130-T5	NSF	-	2
G1/2	13	70	B**08	0,2	16	16	25	21WA4K1E130-T5	NSF	-	2
G3/4	19	140	B**08	0,2	16	16	25	21W3K1E190-T5	NSF	-	3
G1	25	190	B**08	0,2	16	16	25	21W4K1E250-T5	NSF	-	3

Valves certified to NSF/ANSI 61-G, available with EPDM sealing.
 Available on request with minimum order quantity.

2/2 NO
VALVES FOR
DRINKING WATER
SYSTEMS

PIPE ISO 228/1	ORIFICE SIZE Ø [mm]	Kv [l/min]	COIL SERIES	PRESSURE [bar]			CODE		DRAWING REFERENCE		
				MIN	MOPD (AIR, GASES)		BRASS	STAINLESS STEEL			
					AC	DC				PS	
G3/8	13	60	B**08	0,2	16	16	23	21WA3Z1E130-T5	NSF	-	2
G1/2	13	70	B**08	0,2	16	16	23	21WA4Z1E130-T5	NSF	-	2
G3/4	19	140	B**08	0,2	16	16	23	21W3Z1E190-T5	NSF	-	3
G1	25	190	B**08	0,2	16	16	23	21W4Z1E250-T5	NSF	-	3

Valves certified to NSF/ANSI 61-G, available with EPDM sealing.
 Available on request with minimum order quantity.



- I. NUMBER OF WAYS**
2 - 2-way
- II. NUMBER OF ELEMENTS**
1 - 1 element
- III. ARMATURE TUBE MATERIAL**
Blank - std
6 - AISI 316 (optional, valid for NC versions, brass body only)
- IV. SERIES**
WA - G3/8 and G1/2, brass body
W - above G1/2, brass body
X - StSt body
- V. CONNECTIONS**
for WA series
3 - G3/8
4 - G1/2
for W and X series
3 - G3/4
4 - G1
5 - G1 1/4
6 - G1 1/2
7 - G2
8 - G2 1/2
9 - G3
- VI. CORE TUBE TYPE**
K - for 2/2 NC valves, B**08 coil
Z - for 2/2 NO valves, B**08 coil
R - for 2/2 NC valves, LB*2X and L**05 coils
I - for 2/2 NO valves, L**05 coil
- VII. PHASE DISP. RING MATERIAL**
O or blank - copper
1 - gold plated copper
- VIII. SEALING MATERIAL**
V - FKM
E - EPDM
B - NBR
F - HNBR
T - PTFE*
- IX. ORIFICE Ø [mm] MULTIPLIED BY 10**
- X. OPTIONS**
PC - progressive closing
M - manual override
MR - manual override and closing speed adjustment
MM - spring over diaphragm
N - nickel plated body
HP - high pressure
OX - degreasing for industrial oxygen use
T5 - NSF/ANSI 61 certification

*available only for X series, steam version.

CODIFICATION

OPTIONS AVAILABILITY

OPTION	VALVE TYPE	BODY MATERIAL	SEALING MATERIAL	COIL SERIES	VALVE SIZE/CONNECTIONS									NOTES	
					G3/8	G1/2	G3/4	G1	G1 1/4	G1 1/2	G2	G2 1/2	G3		
PC	2/2 NC	Brass	B, V, E, F	B**08	X	X	X	X							
M	2/2 NC	Brass	B, V, E, F	LB*2X	X	X									
				L**05	X	X	X	X	X	X					
MR	2/2 NC	Brass	B, V, E, F	B**08			X	X	X	X	X				
MM	2/2 NC	Brass	B, V, E, F	LB*2X	X	X									
				L**05											
N	2/2 NC	Brass	B, V, E, F	B**08	X	X	X	X	X	X	X				
				B**08											
HP	2/2 NC	Brass	B, V, E, F	B**08								X	X		
OX	2/2 NC, NO	Brass	V	B**08	X	X	X	X	X	X	X			PS & MOPD limited to 25 bar. Shall not be used as safety valves	
T5	2/2 NC, NO	Brass	E	B**08	X	X	X	X						Ref. to drinking water valves' section	

Please contact ODE if you wish to combine more options.