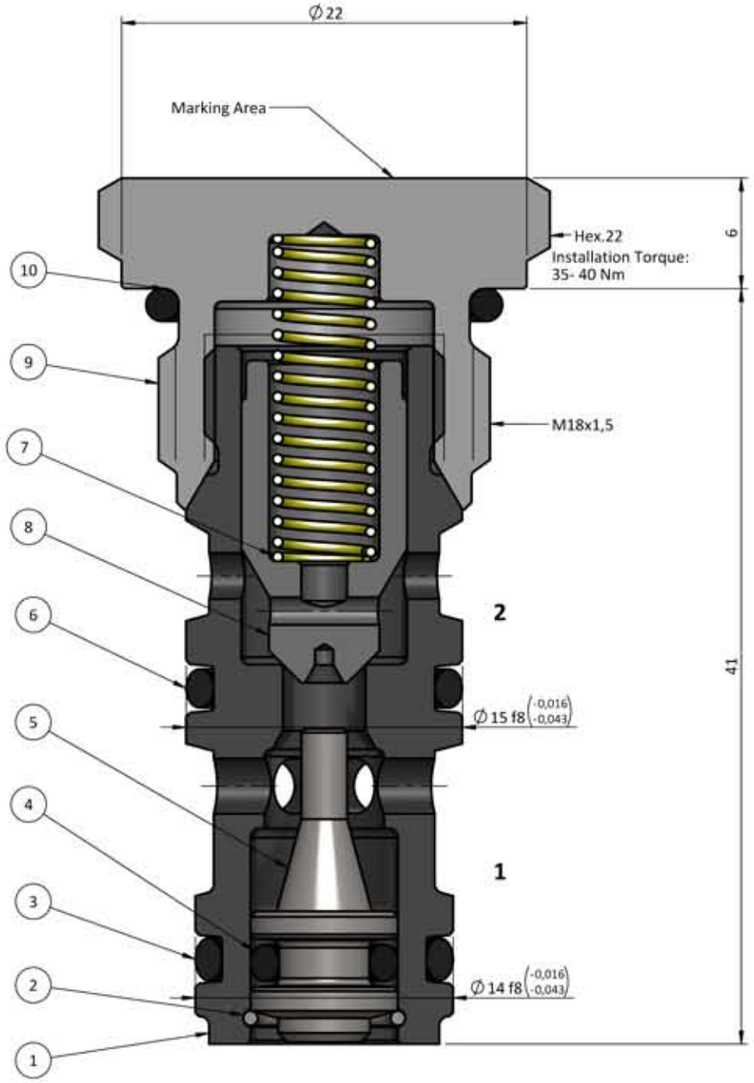
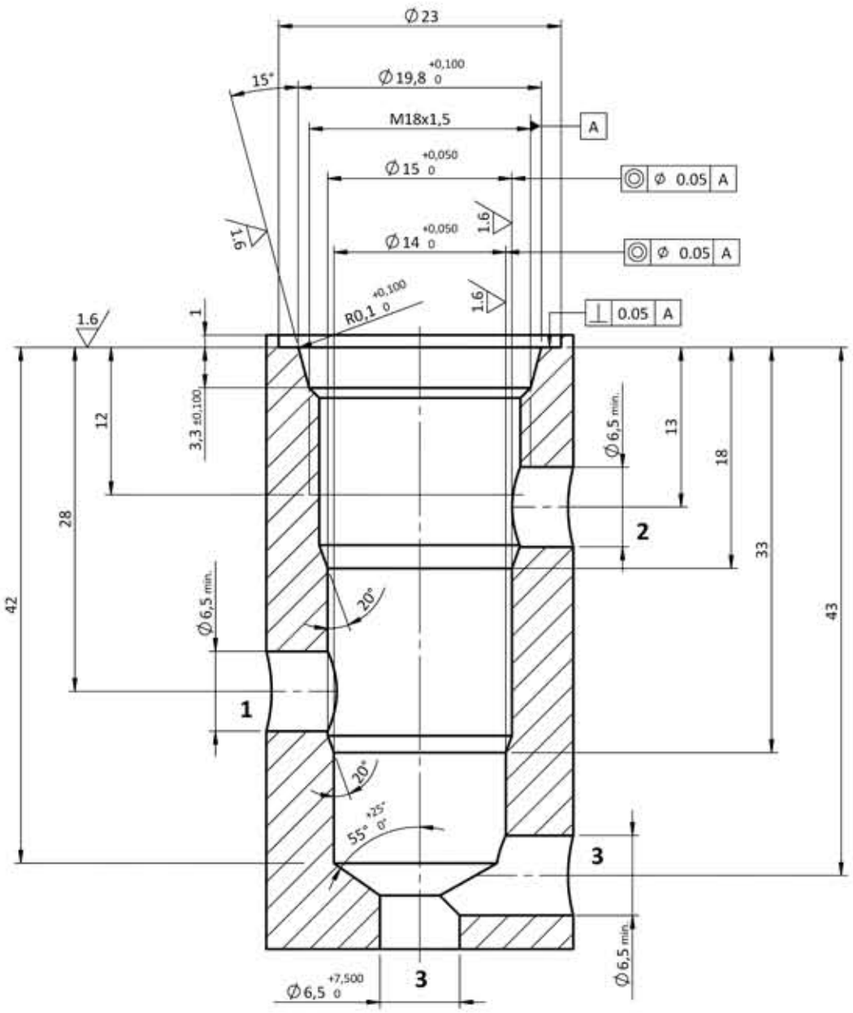
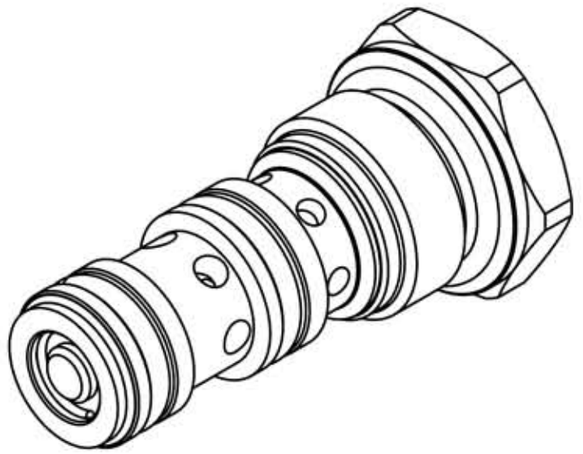


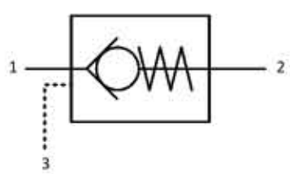
3





Item #	Part description	Default
10	O-Ring 90 Sh Ø15.6 x Ø1.78 NBR	1
9	Retainer	1
8	Poppet	1
7	Spring	1
6	O-Ring 93 Sh Ø10.82 x 1.78 NBR	1
5	Spool	1
4	O-Ring 70 Sh Ø4.48 x Ø1.78 NBR	1
3	O-Ring 93 Sh Ø10.82 x 1.78 NBR	1
2	Retaining Ring UNI 7433-B-10	1
1	Valve Seat	1

Cracking pressure: **0.5 bar**.
Pilot Ratio: **3.2:1** .
Marking Instructions: **Date Code** - Valve code - Cracking pressure



QUOTES AND TOLERANCES NOT REPORTED ON THE DRAWING TO BE IN ACCORDANCE WITH
ISO 2768-1/2
Precision Grade: PRECISE

A3

Unless otherwise specified break all inside and outside corners 0.1 - 0.2 mm

Valve Description
Single Pilot Check Valve

CP-M18

Rev.

Customer Code

Mass [g]
59.51

Replacing

Date

Designed by

Date

Scale
2:1

Reference Project:

aidro

Max Pressure
210 bar

Max Flow
40 l/min

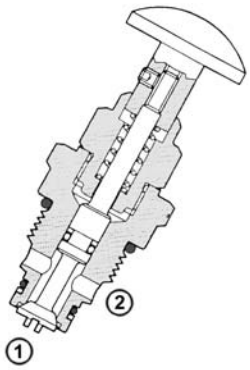
Typology
Check Valve

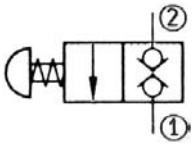
aidro

HYDRAULIC SCREW-IN VALVES type VEM-34
N.C. 1-DIR. FLOW – MANUAL OPERATED

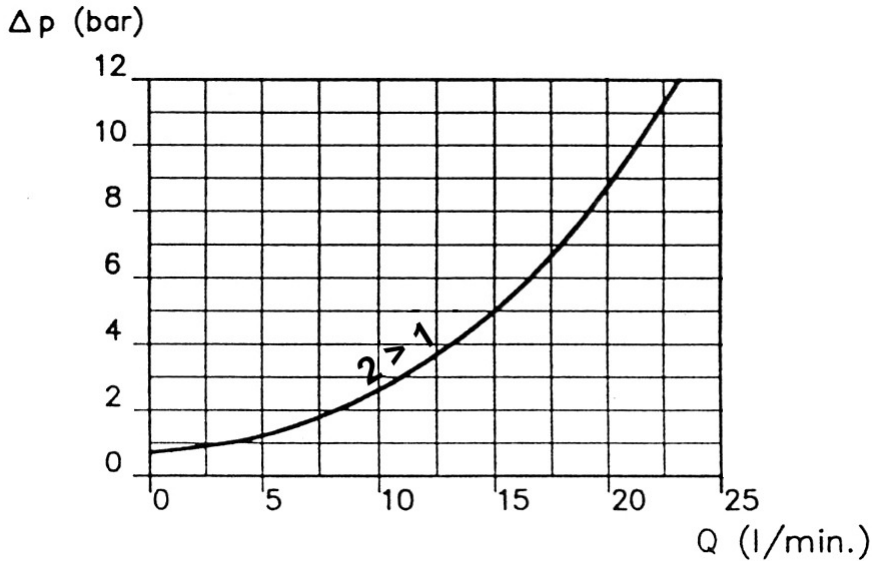
TABLE AC-200

- Suitable for standard cavity **3/4" 16 UNF**
- **2-way** manual operated poppet valves
- **Normally closed**, one direction flow
- Stroke adjustment by rotation of the knob to the desired position. A set screw will fix the new position
- Maximum operating pressure: 350bar
- Maximum recommended flow rate: 20 l/min
- Operating temperature: -30°C +50°C
- Steel body zinc plated
- Poppet in hardened and grinded steel
- Mass 0,13kg



SYMBOL	ORDERING CODE	
	VEM-34-NC/20	
	VEM	2-way manual operated poppet valve
	34	Size 3/4" – 16 UNF
	NC	Normally closed
	20	Drawing

TYPICAL DIAGRAM

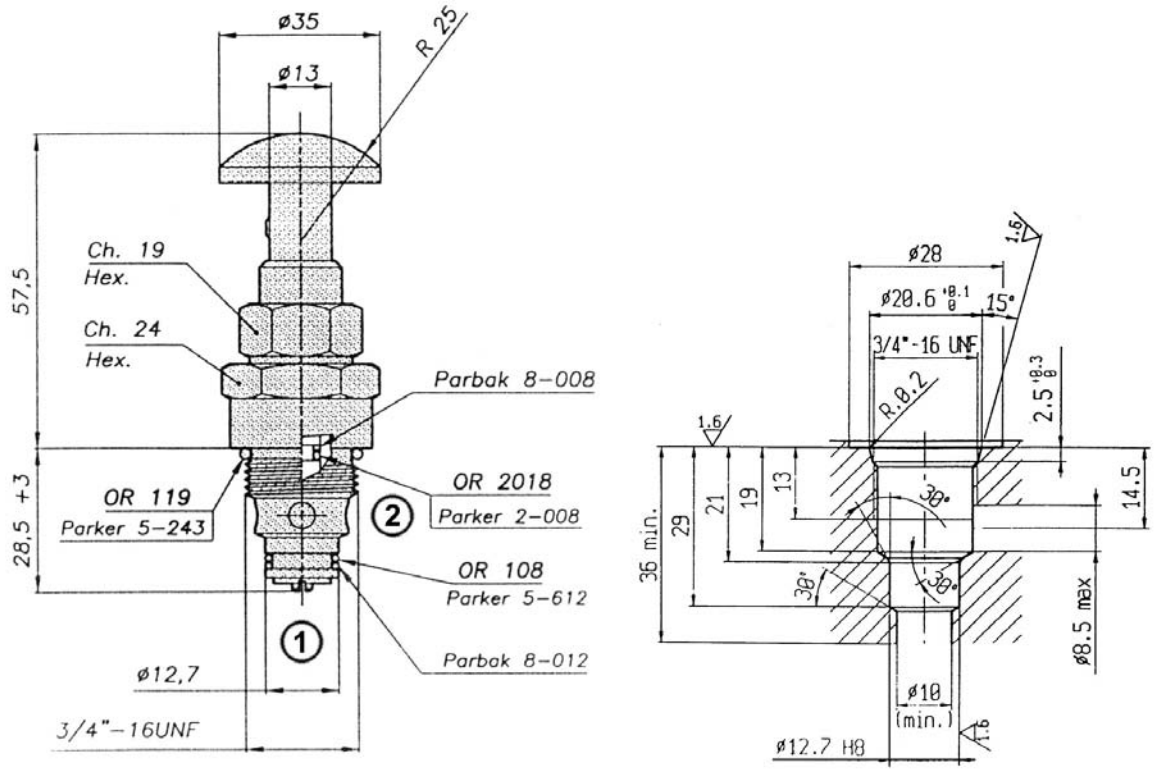


Typical Δp-Q curves for valves VEM.34 in standard configuration, with mineral oil at 42cSt and 50°C for flow 2 => 1

aidro srl – Italia – 21020 Taino VA Via Prati Bassi 36 – Tel +39 0331 960250 Fax+39 0331 960075 e-mail: aidro@aidro.it web: www.aidro.it

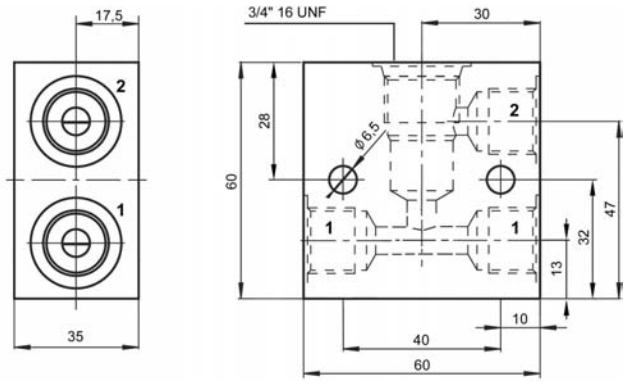
TABLE AC-200

OVERALL DIMENSIONS



Subject to technical and dimensional changes without notice

LINE ASSEMBLY BODY



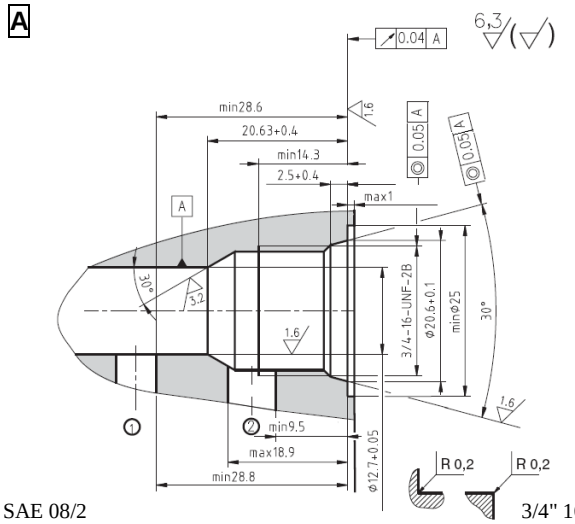
Code	Ports
LAB-34-2/14	1/4“ BSP
LAB-34-2/38	3/8“ BSP
Mass: 0,25 kg	

Suitable for standard 2-way screw-in valves, cavity 3/4“ 16 UNF. Designed for in-line assembly, either parallel or in series one, LAB aluminium bodies are supplied with one service port (1) plugged.

Screw in, 2-way solenoid operated directional valve

cavity 3/4” 16 UNF – SAE 08/2 - spool type EV2*.34.*

A



SAE 08/2 3/4" 16 UNF

B

❷ FUNCTIONAL SYMBOL

For 2 positions valves

C

O

Recommended use of ports
2=P; 1=T

❶ HOW TO READ THE MODEL CODE FOR VALVES EV2(O).34.(04).(012C).*.**

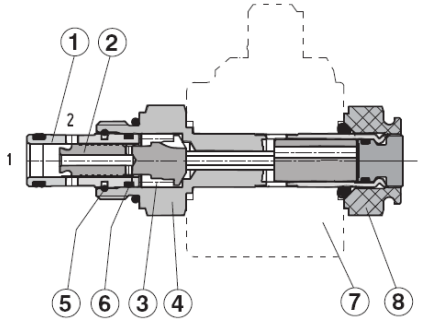
EV2 (O) . 34 . (04) . (012C) . * . **
① ② ③ ④ ⑤ ⑥ ⑦

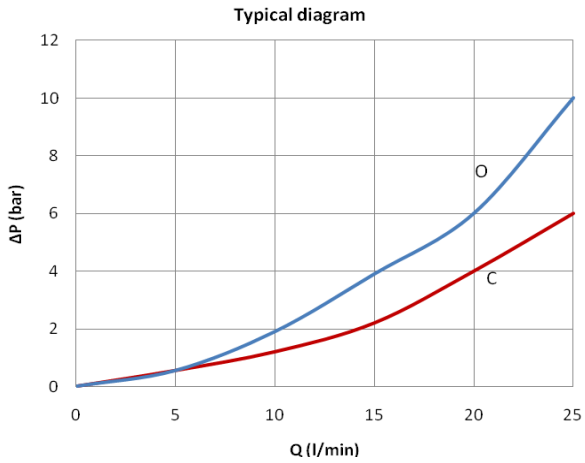
① EV2 : 2-way solenoid operated spool type
② (O) : spool type (see ❷)
C: normally closed
O: normally open
③ 34 : cavity 3/4” 16 UNF – see **A**
④ (04) : valves variants (see ❾)
03 : without manual override
04 : manual override push type (standard)
05 : manual override screw type
⑤ (012C) : electric voltage and solenoid coils (see ❻, ❿)
0000 : no coil
012C : coil for V12DC
024C : coil for V24DC
220R : coil for V220-230 RAC
⑥ * : options for coil connection (see ❿)
- : standard connection ISO4400/DIN43650/A
/ : /C flying leads; /D:Deutsch; /A: AMP Junior
⑦ ** : options for ISO4400/DIN 43650/A connectors (see ❼)
B9 : standard connector, black PG9
D9 : black connector, with diode, PG9
ES : "energy saving" connector with LED
R* : rectifier bridge; L*:LED; V*:LED+varistor

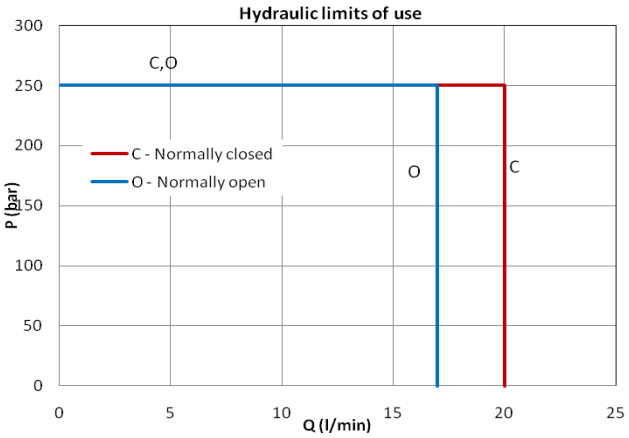
❸ DESCRIPTION

Screw-in 2/2 solenoid valves type EV2*.34 are composed by a valve sleeve ①, a control spool ②, a return spring ③, and an actuating assembly ④ that comprises the magnetic parts and the screwing section. An energizing electric solenoid coil ⑦ is fastened to the assembly by means of a retaining nut ⑧. When solenoid coils ⑦ is energized, a magnetic mobile armature shifts and by means of a rod installed inside assembly ④, moves the control spool which makes hydraulic connections between 1,2 ports.

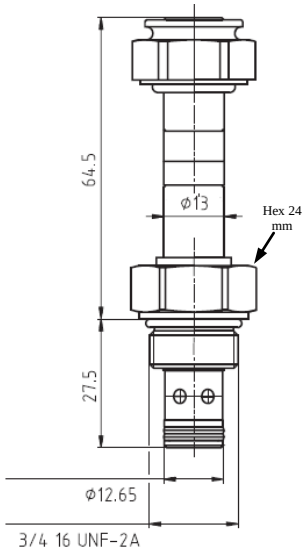
CROSS SECTIONAL VIEW
EV2O.34.03.0000







❺ INSTALLATION DIMENSIONS



Seals:

Body
Dualseal –PU:
1pcs- 10,3x12,7x3,1

O-ring – NBR
1 pcs- 17,0x1,8

Solenoid and retainig nut
O-ring- NBR
1-pcs- 12,3x2,4

All dimensions are mm

❹ TECHNICAL DATA

Nominal flow rate	16 l/min
Maximum rec.flow rate	20 l/min
Max pressure	25 MPa (250 bar)
Dimensions	see ❺
Installation	see ❽
Electric features	see ❻
Duty cycle	ED 100%

Mass (without coil) 0,20 kg.

❻ ELECTRIC FEATURES.

Those solenoid valves are normally equipped by coils type C36, which are energized from DC or AC supply (see ❿).
Coils type C36-***C are DC energized directly from a V***DC supply.
Coils type C36-***R are RAC (Rectified Alternate Current) energized from a V***AC supply, by a full wave bridge rectifier incorporated in the connector.

Coils type C36 are normally provided for use of ISO 4400/DIN 43650/A connectors. For coils with different connection to the power supply, see table C30/36.

❼ CONNECTORS.

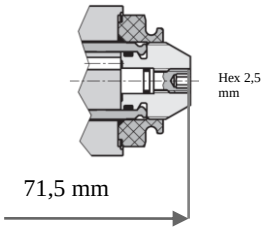
Standard coils are compatible with KA-132 connectors (see table) ; for some functions (R* = bridge rectifier, L* = LED, etc.) the voltage has to be specified :
1 = V12, V24 2 = V115 3 = V230
The "energy saving" connectors – option ES – save current consumption to less than 50% of the nominal and strongly reduce warming up of the coils – see table KA-ES.

❽ INSTALLATION

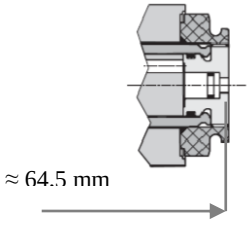
EV2*.34 valves are to be installed in cavity 3/4" 16 UNF (see A).
Check the appropriate state and position of the seals, screw the valve in the cavity and lock it with a torque of about 45 Nm applied on the 24 mm hexagon.

❾ VARIANTS OF MANUAL OVERRIDE

05: manual override
screw type

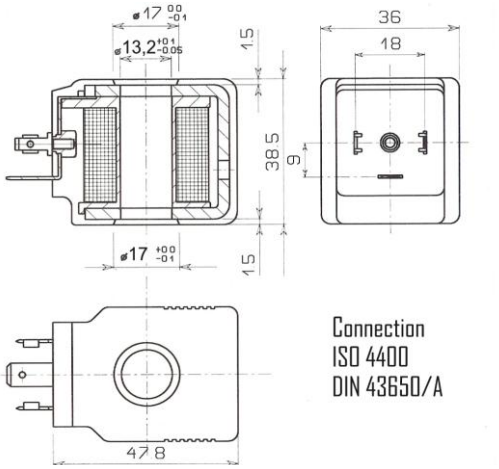


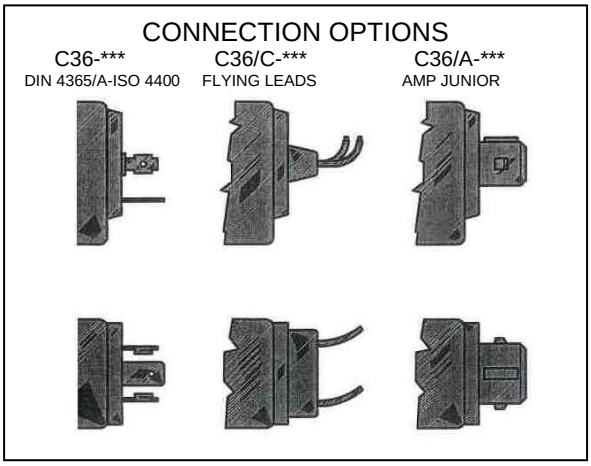
04: manual override
push type (standard)



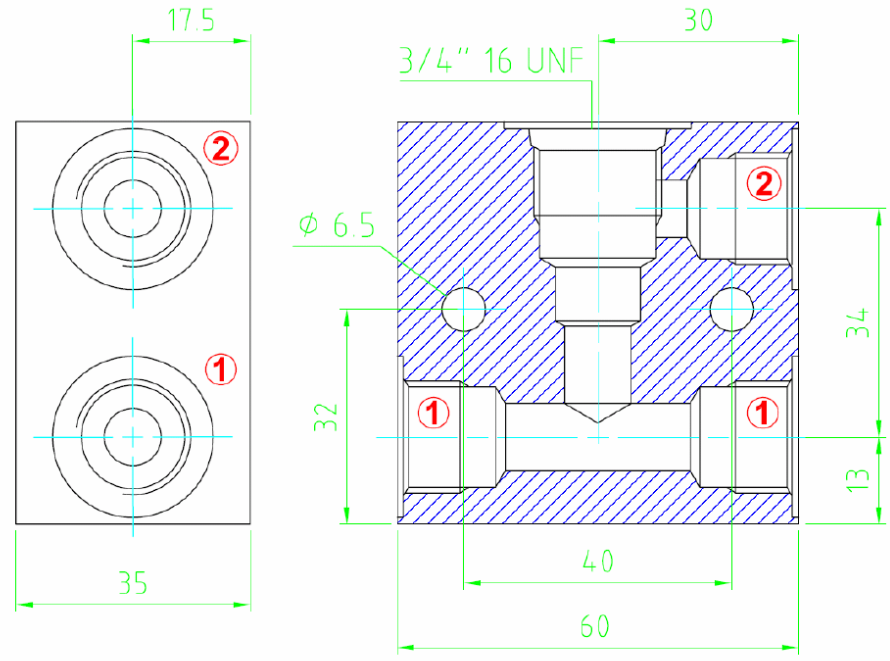
⑩ COILS TYPE C36 (Ø 13 mm)

Coils DIN	Voltage DC	Nominal current [A]	Resistance 20°C [Ω]	Nominal power [W]	Insulation class
C36-012C	V 12 DC	1,9	6,3	22,8	H
C36-024C	V 24 DC	0,95	25,6	22,5	
C36-024R	V 24 RAC	1,05	20,2	23	
C36-048C	V 48 DC	0,47	102	22,6	
C36-110R	V 110-115 RAC	0,23	420	22,9	
C36-220R	V 220-230 RAC	0,11	1720	22,3	



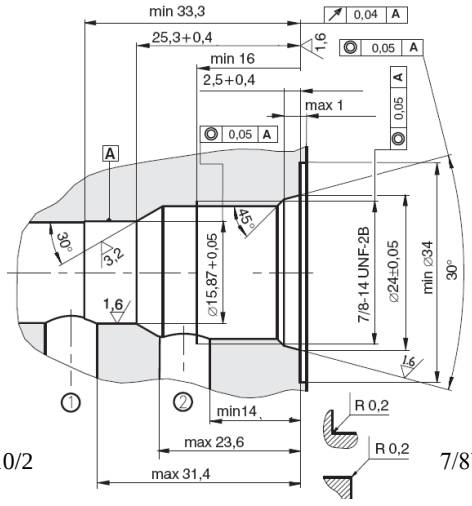


LINE ASSEMBLY BODY	Ports	Material	Mass
LAB-34-2/38	3/8" BSP	Aluminium Alloy	0,25 Kg



Screw in, 2-way solenoid operated directional valve cavity 7/8” 14 UNF - SAE 10/2 - spool type EV2*.78.*

A



SAE10/2 7/8” 14 UNF

B

❷ FUNCTIONAL SYMBOL

For 2 positions valves

C

O

Recommended use of ports:
2=P; 1=T

❶ HOW TO READ THE MODEL CODE FOR VALVES EV2(C).78.(04).(012C).*.**

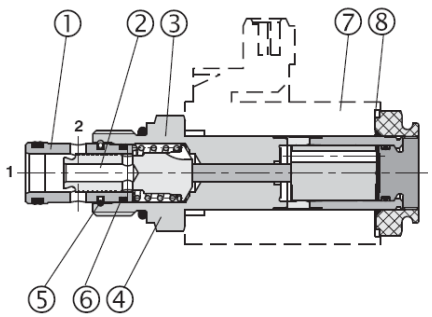
**EV2 (C) . 78 . 04 . (012C) . * / **
① ② ③ ④ ⑤ ⑥ ⑦

① EV2 : 2-way solenoid operated spool type
② (C) : spool type (see ❷)
C: normally closed
O: normally open
③ 78 : cavity 7/8” 14 UNF – see **A**
④ (04) : valves variants (see ❾)
03: without manual override
04: manual override push type (standard)
05: manual override screw type
⑤ (012C) : electric voltage and solenoid coils (see ❻)
0000 : no coil(s)
012C : coil(s) for V12DC
024C : coil(s) for V24DC
115A : coil(s) for V110/50 – V 115/60 AC
230A : coil(s) for V220/50 – V 230/60 AC
⑥ * : options for coil connection
- : standard connection ISO4400/DIN43650/A
/ : /D:Deutsch; /A: AMP Junior Timer; /AMPX
⑦ ** : design number (progressive) of the valves.

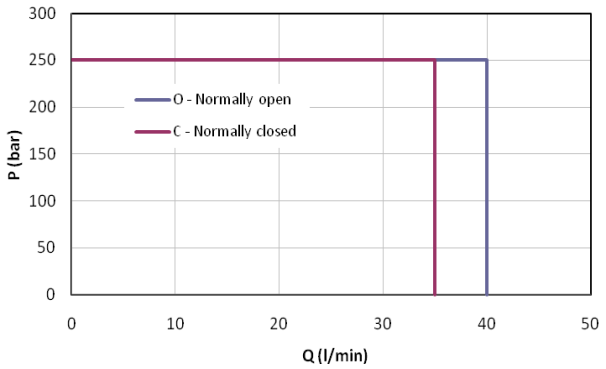
❸ DESCRIPTION

Screw-in 2/2 solenoid valves type EV2*.78 are composed by a valve sleeve ①, a control spool ②, a return spring ③, and an actuating assembly ④ that comprises the magnetic parts and the screwing section. An energizing electric solenoid coil ⑦ is fastened to the assembly by means of a retaining nut ⑧. When solenoid coils ⑦ is energized, a magnetic mobile armature shifts and by means of a rod installed inside assembly ④, moves the control spool which makes hydraulic connections between 1,2,3 ports.

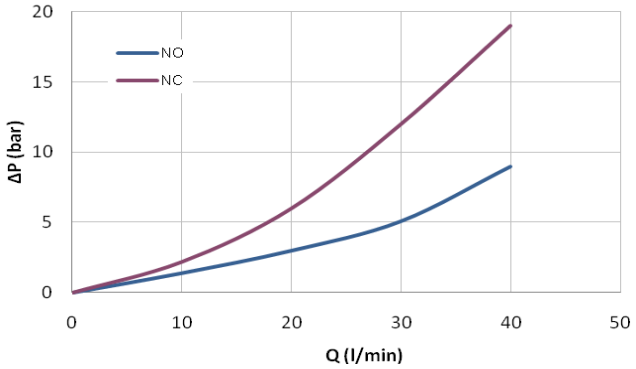
CROSS SECTIONAL VIEW EV2O.78.03.0000



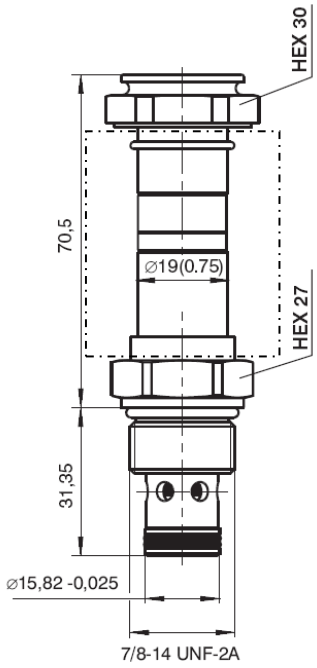
Hydraulic limits of use



Typical diagram



❺ INSTALLATION DIMENSIONS



Seals:

Body
Dualseal –PU:
1pcs- 13,47x15,87x3,1
O-ring – NBR
1 pcs- 19,4x2,1

Solenoid and retainig nut
O-ring- NBR
1-pcs- 18,0x1,5

All dimensions are mm

❹ TECHNICAL DATA

Nominal flow rate	32 l/min
Maximum rec.flow rate	40 l/min
Max pressure	25 MPa (250 bar)
Dimensions	see ❺
Installation	see ❽
Electric features	see ❻
Duty cycle	ED 100%
Mass (without coil)	0,22 kg.

❻ ELECTRIC FEATURES

Those solenoid operated valves are normally equipped by coils type B02, which are energized:

- directly from a D.C. voltage supply
  V 12 DC = 012C
  V 24 DC = 024C
- by the use of coils that incorporate a full wave bridge rectifier, from A.C. voltage supply :
  V 110/50 - V 115/60 = 115A
  V 220/50 - V 230/60 = 230A

❼ CONNECTORS

All connectors must conform to ISO 4400 (DIN 43650) and electric circuitry must be able to carry the following rated current values :
V 12 DC = 2,4 A V 115/50 = 0,26 A
V 24 DC = 1,2 A V 230/50 = 0,14 A

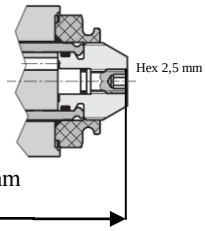
Coils with 2 electric pins, conforming with AMP connectors, are only available for DC supply (example of code : B02-012C AMP).

❽ INSTALLATION

EV2*.78 valves are to be installed in cavity 7/8" 14 UNF (see A).
Check the appropriate state and position of the seals, screw the valve in the cavity and lock it with a torque of about 40 Nm applied on the 27 mm hexagon.

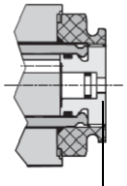
❾ VARIANTS OF MANUAL OVERRIDE

05: manual override screw type



≈78,0 mm

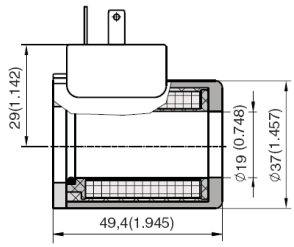
04: manual override push type (standard)



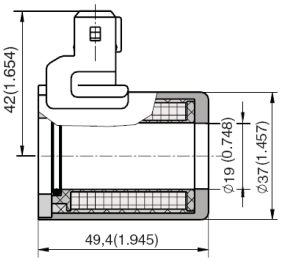
≈ 70,5 mm

⑩ COILS TYPE B02 (Ø 19 mm)

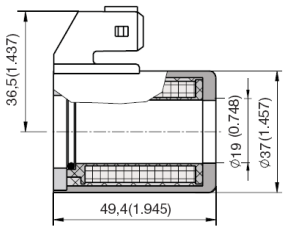
DIN 4365/A-ISO 4400



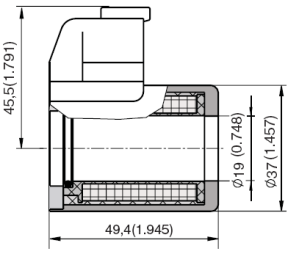
AMP (Amp Junior Timer)



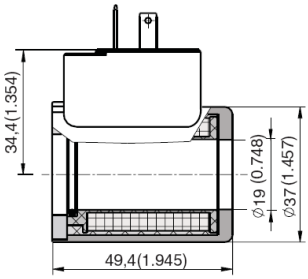
AMPX (Amp Junior Axial)



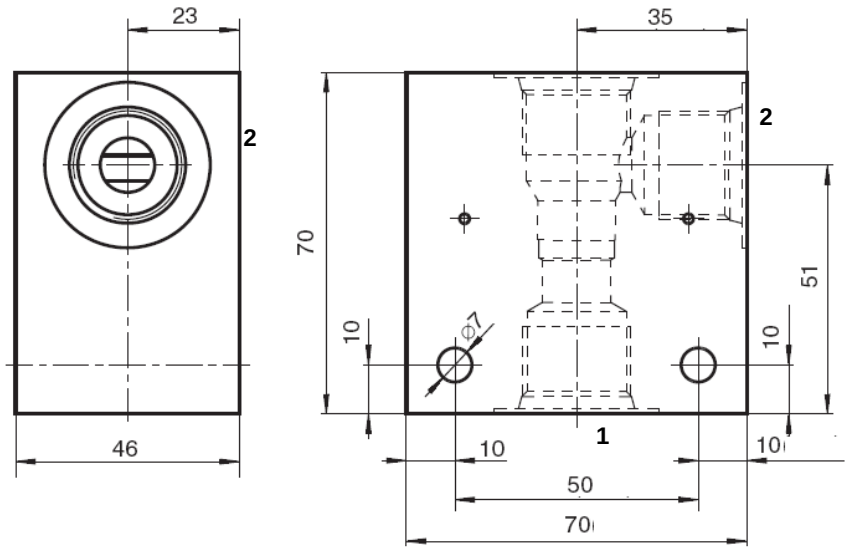
Deutsch



DIN 4365/A-ISO 4400
With Buit-in rectifier

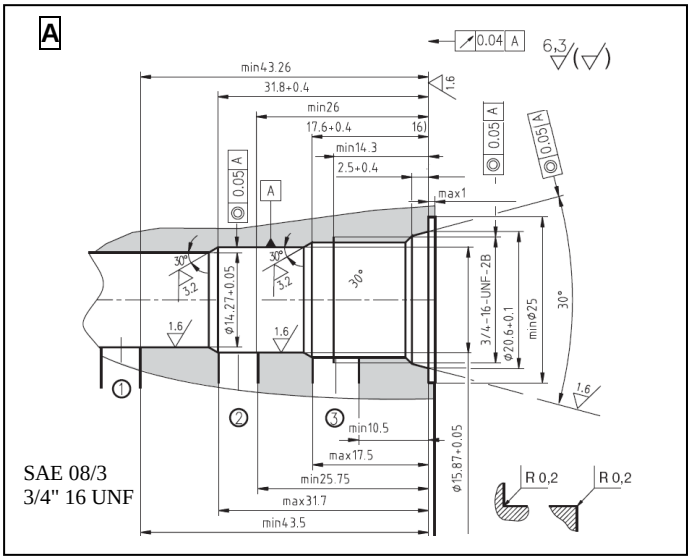


LINE ASSEMBLY BODY	**Ports**	**Material**	**Mass**
LAB-78-2/38	3/8" BSP	Aluminium Alloy	0,54 Kg



Screw in, 3-way solenoid operated directional valve cavity 3/4” 16 UNF – SAE 08/3 – spool type EV3*.34.*

A



B

❷ FUNCTIONAL SYMBOL

For 2 positions valves

C

O

Recommended use of ports
3=P; 1=T

❶ HOW TO READ THE MODEL CODE FOR VALVES EV3(C).34.(04).(012C).*.**

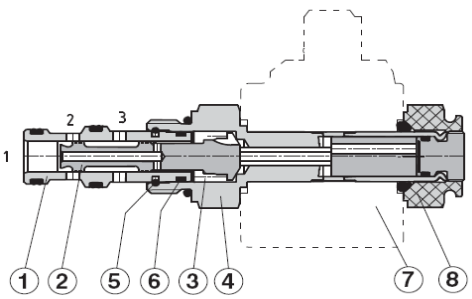
EV3 (C) . 34 . (04) . (012C) . * . **
① ② ③ ④ ⑤ ⑥ ⑦

① EV3 : 3-way solenoid operated spool type
② (C) : spool type (see ❷)
C: normally closed
O: normally open
③ 34 : cavity 3/4” 16 UNF – see **A**
④ (04) : valves variants (see ❾)
03 : without manual override
04 : manual override push type (standard)
05 : manual override screw type
⑤ (012C) : electric voltage and solenoid coils (see ❻, ❿)
0000 : no coil
012C : coil for V12DC
024C : coil for V24DC
220R : coil for V220-230 RAC
⑥ * : options for coil connection (see ❿)
- : standard connection ISO4400/DIN43650/A
/ : /C flying leads; /D:Deutsch; /A: AMP Junior
⑦ ** : options for ISO4400/DIN 43650/A connectors (see ❼)
B9 : standard connector, black PG9
D9 : black connector, with diode, PG9
ES : "energy saving" connector with LED
R* : rectifier bridge; L*:LED; V*:LED+varistor

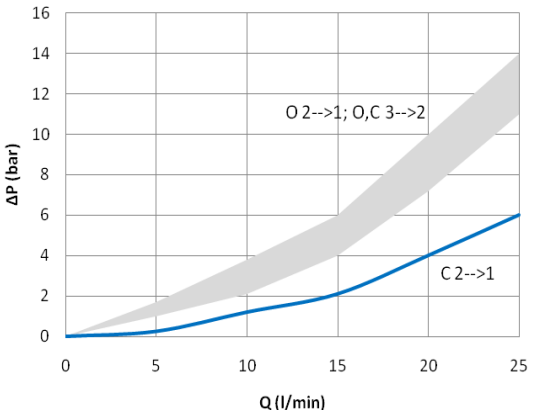
❸ DESCRIPTION

Screw-in 3/2 solenoid valves type EV3*.34 are composed by a valve sleeve ①, a control spool ②, a return spring ③, and an actuating assembly ④ that comprises the magnetic parts and the screwing section. An energizing electric solenoid coil ⑦ is fastened to the assembly by means of a retaining nut ⑧. When solenoid coils ⑦ is energized, a magnetic mobile armature shifts and by means of a rod installed inside assembly ④, moves the control spool which makes hydraulic connections between 1,2,3 ports.

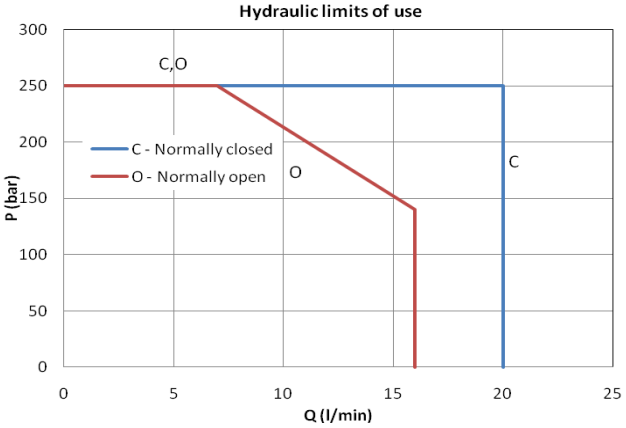
CROSS SECTIONAL VIEW
EV3C.34.03.0000



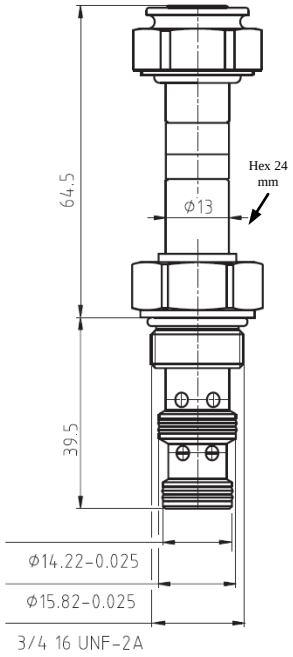
Typical diagram



Hydraulic limits of use



❺ INSTALLATION DIMENSIONS



Seals:

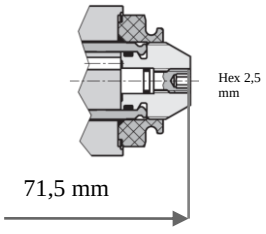
Body
Dualseal –PU:
1pcs- 11,87x14,27x3,1
1pcs- 13,4x15,87x3,1
O-ring – NBR
1 pcs- 17,0x1,8

Solenoid and retainig nut
O-ring- NBR
1-pcs- 12,4x2,4

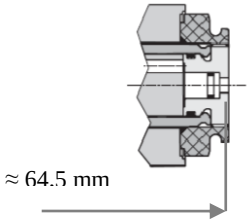
All dimensions are mm

❾ VARIANTS OF MANUAL OVERRIDE

05: manual override screw type



04: manual override push type (standard)



❹ TECHNICAL DATA

Nominal flow rate	16 l/min
Maximum rec.flow rate	20 l/min
Max pressure	25 MPa (250 bar)
Dimensions	see ❺
Installation	see ❽
Electric features	see ❻
Duty cycle	ED 100%

Mass (without coil) 0,20 kg.

❻ ELECTRIC FEATURES.

Those solenoid valves are normally equipped by coils type C36, which are energized from DC or AC supply (see ❿).
Coils type C36-***C are DC energized directly from a V***DC supply.
Coils type C36-***R are RAC (Rectified Alternate Current) energized from a V***AC supply, by a full wave bridge rectifier incorporated in the connector.

Coils type C36 are normally provided for use of ISO 4400/DIN 43650/A connectors. For coils with different connection to the power supply, see table C30/36.

❼ CONNECTORS.

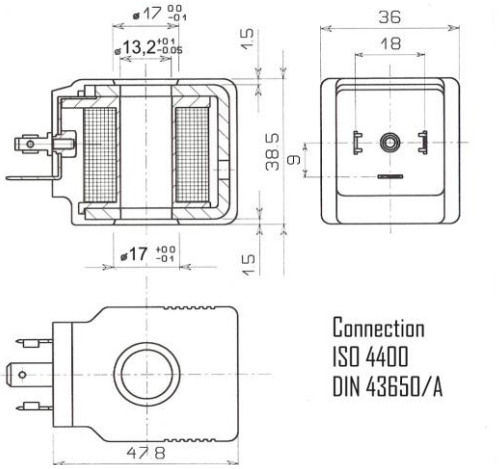
Standard coils are compatible with KA-132 connectors (see table) ; for some functions (R* = bridge rectifier, L* = LED, etc.) the voltage has to be specified :
1 = V12, V24 2 = V115 3 = V230
The "energy saving" connectors – option ES – save current consumption to less than 50% of the nominal and strongly reduce warming up of the coils – see table KA-ES.

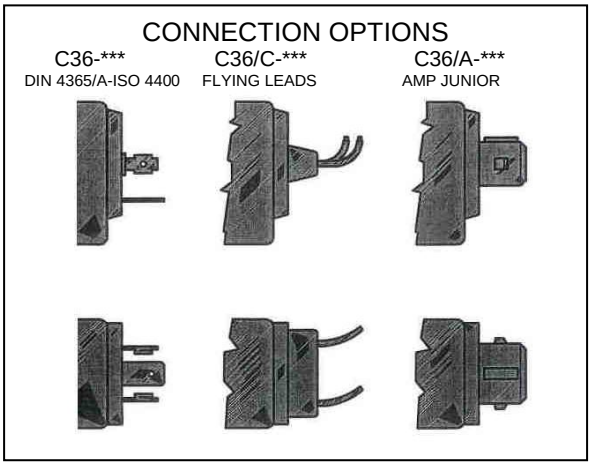
❽ INSTALLATION

EV3*.34 valves are to be installed in cavity 3/4" 16 UNF (see A).
Check the appropriate state and position of the seals, screw the valve in the cavity and lock it with a torque of about 45 Nm applied on the 24 mm hexagon.

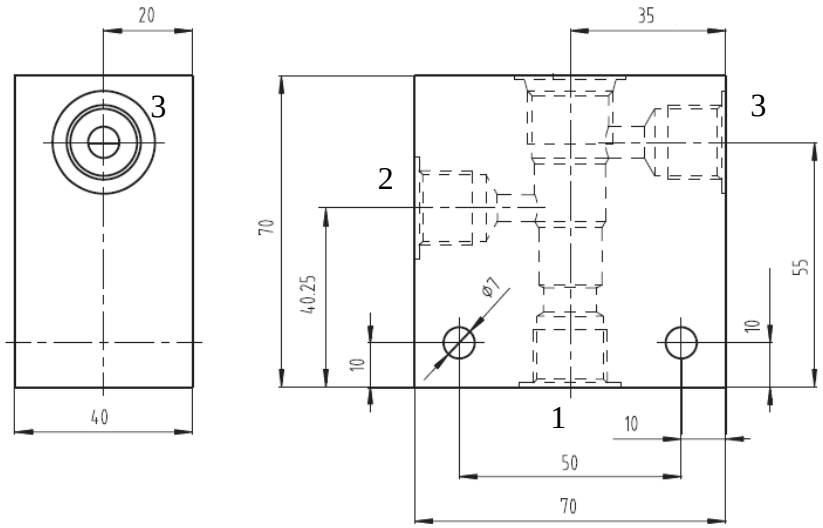
⑩ COILS TYPE C36 (Ø 13 mm)

Coils DIN	Voltage DC	Nominal current [A]	Resistance 20°C [Ω]	Nominal power [W]	Insulation class
C36-012C	V 12 DC	1,9	6,3	22,8	H
C36-024C	V 24 DC	0,95	25,6	22,5	
C36-024R	V 24 RAC	1,05	20,2	23	
C36-048C	V 48 DC	0,47	102	22,6	
C36-110R	V 110-115 RAC	0,23	420	22,9	
C36-220R	V 220-230 RAC	0,11	1720	22,3	





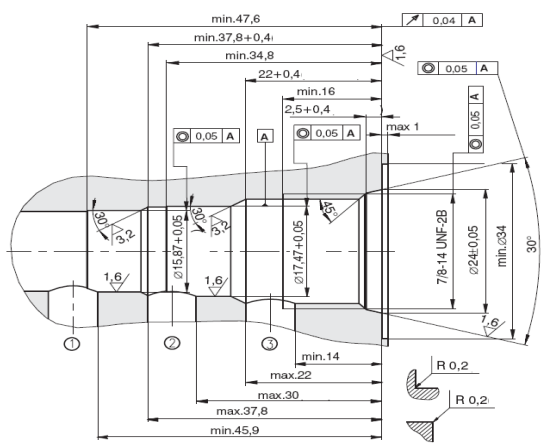
LINE ASSEMBLY BODY	Ports	Material	Mass
LAB-34-3/38	3/8" BSP	Aluminium Alloy	0,48 Kg



Screw in, 3-way solenoid operated directional valve

cavity 7/8” 14 UNF – SAE 10/3 - spool type EV3*.78.*

A



SAE 10/3 7/8” 14 UNF

B

❷ FUNCTIONAL SYMBOL

For 2 positions valves

C

O

Recommended use of ports
3=P; 1=T; 2=user

❶ HOW TO READ THE MODEL CODE FOR VALVES EV3(C).78.(04).(012C).*.**

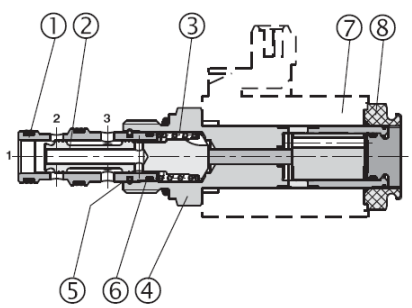
**EV3 (C) . 78 . 04 . (012C) . * / **
① ② ③ ④ ⑤ ⑥ ⑦

① EV3 : 3-way solenoid operated spool type
② (C) : spool type (see ❷)
C: normally closed
O: normally open
③ 78 : cavity 7/8” 14 UNF – see **A**
④ (04) : valves variants (see ❾)
03: without manual override
04: manual override push type (standard)
05: manual override screw type
⑤ (012C) : electric voltage and solenoid coils (see ❻)
0000 : no coil(s)
012C : coil(s) for V12DC
024C : coil(s) for V24DC
115A : coil(s) for V110/50 – V 115/60 AC
230A : coil(s) for V220/50 – V 230/60 AC
⑥ * : options for coil connection
- : standard connection ISO4400/DIN43650/A
/ : /D:Deutsch; /A: AMP Junior Timer; /AMPX
⑦ ** : design number (progressive) of the valves

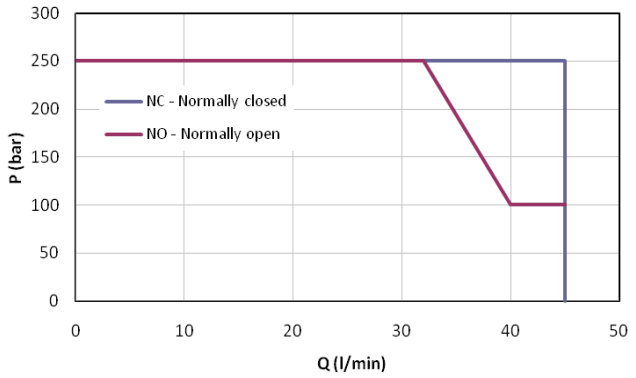
❸ DESCRIPTION

Screw-in 3/2 solenoid valves type EV3*.78 are composed by a valve sleeve ①, a control spool ②, a return spring ③, and an actuating assembly ④ that comprises the magnetic parts and the screwing section. An energizing electric solenoid coil ⑦ is fastened to the assembly by means of a retaining nut ⑧. When solenoid coils ⑦ is energized, a magnetic mobile armature shifts and by means of a rod installed inside assembly ④, moves the control spool which makes hydraulic connections between 1,2,3 ports.

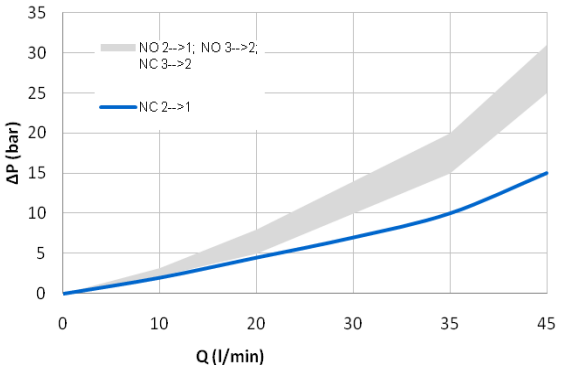
CROSS SECTIONAL VIEW EV3C.78.03.0000



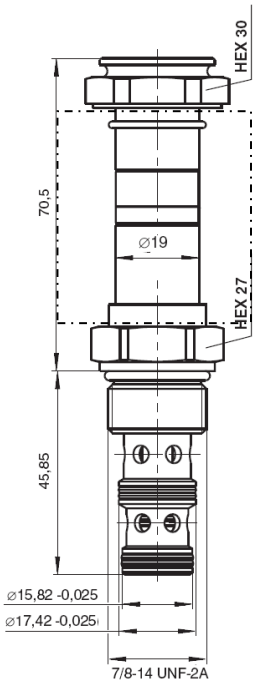
Hydraulic limits of use



Typical diagram



❺ INSTALLATION DIMENSIONS



Seals:

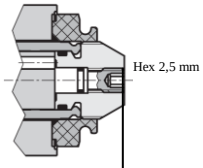
Body
Dualseal –PU:
1pcs- 13,87x15,87x3,1
1pcs- 17,47x15,07x3,1
O-ring – NBR
1 pcs- 19,4x2,1

Solenoid and retainig nut
O-ring- NBR
1-pcs- 18,0x1,5

All dimensions are mm

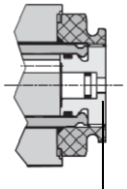
❾ VARIANTS OF MANUAL OVERRIDE

05: manual override screw type



≈78,0 mm

04: manual override push type (standard)



≈ 70,5 mm

❹ TECHNICAL DATA

Nominal flow rate	32 l/min
Maximum rec.flow rate	40 l/min
Max pressure	25 MPa (250 bar)
Dimensions	see ❺
Installation	see ❽
Electric features	see ❻
Duty cycle	ED 100%

Mass (without coil) 0,24 kg.

❻ ELECTRIC FEATURES

Those solenoid operated valves are normally equipped by coils type B02, which are energized:

- directly from a D.C. voltage supply
  V 12 DC = 012C
  V 24 DC = 024C
- by the use of coils that incorporate a full wave bridge rectifier, from A.C. voltage supply :
  V 110/50 - V 115/60 = 115A
  V 220/50 - V 230/60 = 230A

❼ CONNECTORS

All connectors must conform to ISO 4400 (DIN 43650) and electric circuitry must be able to carry the following rated current values :
V 12 DC = 2,4 A V 115/50 = 0,26 A
V 24 DC = 1,2 A V 230/50 = 0,14 A

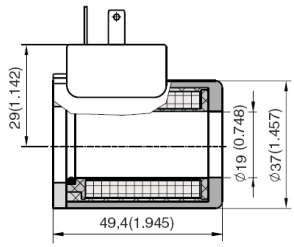
Coils with 2 electric pins, conforming with AMP connectors, are only available for DC supply (example of code : B02-012C AMP).

❽ INSTALLATION

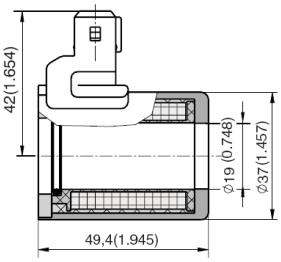
EV3*.78 valves are to be installed in cavity 7/8" 14 UNF (see A).
Check the appropriate state and position of the seals, screw the valve in the cavity and lock it with a torque of about 40 Nm applied on the 27 mm hexagon.

⑩ COILS TYPE B02 (Ø 19 mm)

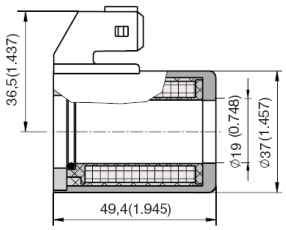
DIN 4365/A-ISO 4400



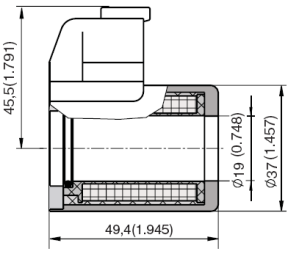
AMP (Amp Junior Timer)



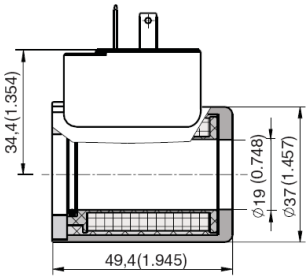
AMPX (Amp Junior Axial)



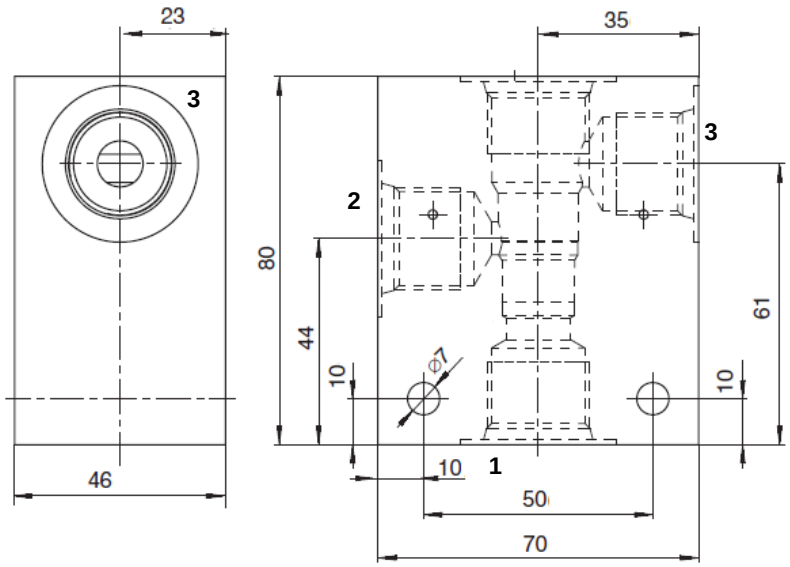
Deutsch



DIN 4365/A-ISO 4400
With Buit-in rectifier



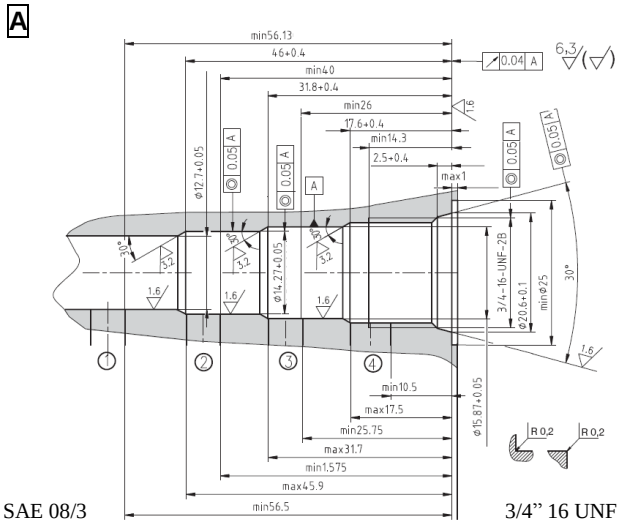
LINE ASSEMBLY BODY	**Ports**	**Material**	**Mass**
LAB-78-3/38	3/8” BSP	Aluminium Alloy	0,60 Kg



Screw in, 4-way solenoid operated directional valve

cavity 3/4" 16 UNF – SAE 08/4 - spool type EV4**.34.*

A



B

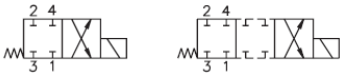
❷FUNCTIONAL SYMBOL

For 2 positions valves

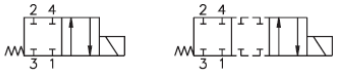
XP

PX

CX



CP



3=P; 1=T 2=A; 4=B

❶ HOW TO READ THE MODEL CODE FOR VALVES EV4(XP).34.(04).(012C).*.**

EV4	**(XP)**	**.**	**34**	**.**	**(04)**	**.**	**(012C)**	**.**	*****	**.**	******
①	②		③		④		⑤		⑥		⑦

① EV4 : 4-way solenoid operated spool type

② (XP) : spool type (see ❷)

③ 34 : cavity 3/4" 16 UNF – see **A**

④ (04) : valves variants (see ❾)

- 03 : without manual override
- 04 : manual override push type (standard)
- 05 : manual override screw type

⑤ (012C) : electric voltage and solenoid coils (see ❻, ❿)

- 0000 : no coil
- 012C : coil for V12DC
- 024C : coil for V24DC
- 220R : coil for V220-230 RAC

⑥ * : options for coil connection (see ❿)

- \- : standard connection ISO4400/DIN43650/A
- / : /C flying leads; /D:Deutsch; /A: AMP Junior

⑦ ** : options for ISO4400/DIN 43650/A connectors (see ❼)

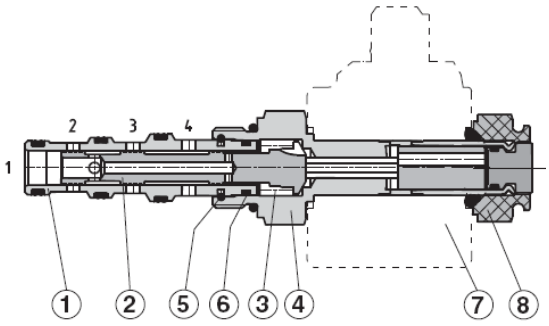
- B9 : standard connector, black PG9
- D9 : black connector, with diode, PG9
- ES : "energy saving" connector with LED
- R* : rectifier bridge; L*:LED; V*:LED+varistor

❸ DESCRIPTION

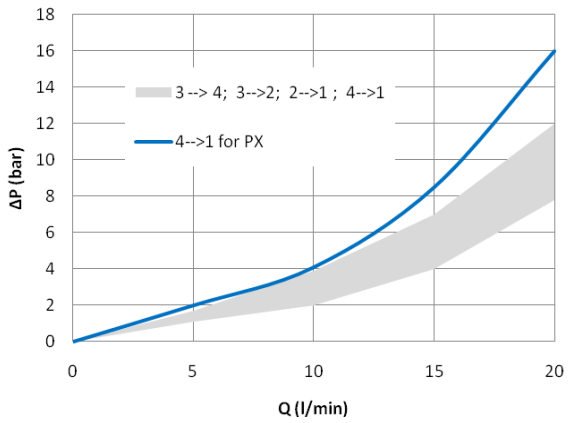
Screw-in 4/2 solenoid valves type EV4**.34 are composed by a valve sleeve ①, a control spool ②, a return spring ③, and an actuating assembly ④ that comprises the magnetic parts and the screwing section. An energizing electric solenoid coil ⑦ is fastened to the assembly by means of a retaining nut ⑧. When solenoid coils ⑦ is energized, a magnetic mobile armature shifts and by means of a rod installed inside assembly ④, moves the control spool which makes hydraulic connections between 1,2,3,4 ports.

CROSS SECTIONAL VIEW

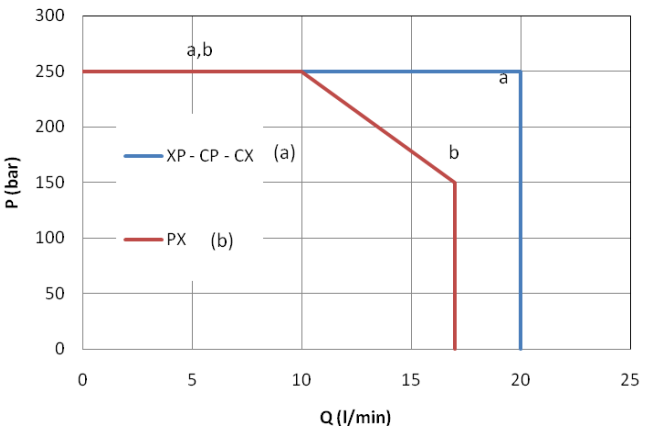
EV4CX.34.03.0000



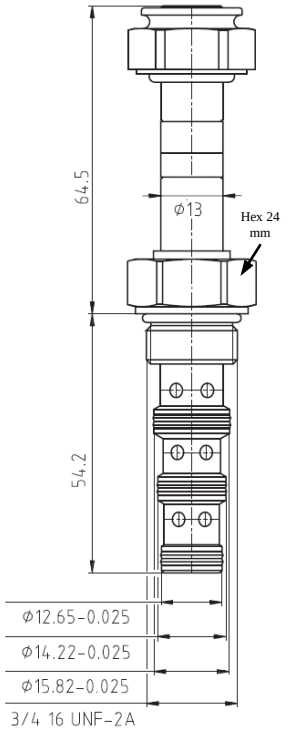
Typical diagram



Hydraulic limits of use



❺ INSTALLATION DIMENSIONS



Seals:

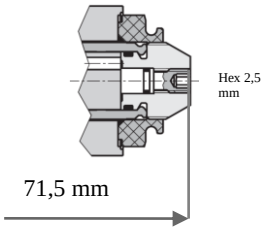
Body
Dualseal –PU:
1pcs- 10,3x12,7x3,1
1pcs- 11,87x14,27x3,1
1pcs- 13,4x15,87x3,1
O-ring – NBR
1 pcs- 17,0x1,8

Solenoid and retainig nut
O-ring- NBR
1-pcs- 12,4x2,4

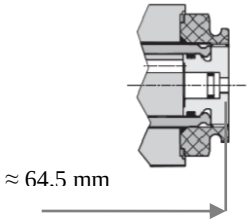
All dimensions are mm

❾ VARIANTS OF MANUAL OVERRIDE

05: manual override screw type



04: manual override push type (standard)



❹ TECHNICAL DATA

Nominal flow rate	16 l/min
Maximum rec.flow rate	20 l/min
Max pressure	25 MPa (250 bar)
Dimensions	see ❺
Installation	see ❽
Electric features	see ❻
Duty cycle	ED 100%

Mass (without coil) 0,20 kg.

❻ ELECTRIC FEATURES.

Those solenoid valves are normally equipped by coils type C36, which are energized from DC or AC supply (see ❿).
Coils type C36-***C are DC energized directly from a V***DC supply.
Coils type C36-***R are RAC (Rectified Alternate Current) energized from a V***AC supply, by a full wave bridge rectifier incorporated in the connector.

Coils type C36 are normally provided for use of ISO 4400/DIN 43650/A connectors. For coils with different connection to the power supply, see table C30/36.

❼ CONNECTORS.

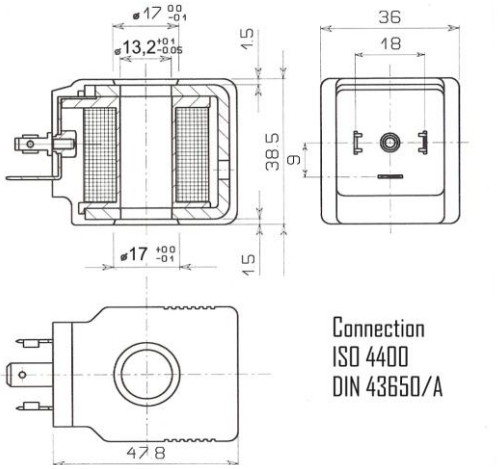
Standard coils are compatible with KA-132 connectors (see table) ; for some functions (R* = bridge rectifier, L* = LED, etc.) the voltage has to be specified :
1 = V12, V24 2 = V115 3 = V230
The "energy saving" connectors – option ES – save current consumption to less than 50% of the nominal and strongly reduce warming up of the coils – see table KA-ES.

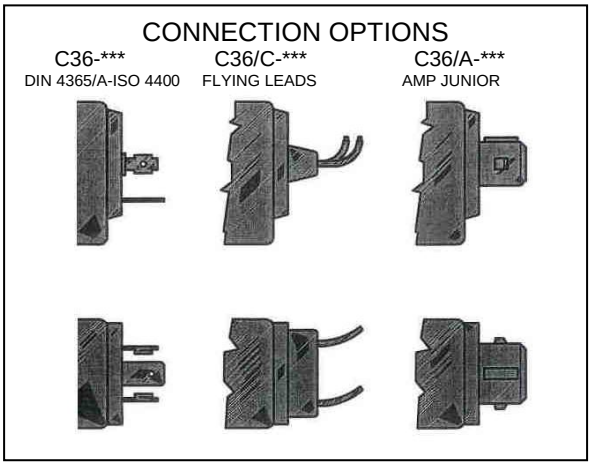
❽ INSTALLATION

EV4**.34 valves are to be installed in cavity 3/4" 16 UNF (see A).
Check the appropriate state and position of the seals, screw the valve in the cavity and lock it with a torque of about 45 Nm applied on the 24 mm hexagon.

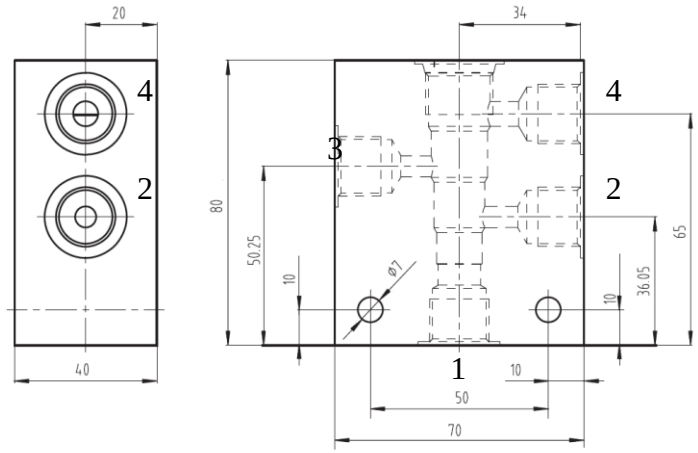
⑩ COILS TYPE C36 (Ø 13 mm)

Coils DIN	Voltage DC	Nominal current [A]	Resistance 20°C [Ω]	Nominal power [W]	Insulation class
C36-012C	V 12 DC	1,9	6,3	22,8	H
C36-024C	V 24 DC	0,95	25,6	22,5	
C36-024R	V 24 RAC	1,05	20,2	23	
C36-048C	V 48 DC	0,47	102	22,6	
C36-110R	V 110-115 RAC	0,23	420	22,9	
C36-220R	V 220-230 RAC	0,11	1720	22,3	



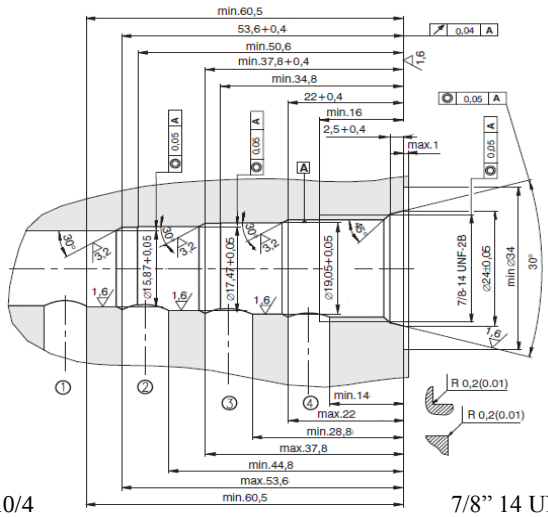


LINE ASSEMBLY BODY	Ports	Material	Mass
LAB-34-4/38	3/8" BSP	Aluminium Alloy	0,54 Kg



Screw in, 4-way solenoid operated directional valve cavity 7/8” 14 UNF – SAE 10/4 - spool type EV4**.78.*

A



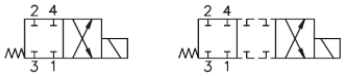
SAE 10/4 7/8” 14 UNF

B

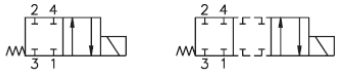
❷ FUNCTIONAL SYMBOL
For 2 positions valves

XP

CX



CP



Recommended use of ports
3=P; 1=T 2=A; 4=B

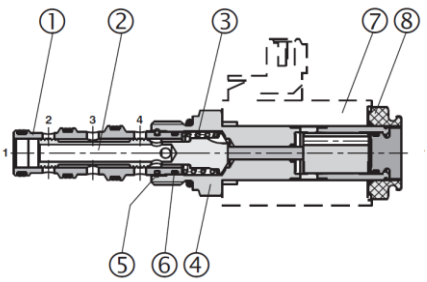
❶ HOW TO READ THE MODEL CODE FOR VALVES EV4(XP).78.(04).(012C).*.**

**EV4 (XP) . 78 . 04 . (012C) . * / **
① ② ③ ④ ⑤ ⑥ ⑦

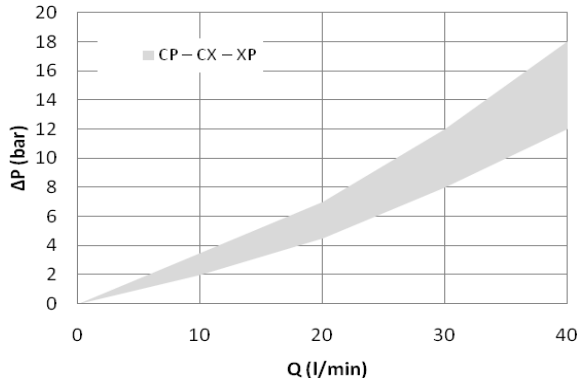
① EV4 : 4-way solenoid operated spool type
② (XP) : spool type (see ❷)
③ 78 : cavity 7/8” 14 UNF – see **A**
④ (04) : valves variants (see ❾)
03: without manual override
04: manual override push type (standard)
05: manual override screw type
⑤ (012C) : electric voltage and solenoid coils (see ❻)
0000 : no coil(s)
012C : coil(s) for V12DC
024C : coil(s) for V24DC
115A : coil(s) for V110/50 – V 115/60 AC
230A : coil(s) for V220/50 – V 230/60 AC
⑥ * : options for coil connection
- : standard connection ISO4400/DIN43650/A
/ : /D:Deutsch; /A: AMP Junior Timer; /AMPX
⑦ ** : design number (progressive) of the valves.

❸ DESCRIPTION
Screw-in 4/2 solenoid valves type EV4**.78 are composed by a valve sleeve ①, a control spool ②, a return spring ③, and an actuating assembly ④ that comprises the magnetic parts and the screwing section. An energizing electric solenoid coil ⑦ is fastened to the assembly by means of a retaining nut ⑧. When solenoid coils ⑦ is energized, a magnetic mobile armature shifts and by means of a rod installed inside assembly ④, moves the control spool which makes hydraulic connections between 1,2,3 ports.

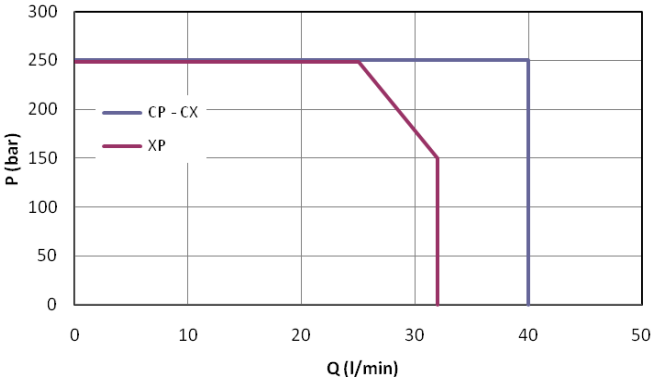
CROSS SECTIONAL VIEW EV4CP.78.03.0000



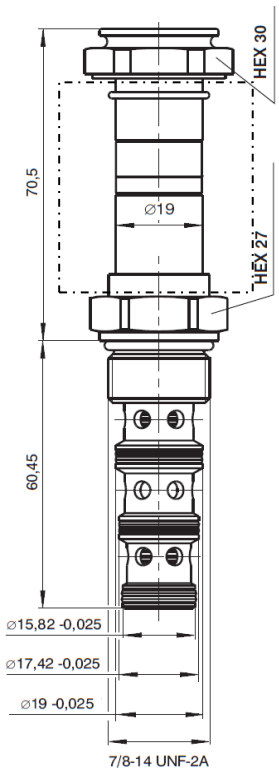
Typical diagram



Hydraulic limits of use



❺ INSTALLATION DIMENSIONS



All dimensions are mm

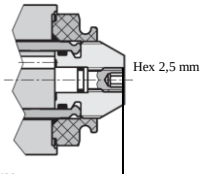
Seals:

Body
Dualseal –PU:
1pcs- 13,47x15,87x3,1
1pcs- 17,47x15,07x3,1
1pcs- 19,05x16,65x3,1
O-ring – NBR
1 pcs- 19,4x2,1

Solenoid and retainig nut
O-ring- NBR
1-pcs- 18,0x1,5

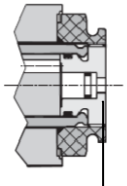
❾ VARIANTS OF MANUAL OVERRIDE

05: manual override screw type



≈78,0 mm

04: manual override push type (standard)



≈ 70,5 mm

❹ TECHNICAL DATA

Nominal flow rate	32 l/min
Maximum rec.flow rate	40 l/min
Max pressure	25 MPa (250 bar)
Dimensions	see ❺
Installation	see ❽
Electric features	see ❻
Duty cycle	ED 100%

Mass (without coil) 0,25 kg.

❻ ELECTRIC FEATURES

Those solenoid operated valves are normally equipped by coils type B02, which are energized:

- directly from a D.C. voltage supply
  V 12 DC = 012C
  V 24 DC = 024C
- by the use of coils that incorporate a full wave bridge rectifier, from A.C. voltage supply :
  V 110/50 - V 115/60 = 115A
  V 220/50 - V 230/60 = 230A

❼ CONNECTORS

All connectors must conform to ISO 4400 (DIN 43650) and electric circuitry must be able to carry the following rated current values :
V 12 DC = 2,4 A V 115/50 = 0,26 A
V 24 DC = 1,2 A V 230/50 = 0,14 A

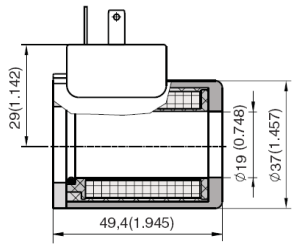
Coils with 2 electric pins, conforming with AMP connectors, are only available for DC supply (example of code : B02-012C AMP).

❽ INSTALLATION

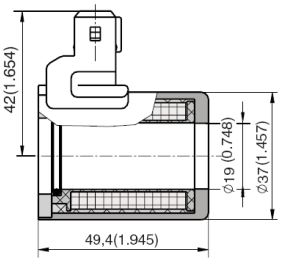
EV4**.78 valves are to be installed in cavity 7/8" 14 UNF (see A).
Check the appropriate state and position of the seals, screw the valve in the cavity and lock it with a torque of about 40 Nm applied on the 27 mm hexagon.

⑩ COILS TYPE B02 (Ø 19 mm)

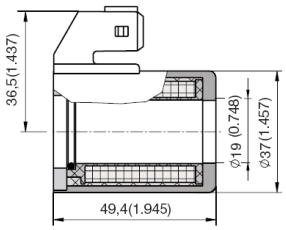
DIN 4365/A-ISO 4400



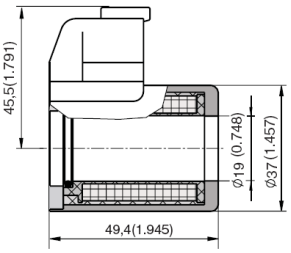
AMP (Amp Junior Timer)



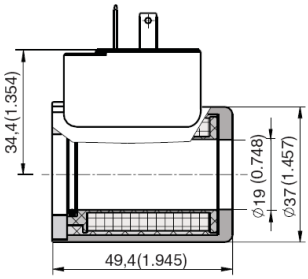
AMPX (Amp Junior Axial)



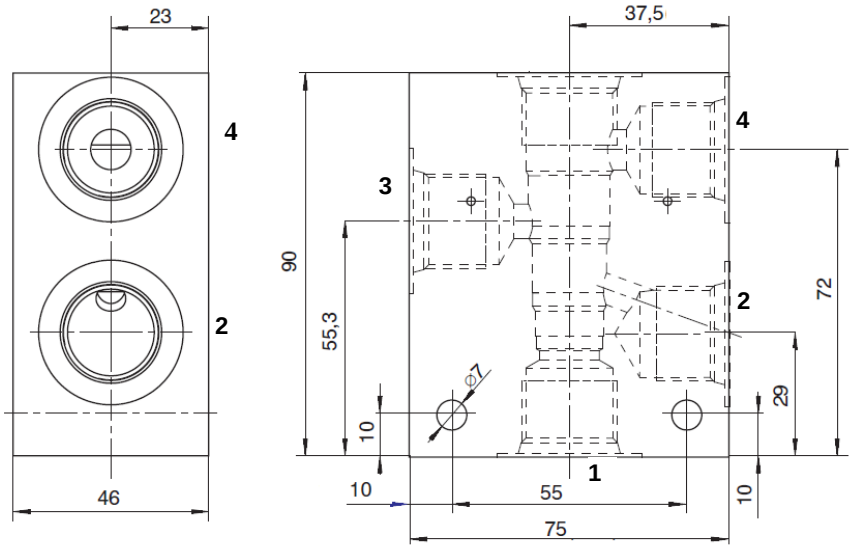
Deutsch



DIN 4365/A-ISO 4400
With Buit-in rectifier

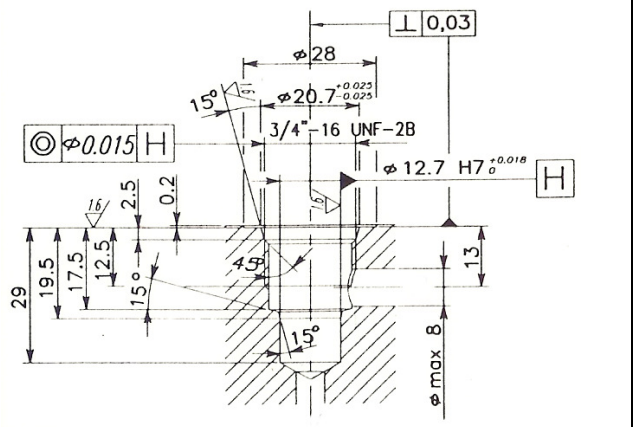


LINE ASSEMBLY BODY	**Ports**	**Material**	**Mass**
LAB-78-4/38	3/8" BSP	Aluminium Alloy	0,71 Kg



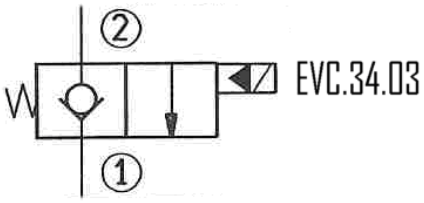
SCREW-IN, 2 WAY SOLENOID OPERATED POPPET VALVES NORMALLY CLOSED, CAVITY 3/4" 16 UNF Ø 12,7 mm ONE DIRECTION FLOW TYPE EVC.34.

A



B

❷ SYMBOLS



❶ HOW TO READ THE MODEL CODE FOR VALVES EVC.34.

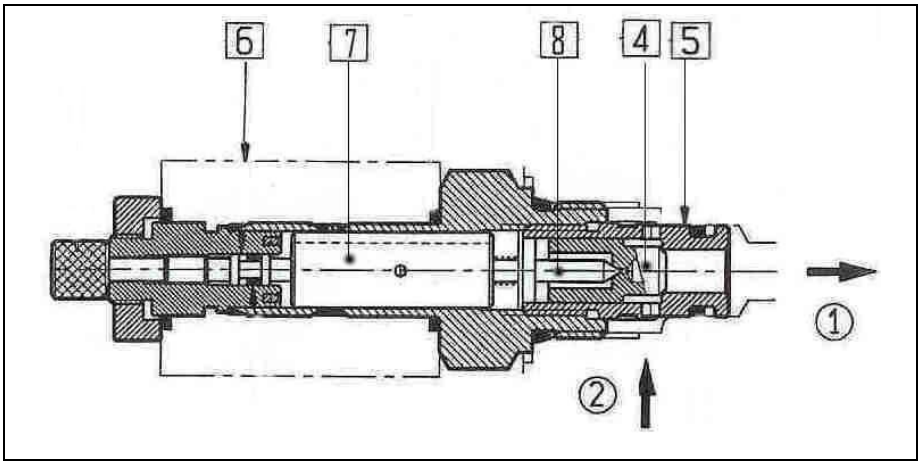
EV C. 34. 03. (012C). * . **

① ② ③ ④ ⑤ ⑥

①	EV	:	screw-in directional solenoid valve
②	C	:	valve with Ø 13 mm solenoid core (see ❻), 2 way, 2 position, poppet type, normally closed, one direction flow (see ❷)
③	34	:	cavity 3/4 " 16 UNF with Ø 12,7 mm - see A ❾
④	(012C)	:	electric voltage and solenoid coils (see ❼❿)
			0000 : no coil
			012C : coil for V12DC
			024C : coil for V24DC
			220R : coil for V220-230 RAC
			230/50 : coil for V230/50 AC
⑤	*	:	options for coil connection (see ❼)
			- : standard connection ISO4400/DIN 43650/A
			/C : flying leads; /K: Kostal; /A: AMP Junior
⑥	**	:	options for ISO4400/DIN 43650/A connectors (see ❽)
			B9 : standard connector, black PG9
			D9 : black connector, with diode, PG9
			ES : "energy saving" connector with LED
			R* : rectifier bridge; L*:LED; V*:LED+varistor

❸ DESCRIPTION

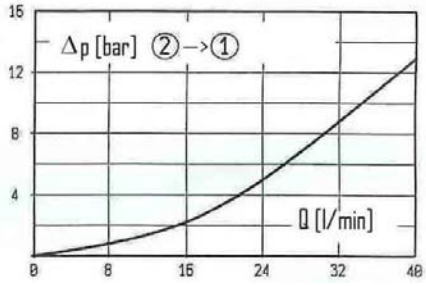
The poppet 4 is pilot operated and it is kept normally closed against its seat 5. When the solenoid 6 is energized, the mobile armature 7 and the pilot pin 8 are shifted and the poppet, unbalanced by pressure, opens permitting flow from ② to ①.



❹ TECHNICAL DATA

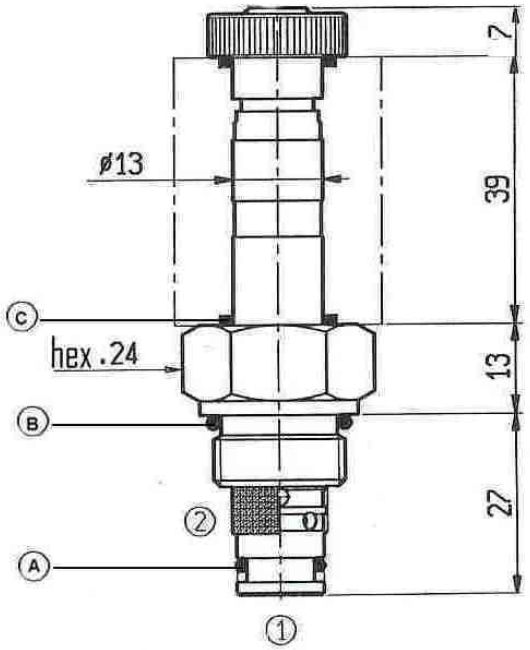
Nominal flow rate	32 l/min
Maximum rec.flow rate	40 l/min
Max pressure	25 Mpa (250 bar)
Dimensions	see ❻
Installation	see ❾
Electric features	see ❼
Duty cycle	ED 100%
Mass (without coil)	0,120 kg.

PRESSURE DROPS



Viscosity 42 cSt at 50°C.

❻ INSTALLATION DIMENSIONS.



Ⓒ 2 x O Ring 12,42 x 1,78

Ⓑ O Ring 16,36 x 2,20

Ⓐ O Ring 9,25 x 1,78 parbak 9,91 x 1,35

All dimensions are mm.

❺ VARIANTS

No variants on the valve.

❼ ELECTRIC FEATURES.

Those solenoid valves are normally equipped by coils type C30, which are energized from DC or AC supply (see ❿).
Coils type C30-***C are DC energized directly from a V***DC supply.
Coils type C30-***R are RAC (Rectified Alternate Current) energized from a V***AC supply, by a full wave bridge rectifier incorporated in the connector.

Solenoid valves type EVC.34. can also be AC energized, directly from a V***AC supply, by using appropriate C30-***/50 or C30-***/60 coils (see ❿).
(*) Caution : with AC operation, the inrush current can be up to 3-4 times the nominal holding value.

Coils type C30 are normally provided for use of ISO 4400/DIN 43650/A connectors. For coils with different connection to the power supply, see table C30/36.

❽ CONNECTORS.

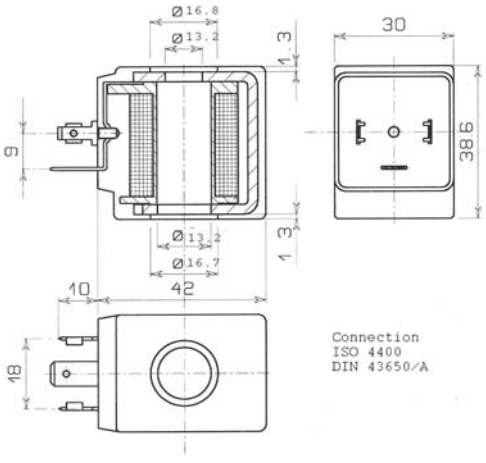
Standard coils are compatible with KA-132 connectors (see table) ; for some functions (R* = bridge rectifier, L* = LED, etc.) the voltage has to be specified :
1 = V12, V24 2 = V115 3 = V230
The "energy saving" connectors – option ES – save current consumption to less than 50% of the nominal and strongly reduce warming up of the coils – see table KA-ES.

❾ INSTALLATION

EV*.34 valves are to be installed in cavity 3/4" 16 UNF with Ø 12,7 mm (see A and ❻).
Check the appropriate state and position of the seals Ⓐ and Ⓑ, screw the valve in the cavity and lock it with a torque of about 45 Nm applied on the 24 mm hexagon.

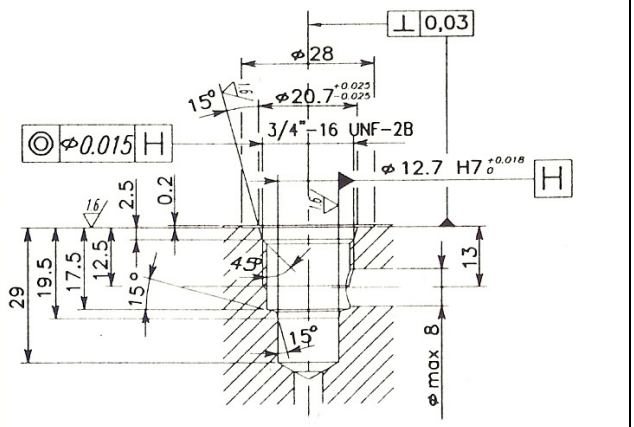
❿ COILS TYPE C30 (Ø 13 mm – 18 w : 35 VA)

Coils ISO/DIN	voltage DC/RAC	nominal current [A]	resistance 20°C [Ω]	nominal power [W]	isulation class
C30-012C	V 12 DC	1,55	7,7	18,6	F
C30-024C	V 24 DC	0,8	31	19	
C30-024R	V 24 RAC	0,85	27	18,3	
C30-048C	V 48 DC	0,4	116	19	
C30-048R	V 48 RAC	0,4	106	17,3	
C30-110R	V 110-115 RAC	0,16	600	16	
C30-220R	V 220-230 RAC	0,08	2500	16	
	AC	(*)		[VA] (*)	
C30-024/50	24V 50Hz	0,9	5,3	35	F
C30-110/50	110-115V 50Hz	0,2	108		
C30-230/50	220-230V 50Hz	0,1	438		
C30-110/60	110-115V 60Hz	0,3	92		
C30-220/60	220-230V 60Hz	0,15	375		



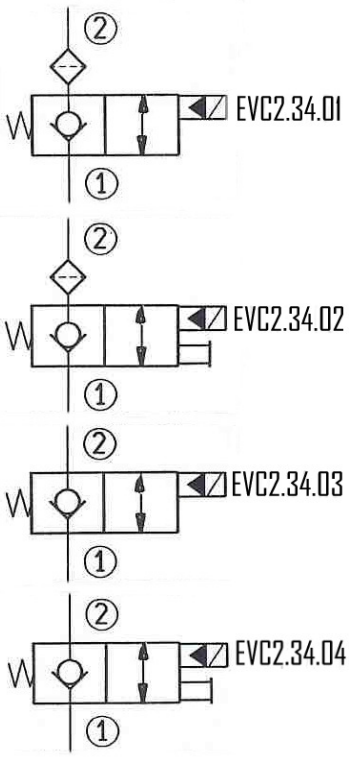
SCREW-IN, 2 WAY SOLENOID OPERATED POPPET VALVES NORMALLY CLOSED, CAVITY 3/4" 16 UNF Ø 12,7 mm TWO DIRECTIONS FLOW TYPE EVC2.34.

A



B

❷ SYMBOLS



❶ HOW TO READ THE MODEL CODE FOR VALVES EVC2.34.

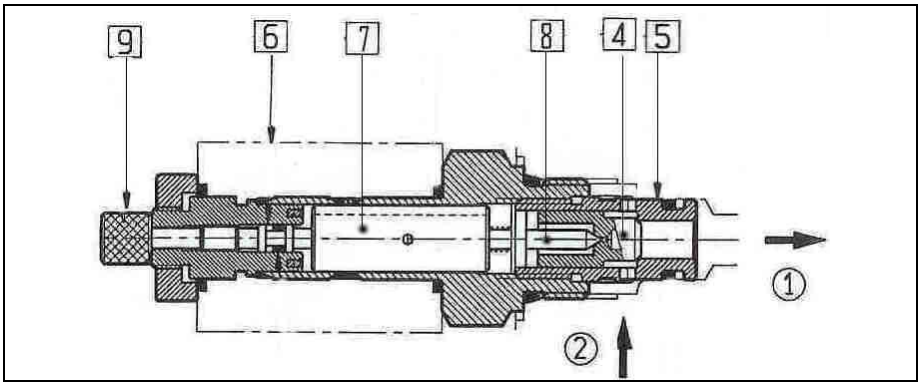
EV C2. 34. (04). (012C). * . **

① ② ③ ④ ⑤ ⑥ ⑦

①	EV	:	screw-in directional solenoid valve
②	C2	:	valve with Ø 13 mm solenoid core (see ❻), 2 way, 2 position, poppet type, normally closed, two directions flow (see ❷)
③	34	:	cavity 3/4 " 16 UNF with Ø 12,7 mm - see A ❾
④	(04)	:	valves variants (see ❷❺)
		01 :	filter
		02 :	filter and manual override
		03 :	--
		04 :	manual override
		P* :	manual override protection
⑤	(012C)	:	electric voltage and solenoid coils (see ❼❿)
		0000 :	no coil
		012C :	coil for V12DC
		024C :	coil for V24DC
		220R :	coil for V220-230 RAC
		230/50 :	coil for V230/50 AC
⑥	*	:	options for coil connection (see ❼)
		- :	standard connection ISO4400/DIN 43650/A
		/C :	flying leads; /K: Kostal; /A: AMP Junior
⑦	**	:	options for ISO4400/DIN 43650/A connectors (see ❽)
		B9 :	standard connector, black PG9
		D9 :	black connector, with diode, PG9
		ES :	"energy saving" connector with LED
		R* :	rectifier bridge; L*:LED; V*:LED+varistor

❸ DESCRIPTION

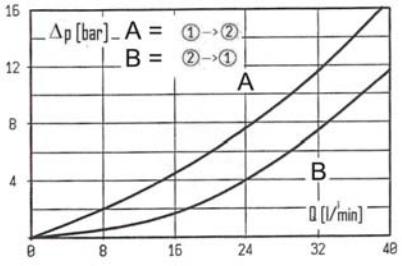
The poppet 4 is pilot operated and it is kept normally closed against its seat 5.
When the solenoid 6 is energized, the mobile armature 7 and the pilot pin 8 are shifted and the poppet, unbalanced by pressure, opens permitting flow in both directions.
The manual override 9 is of screw type and permits the valve operation in case of electric failure.



❹ TECHNICAL DATA

Nominal flow rate	32 l/min
Maximum rec.flow rate	40 l/min
Max pressure	25 Mpa (250 bar)
Dimensions	see ❻
Installation	see ❾
Electric features	see ❼
Duty cycle	ED 100%
Mass (without coil)	0,120 kg.

PRESSURE DROPS

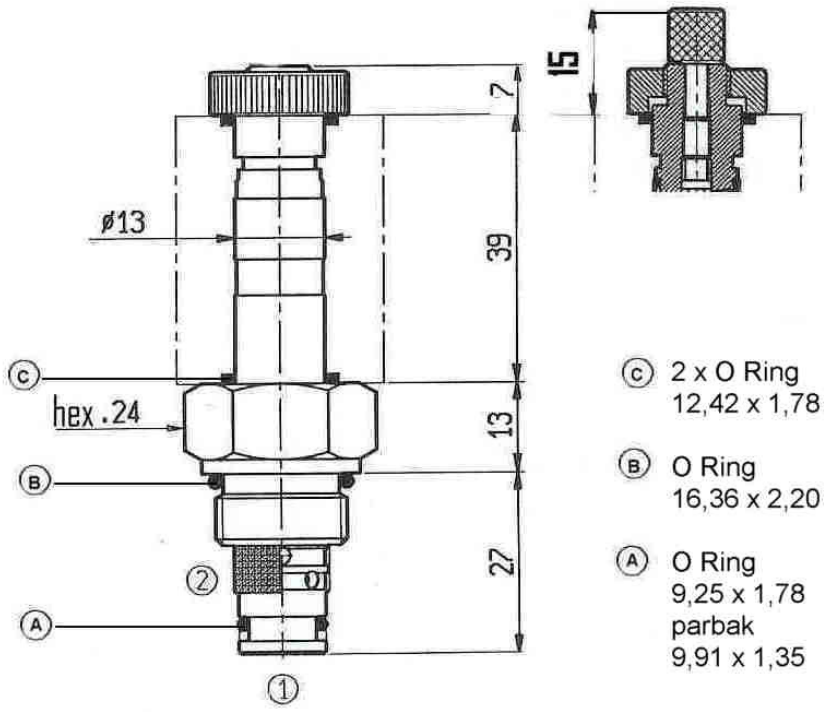


Viscosity 42 cSt at 50°C.

❺ VARIANTS

01 and 02 : filter (0,25 mm) on way ② prevents from dirt and better diffuses the flow around the poppet.
02 and 04 : manual override is of screw type. Turn anticlockwise to pilot the poppet open (flow from ② to ①); turn clockwise to reinstall the condition of normally closed poppet (no flow from ② to ①).

❻ INSTALLATION DIMENSIONS.



All dimensions are mm.

❼ ELECTRIC FEATURES.

Those solenoid valves are normally equipped by coils type C30, which are energized from DC or AC supply (see ❿).
Coils type C30-***C are DC energized directly from a V***DC supply.
Coils type C30-***R are RAC (Rectified Alternate Current) energized from a V***AC supply, by a full wave bridge rectifier incorporated in the connector.

Solenoid valves type EVC2.34. can also be AC energized, directly from a V***AC supply, by using appropriate C30-***/50 or C30-***/60 coils (see ❿).
(*) Caution : with AC operation, the inrush current can be up to 3-4 times the nominal holding value.

Coils type C30 are normally provided for use of ISO 4400/DIN 43650/A connectors. For coils with different connection to the power supply, see table C30/36.

❽ CONNECTORS.

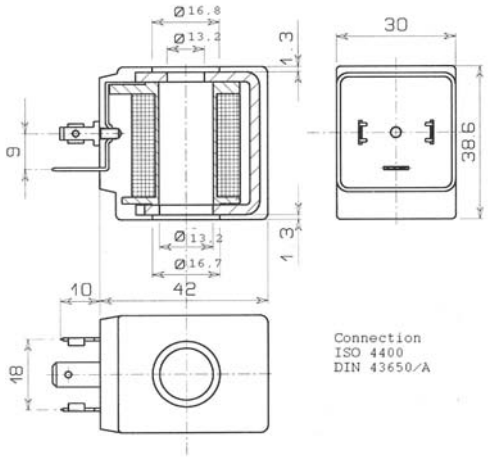
Standard coils are compatible with KA-132 connectors (see table) ; for some functions (R* = bridge rectifier, L* = LED, etc.) the voltage has to be specified :
1 = V12, V24 2 = V115 3 = V230
The "energy saving" connectors – option ES – save current consumption to less than 50% of the nominal and strongly reduce warming up of the coils – see table KA-ES.

❾ INSTALLATION

EV*.34 valves are to be installed in cavity 3/4" 16 UNF with Ø 12,7 mm (see A and ❻).
Check the appropriate state and position of the seals Ⓐ and Ⓑ, screw the valve in the cavity and lock it with a torque of about 45 Nm applied on the 24 mm hexagon.

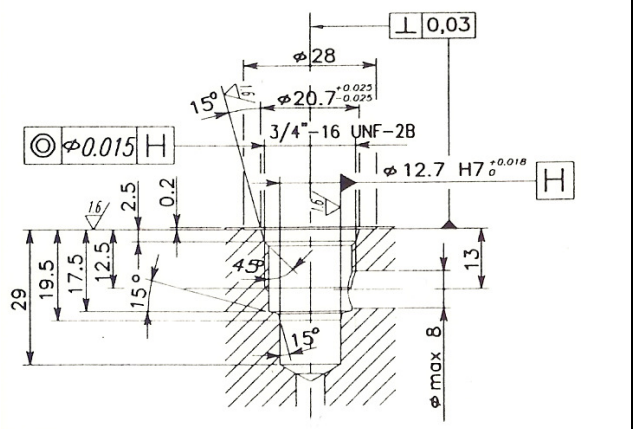
❿ COILS TYPE C30 (Ø 13 mm – 18 w : 35 VA)

Coils ISO/DIN	voltage DC/RAC	nominal current [A]	resistance 20°C [Ω]	nominal power [W]	isulation class
C30-012C	V 12 DC	1,55	7,7	18,6	F
C30-024C	V 24 DC	0,8	31	19	
C30-024R	V 24 RAC	0,85	27	18,3	
C30-048C	V 48 DC	0,4	116	19	
C30-048R	V 48 RAC	0,4	106	17,3	
C30-110R	V 110-115 RAC	0,16	600	16	
C30-220R	V 220-230 RAC	0,08	2500	16	
	AC	(*)		[VA] (*)	
C30-024/50	24V 50Hz	0,9	5,3	35	F
C30-110/50	110-115V 50Hz	0,2	108		
C30-230/50	220-230V 50Hz	0,1	438		
C30-110/60	110-115V 60Hz	0,3	92		
C30-220/60	220-230V 60Hz	0,15	375		



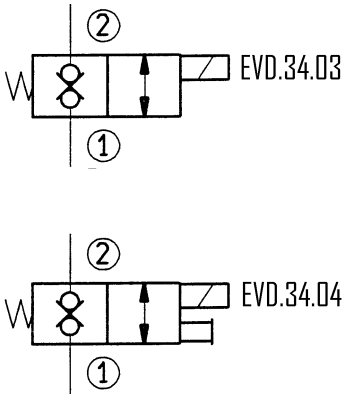
SCREW-IN, 2 WAY SOLENOID OPERATED POPPET VALVES CAVITY 3/4" 16 UNF Ø 12,7 mm, NORMALLY CLOSED, BI-DIRECTIONAL CONTROL TYPE EVD.34.

A



B

❷ SYMBOLS



❶ HOW TO READ THE MODEL CODE FOR VALVES EVD.34.

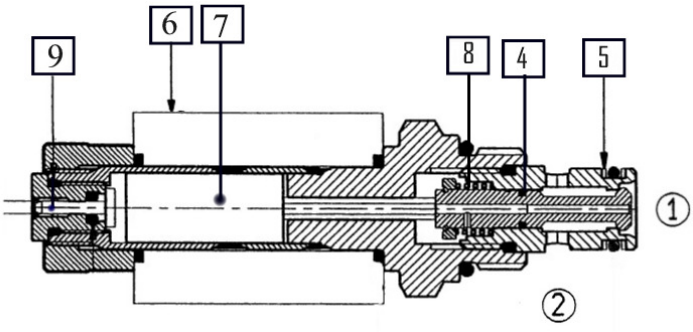
EV D. 34. (04). (012C). * . **

① ② ③ ④ ⑤ ⑥ ⑦

①	EV	:	screw-in directional solenoid valve
②	D	:	valve with Ø 13 mm solenoid core (see ❻), 2 way, 2 position, poppet type, normally closed, bi-directional control (see ❷)
③	34	:	cavity 3/4 " 16 UNF with Ø 12,7 mm - see A ❾
④	(04)	:	valves variants (see ❷❺)
		01 :	filter
		02 :	filter and manual override
		03 :	--
		04 :	manual override
⑤	(012C)	:	electric voltage and solenoid coils (see ❼❿)
		0000 :	no coil
		012C :	coil for V12DC
		024C :	coil for V24DC
		220R :	coil for V220-230 RAC
⑥	*	:	options for coil connection (see ❼)
		- :	standard connection ISO4400/DIN 43650/A
		/C :	flying leads; /K: Kostal; /A: AMP Junior
⑦	**	:	options for ISO4400/DIN 43650/A connectors (see ❽)
		B9 :	standard connector, black PG9
		D9 :	black connector, with diode, PG9
		ES :	"energy saving" connector with LED
		R* :	rectifier bridge; L*:LED; V*:LED+varistor

❸ DESCRIPTION

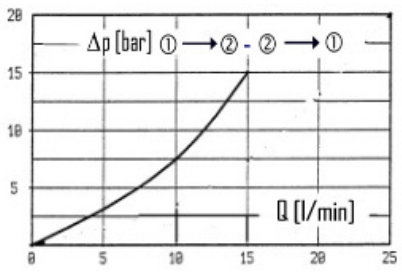
The poppet 4 is balanced by pressure and it is kept normally closed against its seat 5 by spring 8.
When the solenoid 6 is energized, the mobile armature 7 moves against spring 8 the poppet 4, thus permitting flow between ② and ①.
The manual override 9 is of the pin type and, when pushed, it permits the valve's operation in case of electric failure.



❹ TECHNICAL DATA

Nominal flow rate	10 l/min
Maximum rec.flow rate	16 l/min
Max pressure	25 Mpa (250 bar)
Dimensions	see ❻
Installation	see ❾
Electric features	see ❼
Duty cycle	ED 100%
Mass (without coil)	0,120 kg.

PRESSURE DROPS



Viscosity 42 cSt at 50°C.

❺ VARIANTS

01 and 02 : filter (0,25 mm) on way ② prevents from dirt and better diffuses the flow around the poppet.
02 and 04 : manual override is of pin type. Push the pin to shift the poppet and open (flow between ② to ①); release the pin to reinstall the condition of normally closed poppet (no flow between ② to ①).

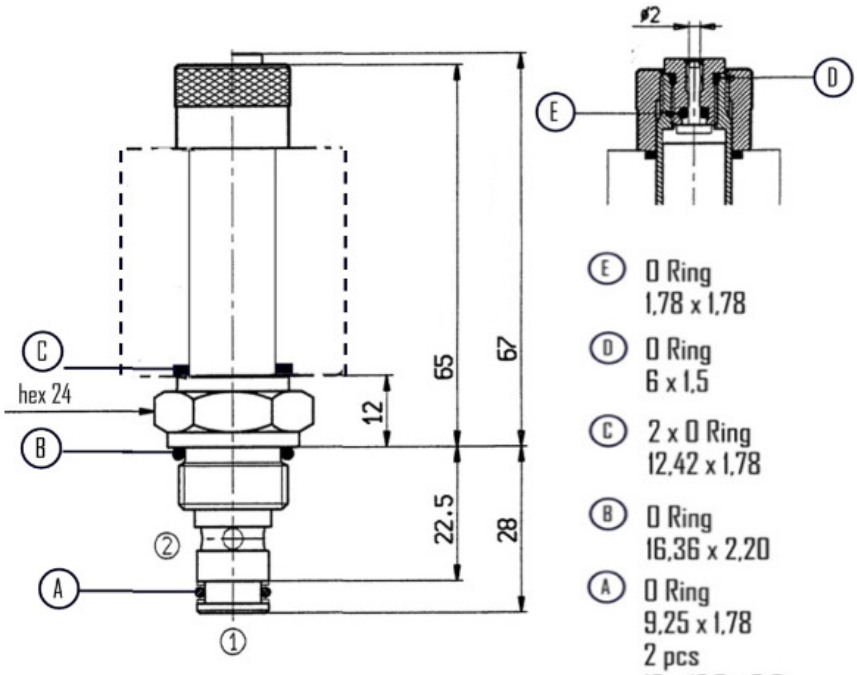
❼ ELECTRIC FEATURES.

Those solenoid valves are normally equipped by coils type C36, which are energized from DC or AC supply (see ❿).
Coils type C36-***C are DC energized directly from a V***DC supply.
Coils type C36-***R are RAC (Rectified Alternate Current) energized from a V***AC supply, by a full wave bridge rectifier incorporated in the connector.
Coils type C36 are normally provided for use of ISO 4400/DIN 43650/A connectors. For coils with different connection to the power supply, see table C30/36.

❽ CONNECTORS.

Standard coils are compatible with KA-132 connectors (see table) ; for some functions (R* = bridge rectifier, L* = LED, etc.) the voltage has to be specified :
1 = V12, V24 2 = V115 3 = V230
The "energy saving" connectors – option ES – save current consumption to less than 50% of the nominal and strongly reduce warming up of the coils – see table KA-ES.

❻ INSTALLATION DIMENSIONS.



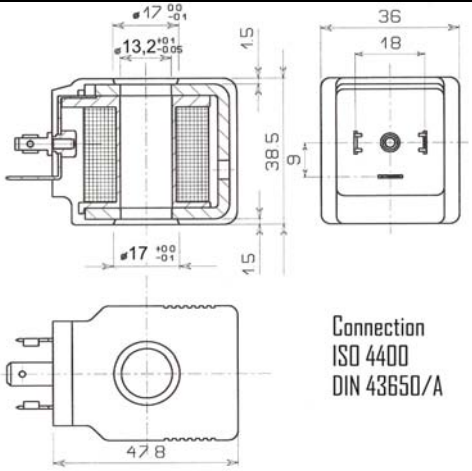
All dimensions are mm.

❾ INSTALLATION

EV*.34 valves are to be installed in cavity 3/4" 16 UNF with Ø 12,7 mm (see A and ❻).
Check the appropriate state and position of the seals Ⓐ and Ⓑ, screw the valve in the cavity and lock it with a torque of about 45 Nm applied on the 24 mm hexagon.

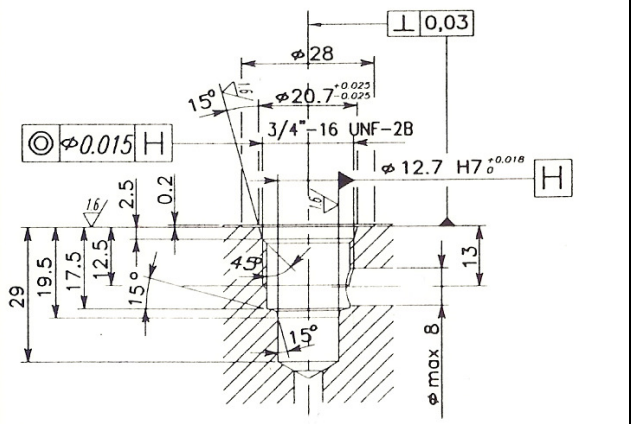
❿ COILS TYPE C36 (Ø 13 mm)

Coils DIN	Voltage DC	Nominal current [A]	Resistance 20°C [Ω]	Nominal power [W]	Isulation class
C36-012C	V 12 DC	1,9	6,3	22,8	H
C36-024C	V 24 DC	0,95	25,6	22,5	
C36-024R	V 24 RAC	1,05	20,2	23	
C36-048C	V 48 DC	0,47	102	22,6	
C36-110R	V 110-115 RAC	0,23	420	22,9	
C36-220R	V 220-230 RAC	0,11	1720	22,3	



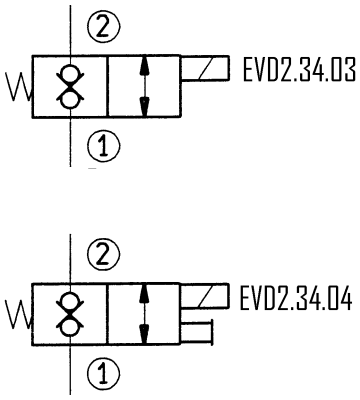
SCREW-IN, 2 WAY SOLENOID OPERATED POPPET VALVES CAVITY 3/4" 16 UNF Ø 12,7 mm, NORMALLY CLOSED, BI-DIRECTIONAL CONTROL TYPE EVD2.34.

A



B

❷ SYMBOLS



❶ HOW TO READ THE MODEL CODE FOR VALVES EVD2.34.

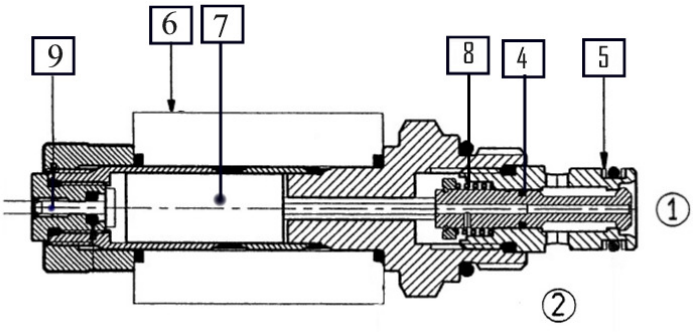
EV D2. 34. (04). (012C). * . **

① ② ③ ④ ⑤ ⑥ ⑦

①	EV	:	screw-in directional solenoid valve
②	D2	:	valve with Ø 13 mm solenoid core (see ❻), 2 way, 2 position, poppet type, normally closed, bi-directional control (see ❷)
③	34	:	cavity 3/4 " 16 UNF with Ø 12,7 mm - see A ❾
④	(04)	:	valves variants (see ❷❺)
		01 :	filter
		02 :	filter and manual override
		03 :	--
		04 :	manual override
⑤	(012C)	:	electric voltage and solenoid coils (see ❼❿)
		0000 :	no coil
		012C :	coil for V12DC
		024C :	coil for V24DC
		220R :	coil for V220-230 RAC
⑥	*	:	options for coil connection (see ❼)
		- :	standard connection ISO4400/DIN 43650/A
		/C :	flying leads; /K: Kostal; /A: AMP Junior
⑦	**	:	options for ISO4400/DIN 43650/A connectors (see ❽)
		B9 :	standard connector, black PG9
		D9 :	black connector, with diode, PG9
		ES :	"energy saving" connector with LED
		R* :	rectifier bridge; L*:LED; V*:LED+varistor

❸ DESCRIPTION

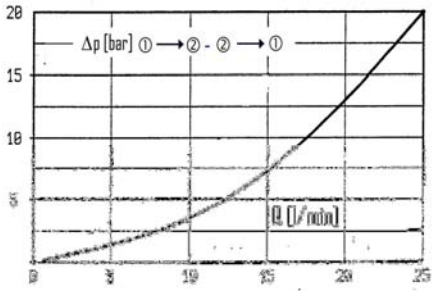
The poppet 4 is balanced by pressure and it is kept normally closed against its seat 5 by spring 8.
When the solenoid 6 is energized, the mobile armature 7 moves against spring 8 the poppet 4, thus permitting flow between ② and ①.
The manual override 9 is of the pin type and, when pushed, it permits the valve's operation in case of electric failure.



❹ TECHNICAL DATA

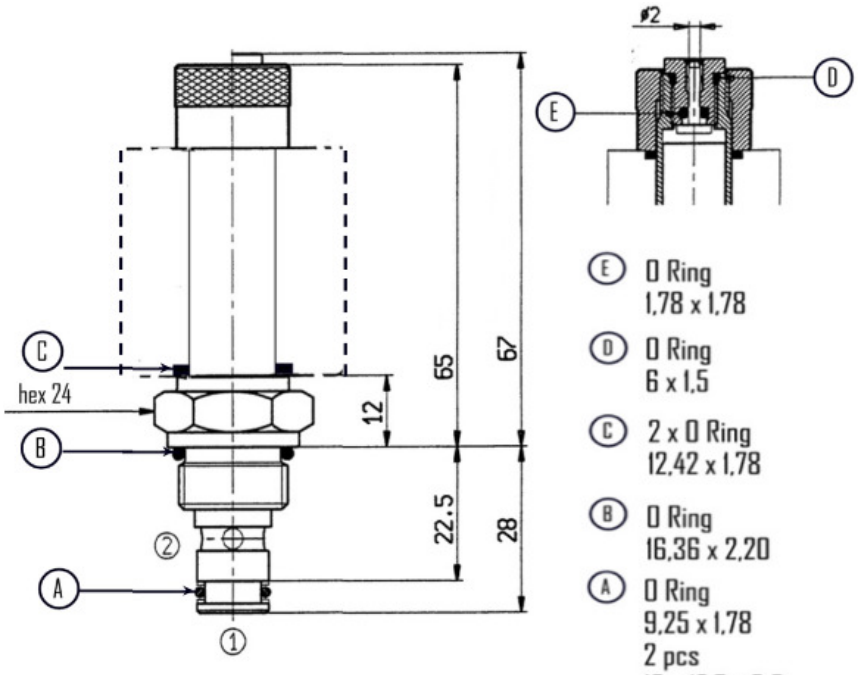
Nominal flow rate	16 l/min
Maximum rec.flow rate	25 l/min
Max pressure	21 Mpa (210 bar)
Dimensions	see ❻
Installation	see ❾
Electric features	see ❼
Duty cycle	ED 100%
Mass (without coil)	0,120 kg.

PRESSURE DROPS



Viscosity 42 cSt at 50°C.

❻ INSTALLATION DIMENSIONS.



All dimensions are mm.

❺ VARIANTS

01 and 02 : filter (0,25 mm) on way ② prevents from dirt and better diffuses the flow around the poppet.
02 and 04 : manual override is of pin type. Push the pin to shift the poppet and open (flow between ② to ①); release the pin to reinstall the condition of normally closed poppet (no flow between ② and ①).

❼ ELECTRIC FEATURES.

Those solenoid valves are normally equipped by coils type C36, which are energized from DC or AC supply (see ❿).
Coils type C36-***C are DC energized directly from a V***DC supply.
Coils type C36-***R are RAC (Rectified Alternate Current) energized from a V***AC supply, by a full wave bridge rectifier incorporated in the connector.
Coils type C36 are normally provided for use of ISO 4400/DIN43650/A connectors. For coils with different connection to the power supply, see table C30/36.

❽ CONNECTORS.

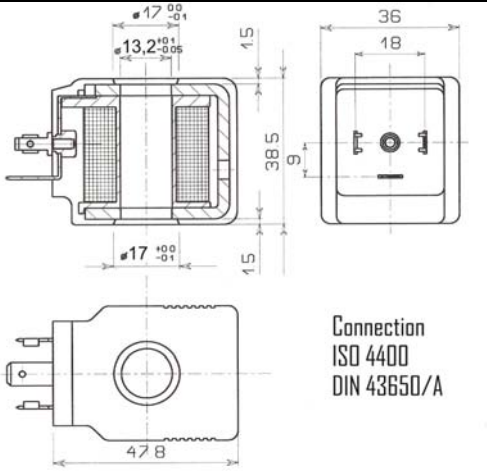
Standard coils are compatible with KA-132 connectors (see table) ; for some functions (R* = bridge rectifier, L* = LED, etc.) the voltage has to be specified :
1 = V12, V24 2 = V115 3 = V230
The "energy saving" connectors – option ES – save current consumption to less than 50% of the nominal and strongly reduce warming up of the coils – see table KA-ES.

❾ INSTALLATION

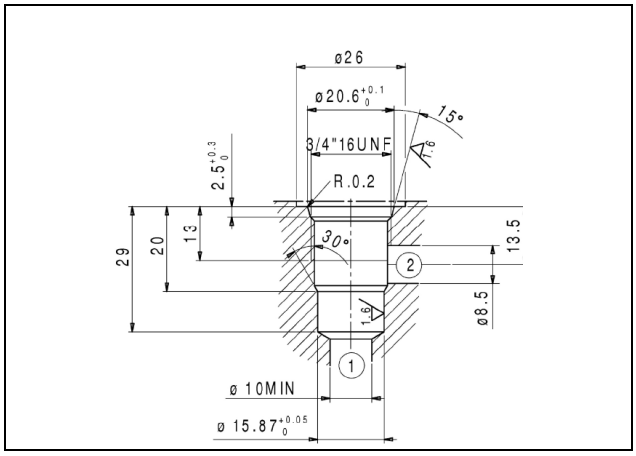
EV*.34 valves are to be installed in cavity 3/4" 16 UNF with Ø 12,7 mm (see A and ❻).
Check the appropriate state and position of the seals Ⓐ and Ⓑ, screw the valve in the cavity and lock it with a torque of about 45 Nm applied on the 24 mm hexagon.

❿ COILS TYPE C36 (Ø 13 mm)

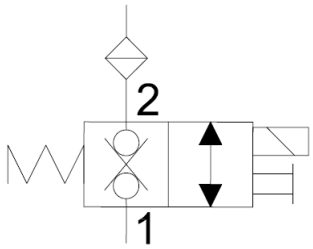
Coils DIN	Voltage DC	Nominal current [A]	Resistance 20°C [Ω]	Nominal power [W]	Isulation class
C36-012C	V 12 DC	1,9	6,3	22,8	H
C36-024C	V 24 DC	0,95	25,6	22,5	
C36-024R	V 24 RAC	1,05	20,2	23	
C36-048C	V 48 DC	0,47	102	22,6	
C36-110R	V 110-115 RAC	0,23	420	22,9	
C36-220R	V 220-230 RAC	0,11	1720	22,3	

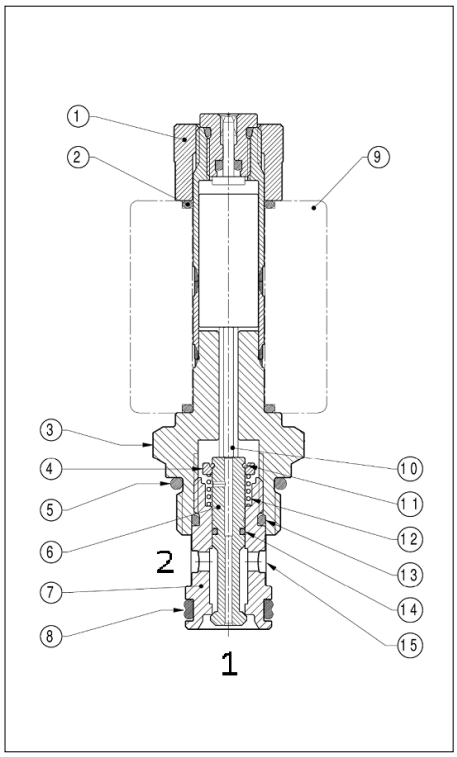


SCREW IN, 2-WAY SOLENOID OPERATED POPPET VALVES CAVITY 3/4" 16 UNF Ø 15,87 mm, NORMALLY CLOSED BI-DIRECTIONAL CONTROL TYPE EVD2.34/2



❷ FUNCTIONAL SYMBOL





❶ HOW TO READ THE MODEL CODE FOR VALVES EVD2.34/2.02

EV	**D2.**	**34**	**/**	**2.**	**02.**	**(0000).**	***.**	******
①	②	③		④	⑤	⑥	⑦	⑧

① **EV** : screw in directional solenoid valve with Ø 13 mm solenoid core (see ❺), 2 way, 2 position,

② **D2** : poppet type, normally closed, bi-direction control (see ❷)

③ **34** : cavity 3/4" 16 UNF

④ **2** : with Ø 15,87 mm nose

⑤ **02** : filter and manual override

⑥ **(0000)** : electric voltage and solenoid coil (see ❼)

- 0000 : no coil
- 012C : coil for V 12 DC
- 024C : coil for V 12 DC
- 220R : coil for V 220-230 RAC

⑦ * : options for coils connections

- \- : standard connection ISO 4400 / DIN 43650/A
- C : flying leads
- A : AMP Junior
- D : Deutsch

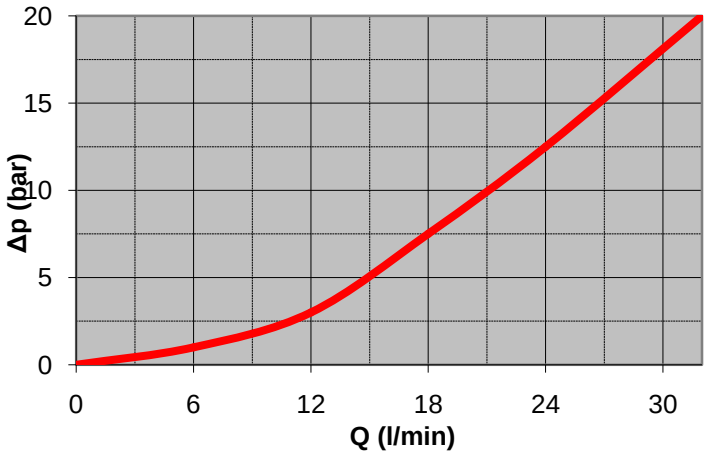
⑧ ** : options for ISO 4400 / DIN 43650/A connectors

- B9 : standard connector, black PG9
- D9 : black connector, with diode, PG9
- ES : "energy saving" connector with LED
- R* : rectifier bridge
- L* : LED
- V* : LED + varistor

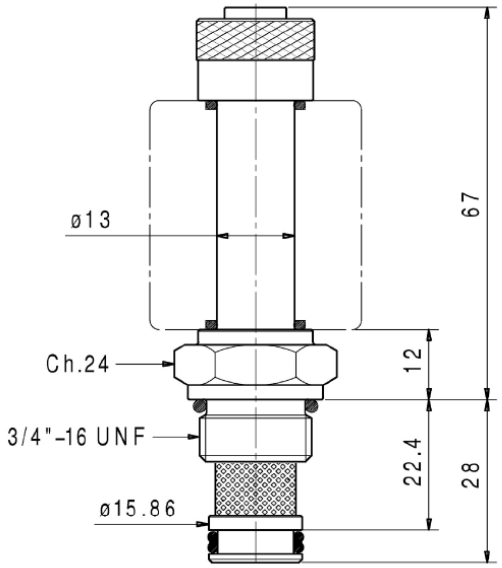
❸ DESCRIPTION

The poppet **6** is balanced by pressure and it is kept normally closed against its seat **7** by spring **12**.
When the solenoid is energized, the mobile armature moves against spring **12** the poppet **6**, thus permitting flow from 2 to 1 and from 1 to 2.
The manual override is of the pin type and, when pushed, it permits the valve's operation in case of electric failure.
The filter (0,25 mm) on way 2 prevents from dirt and better diffuses the flow around the poppet.

❹ TYPICAL DIAGRAMS (measured at ν = 46 cSt and 40°C)



❺ INSTALLATION DIMENSIONS (all dimensions are mm)



❻ DATA AND OPERATING LIMITS

Max. nominal pressure	21 MPa (210 bar)
Nominal flow rate	16 l/min
Max. rec. flow rate	25 l/min

❼ ELECTRIC FEATURES

Those solenoid valves are normally equipped by coils type C36, which are energized from DC or AC supply . Coils type C36-***C are DC energized directly from a V***DC supply.
Coils type C36-***R are RAC (Rectified Alternate Current) energized from a V***AC supply, by a full wave bridge rectifier incorporated in the connector.

Coils type C36 are normally provided for use of ISO 4400 / DIN 43650/A connectors. For coils with different connection to the power supply, see table C36

❽ CONNECTORS

Standard coils are compatible with KA-132 connectors (see table) ; for some functions (R* = bridge rectifier ; L* = LED , etc.) the voltage has to be specified :
1 = V12, V24 2 = V115 3=V230
The "energy saving" connectors (option ES) save current consumption to less than 50% of the nominal and strongly reduce warming up of the coils.

❾ INSTALLATION

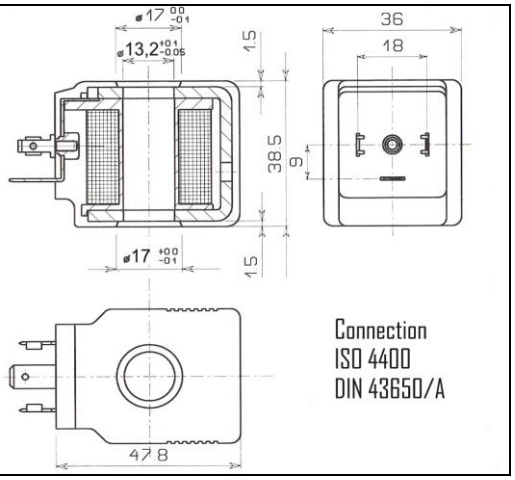
EVD2.34/2 valves are to be installed in cavity 3/4" 16 UNF with Ø 15,87 mm.
Check the appropriate state and position of the seals supplied with the valve:

- Dual seal 12,7x1,8x3 (ref ⑧)
- O-ring 16,36x2,20 (ref ⑤)
- 2 x O-ring 13 x 2 (ref ②)

Screw the valve in the cavity and lock it with a torque of about 45 Nm applied on the 24mm hexagon.

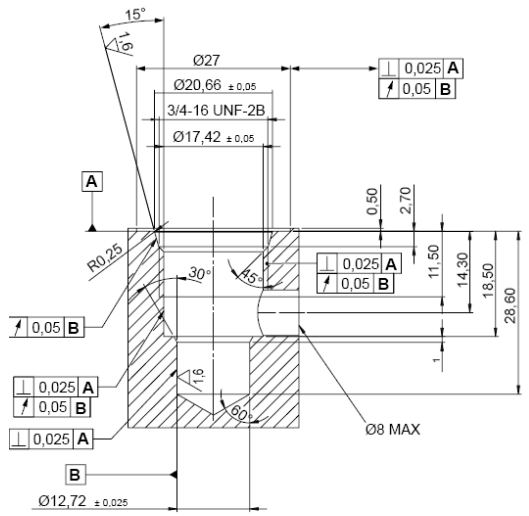
❿ COILS TYPE C36 (Ø 13 mm)

Coils DIN	Voltage DC	Nominal current [A]	Resistance @ 20°C [Ω]	Nominal power [W]	Isulation class
C36-012C	V 12 DC	1,9	6,3	22,8	H
C36-024C	V 24 DC	0,95	25,6	22,5	
C36-024R	V 24 RAC	1,05	20,2	23	
C36-048C	V 48 DC	0,47	102	22,6	
C36-110R	V 110-115 RAC	0,23	420	22,9	
C36-220R	V 220-230 RAC	0,11	1720	22,3	



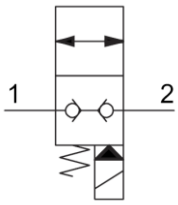
Screw in, 2-way solenoid operated directional NC control valve poppet type EVDP.34.*

A



B

❷ FUNCTIONAL SYMBOL



❶ HOW TO READ THE MODEL CODE FOR VALVES EVDP.34.(04).(012C).*.**

EV DP . 34 . (04) . (012C) . * . **
① ② ③ ④ ⑤ ⑥ ⑦

① EV : screw-in directional solenoid valve
② DP : valve 2 way, 2 position poppet type, normally closed, bi-directional control pilot operated (see ❷)
③ 34 : cavity 3/4" 16 UNF with ø 12,7 mm– see A
④ (04) : valves variants (see ❾)
- 03 : without manual override
- 04 : manual override screw type

⑤ (012C) : electric voltage and solenoid coils (see ❻, ❿)
- 0000 : no coil
- 012C : coil for V12DC
- 024C : coil for V24DC
- 220R : coil for V220-230 RAC

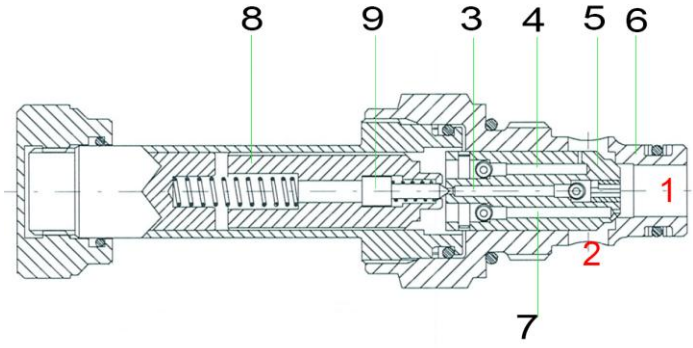
⑥ * : options for coil connection (see ❿)
- - : standard connection ISO4400/DIN43650/A
- / : /C flying leads; /D:Deutsch; /A: AMP Junior

⑦ ** : options for ISO4400/DIN 43650/A connectors (see ❼)
- B9 : standard connector, black PG9
- D9 : black connector, with diode, PG9
- ES : "energy saving" connector with LED
- R* : rectifier bridge; L*:LED; V*:LED+varistor

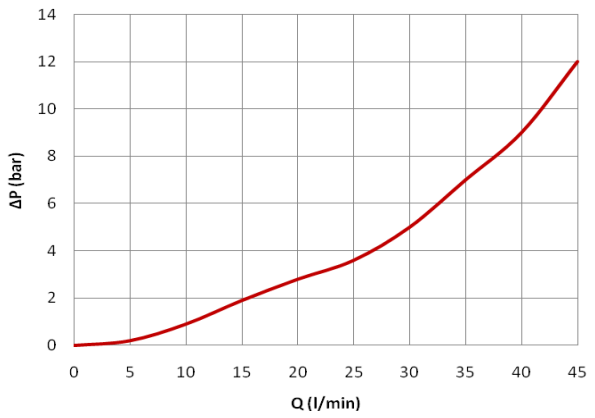
❸ DESCRIPTION

Screw-in 2 way solenoid valve type EVDP.34.* is composed by a valve sleeve 6, a poppet 5, a pilot stage 9, and an actuating assembly that comprises the magnetic parts and the screwing section. An energizing electric solenoid coil is fastened to the assembly by means of a retaining nut. The valve is NC (normally closed). Pressure coming from ports 1 or 2 cannot open the valve because the channels 7 and 4 permit the pressure behind the poppet 5 forcing it into close position. When solenoid coil is energized, part 8 shifts and by means of pin 9 the channel 3 is unplugged. This make poppet 5 floating and therefore the hydraulic connection between 1 and 2 ports is permitted.

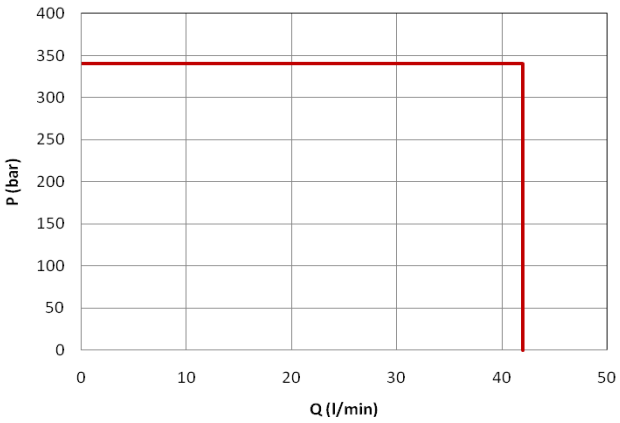
EXAMPLE OF CROSS SECTIONALVIEW



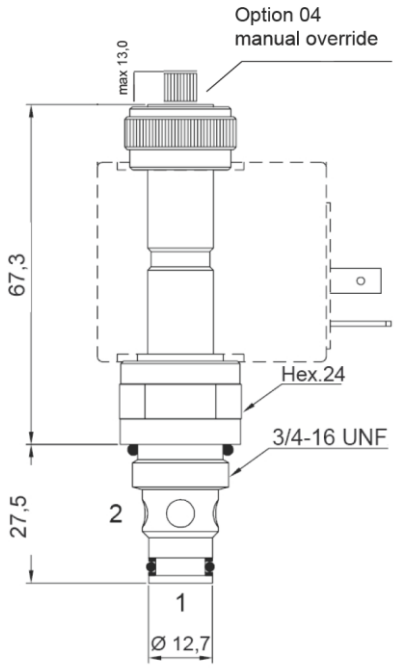
Typical diagram



Hydraulic limits of use



❺ INSTALLATION DIMENSIONS



Seals:

Body
Parbak –PTFE:
2pcs- 9,9x12,6x0,7

O-ring – NBR
1-pcs- type 173
16,36x2,21

1-pcs- type 2037
9,25x1.78

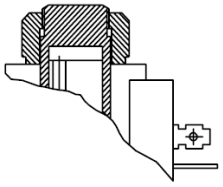
Solenoid and retainig nut
O-ring- NBR
1-pcs- type 2075
18,77x1,78

1-pcs- type 2050
12,42x1,78

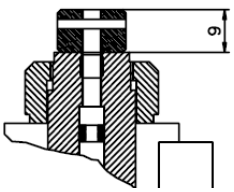
All dimensions are mm

❾ VARIANTS OF MANUAL OVERRIDE

03: no manual override



04: manual override
screw type: unscrew to operate the valve open



❹ TECHNICAL DATA

Nominal flow rate	40 l/min
Maximum rec.flow rate	42 l/min
Max pressure	35 MPa (350 bar)
Dimensions	see ❺
Installation	see ❽
Electric features	see ❻
Duty cycle	ED 100%
Mass of the valve	0,16 kg
Mass with C-36 coil	0,35 kg

❻ ELECTRIC FEATURES.

Those solenoid valves are normally equipped by coils type C36, which are energized from DC or AC supply (see ❿).
Coils type C36-***C are DC energized directly from a V***DC supply.
Coils type C36-***R are RAC (Rectified Alternate Current) energized from a V***AC supply, by a full wave bridge rectifier incorporated in the connector.

Coils type C36 are normally provided for use of ISO 4400/DIN 43650/A connectors. For coils with different connection to the power supply, see table C30/36.

❼ CONNECTORS.

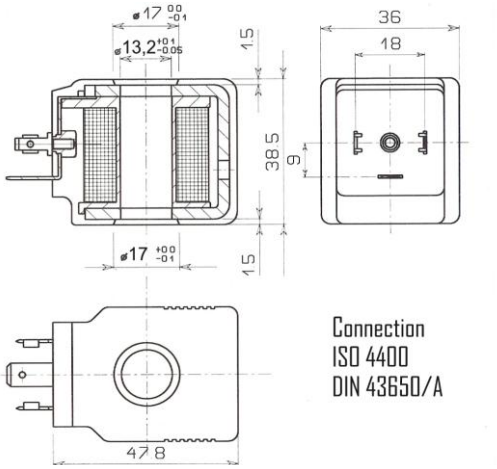
Standard coils are compatible with KA-132 connectors (see table) ; for some functions (R* = bridge rectifier, L* = LED, etc.) the voltage has to be specified :
1 = V12, V24 2 = V115 3 = V230
The "energy saving" connectors – option ES – save current consumption to less than 50% of the nominal and strongly reduce warming up of the coils – see table KA-ES.

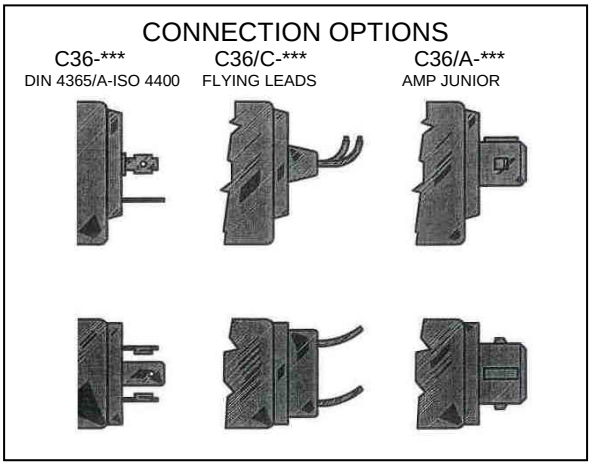
❽ INSTALLATION

EVDP.34 valves are to be installed in cavity 3/4" 16 UNF (see A).
Check the appropriate state and position of the seals, screw the valve in the cavity and lock it with a torque of about 30 Nm applied on the 24 mm hexagon.

⑩ COILS TYPE C36 (Ø 13 mm)

Coils DIN	Voltage DC	Nominal current [A]	Resistance 20°C [Ω]	Nominal power [W]	Insulation class
C36-012C	V 12 DC	1,9	6,3	22,8	H
C36-024C	V 24 DC	0,95	25,6	22,5	
C36-024R	V 24 RAC	1,05	20,2	23	
C36-048C	V 48 DC	0,47	102	22,6	
C36-110R	V 110-115 RAC	0,23	420	22,9	
C36-220R	V 220-230 RAC	0,11	1720	22,3	

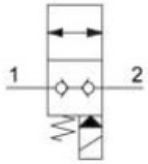


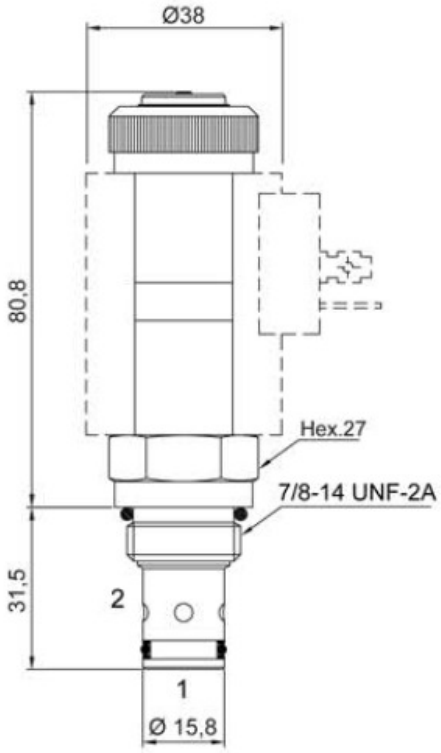


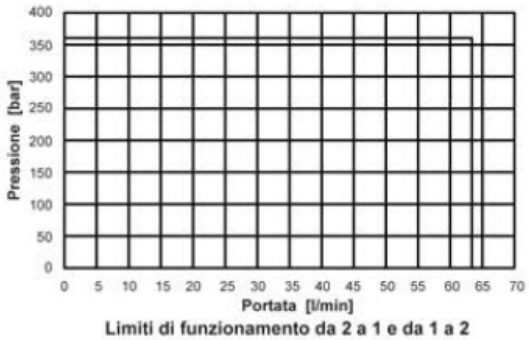
VALVOLA ELETTRICA 2 VIE 2 POSIZIONI PILOTATA A OTTURATORE NORMALMENTE CHIUSA

- Portata . . . . . .60 l/min
- Pressione max . . . . . .350 bar
- Trafilamenti . . . . . 0,25 cc/min
- Guarnizioni . . . . . .NBR

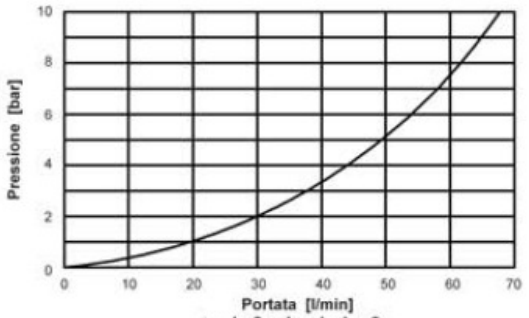
- Coppia serraggio cartuccia . . . . . 40 Nm
- Coppia serraggio ghiera . . . . . 5 Nm
- Peso (con bobina). . . . . .0,56 Kg







Limiti di funzionamento da 2 a 1 e da 1 a 2



Δp da 2 a 1 e da 1 a 2

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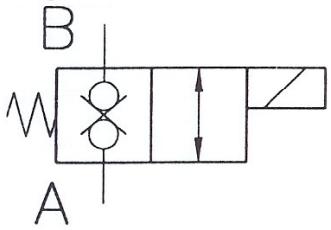
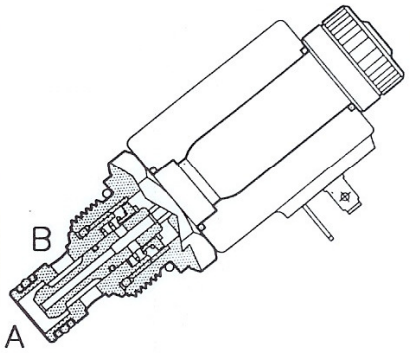
EVMD.78.04.****

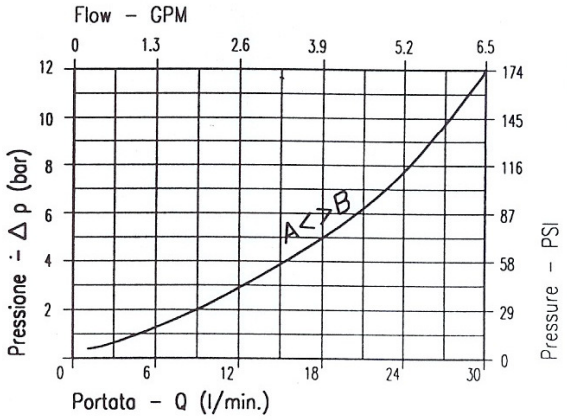
SCHEMA DI FUNZIONAMENTO
NC



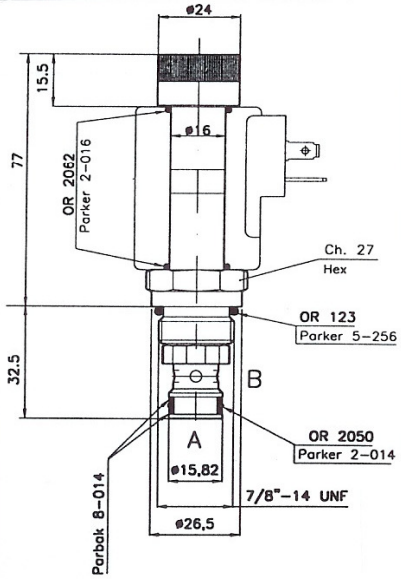
CRITERI PROGETTUALI

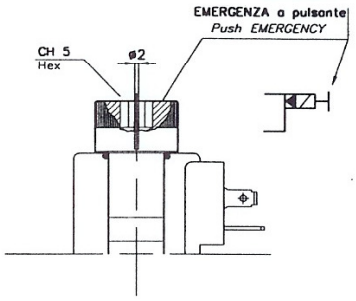


CARATTERISTICHE		*PERFORMANCES*
7/8" 14 UNF		
Portata max *Max flow – rate*		30 L/min.
Pressione max *Max pressure*		250 bar
Voltaggio minimo *Min. operatine voltage*		90% della tens. nominale of nominal tension
Tempetura ambiente *Room temperature*	°C	-30 +50
Temperatura olio *Oil temperature*	°C	-30 +80
Filtraggio consigliato *Filtration*	µm	25
Coppia di serraggio *Tightening torque*	Nm	47
Peso *Weight*	KG.	0,15



Viscosita' olio 4°E a 50°C
Oil viscosity 46 cSt at 50 °C

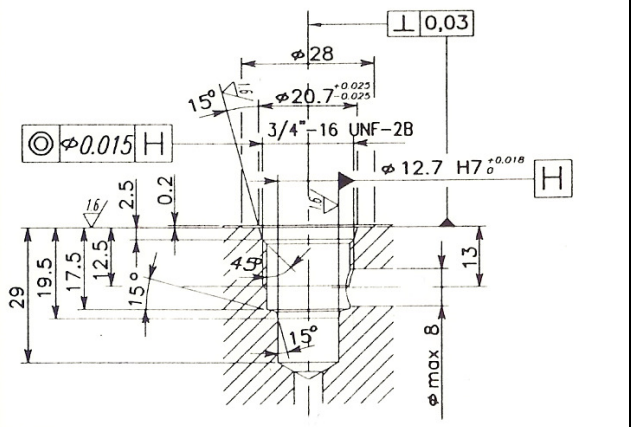




Bobine tipo C38 (26 W)
C38-012C
C38-024C

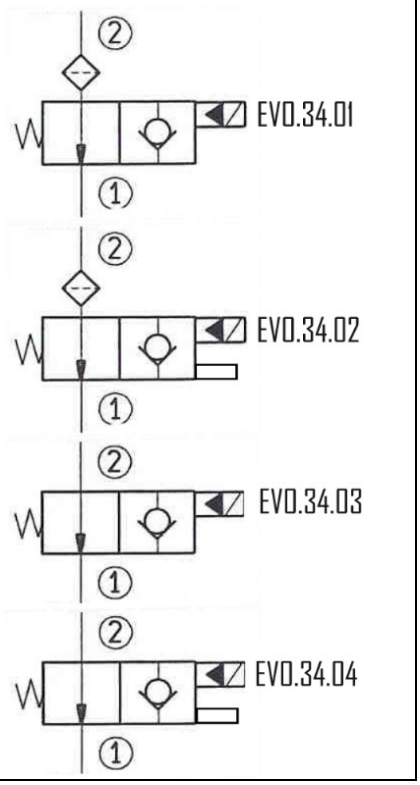
SCREW-IN, 2 WAY SOLENOID OPERATED POPPET VALVES NORMALLY OPEN, CAVITY 3/4" 16 UNF Ø 12,7 mm ONE DIRECTION FLOW TYPE EVO.34.

A



B

❷ SYMBOLS



❶ HOW TO READ THE MODEL CODE FOR VALVES EVO.34.

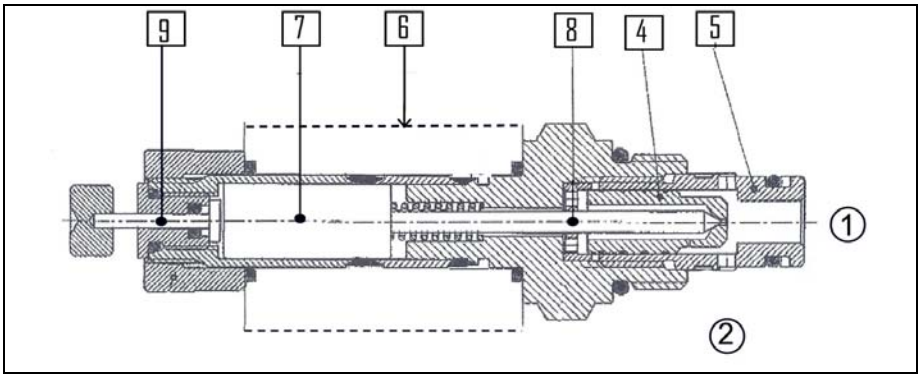
EV O. 34. (04). (012C). * . **

① ② ③ ④ ⑤ ⑥ ⑦

①	EV	:	screw-in directional solenoid valve
②	O	:	valve with Ø 13 mm solenoid core (see ❻), 2 way, 2 position, poppet type, normally open, one direction flow (see ❷)
③	34	:	cavity 3/4 " 16 UNF with Ø 12,7 mm - see A ❾
④	(04)	:	valves variants (see ❷❺)
		01 :	filter
		02 :	filter and manual override
		03 :	--
		04 :	manual override
⑤	(012C)	:	electric voltage and solenoid coils (see ❼❿)
		0000 :	no coil
		012C :	coil for V12DC
		024C :	coil for V24DC
		220R :	coil for V220-230 RAC
⑥	*	:	options for coil connection (see ❼)
		- :	standard connection ISO4400/DIN 43650/A
		/C :	flying leads; /K: Kostal; /A: AMP Junior
⑦	**	:	options for ISO4400/DIN 43650/A connectors (see ❽)
		B9 :	standard connector, black PG9
		D9 :	black connector, with diode, PG9
		ES :	"energy saving" connector with LED
		R* :	rectifier bridge; L*:LED; V*:LED+varistor

❸ DESCRIPTION

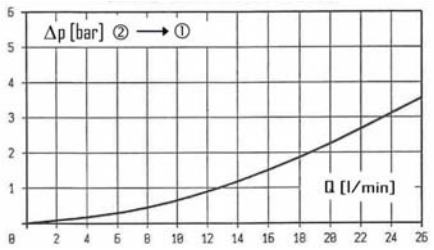
The poppet 4 is pilot operated and it is kept, balanced by pressure, normally open permitting flow from ② to ①.
When the solenoid 6 is energized, the mobile armature 7 and the pilot pin 8 move against the spring and the poppet, closes against its seat 5.
The manual override 9, by pushing, permits the valve operation.



❹ TECHNICAL DATA

Nominal flow rate	20 l/min
Maximum rec.flow rate	32 l/min
Max pressure	25 Mpa (250 bar)
Dimensions	see ❻
Installation	see ❾
Electric features	see ❼
Duty cycle	ED 100%
Mass (without coil)	0,120 kg.

PRESSURE DROPS

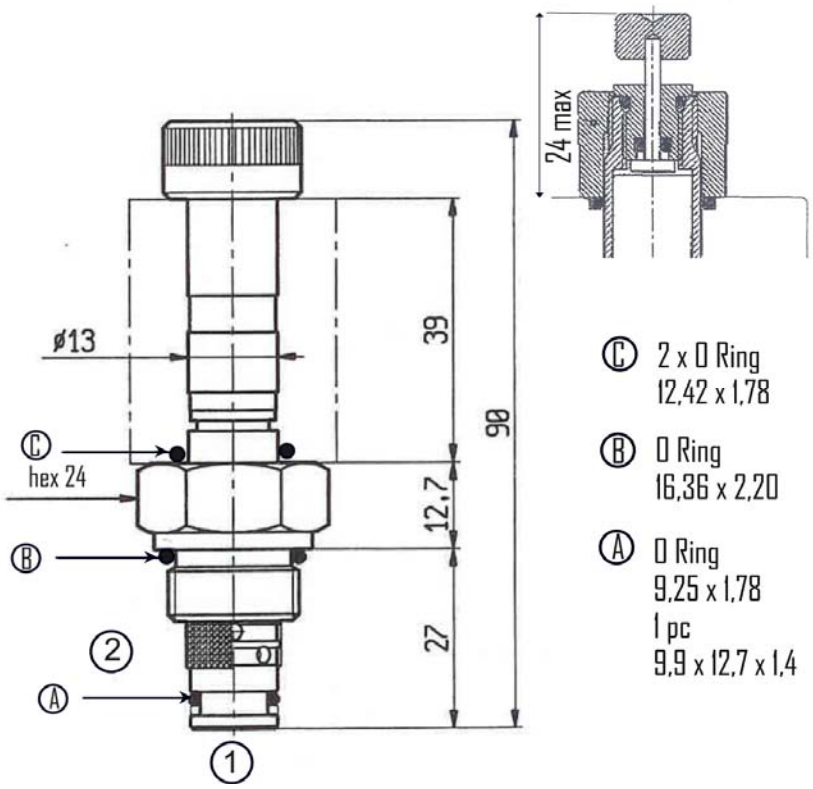


Viscosity 42 cSt at 50°C.

❺ VARIANTS

01 and 02 : filter (0,25 mm) on way ② prevents from dirt and better diffuses the flow around the poppet.
02 and 04 : manual override is of pushing type. Push to pilot the poppet closed (no flow from ② to ①); pull to reinstall the condition of normally open poppet (flow from ② to ①).

❻ INSTALLATION DIMENSIONS.



All dimensions are mm.

❼ ELECTRIC FEATURES.

Those solenoid valves are normally equipped by coils type C30, which are energized from DC or AC supply (see ❿).
Coils type C30-***C are DC energized directly from a V***DC supply.
Coils type C30-***R are RAC (Rectified Alternate Current) energized from a V***AC supply, by a full wave bridge rectifier incorporated in the connector.

Coils type C30 are normally provided for use of ISO 4400/DIN 43650/A connectors. For coils with different connection to the power supply, see table C30/36.

❽ CONNECTORS.

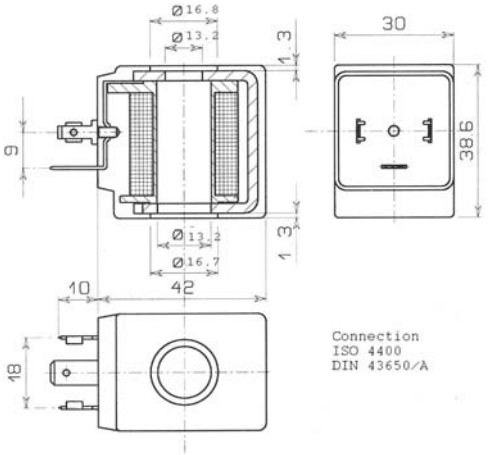
Standard coils are compatible with KA-132 connectors (see table) ; for some functions (R* = bridge rectifier, L* = LED, etc.) the voltage has to be specified :
1 = V12, V24 2 = V115 3 = V230
The "energy saving" connectors – option ES – save current consumption to less than 50% of the nominal and strongly reduce warming up of the coils – see table KA-ES.

❾ INSTALLATION

EV*.34 valves are to be installed in cavity 3/4" 16 UNF with Ø 12,7 mm (see A and ❻).
Check the appropriate state and position of the seals Ⓐ and Ⓑ, screw the valve in the cavity and lock it with a torque of about 45 Nm applied on the 24 mm hexagon.

❿ COILS TYPE C30 (Ø 13 mm – 18 w)

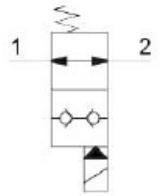
Coils ISO/DIN	voltage DC/RAC	nominal current [A]	resistance 20°C [Ω]	nominal power [W]	isulation class
C30-012C	V 12 DC	1,55	7,7	18,6	F
C30-024C	V 24 DC	0,8	31	19	
C30-024R	V 24 RAC	0,85	27	18,3	
C30-048C	V 48 DC	0,4	116	19	
C30-048R	V 48 RAC	0,4	106	17,3	
C30-110R	V 110-115 RAC	0,16	600	16	
C30-220R	V 220-230 RAC	0,08	2500	16	

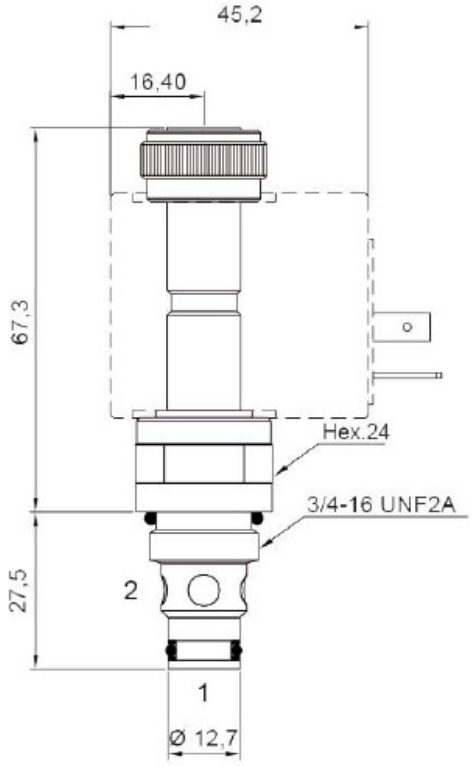


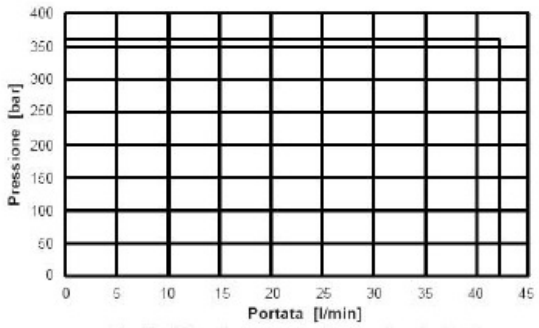
VALVOLA ELETTRICA 2 VIE 2 POSIZIONI PILOTATA A OTTURATORE NORMALMENTE APERTA

- Portata . . . . . 40 l/min
- Pressione max. . . . . 350 bar
- Trafilamenti . . . . . 0,25 cc/min
- Guarnizioni . . . . . NBR

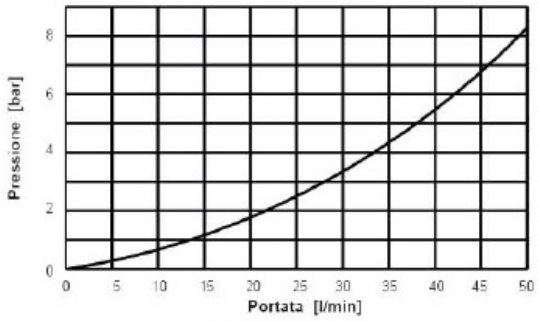
- Coppia serraggio cartuccia. . . . . 30 Nm
- Coppia serraggio ghiera. . . . . 5 Nm
- Peso (con bobina). . . . . 0,32 Kg







Limiti di funzionamento da 2 a 1 e da 1 a 2



Δp da 2 a 1 e da 1 a 2

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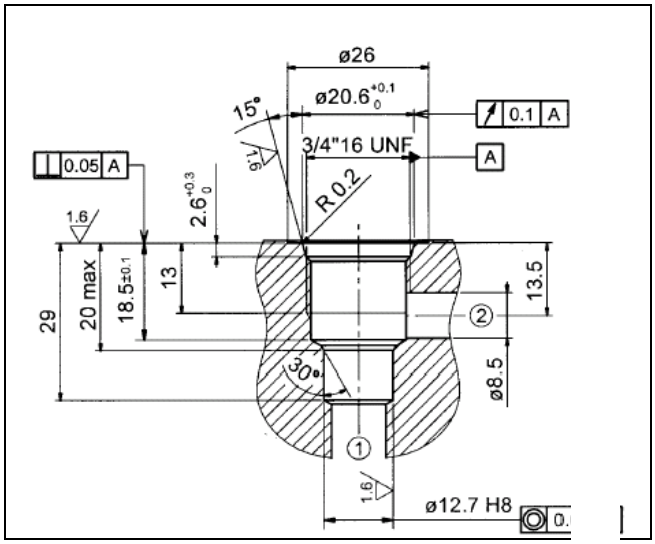
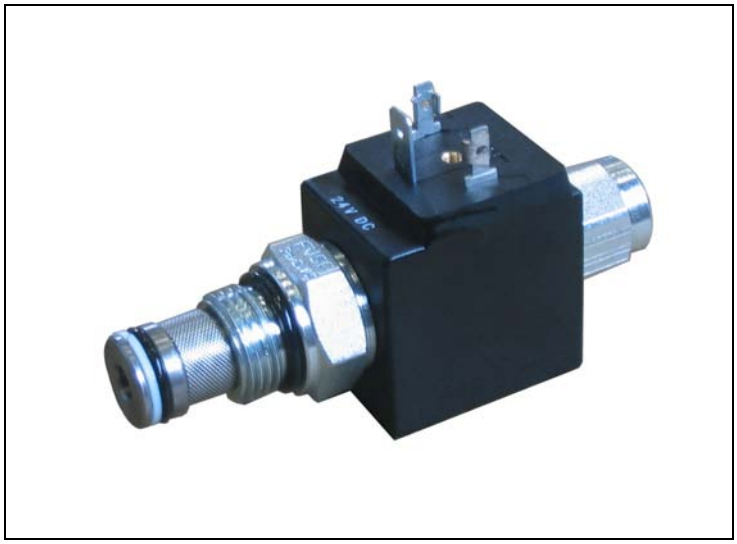
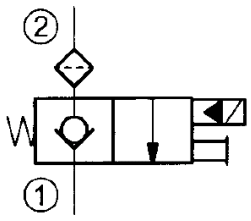
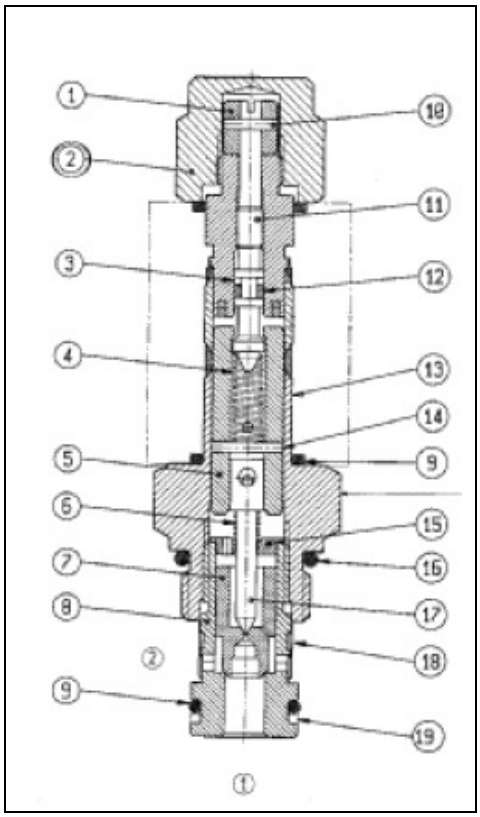
SCREW IN, 2-WAY SOLENOID OPERATED POPPET VALVES NORMALLY CLOSED, CAVITY 3/4" 16 UNF Ø 12,7 mm ONE DIRECTIONAL FLOW TYPE EVSC.34.02





❷ FUNCTIONAL SYMBOLS





❶ I / TO READ THE MODEL CODE FOR VALVES EVSC.34.02.0000

EVSC.	34.	02.	(0000).	*.	**	P
①	②	③	④	⑤	⑥	⑦

① **EVSC** : screw in directional solenoid valve with Ø 13 mm solenoid core (see ❺), 2 way, 2 position, poppet type, normally closed, one direction flow (see ❷)

② **34** : cavity 3/4" 16 UNF (Ø 12,7 mm)

③ **02** : filter and manual override of screw type

④ **(0000)** : electric voltage and solenoid coil (see ❼)

0000	:	no coil
012C	:	coil for V 12 DC
024C	:	coil for V 24 DC
220R	:	coil for V 220-230 RAC
230/50	:	coil for V 230/50 AC

⑤ * : options for coils connections

-	:	standard connection ISO 4400 / DIN 43650/A
C	:	flying leads
K	:	Kostal
A	:	AMP Junior

⑥ ** : options for ISO 4400 / DIN 43650/A connectors

B9	:	standard connector, black PG9
D9	:	black connector, with diode, PG9
ES	:	"energy saving" connector with LED
R*	:	rectifier bridge
L*	:	LED
V*	:	LED + varistor

⑦ **P** : Protective cap on manual override

❸ DESCRIPTION

The poppet **7** is pilot operated and it is kept normally closed against its seat **8**. When the solenoid is energized, the mobile armature **5** and the pilot pin **17** are shifted and the poppet, unbalanced by pressure, opens permitting flow from ② to ①.
The manual override **1** is of screw type and permits the valve operation in case of electric failure.
The filter **18** (0,25 mm) on way ② prevents from dirt and better diffuses the flow around the poppet.
The cap **2** protects from shocks the manual override and, if locked, may prevent undue tampering of the valve.

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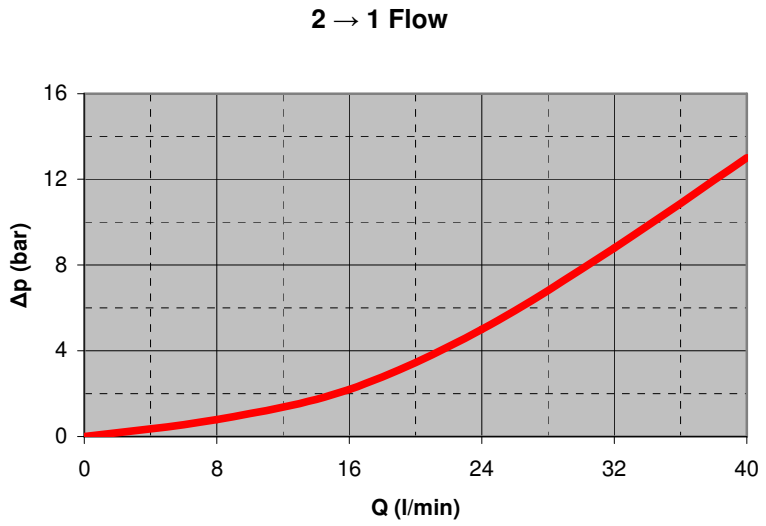
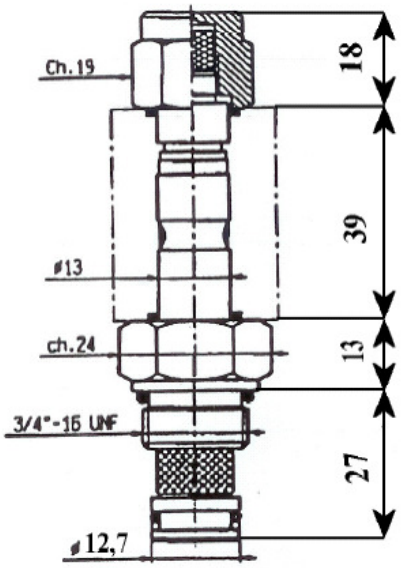
❹ TYPICAL DIAGRAMS (measured at ν = 46 cSt and 40°C)



❺ INSTALLATION DIMENSIONS (all dimensions are mm)



❻ DATA AND OPERATING LIMITS

Max. nominal pressure	25 MPa (250 bar)
Nominal flow rate	32 l/min
Max. rec. flow rate	40 l/min

❼ ELECTRIC FEATURES

Those solenoid valves are normally equipped by coils type C30, which are energized from DC or AC supply (see).
Coils type C30-***C are DC energized directly from a V***DC supply.
Coils type C30-***R are RAC (Rectified Alternate Current) energized from a V***AC supply, by a full wave bridge rectifier incorporated in the connector.
Solenoids valves type EVSC.34 can also be AC energized, directly from a V***AC supply, by using appropriate C30-***/50 or C30-***/60 coils (see).

Coils type C30 are normally provided for use of ISO 4400 / DIN 43650/A connectors. For coils with different connection to the power supply, see table C30

❽ CONNECTORS

Standard coils are compatible with KA-132 connectors (see table) ; for some functions (R* = bridge rectifier ; L* = LED , etc.) the voltage has to be specified :
1 = V12, V24 2 = V115 3=V230
The "energy saving" connectors (option ES) save current consumption to less than 50% of the nominal and strongly reduce warming up of the coils.

❾ INSTALLATION

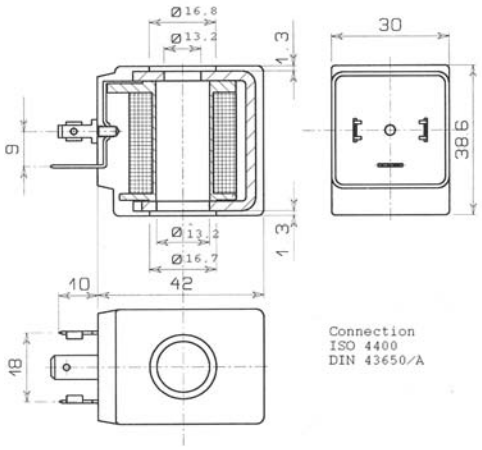
EVSC.34 valves are to be installed in cavity 3/4" 16 UNF with Ø 12,7 mm.
Check the appropriate state and position of the seals supplied with the valve :

- O-Ring 9,25 x 1,78 with parbak 9,91 x 1,35
- O-Ring 16,36 x 2,20
- 2 x O-Ring 12,42 x 1,78

Screw the valve in the cavity and lock it with a torque of about 45 Nm applied on the 24mm hexagon.

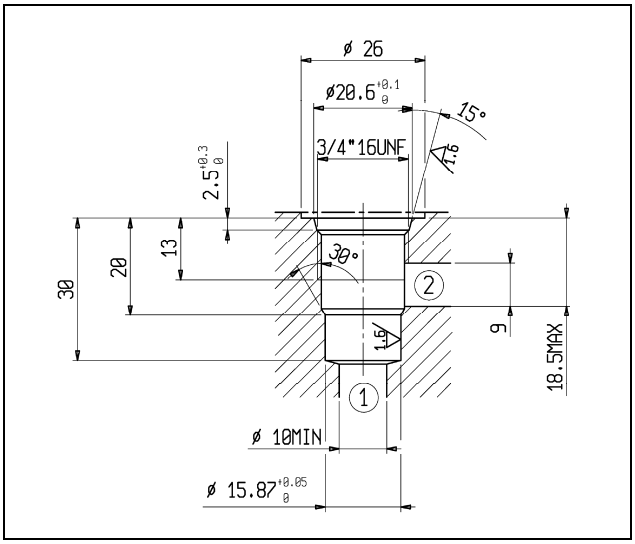
❿ COILS TYPE C30 (Ø 13 mm)

coils	voltage DC/RAC	nominal current (A)	resistance 20°C (Ω)	nominal power (W)	insulation class
C30-012C	V 12 DC	1,55	7,7	18,6	
C30-024C	V 24 DC	0,8	31	19	
C30-024R	V 24 RAC	0,85	27	18,3	
C30-048C	V 48 DC	0,4	116	19	F
C30-048R	V 48 RAC	0,4	106	17,3	
C30-110R	V 110-115 RAC	0,16	600	16	
C30-220R	V 220-230 RAC	0,08	2500	16	
	AC	(*)		**(VA)** (*)	
C30-024/50	24V 50 Hz	0,9	5,3		
C30-110/50	110-115V 50 Hz	0,2	108		
C30-230/50	220-230V 50 Hz	0,1	438	35	F
C30-110/60	110-115V 60 Hz	0,3	92		
C30-220/60	220-230V 60 Hz	0,15	375		

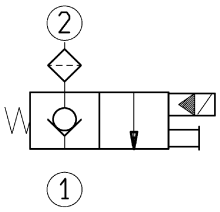


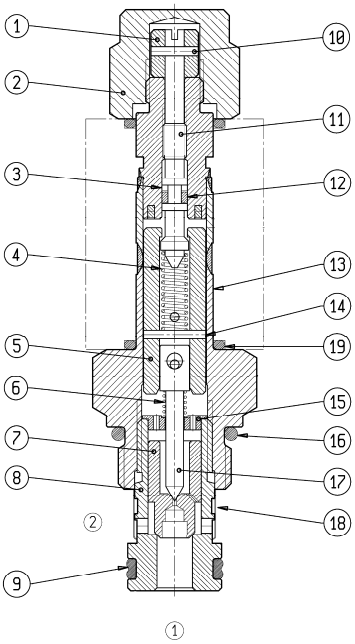
(*) *Caution : with AC operation, the inrush current can be up to 3-4 times the nominal holding value*

SCREW IN, 2-WAY SOLENOID OPERATED POPPET VALVES NORMALLY CLOSED, CAVITY 3/4" 16 UNF Ø 15,87 mm ONE DIRECTIONAL FLOW TYPE EVSC.34/2.02



❷ FUNCTIONAL SYMBOLS





❶ HOW TO READ THE MODEL CODE FOR VALVES EVSC.34/2.02

EVSC	**34**	**/**	**2.**	**02.**	**(0000).**	***.**	****.**	**P**
①	②		③	④	⑤	⑥	⑦	⑧

① **EVSC** : screw in directional solenoid valve
valve with Ø 13 mm solenoid core (see ❺), 2 way, 2 position, poppet type, normally closed, one direction flow (see ❷)

② **34** : cavity 3/4" 16 UNF

③ **2** : with Ø 15,87 mm (see ❺)

④ **02** : filter and manual override

⑤ **(0000)** : electric voltage and solenoid coil (see ❼)

0000	:	no coil
012C	:	coil for V 12 DC
024C	:	coil for V 12 DC
220R	:	coil for V 220-230 RAC
230/50	:	coil for V 230/50 AC

⑥ * : options for coils connections

-	:	standard connection ISO 4400 / DIN 43650/A
C	:	flying leads
K	:	Kostal
A	:	AMP Junior

⑦ ** : options for ISO 4400 / DIN 43650/A connectors

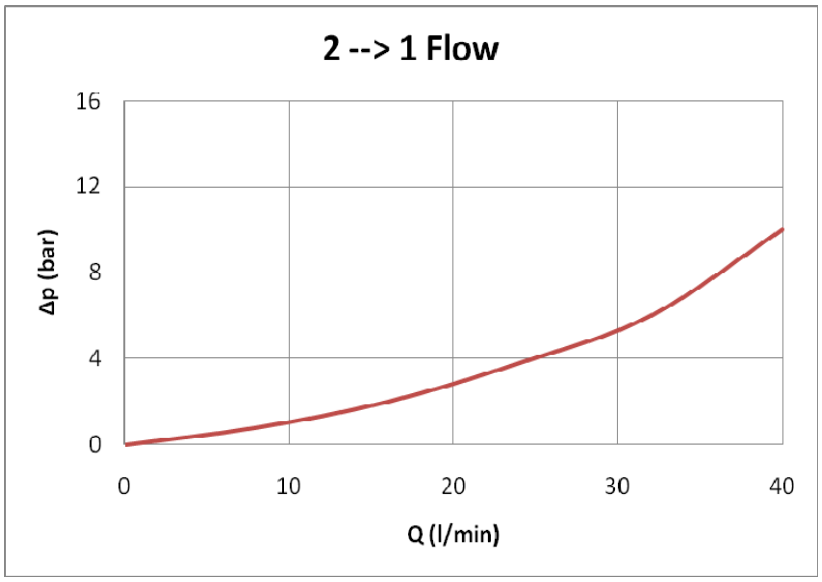
B9	:	standard connector, black PG9
D9	:	black connector, with diode, PG9
ES	:	"energy saving" connector with LED
R*	:	rectifier bridge
L*	:	LED
V*	:	LED + varistor

⑧ **P** : Water-proof cap on manual override

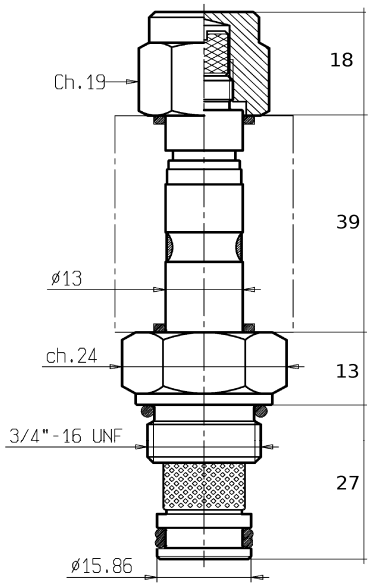
❸ DESCRIPTION

The poppet **7** is pilot operated and it is kept normally closed against its seat **8**. When the solenoid is energized, the mobile armature **5** and the pilot pin **17** are shifted and the poppet, unbalanced by pressure, opens permitting flow from ② to ①.
The manual override **1** is of screw type and permits the valve operation in case of electric failure.
The filter **18** (0,25 mm) on way ② prevents from dirt and better diffuses the flow around the poppet.

❹ TYPICAL DIAGRAMS (measured at ν = 46 cSt and 40°C)



❺ INSTALLATION DIMENSIONS (all dimensions are mm)



❻ DATA AND OPERATING LIMITS

Max. nominal pressure	25 MPa (250 bar)
Nominal flow rate	32 l/min
Max. rec. flow rate	40 l/min

❼ ELECTRIC FEATURES

Those solenoid valves are normally equipped by coils type C30, which are energized from DC or AC supply (see).
Coils type C30-***C are DC energized directly from a V***DC supply.
Coils type C30-***R are RAC (Rectified Alternate Current) energized from a V***AC supply, by a full wave bridge rectifier incorporated in the connector.
Solenoids valves type EVSC.34 can also be AC energized, directly from a V***AC supply, by using appropriate C30-***/50 or C30-***/60 coils (see).

Coils type C30 are normally provided for use of ISO 4400 / DIN 43650/A connectors. For coils with different connection to the power supply, see table C30

❽ CONNECTORS

Standard coils are compatible with KA-132 connectors (see table) ; for some functions (R* = bridge rectifier ; L* = LED , etc.) the voltage has to be specified :
1 = V12, V24 2 = V115 3=V230
The "energy saving" connectors (option ES) save current consumption to less than 50% of the nominal and strongly reduce warming up of the coils.

❾ INSTALLATION

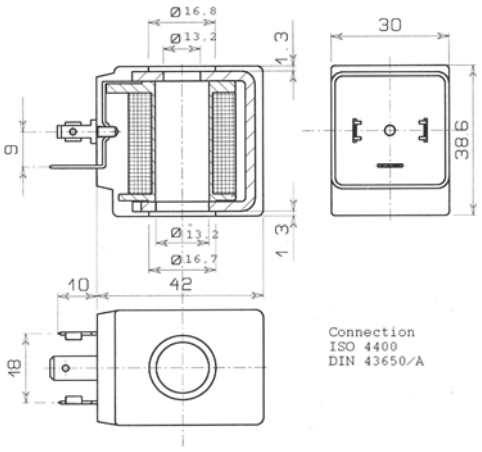
EVSC.34/2 valves are to installed in cavity 3/4" 16 UNF with Ø 15,87 mm.
Check the appropriate state and position of the seals supplied with the valve:

- Dual seal 12,7x1,8x3
- O-ring 16,36x2,20
- 2 x O-ring 12,42 x 1,78

Screw the valve in the cavity and lock it with a torque of about 45 Nm applied on the 24mm hexagon.

❿ COILS TYPE C30 (Ø 13 mm)

coils	voltage DC/RAC	nominal current (A)	resistance 20°C (Ω)	nominal power (W)	insulation class
C30-012C	V 12 DC	1,55	7,7	18,6	
C30-024C	V 24 DC	0,8	31	19	
C30-024R	V 24 RAC	0,85	27	18,3	
C30-048C	V 48 DC	0,4	116	19	F
C30-048R	V 48 RAC	0,4	106	17,3	
C30-110R	V 110-115 RAC	0,16	600	16	
C30-220R	V 220-230 RAC	0,08	2500	16	
	AC	(*)		**(VA)** (*)	
C30-024/50	24V 50 Hz	0,9	5,3		
C30-110/50	110-115V 50 Hz	0,2	108		
C30-230/50	220-230V 50 Hz	0,1	438	35	F
C30-110/60	110-115V 60 Hz	0,3	92		
C30-220/60	220-230V 60 Hz	0,15	375		



(*) *Caution : with AC operation, the inrush current can be up to 3-4 times the nominal holding value*