

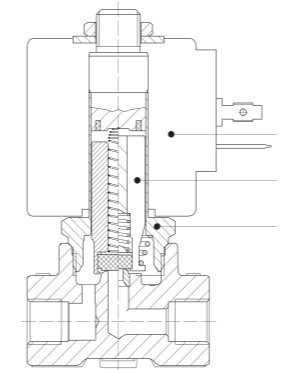
21A - 21L - 21ALB SERIES

General purpose, 2-way, Direct Acting

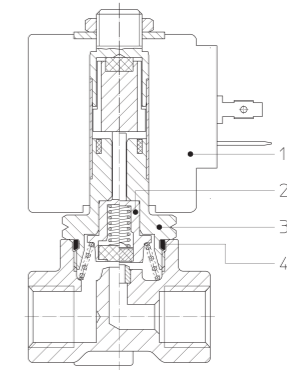
21A and **21L** are direct acting solenoid valves. The fixed core and armature tube are welded together to enhance pressure resistance and leak-tightness. Valves do not require a minimum operating pressure. A large selection of seal materials provides wide chemical compatibility. AC/DC interchangeability of the coil is possible for both NC and NO configurations.



2/2 NC



2/2 NO



Solenoid Valves ■ General purpose ■ 2-way ■ Direct Acting ■ 21A 21L SERIES

TECHNICAL DATA

PORT CONNECTION	G1/8, G1/4, G3/8, G1/2, Flange connection					
SEALING MATERIALS	soft			hard		
	NBR	FKM	EPDM	HNBR	RUBY	PTFE
FLUID TEMPERATURE	-10°C +90°C	-10°C +140°C	-10°C +140°C	-30°C +130°C	-40°C +180°C	-40°C +180°C
FLUIDS	Air, inert gases, water	Air, oils, gasoline, diesel	Water, steam	Air, inert gases, glycol	Water, steam, oils, diesel	Water, steam, aggressive chemical
VISCOSITY	12 cSt up to orifice 1.5 mm, 37 cSt for orifice 2.0 mm, 53 cSt for orifice 2.5 mm and above					
TUBE Ø - COIL WIDTH - SERIES	Ø 13 mm - 30 mm		BDA08, BVA08 (CLASS F), BDV08 (CLASS H)			
	Ø 13 mm - 36 mm		UDV16 (CLASS H)			
	Ø 13 mm - 52 mm		GDV14 (CLASS H)			
INSTALLATION	As required, preferably with actuator upright					
PROTECTION DEGREE	IP 65 EN 60529 (DIN 40050) with connector					

■ MOPD values are referred to "standard power" coil range. Please refer to coil chapter.

MATERIALS

BODY	Brass UNI EN 12165 CW617N, Stainless steel AISI 316
ORIFICE*	≤ 3 mm Stainless steel AISI series 300 > 3 mm Brass - UNI EN 12165 CW617N
ARMATURE TUBE	Stainless steel AISI series 300
FIXED CORE	Stainless steel AISI series 400
PLUNGER	Stainless steel AISI series 400
PHASE DISPLACEMENT RING	Copper (Cu 99.9%) or Gold plated copper
SPRING	Stainless steel AISI series 300
SEALING	V=FKM, B=NBR, E=EPDM, F=HNBR, R=RUBY, T=PTFE O-R flange sealing are made of VMQ

■ Orifice for valves with AISI 316 body is in AISI 316 material.

■ **CE**
- 2014/35/EU (LVD)
- 2014/30/EU (EMC)
- 2014/68/EU (PED)
art. 4.3 up to 1"

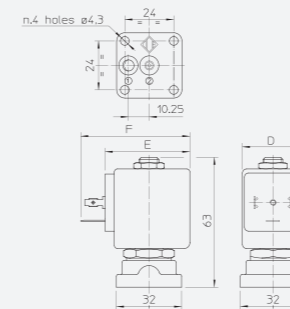
■ **INDUSTRIAL OXYGEN**
Special versions suitable for contact with industrial oxygen are available. Please refer to codification options.

■ **UL** recognized and **VDE, CSA** approved coils are available for this series, please refer to coil section.

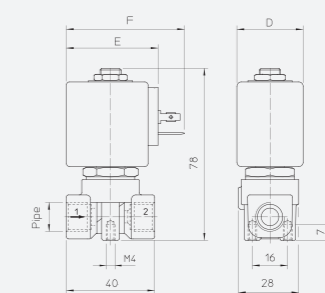
■ **EXPLOSION PROOF COILS** suitable for zone 2-22 are available for this series. Please refer to ATEX coil section for further details.

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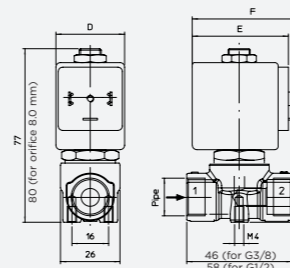
DRAWING 1



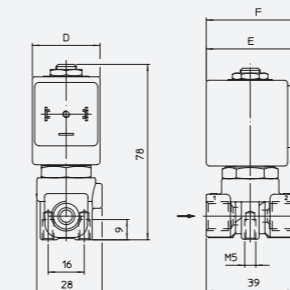
DRAWING 2



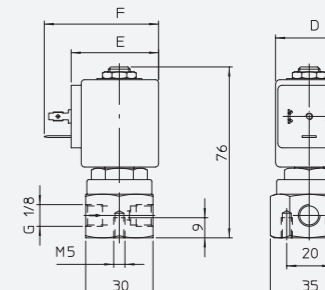
DRAWING 3



DRAWING 4



DRAWING 5



COIL SERIES	DIMENSIONS [mm]		
	D	E	F
BDA08, BDV08	30	42	54
UDV16	36	48	60
GDV14	52	55	67

■ 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.
■ G type thread in accordance with ISO 228/1.
■ For spare parts list please refer to the dedicated chapter.

2/2 NO RUBY SEALING

PIPE	ORIFICE SIZE [mm]	Kv [l/min]	COIL SERIES	PRESSURE [bar]			CODE		DRAWING REF.	
				MIN.	MOPD		BRASS	STAINLESS STEEL		
					AC	DC				PS
G1/8	1,5	1,4	B**08	0	35	35	40	21A3ZR15D	-	2
			B**08	0	30	30	40	21A3ZR20D	-	2
	2,5	3,2	B**08	0	16	16	40	21A3ZR25D	-	2
			UDV16	0	17	17	40	21A3ZR25G	-	2
			GDV14	0	17	17	40	21A3ZR25G	-	2
			B**08	0	10	10	40	21A3ZR30D	-	2
G1/4	1,5	1,4	B**08	0	35	35	40	21A2ZR15D	-	2
			B**08	0	30	30	40	21A2ZR20D	-	2
	2,5	3,2	B**08	0	16	16	40	21A2ZR25D	-	2
			UDV16	0	17	17	40	21A2ZR25G	-	2
			GDV14	0	17	17	40	21A2ZR25G	-	2
			B**08	0	10	10	40	21A2ZR30D	-	2
FLANGE CONN.	1,1	0,7	B**08	0	40	40	40	21A1ZR11D	-	1
			B**08	0	35	35	40	21A1ZR15D	-	1
	1,5	1,4	GDV14	0	35	35	40	21A1ZR15G	-	1
			B**08	0	30	30	40	21A1ZR20D	-	1

2/2 NC HIGH PRESSURE

PIPE	ORIFICE SIZE [mm]	Kv [l/min]	POWER RANGE	PRESSURE [bar]			CODE		DRAWING REF.	
				MIN.	MOPD		BRASS	STAINLESS STEEL		
					AC	DC				PS
G1/8	1,2	1	B**08	0	100	90	100	21A3KOT12-XC	2	
			UDV16	0	100	100	100	21A3KOT12-XC	2	
			GDV14	0	-	-	100	21A3KOT12-XC	2	
	1,5	1,5	B**08	0	90	60	100	-	21L1KIT15-XC	5
			UDV16	0	100	60	100	-	21L1KIT15-XC	5
			GDV14	0	100	100	100	-	21L1KIT15-XC	5
G1/4	1	1	B**08	0	100	90	100	21A2KOT10-XC	2	
			UDV16	0	100	100	100	21A2KOT10-XC	2	
			GDV14	0	-	-	100	21A2KOT10-XC	2	
			B**08	0	100	90	100	21A2KOT12-XC	2	
			UDV16	0	100	100	100	21A2KOT12-XC	2	
			GDV14	0	-	-	100	21A2KOT12-XC	2	
	1,2	1	B**08	0	-	-	130	21A2KOR12-XC	2	
			UDV16	0	-	-	130	21A2KOR12-XC	2	
			GDV14	0	130	130	130	21A2KOR12-XC	2	
			B**08	0	90	60	100	-	21L2KIT15-XC	4
			UDV16	0	100	60	100	-	21L2KIT15-XC	4
			GDV14	0	100	100	100	-	21L2KIT15-XC	4
	1,5	1,5	B**08	0	37	17	40	21A2KOR20-XC	2	
			UDV16	0	40	23	40	21A2KOR20-XC	2	
			GDV14	0	-	-	40	21A2KOR20-XC	2	
			B**08	0	30	12	40	21A2KOR25-XC	2	
			UDV16	0	-	-	40	21A2KOR25-XC	2	
			GDV14	0	-	-	40	21A2KOR25-XC	2	
	2,5	3,2	B**08	0	25	8	40	21A2KOR30-XC	2	
			UDV16	0	-	-	40	21A2KOR30-XC	2	
			GDV14	0	-	-	40	21A2KOR30-XC	2	
			B**08	0	100	90	130	21A1KOT12-XC	21ALBKIT12-XC	1
			UDV16	0	100	100	130	21A1KOT12-XC	21ALBKIT12-XC	1
			GDV14	0	-	-	130	21A1KOT12-XC	21ALBKIT12-XC	1
3	4	B**08	0	90	60	100	21A1KOT15-XC	1		
		UDV16	0	100	100	100	21A1KOT15-XC	1		
		GDV14	0	100	100	100	21A1KOT15-XC	1		
		B**08	0	14	8	100	21A1KOT30-XC	1		
		UDV16	0	27	16	100	21A1KOT30-XC	1		
		GDV14	0	-	-	100	21A1KOT30-XC	1		

■ The use of rigid sealings usually implies a slight leakage, limited within 300 cm³/h of air at the pressure of 10 bar.
 ■ Base O-Rings for flange connection versions are in VMQ material.

I	II	III	IV	V	VI	VII	VIII	IX	X	XI
2	1		A	2	K		V	30	-	

I. NUMBER OF WAYS
2 - 2-way

II. NUMBER OF ELEMENTS
1 - 1 element

III. ARMATURE TUBE MATERIAL
Blank - std. material
6 - AISI 316 (optional, valid for NC versions, brass body only)

IV. SERIES TYPE
A - brass body
L - StSt body
AL - StSt body with flange connection

V. CONNECTIONS for A series
1 - flange connection
3 - G1/8
2 - G1/4
5 - G3/8
8 - G1/2

for L series
1 - G1/8
2 - G1/4
for AL series
B - flange connection

VI. CORE TUBE TYPE
K - for 2/2 NC valves
Z - for 2/2 NO valves

VII. PHASE DISP. RING MATERIAL
O or blank - copper
1 - gold plated copper

VIII. SEALING MATERIAL
V - FKM
E - EPDM
B - NBR
F - HNBR
R - RUBY
T - PTFE

IX. ORIFICE Ø MULTIPLIED BY 10

X. COIL IDENTIFICATION

Blank - std. for NC
D - B**08 coil, only for 2/2 NO valves
G - UDV16 and GDV14 coils, only for 2/2 NO valves

XI. OPTIONS

W - variable pitch spring or double spring, improved pressure range
XC - special plunger for high pressure range
OX - Degreased version for industrial oxygen use.
OR - O-ring sealing between body and armature tube
N - nickel plated body
M - manual operator
ORV - flange O-Rings in FKM material
ORT - flange O-Rings in PTFE material

CODIFICATION

OPTION	VALVE TYPE	BODY MATERIAL	SEALING MATERIAL	VALVE SIZE/CONNECTIONS					NOTES
				G1/8	G1/4	G3/8	G1/2	FLANGE CONN.	
W	NC	Brass & StSt	V, B, E, T	X	X	X	X	X	Ref. to improved pressure range valves' table for performances
XC	NC	Brass & StSt	R, T	X	X			X	Ref. to high pressure valves' table for performances
OX	NC & NO	Brass & StSt	V	X	X	X	X		PS & MOPD limited to 25 bar. Shall not be used as safety valves
OR	NC	Brass	V, B, E, F, T	X	X	X	X	X	
N	NC & NO	Brass	V, B, E, F, T	X	X	X	X	X	G1/2 size with minimum order quantity
M	NC	Brass	V, B, E	X	X				
ORV	NC & NO	Brass & StSt	V, R, T					X	
ORT	NC & NO	Brass & StSt	R, T					X	

OPTIONS AVAILABILITY

■ Please contact ODE if you wish to combine more options.