



SAE cavity cartridges



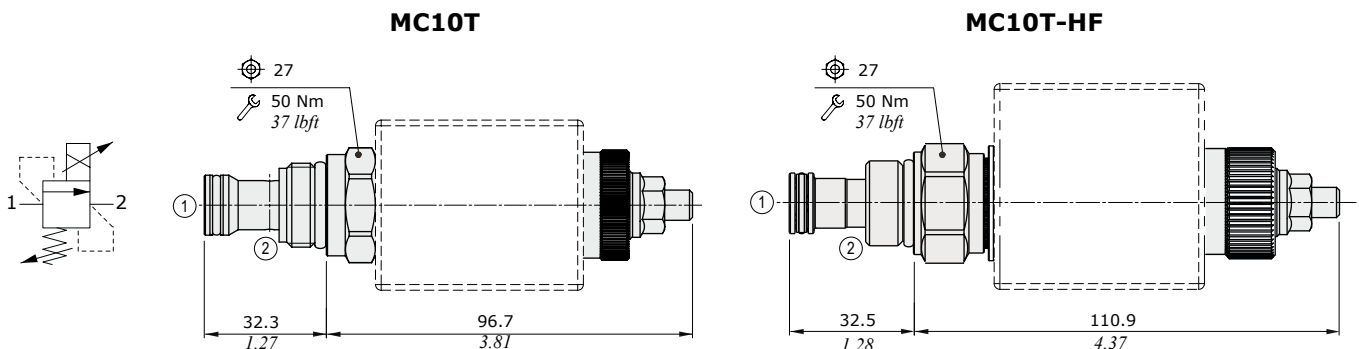
MC10T - MC10T-HF type pressure relief valve - 2 ways

- Solenoid proportional type, direct acting
- Decreasing pressure with increasing current (NC)
- Poppet type

Technical specifications and diagrams are measured with mineral oil of 46 cSt viscosity at 40°C (104°F) temperature.

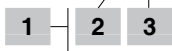
| | | MC10T | MC10T-HF |
|--|----------------------------------|--|--|
| Max. flow | | 3 l/min (0.79 US gpm) | 10 l/min (2.64 US gpm) |
| Max. pressure | | 350 bar (5100 psi) | 250 bar (3600 psi) |
| Oil leakage | 80% of max. pressure setting | 0.25 cm ³ /min (0.015 in ³ /min) | 0.50 cm ³ /min (0.030 in ³ /min) |
| Fluid | | mineral based oil | |
| Viscosity | | 10-200 cSt | |
| Max level of contamination | | 18/16/13 ISO4406 | |
| Fluid temperature | with NBR seals with FPM seals | from -20°C (-4°F) to 80°C (176°F) from -20°C (-4°F) to 100°C (212°F) | |
| Environmental temp. for working conditions | | from -40°C (-40°F) to 100°C (212°F) | |
| Cavity | | SAE 10/2 | |
| Coil type* | | BH or BQP19 | BQP19 |
| Nominal voltages | | 12 VDC - 24VDC | |
| Power rating | | 20.4 W (BH) - 15 W (BQP19) | 15 W |
| Max control current | | 1 2V -> 1.70 A - 24 V -> 0.85 A (BH) 12 V-> 1.25 A - 24 V -> 0.63 A (BQP19) | 12 V -> 1.25 A - 24 V -> 0.63 A |
| Dither frequency | | 150 Hz | |
| Hysteresis | | <5% | |
| Weight | | 0.54 kg (1.19 lb) | 0.87 kg (1.91 lb) |

NOTE - For different conditions, please contact Walvoil Sales Dpt. - For coils further features see from page 190.

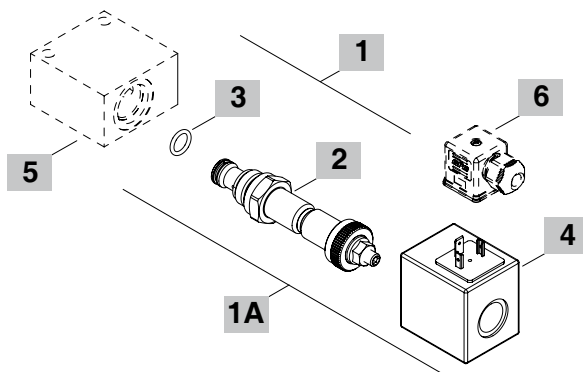


Ordering codes and description composition

MC10T/001B



MC10T/031B



1 Cartridges

| TYPE | CODE | DESCRIPTION |
|----------------------|-------------|-------------------------|
| MC10T/001B | OMC10002047 | Pressure range 1 |
| MC10T/002B | OMC10002048 | Pressure range 2 |
| MC10T/003B | OMC10002049 | Pressure range 3 |
| MC10T-HF/003B | OMC10002068 | Pressure range 3 |

1A Complete cartridges with coil

| TYPE | CODE | DESCRIPTION |
|-------------------|-------------|---------------------------------|
| MC10T/031B | OMC10002019 | Pressure range 1 , 12VDC |
| MC10T/032B | OMC10002020 | Pressure range 2 , 12VDC |
| MC10T/033B | OMC10002021 | Pressure range 3 , 12VDC |

2 Pressure range

| TYPE | DESCRIPTION |
|--------------|--|
| MC10T | |
| 1 | Pressure range 15÷130 bar (217÷1885 psi) |
| 2 | Pressure range 15÷170 bar (217÷2465 psi) |
| 3 | Pressure range 15÷210 bar (217÷3045 psi) |

MC10T-HF

| | |
|----------|--|
| 3 | Pressure range 20÷225 bar (290÷3260 psi) |
|----------|--|

Note: for further pressure range contact Sales Dept.

3 Seals

| TYPE | DESCRIPTION |
|----------|--|
| B | NBR (Buna) o-ring seals, std configuration |
| V | FPM (Viton) o-ring seals, contact Sales Dept. |

4 Coils

| TYPE | CODE | DESCRIPTION |
|-----------------------|------------|--------------------|
| 2) BH 12VDC | 4SLD001200 | 12VDC-ISO4400 coil |
| 3) BQP19 12VDC | 4SL5000126 | 12VDC-ISO4400 coil |
| 4) BH 24VDC | 4SLD002400 | 24VDC-ISO4400 coil |
| 5) BQP19 24VDC | 4SL5000245 | 24VDC-ISO4400 coil |

Note: for HF version use only BQP19 coil
For complete coils list see from page 190

5 Valve body

| TYPE | CODE | DESCRIPTION |
|-----------------------|------------|--|
| SAE 10/2-G 3/8 | 3CC1020C11 | Aluminium body for cavity 10 valve, G 3/8 std thread |

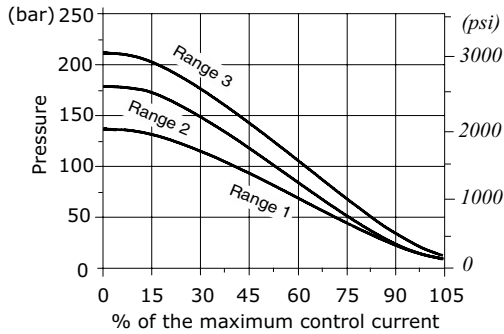
Note: aluminium body can stand up to 210 bar (3050 psi)
For steel bodies or different threading see from page 199

6 Connector

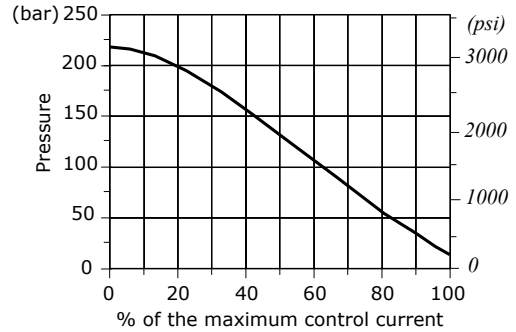
| TYPE | CODE | DESCRIPTION |
|----------------|------------|-------------|
| ISO4400 | 4CN1009995 | Connector |

For complete connectors list see from page 190

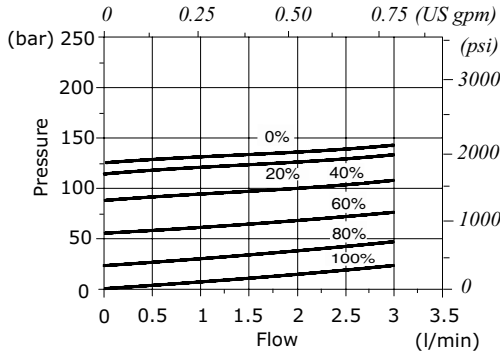
MC10T pressure setting vs. % max. control current
at 1 l/min (0.26 US gpm)



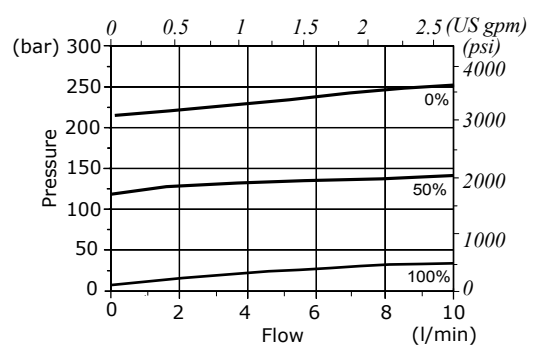
MC10T-HF pressure setting vs. % max. control current
at 2 l/min (0.53 US gpm)



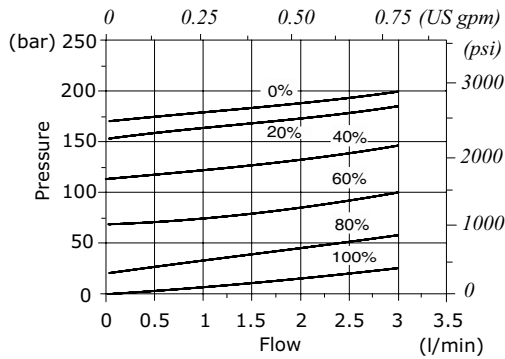
MC10T pressure vs. flow 1->2
for % of control current - Pressure range 1 -



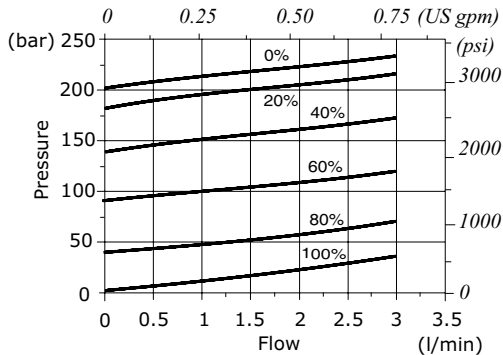
MC10T-HF pressure vs. flow 1->2
for % of control current



MC10T pressure vs. flow 1->2
for % of control current - Pressure range 2 -



MC10T pressure vs. flow 1->2
for % of control current - Pressure range 3 -



Types and ordering codes

| Valve type | Coil | Voltage | Connector | | | | | |
|--|-------|----------|--|---|--|---------------------------|---------------------------|--------------|
| | | | ISO4400 | Deutsch DT | AMP JPT | Packard Weather-pack | Packard Metri-pack | Flying leads |
| Directional solenoid valves | | | | | | | | |
| EA08A | BE | 12 VDC | 4SL1000120 | 4SL1000123 ⁽⁶⁾ 4SL1000140 ⁽³⁻⁶⁾ 4SL1000124 ⁽²⁾ | - | - | - | 4SL1000122 |
| | | 24 VDC | 4SL1000240 4SL1030240 ⁽¹⁾ | 4SL1002401 ⁽⁶⁾ | - | - | - | - |
| | | 110 VDC | 4SL1011100 4SL1031100 ⁽¹⁾ | - | - | - | - | - |
| | | 220 VDC | 4SL1012200 4SL1032200 ⁽¹⁾ | - | - | - | - | - |
| EA08B EW08A EJ08F EJ08G | BT | 10 VDC | 4SL3000100 | - | - | - | - | - |
| | | 12 VDC | 4SL3000120 4SL3000126 ⁽⁴⁾ | 4SL3000130 ⁽⁶⁾ 4SL3000134 ⁽³⁻⁶⁾ 4SL3000128 ⁽²⁾ | 4SL3000122 ⁽⁵⁾ 4SL3001200 ⁽³⁻⁵⁾ | 4SL3000124 ⁽²⁾ | 4SL3000127 ⁽²⁾ | 4SL300012C |
| | | 24 VDC | 4SL3000240 4SL3030240 ⁽¹⁾ | 4SL3000249 ⁽⁶⁾ 4SL300024C ⁽³⁻⁶⁾ | 4SL3000248 ⁽⁵⁾ | - | - | 4SL3000246 |
| | | 26 VDC | 4SL3000260 | - | - | - | - | - |
| | | 48 VDC | 4SL3000480 4SL3030480 ⁽¹⁾ | - | - | - | - | - |
| | | 110 VDC | 4SL3001100 4SL3031100 ⁽¹⁾ | - | - | - | - | - |
| | | 220 VDC | 4SL3002200 4SL3032200 ⁽¹⁾ | - | - | - | - | - |
| EW10M | BH | 12 VDC | 4SLD001200 | 4SLD001201 ⁽⁶⁾ | 4SLD001202 ⁽⁵⁾ | - | - | 4SLD001203 |
| | | 24 VDC | 4SLD002400 | 4SLD002401 ⁽⁶⁾ | 4SLD002402 ⁽⁵⁾ | - | - | 4SLD002403 |
| | | 10 VDC | 4SLE001000 | - | - | - | - | - |
| EE08A EC..M EF..M EJ08M ER08M ET08M | BER | 12 VDC | 4SLE001200 4SLE001217 ⁽³⁾ | 4SLE001201 ⁽⁵⁾ 4SLE001209 ⁽³⁻⁵⁾ 4SLE001202 ⁽⁶⁾ 4SLE001216 ⁽³⁻⁶⁾ 4SLE001206 ⁽²⁾ | 4SLE001203 ⁽⁵⁾ 4SLE001211 ⁽³⁻⁵⁾ | 4SLE001210 ⁽²⁾ | 4SLE001214 ⁽²⁾ | 4SLE001207 |
| | | 24 VDC | 4SLE002400 4SLE002408 ⁽³⁾ 4SLE302400 ⁽¹⁾ | 4SLE002401 ⁽⁵⁾ 4SLE002407 ⁽³⁻⁵⁾ 4SLE002402 ⁽⁶⁾ | 4SLE002403 ⁽⁵⁾ | - | - | 4SLE002404 |
| | | 48 VDC | 4SLE004800 4SLE304800 ⁽¹⁾ | - | - | - | - | - |
| | | 110 VDC | 4SLE011000 4SLE311000 ⁽¹⁾ | - | - | - | - | - |
| | | 220 VDC | 4SLE022000 4SLE322000 ⁽¹⁾ | - | - | - | - | - |
| EE10A EW10A EW10B | BIN19 | 10.5 VDC | 4SL6000100 | - | - | - | - | - |
| | | 12 VDC | 4SL6000121 | - | - | - | - | - |
| | | 24 VDC | 4SL6000240 | - | - | - | - | - |
| EE12A EW12A EW12C EJ12A ET12A | BIN22 | 12 VDC | 4SL6000128 | - | - | - | - | - |
| | | 24 VDC | 4SL6000245 | - | - | - | - | - |
| EJ10M EL08A ER10M ET10M | BC | 10.5 VDC | 4SL8000110 | - | - | - | - | - |
| | | 12 VDC | 4SL8000120 | 4SL800012B ⁽⁶⁾ | 4SL8000127 ⁽⁵⁾ 4SL8000130 ⁽⁵⁻³⁾ | - | - | 4SL800012A |
| | | 24 VDC | 4SL8000240 4SL8030240 ⁽¹⁾ | 4SL8000243 ⁽⁶⁾ | 4SL8000241 ⁽⁵⁾ | - | - | 4SL8000242 |
| | | 26 VDC | 4SL8000260 | - | - | - | - | - |
| | | 48 VDC | 4SL8030480 ⁽¹⁾ | - | - | - | - | - |
| | | 110 VDC | 4SL8031100 ⁽¹⁾ | - | - | - | - | - |
| EL10C | BQ16 | 12 VDC | 4SL8000121 | 4SL8000128 ⁽⁵⁾ | - | - | 4SL8000124 ⁽²⁾ | 4SL8000125 |
| | | 24 VDC | 4SL8002400 | 4SL8000245 ⁽⁵⁾ | - | - | - | - |

Types and ordering codes

| Valve type | Coil | Voltage | Connector | | | | | |
|---|-------|---------|------------|---------------------------|---------------------------|----------------------|---------------------------|--------------|
| | | | ISO4400 | Deutsch DT | AMP JPT | Packard Weather-pack | Packard Metri-pack | Flying leads |
| Pressure relief valves - Pressure reducing valves - Flow control pressure compensated valves | | | | | | | | |
| MC08Y MP16Y RD08W RM..W RP..W | MP35 | 12 VDC | 4SL4000120 | - | - | - | - | - |
| | | 24 VDC | 4SL4000240 | - | - | - | - | - |
| MC10X MP..T MP..X PP..X PU..X | BQP19 | 12 VDC | 4SL5000126 | 4SL5000125 ⁽⁶⁾ | 4SL5000129 ⁽⁵⁾ | - | - | - |
| | | 24 VDC | 4SL5000245 | 4SL5000244 ⁽⁶⁾ | 4SL5000248 ⁽⁵⁾ | - | - | - |
| | BH | 12 VDC | 4SLD001200 | 4SLD001201 ⁽⁶⁾ | 4SLD001202 ⁽⁵⁾ | - | - | 4SLD001203 |
| | | 24 VDC | 4SLD002400 | 4SLD002401 ⁽⁶⁾ | 4SLD002402 ⁽⁵⁾ | - | - | 4SLD002403 |
| RD08S RD08T | MSM19 | 12 VDC | 4SL5000128 | - | - | - | 5SL5000122 ⁽²⁾ | 4SL5000122 |
| | | 24 VDC | 4SL5000247 | - | - | - | 5SL5000243 ⁽²⁾ | 4SL5000243 |
| RP08X | BDP19 | 12 VDC | 4SL5000120 | - | - | - | - | - |
| | | 24 VDC | 4SL5000240 | - | - | - | - | - |
| Connettori di accoppiamento (con raddrizzatore vedere tabella seguente) | | | 4CN1009995 | 5CON140031 | 5CON003 | 5CON001 | 5CON017 | - |

Notes: ⁽¹⁾ supply with AC and use only with rectifier connector - ⁽²⁾ with flying leads - ⁽³⁾ with bidirectional diode - ⁽⁵⁾ with unidirectional diode - ⁽⁵⁾ integrated perpendicular type - ⁽⁶⁾ integrated parallel type

| Voltage | ISO 4400 mating connector with rectifier | | | |
|---------|--|--------------|---------------|--------------|
| | BT type coil | BE type coil | BER type coil | BC type coil |
| 24 VDC | 4CN3010240 | 4CN1010240 | 4CN1010240 | 4CN3010240 |
| 48 VDC | 4CN3010480 | 4CN1010480 | 4CN1010480 | 4CN3010480 |
| 110 VDC | 4CN3011100 | 4CN1011100 | 4CN1011100 | 4CN3011100 |
| 220 VDC | 4CN3012200 | 4CN1012200 | 4CN1012200 | 4CN3012200 |

Dimensional data and features

BE type

ISO4400 connector

DEUTSCH DT04 connector

Flying leads with DEUTSCH DT04 connector

Features

Nominal voltage tolerance : ±10%

Power rating : 18.7 W - 12 VDC
 : 18.6 W - 24 VDC
 : 17.3 W - 110 VDC
 : 15.7 W - 220 VDC
 : 18.3 W - 24 RAC
 : 16 W - 110 RAC
 : 16 W - 220 RAC

Max. operating current . . . : 1.56 A - 12 VDC
 : 0.77 A - 24 VDC
 : 0.157 A - 110 VDC
 : 0.08 A - 220 VDC
 : 0.85 A - 24 RAC
 : 0.16 A - 110 RAC
 : 0.08 A - 220 RAC

Coil insulation : Class F (155°C - 311°F)

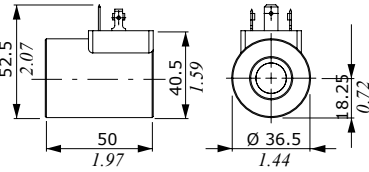
Weather protection : IP65 - ISO4400
 : IP69K - Deutsch DT

Insertion : 100%

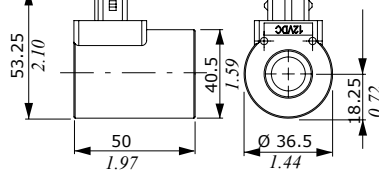
Dimensional data and features

BT type

ISO4400 connector

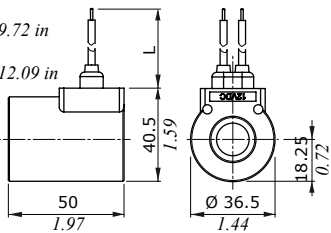


AMP JPT connector

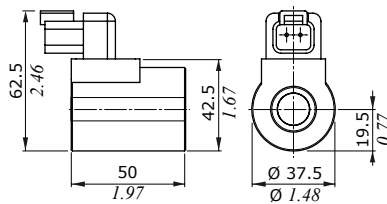


Dimension L:
12 VDC =
247 mm / 9.72 in
24 VDC =
307 mm / 12.09 in

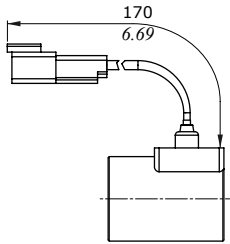
Flying leads



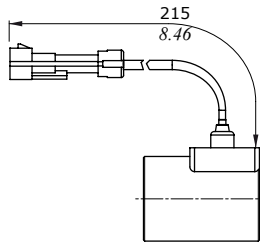
DEUTSCH DT04 connector



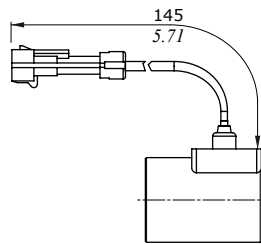
Flying leads with
DEUTSCH DT04
connector



Flying leads with
PACKARD WEATHER-PACK
connector



Flying leads with
PACKARD METRI-PACK
connector

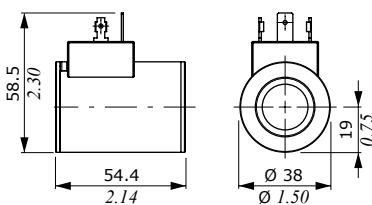


Features

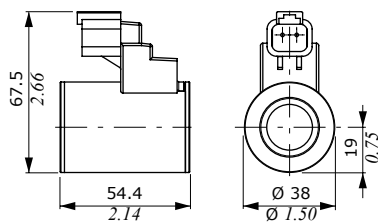
- Nominal voltage tolerance : $\pm 10\%$
- Power rating : 19 W - 10 VDC
- : 21 W - 12/24/26 VDC
- : 20.3 W - 48 VDC
- : 17.3 W - 110 VDC
- : 17.7 W - 220 VDC
- : 19.9 W - 24 RAC
- : 20.7 W - 48 RAC
- : 20 W - 110 / 220 RAC
- Max. operating current . . . : 1.9 A - 10 VDC
- : 1.77 A - 12 VDC
- : 0.89 A - 24VDC
- : 0.84 A - 26 VDC
- : 0.43 A - 48 VDC
- : 0.16 A - 110 VDC
- : 0.08 A - 220 VDC
- : 0.93 A - 24 RAC
- : 0.47 A - 48 RAC
- : 0.18 A - 110 RAC
- : 0.09 A - 220 RAC
- Coil insulation : Class F (155°C - 311°F)
- Weather protection : IP65 - ISO4400
- : IP69K - Deutsch DT
- : IP65 - AMP JPT
- : IP67 - Weatherpack
- : IP67 - Metri-pack
- Insertion : 100%

BH type

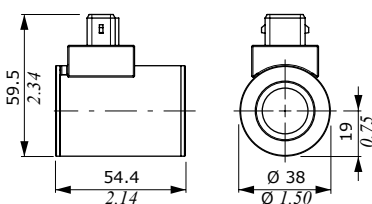
ISO4400 connector



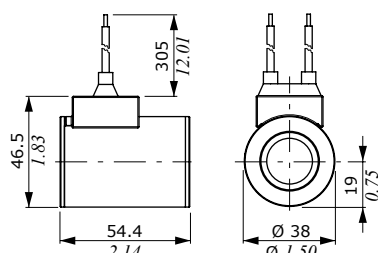
DEUTSCH DT04 connector



AMP JPT connector



Flying leads



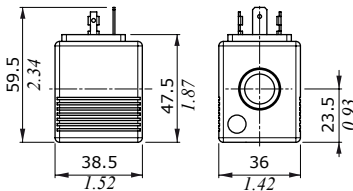
Features

- Nominal voltage tolerance : $\pm 10\%$
- Power rating : 33 W - 12/24 VDC
- Max. oper. current (on/off) . : 2.75 A - 12 VDC
- : 1.38 A - 24 VDC
- Max. prop. control current . : 1.7 A - 12 VDC
- : 0.85 A - 24 VDC
- Coil insulation : Class H
- (180°C - 356°F)
- Weather protection : IP65 - ISO4400
- : IP69K -Deutsch DT
- : IP65 - AMP JPT
- Insertion : 100%

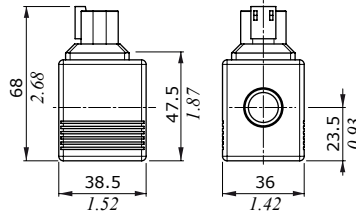
Dimensional data and features

BER type

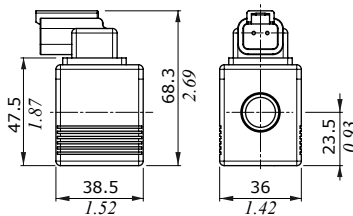
ISO4400 connector



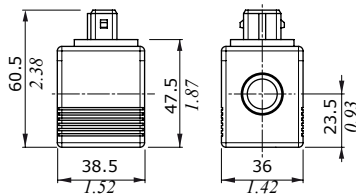
DEUTSCH DT04 connector (perpendicular type)



DEUTSCH DT04 connector (parallel type)



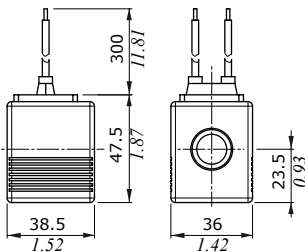
AMP JPT connector



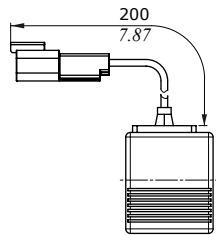
Features

- Nominal voltage tolerance : $\pm 10\%$
- Power rating : 19.2 W - 10/12/24/48/
110/220 VDC
: 19 W - 24/110/220 RAC
: 19.2 W - 48 RAC
- Max. operating current . . . : 1.9 A - 10 VDC
: 1.61 A - 12 VDC
: 0.80 A - 24 VDC
: 0.40 A - 48 VDC
: 0.17 A - 110 VDC
: 0.09 A - 220 VDC
: 0.89 A - 24 RAC
: 0.45 A - 48 RAC
: 0.19 A - 110 RAC
: 0.09 A - 220 RAC
- Coil insulation : Class H ($180^{\circ}\text{C} - 356^{\circ}\text{F}$)
- Weather protection : IP65 - ISO4400
: IP69K - Deutsch DT
: IP65 - AMP JPT
: IP67 - Weatherpack
: IP67 - Metri-pack
- Insertion : 100%

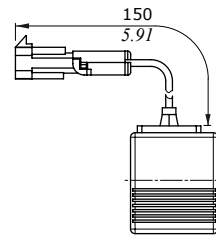
With flying leads



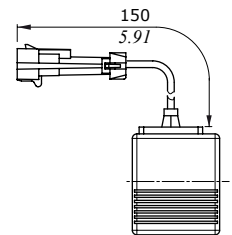
Flying leads with DEUTSCH DT04 connector



Flying leads with PACKARD WEATHER-PACK connector

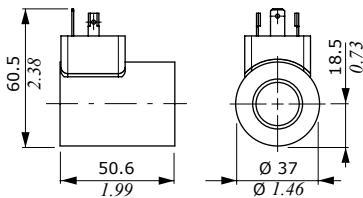


Flying leads with PACKARD METRI-PACK connector



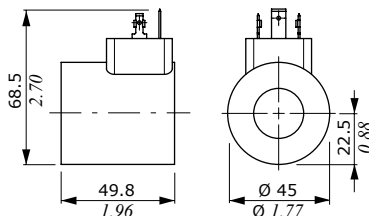
BIN19 type

ISO4400 connector



BIN22 type

ISO4400 connector

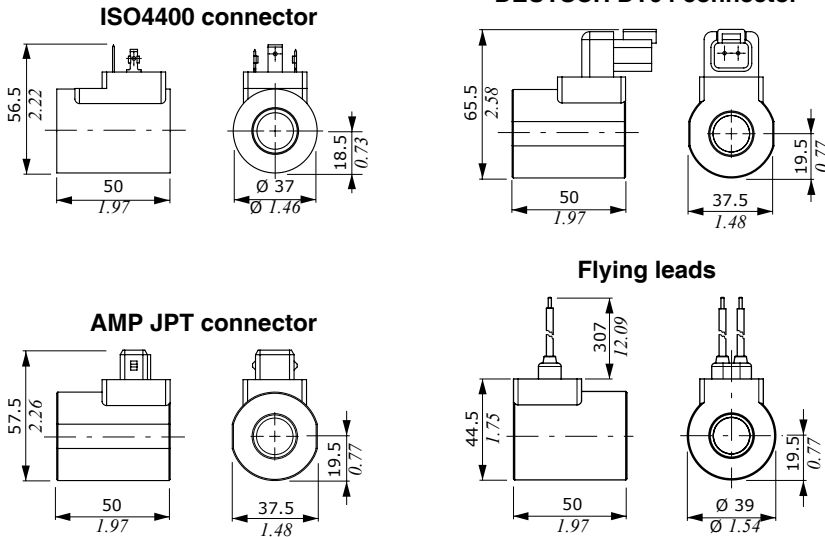


Features

- Nominal voltage tolerance : $\pm 10\%$
- Coil insulation : Class F ($155^{\circ}\text{C} - 311^{\circ}\text{F}$)
- Weather protection : IP65 - ISO4400
- Insertion : 100%
- BIN19**
- Power rating : 26 W - 10.5 VDC
: 29 W - 12 VDC
: 31 W - 24 VDC
- Max. operating current . . . : 2.48 A - 10.5 VDC
: 2.41 A - 12 VDC
: 1.29 A - 24 VDC
- BIN22**
- Power rating : 32.6 W - 12 VDC
: 31 W - 24 VDC
- Max. operating current . . . : 2.72 A - 12 VDC
: 1.29 A - 24 VDC

Dimensional data and features

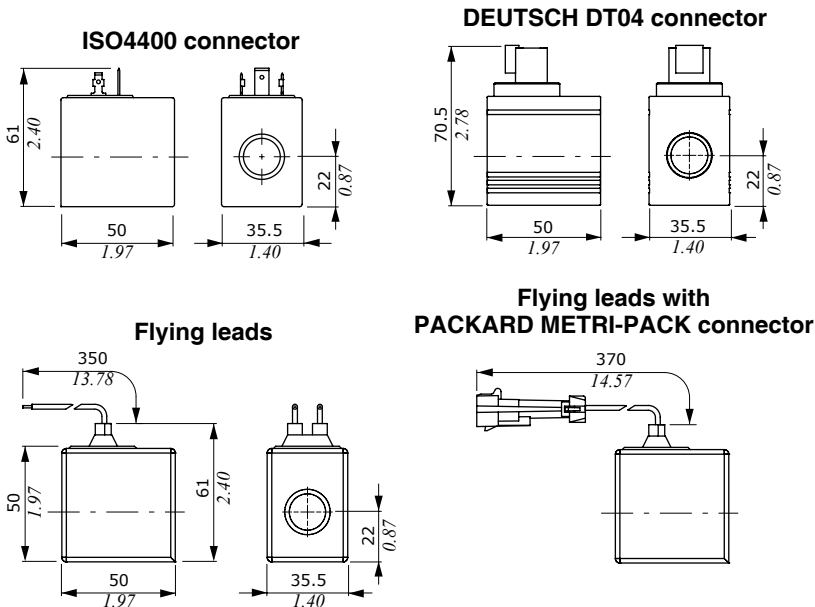
BC type



Features

Nominal voltage tolerance : ±10%
 Power rating : 26.9 W - 10.5 VDC
 : 26.2 W - 12 VDC
 : 25.9 W - 24 VDC
 : 24 W - 26 VDC
 : 26 W - 24/48/110/220 RAC
 Max. operating current . . . : 2.6 A - 10.5 VDC
 : 2.19 A - 12 VDC
 : 1.08 A - 24 VDC
 : 0.92 A - 26 VDC
 : 1.2 A - 24 RAC
 : 0.6 A - 48 RAC
 : 0.3 A - 110 RAC
 : 0.15 A - 220 RAC
 Coil insulation : Class H (180°C - 356°F)
 Weather protection : IP65 - ISO4400
 : IP65 - AMP JPT
 : IP69K - Deutsch DT
 Insertion : 100%

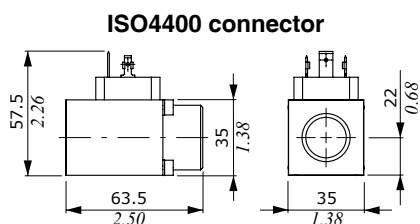
BQ16 type



Features

Nominal voltage tolerance : ±10%
 Power rating : 30 W - 12/24 VDC
 Max. operating current . . . : 2.5 A - 12 VDC
 : 1.25 A - 24 VDC
 Coil insulation : Class H (180°C - 356°F)
 Weather protection : IP65 - ISO4400
 : IP69K - Deutsch DT
 : IP67 - Metri-pack
 Insertion : 100%

MP35 type

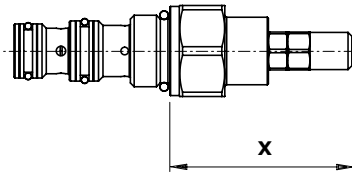


Features

Nominal voltage tolerance : ±10%
 Power rating : 11.2 W - 12 VDC
 : 11.4 W - 24 VDC
 Max. prop. control current : 1.25 A - 12 VDC
 : 0.68 A - 24 VDC
 Coil insulation : Class F (155°C - 311°F)
 Weather protection : IP65 - ISO4400
 Insertion : 100%

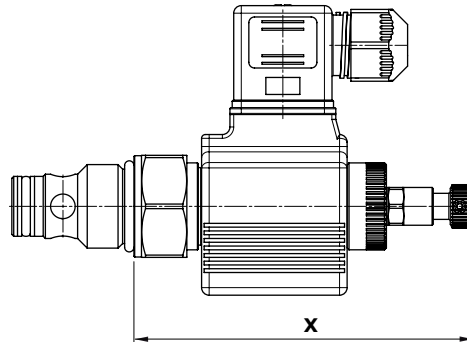
Adjustments

Types and dimensions



| Valve type | Cavity | Dimension "X" | | | | | |
|------------|--------|---------------|------|------------|------|----------------|------|
| | | M Handknob | | S screw | | V handwheel | |
| | | mm | in | mm | in | mm | in |
| MC..A | 08/2 | - | - | 53.5 | 2.11 | 77 | 3.03 |
| | 10/2 | - | - | 94.5 | 3.72 | 118 | 4.65 |
| | 12/2 | - | - | 126.5 | 4.98 | 150 | 5.91 |
| MG..A | 10/2 | - | - | 94.5 | 3.72 | 118 | 4.65 |
| | 12/2 | - | - | 126.5 | 4.98 | 150 | 5.91 |
| MP..A | 10/2 | - | - | 54.5 | 2.15 | 77.5 | 3.05 |
| | 12/2 | - | - | 52.5 | 2.07 | 75.5 | 2.97 |
| RB..A | 08/3 | - | - | 79.5 | 3.13 | 103 | 4.05 |
| | 10/3 | - | - | 94.5 | 3.72 | 118 | 4.65 |
| RD..A | 08/3 | - | - | 79.5 | 3.13 | 103 | 4.05 |
| | 10/3 | - | - | 94.5 | 3.72 | 118 | 4.65 |
| | 10/3 | - | - | 54.5 | 2.15 | 66 | 2.60 |
| RM..A | 12/3 | - | - | 51.5 | 2.03 | 63 | 2.48 |
| | 16/3 | - | - | 50.5 | 1.99 | 62 | 2.44 |
| RP..A | 10/3 | - | - | 54.5 | 2.15 | 66 | 2.60 |
| | 12/3 | - | - | 51.5 | 2.03 | 63 | 2.48 |
| | 16/3 | - | - | 50.5 | 1.99 | 62 | 2.44 |
| | 08/2 | 52 | 2.05 | 49.5 | 1.95 | - | - |
| NB..A | 10/2 | 48 | 1.89 | 46.5 | 1.83 | - | - |
| | 12/2 | 49.2 | 1.94 | 46.3 | 1.82 | - | - |
| | 16/2 | 68.8 | 2.71 | - | - | - | - |

| Valve type | Cavity | Dimension "X" | | | | | |
|------------|--------|---------------|------|------------|------|----------------|----|
| | | M Handknob | | S screw | | V handwheel | |
| | | mm | in | mm | in | mm | in |
| NT..A | 08/2 | 67.5 | 2.66 | 64.5 | 2.54 | - | - |
| | 10/2 | 68 | 2.68 | 65 | 2.56 | - | - |
| | 12/2 | 69 | 2.72 | 66 | 2.60 | - | - |
| | 16/2 | 68.9 | 2.71 | - | - | - | - |
| NU..A | 08/2 | 66.5 | 2.62 | 64.5 | 2.54 | - | - |
| | 10/2 | 68 | 2.68 | 65 | 2.56 | - | - |
| | 12/2 | 69 | 2.72 | 66 | 2.60 | - | - |
| | 16/2 | 66.9 | 2.63 | - | - | - | - |
| PU..A | 08/2 | 49.5 | 1.95 | 46.5 | 1.83 | - | - |
| | 10/2 | 44 | 1.73 | 41 | 1.61 | - | - |
| | 12/2 | 45 | 1.77 | 42 | 1.65 | - | - |
| | 16/2 | 52 | 2.05 | 49 | 1.93 | - | - |
| PW..A | 08/2 | 64.5 | 2.54 | 62 | 2.44 | - | - |
| | 10/2 | 71.9 | 2.83 | 69.4 | 2.73 | - | - |
| | 12/2 | 64.5 | 2.54 | 62 | 2.44 | - | - |
| | 16/2 | 68 | 2.68 | 65.5 | 2.58 | - | - |
| PP..A | 08/3 | 49.5 | 1.95 | 46.5 | 1.83 | - | - |
| | 10/3 | 44 | 1.73 | 41 | 1.61 | - | - |
| | 12/3 | 45 | 1.77 | 42 | 1.65 | - | - |
| | 16/3 | 52 | 2.05 | 49 | 1.93 | - | - |

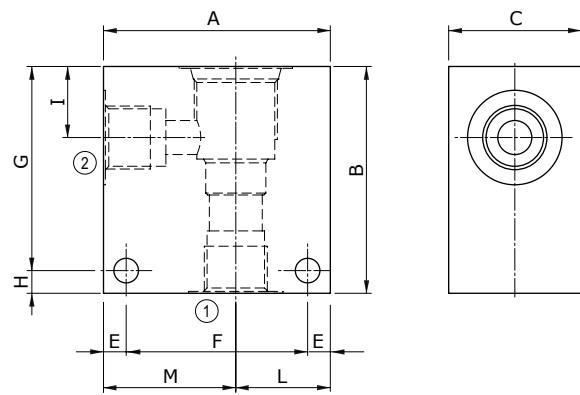
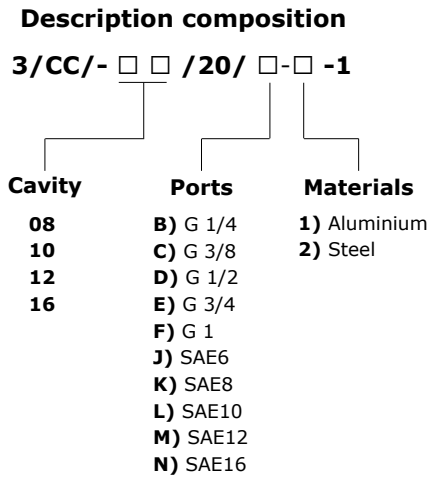


| Valve type | Dimension "X" | | | | | | | | | | | | | | | |
|-----------------|-------------------------------|------|-----------------|------|------------------|------|-------------------------------|------|------------------|------|-------------------------------|------|--------------------------------|----|---------------|------|
| | N / O without emergency | | T screw type | | P push button | | D push type with detent | | F pull button | | Q pull type with detent | | E with pull/ push-button | | V handknob | |
| | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in |
| MC10X | 86 | 3.39 | 105 | 4.13 | - | - | - | - | - | - | - | - | - | - | - | - |
| MC10X-HF | 94.8 | 3.73 | 94.5 | 3.72 | - | - | - | - | - | - | - | - | - | - | - | - |
| MP10X | 86 | 3.39 | 105 | 4.13 | - | - | - | - | - | - | - | - | - | - | - | - |
| MP12X | 102 | 4.02 | 121 | 4.76 | - | - | - | - | - | - | - | - | - | - | - | - |
| PU08X | 94 | 3.70 | 108 | 4.25 | - | - | - | - | - | - | - | - | - | - | 142 | 5.59 |
| PU10X | 96.4 | 3.79 | 110.4 | 4.35 | - | - | - | - | - | - | - | - | - | - | 144.4 | 5.68 |
| PU12X | 97.4 | 3.83 | 111.4 | 4.50 | - | - | - | - | - | - | - | - | - | - | 145.4 | 5.72 |
| PU16X | 121.4 | 4.78 | 135.4 | 5.33 | - | - | - | - | - | - | - | - | - | - | 169.4 | 6.67 |
| PP08X | 94 | 3.70 | 108 | 4.25 | - | - | - | - | - | - | - | - | - | - | 142 | 5.59 |
| PP10X | 96.4 | 3.79 | 110.4 | 4.35 | - | - | - | - | - | - | - | - | - | - | 144.1 | 5.67 |
| PP12X | 97.4 | 3.83 | 111.4 | 4.39 | - | - | - | - | - | - | - | - | - | - | 145.1 | 5.71 |
| PP16X | 121.4 | 4.78 | 135.4 | 5.33 | - | - | - | - | - | - | - | - | - | - | 169.4 | 6.67 |
| EA08A | NO | 60 | 2.36 | 79.3 | 3.12 | - | - | - | - | - | - | - | - | - | - | - |
| | NC | 59 | 2.32 | 79 | 3.11 | - | - | - | - | - | - | - | - | - | - | - |
| EA08B | NO | 70.9 | 2.79 | 90.3 | 3.55 | - | - | - | - | - | - | - | - | - | - | - |
| | NC | 65.5 | 2.58 | 90.5 | 3.56 | - | - | - | - | - | - | - | - | - | - | - |
| EC08M | NO | 67.2 | 2.64 | 90.1 | 3.55 | 90.1 | 3.55 | 92.8 | 3.65 | - | - | - | - | - | - | - |
| EF08M | NC | 63.3 | 2.49 | 77.8 | 3.06 | - | - | - | - | 91.3 | 3.59 | 83.8 | 3.30 | - | - | - |
| EH08M | NC | 63.3 | 2.49 | 77.8 | 3.06 | - | - | - | - | 91.3 | 3.59 | 83.8 | 3.30 | - | - | - |
| EC10M | NO | 66.9 | 2.63 | 89.8 | 3.54 | 89.8 | 3.54 | 92.5 | 3.64 | - | - | - | - | - | - | - |
| EF10M | NC | 63 | 2.48 | 77.5 | 3.05 | - | - | - | - | 91 | 3.58 | 83.5 | 3.29 | - | - | - |
| EH10M | NC | 63 | 2.48 | 77.5 | 3.05 | - | - | - | - | 91 | 3.58 | 83.5 | 3.29 | - | - | - |
| EC12M | NO | 61.1 | 2.40 | 84 | 3.31 | 84 | 3.31 | 86.8 | 3.42 | - | - | - | - | - | - | - |
| EF12M | NC | 57.2 | 2.25 | 71.7 | - | - | - | - | - | 85.2 | 3.35 | 77.7 | 3.06 | - | - | - |
| EH12M | NC | 57.2 | 2.25 | 71.7 | - | - | - | - | - | 85.2 | 3.35 | 77.7 | 3.06 | - | - | - |
| EC16M | NO | 61.2 | 2.41 | 84.1 | 3.31 | 84.1 | 3.31 | 86.9 | 3.42 | - | - | - | - | - | - | - |
| EF16M | NC | 57.3 | 2.26 | 71.8 | - | - | - | - | - | 85.3 | 3.36 | 77.8 | 3.06 | - | - | - |
| EH16M | NC | 57.3 | 2.26 | 71.8 | - | - | - | - | - | 85.3 | 3.36 | 77.8 | 3.06 | - | - | - |

Types and dimensions

| Valve type | | Dimension "X" | | | | | | | | | | | | | | | |
|------------|----|-------------------------------|------|-----------------|------|------------------|------|-------------------------------|------|------------------|------|-------------------------------|------|--------------------------------|------|---------------|----|
| | | N / O without emergency | | T screw type | | P push button | | D push type with detent | | F pull button | | Q pull type with detent | | E with pull/ push-button | | V handknob | |
| | | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in |
| EW08A | NO | 65.7 | 2.59 | 73.5 | 2.89 | - | - | - | - | - | - | - | - | - | - | - | - |
| | NC | 70.9 | 2.79 | 90.3 | 3.56 | 87.2 | 3.43 | - | - | - | - | - | - | - | - | - | - |
| EW10A | NC | - | - | - | - | 83.3 | 3.28 | - | - | - | - | - | - | - | - | - | - |
| EW10B | NO | 99.8 | 3.93 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| EW12B | NO | 102.8 | 4.05 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| EW12C | NC | - | - | - | - | 98.7 | 3.89 | - | - | - | - | - | - | - | - | - | - |
| EW08M | NO | 60.1 | 2.37 | 77 | 3.03 | - | - | - | - | 88.1 | 3.47 | 81 | 3.19 | - | - | - | - |
| | NC | 62.5 | 2.46 | 85.4 | 3.36 | 85.4 | 3.36 | 88.1 | 3.47 | - | - | - | - | - | - | - | - |
| EW10M | NC | 81.3 | 3.20 | 95.3 | 3.75 | 104.2 | 4.10 | 106.3 | 4.19 | - | - | - | - | - | - | - | - |
| EJ08F | | 65.7 | 2.59 | 73.5 | 2.89 | - | - | - | - | - | - | - | - | - | - | - | - |
| EJ08G | | 65.7 | 2.59 | 73.5 | 2.89 | - | - | - | - | - | - | - | - | - | - | - | - |
| EJ08M | | 56.1 | 2.21 | 70.6 | 2.78 | - | - | - | - | 84.1 | 3.31 | 77 | 3.03 | - | - | - | - |
| EJ10M | | 68 | 2.68 | 82.5 | 3.25 | - | - | - | - | 96 | 3.78 | 88.9 | 3.50 | - | - | - | - |
| EL08A | | 94.9 | 3.74 | - | - | 96 | 3.78 | - | - | - | - | - | - | - | - | - | - |
| EL10C | | 86.7 | 3.41 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| ER08M | | 75 | 2.95 | 100 | 3.94 | - | - | - | - | 115.5 | 4.55 | 95.8 | 3.77 | - | - | - | - |
| ER10M | | 89 | 3.50 | 110.5 | 4.35 | - | - | - | - | 129.5 | 5.10 | 110 | 4.33 | - | - | - | - |
| ET08M | | 120 | 4.72 | - | - | 121 | 4.76 | 165 | 6.50 | - | - | - | - | 165.6 | 6.52 | - | - |
| ET10M | | 148.5 | 5.85 | - | - | 149.5 | 5.89 | 190.9 | 7.52 | - | - | - | - | 191.5 | 7.54 | - | - |
| ET12A | | 156 | 6.14 | - | - | 156 | 6.14 | - | - | - | - | - | - | - | - | - | - |

Dimensions and ordering codes



| Material | Max. pressure | |
|-----------|---------------|------|
| | bar | psi |
| Aluminium | 210 | 3050 |
| Steel | 350 | 5100 |

| Cavity | Ports | Dimensions | | | | | | | | | | | Ordering code | | |
|----------|-------|------------|------|------|------|------|------|------|------|------|------|------|---------------|------------|------------|
| | | A | B | C | E | F | G | H | I | L | M | Z | Aluminium | Steel | |
| SAE 08/2 | G 1/4 | mm | 50 | 50 | 30 | 6 | 38 | 44 | 6 | 14.8 | 20 | 30 | 6.5 | 3CC0820B11 | 3CC0820B21 |
| | | in | 1.97 | 1.97 | 1.18 | 0.24 | 1.50 | 1.73 | 0.24 | 0.58 | 0.79 | 1.18 | 0.26 | | |
| | G 3/8 | mm | 50 | 50 | 30 | 6 | 38 | 44 | 6 | 14.8 | 20 | 30 | 6.5 | 3CC0820C11 | 3CC0820C21 |
| | | in | 1.97 | 1.97 | 1.18 | 0.24 | 1.50 | 1.73 | 0.24 | 0.58 | 0.79 | 1.18 | 0.26 | | |
| | G 1/2 | mm | 60 | 60 | 35 | 6 | 48 | 54 | 6 | 18 | 25 | 35 | 6.5 | 3CC0820D11 | / |
| | | in | 2.36 | 2.36 | 1.38 | 0.24 | 1.89 | 2.16 | 0.24 | 0.71 | 0.98 | 1.38 | 0.26 | | |
| SAE6 | mm | 50 | 50 | 30 | 6 | 38 | 44 | 6 | 14.8 | 20 | 30 | 6.5 | 3CC0820J11 | 3CC0820J21 | |
| | in | 1.97 | 1.97 | 1.18 | 0.24 | 1.50 | 1.73 | 0.24 | 0.58 | 0.79 | 1.18 | 0.25 | | | |
| SAE8 | mm | 60 | 60 | 30 | 6 | 48 | 54 | 6 | 14 | 25 | 35 | 6.5 | 3CC0820K11 | 3CC0820K21 | |
| | in | 2.36 | 2.36 | 1.18 | 0.24 | 1.89 | 2.16 | 0.24 | 0.55 | 0.98 | 1.38 | 0.25 | | | |
| SAE 10/2 | G 1/4 | mm | 60 | 60 | 35 | 6 | 48 | 54 | 6 | 18.8 | 25 | 35 | 6.5 | 3CC1020B11 | 3CC1020B21 |
| | | in | 2.36 | 2.36 | 1.38 | 0.24 | 1.89 | 2.12 | 0.24 | 0.74 | 0.98 | 1.38 | 0.26 | | |
| | G 3/8 | mm | 60 | 60 | 35 | 6 | 48 | 54 | 6 | 18.8 | 25 | 35 | 6.5 | 3CC1020C11 | 3CC1020C21 |
| | | in | 2.36 | 2.36 | 1.38 | 0.24 | 1.89 | 2.12 | 0.24 | 0.74 | 0.98 | 1.38 | 0.26 | | |
| | G 1/2 | mm | 60 | 60 | 35 | 6 | 48 | 54 | 6 | 18.8 | 25 | 35 | 6.5 | 3CC1020D11 | 3CC1020D21 |
| | | in | 2.36 | 2.36 | 1.38 | 0.24 | 1.89 | 2.12 | 0.24 | 0.74 | 0.98 | 1.38 | 0.26 | | |
| | SAE8 | mm | 60 | 70 | 35 | 6 | 48 | 64 | 6 | 18.8 | 25 | 35 | 6.5 | 3CC1020J11 | 3CC1020J21 |
| | | in | 2.36 | 2.75 | 1.38 | 0.24 | 1.89 | 2.52 | 0.24 | 0.74 | 0.98 | 1.38 | 0.26 | | |
| | SAE10 | mm | 70 | 70 | 35 | 6 | 58 | 64 | 6 | 18.5 | 35 | 35 | 6.5 | 3CC1020K11 | 3CC1020K21 |
| | | in | 2.75 | 2.75 | 1.38 | 0.24 | 2.28 | 2.52 | 0.24 | 0.73 | 1.38 | 1.38 | 0.26 | | |
| | SAE12 | mm | 70 | 70 | 40 | 8 | 54 | 62 | 8 | 22 | 30 | 40 | 8.5 | 3CC1020L11 | 3CC1020L21 |
| | | in | 2.75 | 2.75 | 1.57 | 0.31 | 2.12 | 2.44 | 0.31 | 0.87 | 1.18 | 1.57 | 0.33 | | |

Dimensions and ordering codes

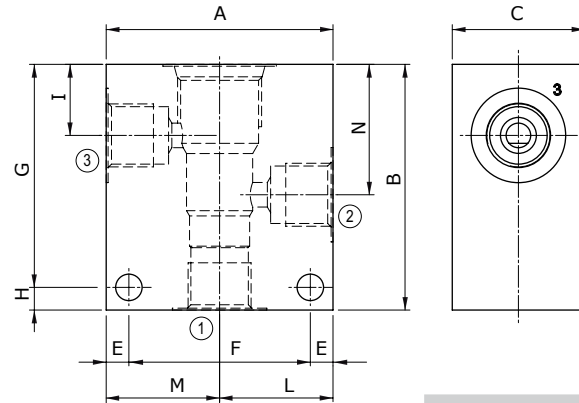
| Cavity | Ports | Dimensions | | | | | | | | | | | Ordering code | | |
|----------|-------|------------|------|------|------|------|------|------|------|------|------|------|---------------|------------|-------------|
| | | A | B | C | E | F | G | H | I | L | M | Z | Aluminium | Steel | |
| SAE 12/2 | G 1/2 | mm | 70 | 80 | 40 | 8 | 54 | 72 | 8 | 25 | 30 | 40 | 8.5 | 3CC1220D11 | 3CC1220D21 |
| | | in | 2.75 | 3.15 | 1.57 | 0.31 | 2.12 | 2.83 | 0.31 | 0.98 | 1.18 | 1.57 | 0.33 | | |
| | G 3/4 | mm | 70 | 90 | 40 | 8 | 54 | 82 | 8 | 25 | 30 | 40 | 8.5 | 3CC1220E11 | 3CC1220E21 |
| | | in | 2.75 | 3.54 | 1.57 | 0.31 | 2.12 | 3.23 | 0.31 | 0.98 | 1.18 | 1.57 | 0.33 | | |
| | SAE10 | mm | 70 | 85 | 40 | 8 | 54 | 77 | 8 | 25 | 30 | 40 | 8.5 | 3CC1220L11 | 3CC1220L21 |
| | | in | 2.75 | 3.35 | 1.57 | 0.31 | 2.12 | 3.03 | 0.31 | 0.98 | 1.18 | 1.57 | 0.33 | | |
| | SAE12 | mm | 70 | 85 | 40 | 8 | 54 | 77 | 8 | 25 | 30 | 40 | 8.5 | 3CC1220M11 | 3CC1220M21 |
| | | in | 2.75 | 3.35 | 1.57 | 0.31 | 2.12 | 3.03 | 0.31 | 0.98 | 1.18 | 1.57 | 0.33 | | |
| SAE 16/2 | G 1/2 | mm | 80 | 90 | 50 | 10 | 60 | 80 | 10 | 25 | 35 | 45 | 10.5 | 3CC1620D11 | 3CC1620D21 |
| | | in | 3.15 | 3.54 | 1.97 | 0.39 | 2.36 | 3.15 | 0.39 | 0.98 | 1.38 | 1.77 | 0.41 | | |
| | G 3/4 | mm | 80 | 90 | 50 | 10 | 60 | 80 | 10 | 25 | 35 | 45 | 10.5 | 3CC1620E11 | 3CC1620E21 |
| | | in | 3.15 | 3.54 | 1.97 | 0.39 | 2.36 | 3.15 | 0.39 | 0.98 | 1.38 | 1.77 | 0.41 | | |
| | G 1 | mm | 85 | 100 | 60 | 10 | 65 | 90 | 10 | 23.5 | 40 | 45 | 10.5 | 3CC1620F11 | 3CC1620F210 |
| | | in | 3.35 | 3.94 | 2.36 | 0.39 | 2.56 | 3.54 | 0.39 | 0.92 | 1.57 | 1.77 | 0.41 | | |
| | SAE12 | mm | 80 | 90 | 50 | 10 | 60 | 80 | 10 | 25 | 35 | 45 | 10.5 | 3CC1620M11 | 3CC1620M21 |
| | | in | 3.15 | 3.54 | 1.97 | 0.39 | 2.36 | 3.15 | 0.39 | 0.98 | 1.38 | 1.77 | 0.41 | | |
| | SAE16 | mm | 80 | 100 | 50 | 10 | 60 | 90 | 10 | 25 | 35 | 45 | 10.5 | 3CC1620N11 | 3CC1620N21 |
| | | in | 3.15 | 3.94 | 1.97 | 0.39 | 2.36 | 3.54 | 0.39 | 0.98 | 1.38 | 1.77 | 0.41 | | |

Dimensions and ordering codes

Description composition

3/CC/- □ □ /30/ □ □ -1

- | | | |
|---------------|--------------|------------------|
| Cavity | Ports | Materials |
| 08 | B) G 1/4 | 1) Aluminium |
| 10 | C) G 3/8 | 2) Steel |
| 12 | D) G 1/2 | |
| 16 | E) G 3/4 | |
| | F) G 1 | |
| | J) SAE6 | |
| | K) SAE8 | |
| | L) SAE10 | |
| | M) SAE12 | |
| | N) SAE16 | |



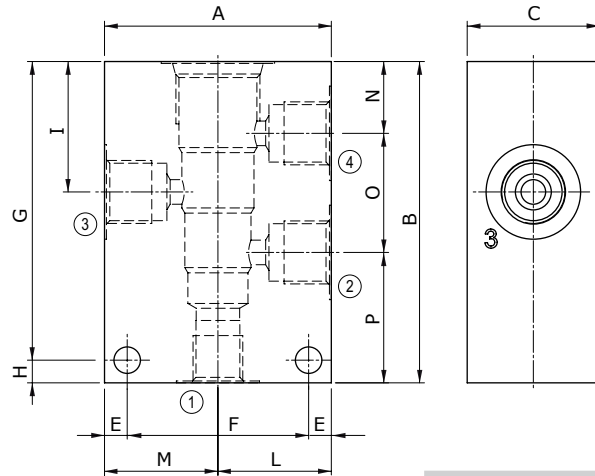
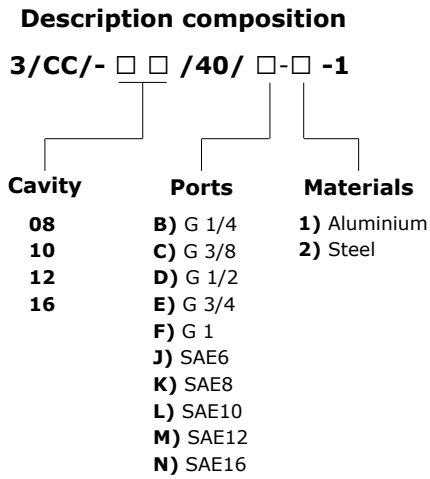
| Material | Max. pressure | |
|-----------|---------------|------|
| | bar | psi |
| Aluminium | 210 | 3050 |
| Steel | 350 | 5100 |

| Cavity | Ports | Dimensions | | | | | | | | | | | | Ordering code | | | |
|---------|----------|------------|------|------|------|------|------|------|------|------|------|------|------|---------------|------------|------------|------------|
| | | A | B | C | E | F | G | H | I | L | M | N | Z | Aluminium | Steel | | |
| SAE 8/3 | G 1/4 | mm | 60 | 60 | 30 | 7 | 46 | 48 | 12 | 14.8 | 30 | 30 | 29.1 | 6.5 | 3CC0830B11 | 3CC0830B21 | |
| | | in | 2.36 | 2.36 | 1.18 | 0.27 | 1.81 | 1.89 | 0.47 | 0.58 | 1.18 | 1.18 | 1.14 | 0.25 | | | |
| | G 3/8 | mm | 60 | 60 | 30 | 7 | 46 | 48 | 12 | 14.5 | 30 | 30 | 29.1 | 6.5 | 3CC0830C11 | 3CC0830C21 | |
| | | in | 2.36 | 2.36 | 1.18 | 0.27 | 1.81 | 1.89 | 0.47 | 0.57 | 1.18 | 1.18 | 1.14 | 0.25 | | | |
| | G 1/2 | mm | 70 | 65 | 35 | 7 | 56 | 53 | 12 | 14.5 | 35 | 35 | 29.1 | 6.5 | 3CC0830D11 | / | |
| | | in | 2.75 | 2.56 | 1.38 | 0.27 | 2.20 | 2.09 | 0.47 | 0.57 | 1.38 | 1.38 | 1.14 | 0.25 | | | |
| | SAE6 | mm | 60 | 60 | 30 | 7 | 46 | 48 | 12 | 14.5 | 30 | 30 | 29.1 | 6.5 | 3CC0830J11 | 3CC0830J21 | |
| | | in | 2.36 | 2.36 | 1.18 | 0.27 | 1.81 | 1.89 | 0.47 | 0.57 | 1.18 | 1.18 | 1.14 | 0.25 | | | |
| | SAE8 | mm | 60 | 60 | 30 | 7 | 46 | 48 | 12 | 15 | 30 | 30 | 29 | 6.5 | 3CC0830K11 | 3CC0830K11 | |
| | | in | 2.36 | 2.36 | 1.18 | 0.27 | 1.81 | 1.89 | 0.47 | 0.59 | 1.18 | 1.18 | 1.14 | 0.25 | | | |
| | SAE 10/3 | G 1/4 | mm | 60 | 65 | 35 | 6 | 48 | 59 | 6 | 18 | 30 | 30 | 34.5 | 7 | 3CC1030B11 | 3CC1030B21 |
| | | | in | 2.36 | 2.56 | 1.38 | 0.24 | 1.89 | 2.32 | 0.24 | 0.70 | 1.18 | 1.18 | 1.36 | 0.27 | | |
| G 3/8 | | mm | 60 | 65 | 35 | 6 | 48 | 59 | 6 | 18.8 | 30 | 30 | 34.5 | 7 | 3CC1030C11 | 3CC1030C21 | |
| | | in | 2.36 | 2.56 | 1.38 | 0.24 | 1.89 | 2.32 | 0.24 | 0.74 | 1.18 | 1.18 | 1.36 | 0.27 | | | |
| G 1/2 | | mm | 65 | 70 | 35 | 6 | 53 | 64 | 6 | 18.8 | 32.5 | 32.5 | 34.5 | 7 | 3CC1030D11 | 3CC1030D21 | |
| | | in | 2.56 | 2.75 | 1.38 | 0.24 | 2.09 | 2.52 | 0.24 | 0.74 | 1.28 | 1.28 | 1.36 | 0.27 | | | |
| SAE6 | | mm | 65 | 70 | 35 | 6 | 53 | 64 | 6 | 18.8 | 32.5 | 32.5 | 34.5 | 7 | 3CC1030J11 | 3CC1030J21 | |
| | | in | 2.56 | 2.75 | 1.38 | 0.24 | 2.09 | 2.52 | 0.24 | 0.74 | 1.28 | 1.28 | 1.36 | 0.27 | | | |
| SAE8 | | mm | 65 | 70 | 35 | 6 | 53 | 64 | 6 | 18.8 | 32.5 | 32.5 | 34.5 | 7 | 3CC1030K11 | 3CC1030K21 | |
| | | in | 2.56 | 2.75 | 1.38 | 0.24 | 2.09 | 2.52 | 0.24 | 0.74 | 1.28 | 1.28 | 1.36 | 0.27 | | | |
| SAE10 | | mm | 65 | 70 | 35 | 6 | 53 | 64 | 6 | 18 | 31.5 | 33.5 | 34.5 | 7 | 3CC1030L11 | 3CC1030L21 | |
| | | in | 2.56 | 2.75 | 1.38 | 0.24 | 2.09 | 2.52 | 0.24 | 0.70 | 1.24 | 1.32 | 1.36 | 0.27 | | | |

Dimensions and ordering codes

| Cavity | Ports | Dimensions | | | | | | | | | | | | | Ordering code | |
|----------|-------|------------|------|------|------|------|------|------|------|------|------|------|------|-----------|---------------|------------|
| | | A | B | C | E | F | G | H | I | L | M | N | Z | Aluminium | Steel | |
| SAE 12/3 | G 1/2 | mm | 70 | 100 | 40 | 8 | 54 | 92 | 8 | 25 | 35 | 35 | 53.5 | 8.5 | 3CC1230D11 | 3CC1230D21 |
| | | in | 2.75 | 3.94 | 1.57 | 0.31 | 2.12 | 3.6 | 0.31 | 0.98 | 1.38 | 1.38 | 2.10 | 0.33 | | |
| | G 3/4 | mm | 90 | 100 | 50 | 10 | 70 | 90 | 10 | 25.1 | 45 | 45 | 53.5 | 10.5 | 3CC1230E11 | 3CC1230E21 |
| | | in | 3.54 | 3.94 | 1.97 | 0.39 | 2.75 | 3.54 | 0.39 | 0.99 | 1.77 | 1.77 | 2.11 | 0.41 | | |
| | SAE10 | mm | 80 | 100 | 40 | 8 | 64 | 92 | 8 | 25 | 40 | 40 | 53.5 | 8.5 | 3CC1230L11 | 3CC1230L21 |
| | | in | 3.15 | 3.94 | 1.57 | 0.31 | 2.52 | 3.6 | 0.31 | 0.98 | 1.57 | 1.57 | 2.11 | 0.33 | | |
| | SAE12 | mm | 80 | 100 | 45 | 8 | 64 | 92 | 8 | 25 | 40 | 40 | 53.5 | 8.5 | 3CC1230M11 | 3CC1230M21 |
| | | in | 3.15 | 3.94 | 1.77 | 0.31 | 2.52 | 3.6 | 0.31 | 0.98 | 1.57 | 1.57 | 2.11 | 0.33 | | |
| SAE16/3 | G 1/2 | mm | 90 | 100 | 50 | 10 | 70 | 90 | 10 | 25 | 45 | 45 | 53.5 | 10.5 | 3CC1630D11 | 3CC1630D21 |
| | | in | 3.54 | 3.94 | 1.97 | 0.39 | 2.75 | 3.54 | 0.39 | 0.98 | 1.77 | 1.77 | 2.11 | 0.41 | | |
| | G 3/4 | mm | 90 | 100 | 50 | 10 | 70 | 90 | 10 | 25.1 | 45 | 45 | 53.5 | 10.5 | 3CC1630E11 | 3CC1630E21 |
| | | in | 3.54 | 3.94 | 1.97 | 0.39 | 2.75 | 3.54 | 0.39 | 0.99 | 1.77 | 1.77 | 2.11 | 0.41 | | |
| | G 1 | mm | 90 | 105 | 50 | 10 | 70 | 95 | 10 | 25 | 46 | 44 | 53.5 | 10.5 | 3CC1630F11 | 3CC1630F21 |
| | | in | 3.54 | 4.13 | 1.97 | 0.39 | 2.75 | 3.74 | 0.39 | 0.98 | 1.81 | 1.73 | 2.11 | 0.41 | | |
| | SAE12 | mm | 90 | 105 | 50 | 10 | 70 | 95 | 10 | 25.1 | 45 | 45 | 53.5 | 10.5 | 3CC1630M11 | 3CC1630M21 |
| | | in | 3.54 | 4.13 | 1.97 | 0.39 | 2.75 | 3.74 | 0.39 | 0.99 | 1.77 | 1.77 | 2.11 | 0.41 | | |
| | SAE16 | mm | 90 | 105 | 50 | 10 | 70 | 95 | 10 | 25.1 | 45 | 45 | 53.5 | 10.5 | 3CC1630N11 | 3CC1630N21 |
| | | in | 3.54 | 4.13 | 1.97 | 0.39 | 2.75 | 3.74 | 0.39 | 0.99 | 1.77 | 1.77 | 2.11 | 0.41 | | |

Dimensions and ordering codes



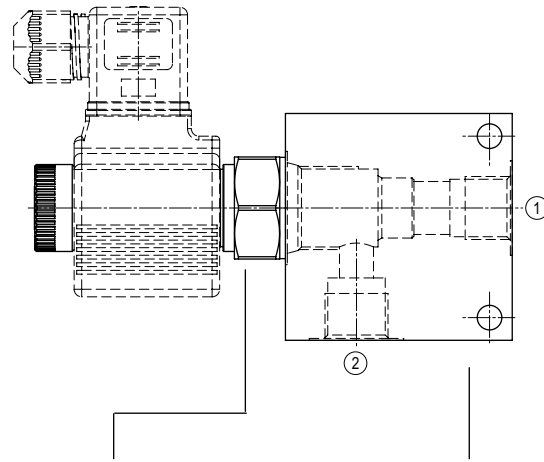
| Material | Max. pressure | |
|-----------|---------------|------|
| | bar | psi |
| Aluminium | 210 | 3050 |
| Steel | 350 | 5100 |

| Cavity | Ports | Dimensions | | | | | | | | | | | | | | Ordering code | | |
|----------|-------|------------|------|------|------|------|------|------|------|------|------|------|------|------|------|---------------|------------|------------|
| | | A | B | C | E | F | G | H | I | L | M | N | O | P | Z | Aluminium | Steel | |
| SAE 8/4 | G 1/4 | mm | 60 | 75 | 30 | 7 | 46 | 63 | 12 | 29.1 | 30 | 30 | 14.8 | 29.1 | 31.1 | 6.5 | 3CC0840B11 | 3CC0840B21 |
| | | in | 2.36 | 2.95 | 1.18 | 0.27 | 1.81 | 2.48 | 0.47 | 1.14 | 1.18 | 1.18 | 0.58 | 1.14 | 1.22 | 0.25 | | |
| | G 3/8 | mm | 60 | 75 | 30 | 7 | 46 | 63 | 12 | 29.1 | 30 | 30 | 14.8 | 28.6 | 31.6 | 6.5 | 3CC0840C11 | 3CC0840C21 |
| | | in | 2.36 | 2.95 | 1.18 | 0.27 | 1.81 | 2.48 | 0.47 | 1.14 | 1.18 | 1.18 | 0.58 | 1.13 | 1.24 | 0.25 | | |
| | SAE6 | mm | 60 | 75 | 30 | 7 | 46 | 63 | 12 | 29.1 | 30 | 30 | 14.8 | 29.1 | 31.1 | 6.5 | 3CC0840J11 | 3CC0840J21 |
| | | in | 2.36 | 2.95 | 1.18 | 0.27 | 1.81 | 2.48 | 0.47 | 1.14 | 1.18 | 1.18 | 0.58 | 1.14 | 1.22 | 0.25 | | |
| | SAE8 | mm | 60 | 75 | 30 | 7 | 46 | 63 | 12 | 29 | 30 | 30 | 15 | 28.5 | 31.5 | 6.5 | 3CC0840K11 | 3CC0840K21 |
| | | in | 2.36 | 2.95 | 1.18 | 0.27 | 1.81 | 2.48 | 0.47 | 1.14 | 1.18 | 1.18 | 0.59 | 1.12 | 1.24 | 0.25 | | |
| SAE 10/4 | G 1/4 | mm | 60 | 85 | 35 | 6 | 48 | 79 | 6 | 34.5 | 30 | 30 | 19 | 31.5 | 34.5 | 7 | 3CC1040B11 | 3CC1040B21 |
| | | in | 2.36 | 3.35 | 1.38 | 0.24 | 1.89 | 3.11 | 0.24 | 1.36 | 1.18 | 1.18 | 0.75 | 1.24 | 1.36 | 0.27 | | |
| | G 3/8 | mm | 60 | 85 | 35 | 6 | 48 | 79 | 6 | 34.5 | 30 | 30 | 18.8 | 31.7 | 34.5 | 7 | 3CC1040C11 | 3CC1040C21 |
| | | in | 2.36 | 3.35 | 1.38 | 0.24 | 1.89 | 3.11 | 0.24 | 1.36 | 1.18 | 1.18 | 0.74 | 1.25 | 1.36 | 0.27 | | |
| | G 1/2 | mm | 70 | 85 | 35 | 6 | 58 | 79 | 6 | 34.5 | 35 | 35 | 18.8 | 31.7 | 34.5 | 7 | 3CC1040D11 | 3CC1040D21 |
| | | in | 2.75 | 3.35 | 1.38 | 0.24 | 2.28 | 3.11 | 0.24 | 1.36 | 1.38 | 1.38 | 0.74 | 1.25 | 1.36 | 0.27 | | |
| | SAE6 | mm | 60 | 85 | 35 | 6 | 48 | 79 | 6 | 34.5 | 30 | 30 | 18.8 | 31.7 | 34.5 | 7 | 3CC1040J11 | 3CC1040J21 |
| | | in | 2.36 | 3.35 | 1.38 | 0.24 | 1.89 | 3.11 | 0.24 | 1.36 | 1.18 | 1.18 | 0.74 | 1.25 | 1.36 | 0.27 | | |
| | SAE8 | mm | 70 | 85 | 35 | 6 | 58 | 79 | 6 | 34.5 | 35 | 35 | 18.8 | 31.7 | 34.5 | 7 | 3CC1040K11 | 3CC1040K21 |
| | | in | 2.75 | 3.35 | 1.38 | 0.24 | 2.28 | 3.11 | 0.24 | 1.36 | 1.38 | 1.38 | 0.74 | 1.25 | 1.36 | 0.27 | | |
| SAE10 | mm | 70 | 85 | 35 | 6 | 58 | 79 | 6 | 34.5 | 35 | 35 | 19 | 31.5 | 34.5 | 7 | 3CC1040L11 | 3CC1040L11 | |
| | in | 2.75 | 3.35 | 1.38 | 0.24 | 2.28 | 3.11 | 0.24 | 1.36 | 1.38 | 1.38 | 0.75 | 1.24 | 1.36 | 0.27 | | | |

Dimensions and ordering codes

| Cavity | Ports | Dimensions | | | | | | | | | | | | | | Ordering code | | |
|----------|-------|------------|------|------|------|------|------|------|------|------|------|------|------|------|------|---------------|------------|------------|
| | | A | B | C | E | F | G | H | I | L | M | N | O | P | Z | Aluminium | Steel | |
| SAE 12/4 | G 3/8 | mm | 80 | 115 | 40 | 8 | 64 | 107 | 8 | 44 | 40 | 40 | 22 | 44.5 | 48.5 | 8.5 | 3CC1240C11 | 3CC1240C21 |
| | | in | 3.15 | 4.53 | 1.57 | 0.31 | 2.52 | 4.21 | 0.31 | 1.73 | 1.57 | 1.57 | 0.87 | 1.75 | 1.9 | 0.33 | | |
| | G 1/2 | mm | 80 | 115 | 40 | 8 | 64 | 107 | 8 | 44 | 40 | 40 | 22 | 44.5 | 48.5 | 8.5 | 3CC1240D11 | 3CC1240D21 |
| | | in | 3.15 | 4.53 | 1.57 | 0.31 | 2.52 | 4.21 | 0.31 | 1.73 | 1.57 | 1.57 | 0.87 | 1.75 | 1.9 | 0.33 | | |
| | SAE10 | mm | 80 | 115 | 40 | 8 | 64 | 107 | 8 | 44 | 40 | 40 | 22 | 44.5 | 48.5 | 8.5 | 3CC1240L11 | 3CC1240L21 |
| | | in | 3.15 | 4.53 | 1.57 | 0.31 | 2.52 | 4.21 | 0.31 | 1.73 | 1.57 | 1.57 | 0.87 | 1.75 | 1.9 | 0.33 | | |
| SAE 16/4 | G 3/4 | mm | 100 | 130 | 50 | 10 | 80 | 120 | 10 | 53.5 | 50 | 50 | 25.1 | 56.9 | 48 | 10.5 | 3CC1640E11 | 3CC1640E21 |
| | | in | 3.94 | 5.12 | 1.97 | 0.39 | 3.15 | 4.72 | 0.39 | 2.11 | 1.97 | 1.97 | 0.99 | 2.24 | 1.89 | 0.41 | | |
| | SAE16 | mm | 100 | 130 | 50 | 10 | 80 | 120 | 10 | 53.5 | 50 | 50 | 25.1 | 56.9 | 48 | 10.5 | 3CC1640N11 | 3CC1640N21 |
| | | in | 3.94 | 5.12 | 1.97 | 0.39 | 3.15 | 4.72 | 0.39 | 2.11 | 1.97 | 1.97 | 0.99 | 2.24 | 1.89 | 0.41 | | |

How to order valves with body



Cartridge description

Body description

EC 10 M/10NB

C 1 1

Cavity

- 08
- 10
- 12
- 16

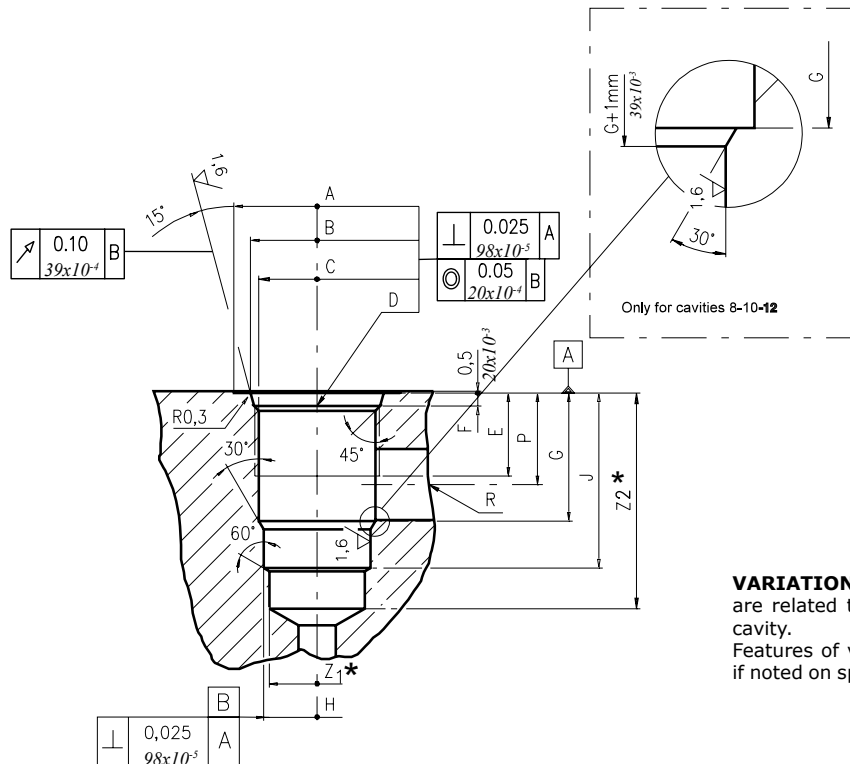
Ports

- B) G 1/4
- C) G 3/8
- D) G 1/2
- E) G 3/4
- F) G 1
- J) SAE6
- K) SAE8
- L) SAE10
- M) SAE12
- N) SAE16

Materials

- 1) Aluminium
- 2) Steel

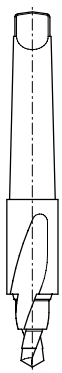
Dimensions



VARIATION "A": the dimensions with "*" are related to the variation "A" of 2 ways cavity. Features of variation "A" are required only if noted on specific product catalogue page.

| Cavity | A | B ±0.05 | C ±0.05 | D | E | F | G | H ±0.02 | J | K ±0.02 | L | M ±0.02 | N | P | R ØMAX | S | T ØMAX | U | V ØMAX | X ØMAX | Z1* ØMIN | Z2* MIN |
|--------|---------|---------|---------|---------------|-------|------|-------|---------|-------|---------|---|---------|---|-------|--------|---|--------|---|--------|--------|----------|---------|
| 08/2 | mm 27 | 20.66 | 17.42 | 3/4-16 UNF | 12.50 | 2.50 | 18.20 | 12.72 | 29.50 | - | - | - | - | 14.00 | 8.00 | - | - | - | - | - | 12.00 | 39 |
| 08/2 A | in 1.06 | 0.81 | 0.68 | | 0.49 | 0.10 | 0.72 | 0.50 | 1.16 | - | - | - | - | 0.55 | 0.31 | - | - | - | - | - | 0.47 | 1.53 |
| 10/2 | mm 30 | 24.00 | 20.62 | 7/8-14 UNF | 16.00 | 2.80 | 24.00 | 15.90 | 33.50 | - | - | - | - | 18.30 | 11.00 | - | - | - | - | - | 14.50 | 40 |
| 10/2 A | in 1.18 | 0.94 | 0.81 | | 0.63 | 0.11 | 0.94 | 0.62 | 1.32 | - | - | - | - | 0.72 | 0.43 | - | - | - | - | - | 0.57 | 1.57 |
| 12/2 | mm 38 | 29.23 | 24.73 | 1 1/16-12 UNF | 19.00 | 3.50 | 34.15 | 22.25 | 46.80 | - | - | - | - | 24.50 | 19.00 | - | - | - | - | - | 21.50 | 60 |
| 12/2 A | in 1.50 | 1.15 | 0.97 | | 0.75 | 0.14 | 1.34 | 0.87 | 1.84 | - | - | - | - | 0.96 | 0.75 | - | - | - | - | - | 0.85 | 2.36 |
| 16/2 | mm 45 | 35.60 | 31.34 | 1 5/16-12 UNF | 22.00 | 3.50 | 34.00 | 28.62 | 47.00 | - | - | - | - | 24.50 | 19.00 | - | - | - | - | - | 25.50 | 70 |
| 16/2 A | in 1.77 | 1.40 | 1.23 | | 0.87 | 0.14 | 1.34 | 1.13 | 1.85 | - | - | - | - | 0.96 | 0.75 | - | - | - | - | - | 1.00 | 2.75 |

Rougher tool



| Cavity | Code number |
|--------|-------------|
| 08/2 | 3UT00053190 |
| 10/2 | 3UT00056610 |
| 12/2 | 3UT00054090 |
| 16/2 | 3UT00054510 |

Finisher tool



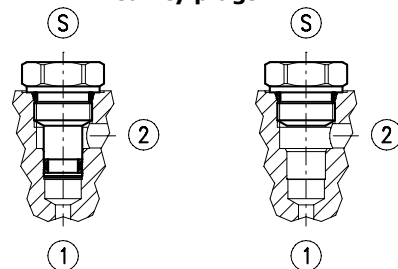
| Cavity | Code number |
|--------|-------------|
| 08/2 | 3UT06A1270N |
| 10/2 | 3UT00054580 |
| 12/2 | 3UT00054670 |
| 16/2 | 3UT00054520 |

Tap



| Cavity | Code number |
|--------|--------------|
| 08/2 | 3UT03416UNF |
| 10/2 | 3UT07814UNF |
| 12/2 | 3UT0111612UN |
| 16/2 | 3UT0151612UN |

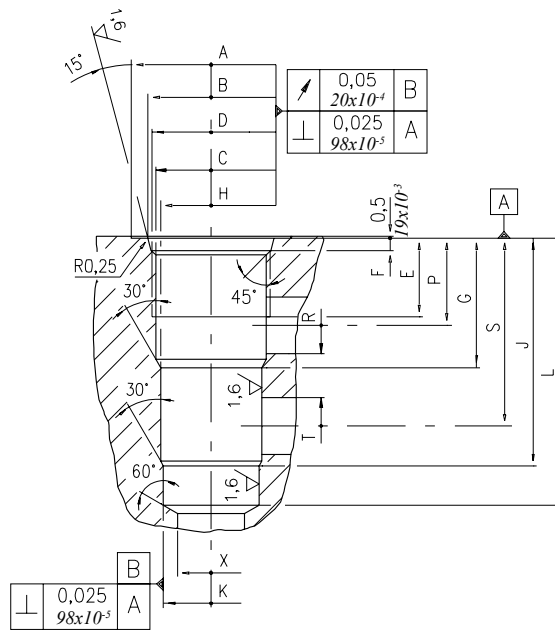
Cavity plugs



| Cavity | Code number | ① | ② | Ⓢ |
|--------|-------------|---|---|---|
| 08/2 | 3XTP3533700 | X | X | X |
| | 3XTP1531900 | 0 | 0 | X |
| 10/2 | 3XTP3544200 | X | X | X |
| | 3XTP1542300 | 0 | 0 | X |
| 12/2 | 3XTP3555400 | X | X | X |
| | 3XTP1552900 | 0 | 0 | X |
| 16/2 | 3XTP3575500 | X | X | X |
| | 3XTP1572900 | 0 | 0 | X |

X=Closed 0=Open

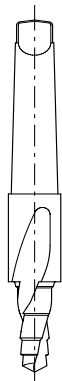
Dimensions



| Cavity | A | B ±0,05 | C ±0,05 | D | E | F | G | H ±0,02 | J | K ±0,02 | L | M ±0,02 | N | P | R øMAX | S | T øMAX | U øMAX | V øMAX | X øMAX | |
|--------|----|------------|------------|-------|----------------|-------|------|------------|-------|------------|-------|------------|---|---|-----------|-------|-----------|-----------|-----------|-----------|-------|
| 08/3 | mm | 27 | 20,66 | 17,42 | 3/4 -16 UNF | 12,50 | 2,50 | 19,10 | 15,90 | 33,30 | 14,30 | 43,30 | - | - | 14,30 | 5,50 | 28,60 | 5,50 | - | - | 12,50 |
| | in | 1.06 | 0.81 | 0.68 | | 0.49 | 0.10 | 0.75 | 0.62 | 1.31 | 0.56 | 1.70 | - | - | 0.56 | 0.22 | 1.12 | 0.22 | - | - | 0.49 |
| 10/3 | mm | 30 | 24,00 | 20,62 | 7/8 -14 UNF | 16,00 | 2,80 | 23,10 | 17,50 | 39,60 | 15,90 | 47,60 | - | - | 18,30 | 6,50 | 34,00 | 6,50 | - | - | 14,00 |
| | in | 1.18 | 0.94 | 0.81 | | 0.63 | 0.11 | 0.94 | 0.69 | 1.56 | 0.62 | 1.87 | - | - | 0.72 | 0.25 | 1.34 | 0.25 | - | - | 0.55 |
| 12/3 | mm | 38 | 29,23 | 24,73 | 1 1/16 -12 UNF | 19,00 | 3,56 | 36,60 | 23,82 | 63,50 | 22,25 | 75,40 | - | - | 24,50 | 16,00 | 53,00 | 16,00 | - | - | 19,00 |
| | in | 1.50 | 1.15 | 0.97 | | 0.75 | 0.14 | 1.44 | 0.94 | 2.5 | 0.88 | 2.97 | - | - | 0.96 | 0.63 | 2.09 | 0.63 | - | - | 0.75 |
| 16/3 | mm | 45 | 35,60 | 28,62 | 1 5/16 -12 UNF | 22,00 | 3,50 | 36,50 | 28,62 | 64,30 | 27,02 | 75,30 | - | - | 24,50 | 16,00 | 53,00 | 16,00 | - | - | 19,00 |
| | in | 1.77 | 1.40 | 1.13 | | 0.87 | 0.14 | 1.44 | 1.13 | 2.53 | 1.06 | 2.96 | - | - | 0.96 | 0.63 | 2.09 | 0.63 | - | - | 0.75 |
| 20/3 | mm | 58 | 43,60 | 36,55 | 1 5/8 -12 UNF | 21,00 | 3,50 | 46,00 | 36,55 | 87,60 | 33,37 | 100 | - | - | 31 | 25,40 | 71,5 | 25,40 | - | - | 30,00 |
| | in | 2.28 | 1.71 | 1.44 | | 0.83 | 0.14 | 1.81 | 1.04 | 3.45 | 1.31 | 3.93 | - | - | 1.22 | 1 | 2.81 | 1 | - | - | 1.18 |

Cavity plugs

Rougher tool



| Cavity | Code number |
|--------|-------------|
| 08/3 | 3UT00052190 |
| 10/3 | 3UT00054170 |
| 12/3 | 3UT00054290 |
| 16/3 | 3UT00054470 |

Finisher tool

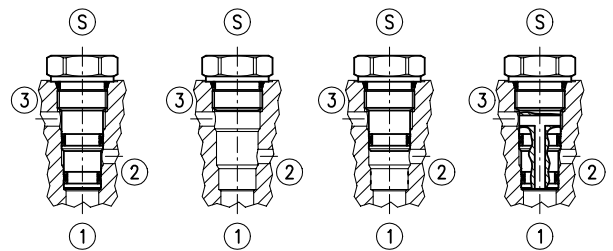


| Cavity | Code number |
|--------|-------------|
| 08/3 | 3UT00052740 |
| 10/3 | 3UT00054180 |
| 12/3 | 3UT00054300 |
| 16/3 | 3UT00054480 |

Tap

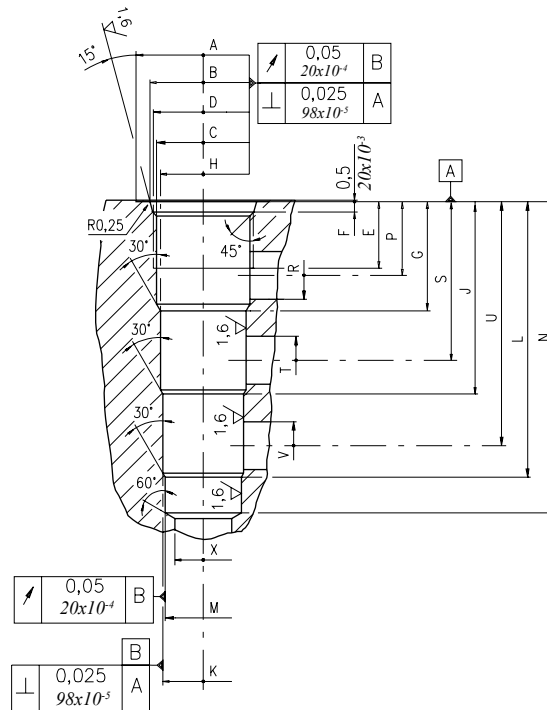


| Cavity | Code number |
|--------|--------------|
| 08/3 | 3UT03416UNF |
| 10/3 | 3UT07814UNF |
| 12/3 | 3UT0111612UN |
| 16/3 | 3UT0151612UN |



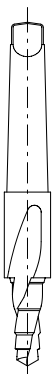
| Cavity | Code number | ① | ② | ③ | S |
|--------|-------------|---|---|---|---|
| 08/3 | 3XTP3535100 | X | X | X | X |
| | 4TP5531500 | 0 | 0 | 0 | X |
| | 3XTP3534000 | 0 | 0 | X | X |
| | 3XTP3534800 | 0 | X | 0 | X |
| 10/3 | 3XTP3545700 | X | X | X | X |
| | 3XTP1542300 | 0 | 0 | 0 | X |
| | 3XTP3545701 | 0 | X | 0 | X |
| 12/3 | 3XTP3558200 | X | X | X | X |
| | 3XTP1552900 | 0 | 0 | 0 | X |
| | 3XTP3558201 | 0 | X | 0 | X |
| 16/3 | 3XTP3578400 | X | X | X | X |
| | 3XTP1572900 | 0 | 0 | 0 | X |

X=Closed 0=Open



| Cavity | A | B ±0,05 | C ±0,05 | D | E | F | G | H ±0,02 | J | K ±0,02 | L | M ±0,02 | N | P | R φMAX | S φMAX | T φMAX | U | V φMAX | X φMAX | |
|--------|----|------------|------------|-------|---------------|-------|------|------------|-------|------------|-------|------------|-------|--------|-----------|-----------|-----------|-------|-----------|-----------|-------|
| 08/4 | mm | 28,00 | 20,66 | 17,42 | 3/4-16 UNF | 12,50 | 2,50 | 19,10 | 15,90 | 33,30 | 14,30 | 47,60 | 12,72 | 57,60 | 14,30 | 5,50 | 28,60 | 5,50 | 42,90 | 5,50 | 11,00 |
| | in | 1.10 | 0.81 | 0.68 | | 0.49 | 0.10 | 0.75 | 0.62 | 1.31 | 0.56 | 1.87 | 0.50 | 2.27 | 0.56 | 0.22 | 1.12 | 0.22 | 1.69 | 0.22 | 0.43 |
| 10/4 | mm | 30 | 24,00 | 20,62 | 7/8-14 UNF | 16,00 | 2,80 | 23,60 | 19,08 | 39,60 | 17,50 | 55,40 | 15,90 | 63,50 | 18,30 | 6,50 | 34,00 | 6,50 | 50,00 | 6,50 | 14,00 |
| | in | 1.18 | 0.94 | 0.81 | | 0.63 | 0.11 | 0.93 | 0.75 | 1.56 | 0.69 | 2.18 | 0.62 | 2.50 | 0.72 | 0.26 | 1.34 | 0.25 | 1.97 | 0.25 | 0.55 |
| 12/4 | mm | 38 | 29,23 | 24,73 | 1 1/16-12 UNF | 19,00 | 3,56 | 29,50 | 23,82 | 51,50 | 22,25 | 73,60 | 20,65 | 83,33 | 21,50 | 11,00 | 43,50 | 11,00 | 66,00 | 11,00 | 19,00 |
| | in | 1.50 | 1.15 | 0.97 | | 0.75 | 0.14 | 1.16 | 0.94 | 2.03 | 0.87 | 2.90 | 0.81 | 3.28 | 0.85 | 0.43 | 1.71 | 0.43 | 2.60 | 0.43 | 0.75 |
| 16/4 | mm | 45 | 35,60 | 31,34 | 1 5/16-12 UNF | 22,00 | 3,50 | 36,50 | 28,62 | 64,30 | 27,02 | 92,07 | 25,45 | 104,00 | 24,60 | 16,00 | 53,00 | 16,00 | 81,50 | 16,00 | 19,00 |
| | in | 1.77 | 1.40 | 1.23 | | 0.87 | 0.14 | 1.44 | 1.13 | 2.53 | 1.06 | 3.62 | 1.00 | 4.09 | 0.97 | 0.63 | 2.09 | 0.63 | 3.21 | 0.63 | 0.75 |

Rougher tool



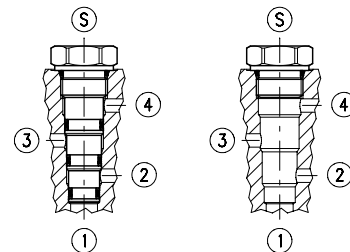
Finisher



Tap



Cavity plugs



| Cavity | Code number |
|--------|-------------|
| 08/4 | 3UT00052040 |
| 10/4 | 3UT00054250 |
| 12/4 | 3UT00054410 |
| 16/4 | 3UT00054820 |

| Cavity | Code number |
|--------|-------------|
| 08/4 | 3UT00052020 |
| 10/4 | 3UT00054260 |
| 12/4 | 3UT00054420 |
| 16/4 | 3UT00054830 |

| Cavity | Code number |
|--------|--------------|
| 08/4 | 3UT03416UNF |
| 10/4 | 3UT07814UNF |
| 12/4 | 3UT111612UN |
| 16/4 | 3UT0151612UN |

| Cavity | Code number | ① | ② | ③ | ④ | Ⓢ |
|--------|-------------|---|---|---|---|---|
| 08/4 | 3XTP3536500 | X | X | X | X | X |
| | 4TP5531500 | 0 | 0 | 0 | 0 | X |
| 10/4 | 3XTP3548301 | X | X | X | X | X |
| | 3XTP1542300 | 0 | 0 | 0 | 0 | X |
| 12/4 | 3XTP3559300 | X | X | X | X | X |
| | 3XTP1552900 | 0 | 0 | 0 | 0 | X |
| 16/4 | 3XTP357B300 | X | X | X | X | X |
| | 3XTP1572900 | 0 | 0 | 0 | 0 | X |

X=Closed 0=Open

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