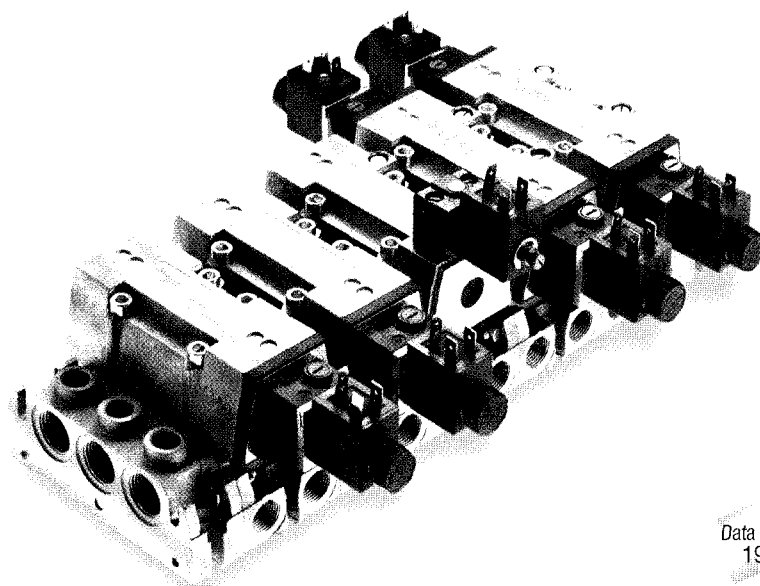
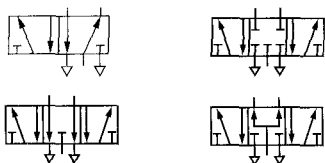


ISO★STAR

Solenoid & pilot actuated
Sub-base

5/2 & 5/3, ISO #1-ISO #3



Data sheet ref
192 00

Features

Specially coated glandless spool and sleeve for long trouble-free life

Integral flow regulators available on ISO #1 and #2 sizes

Low power solenoids feature manual override as standard

Wide range of sub-bases and accessories

Technical data

Medium:

Compressed air, filtered, lubricated, non lubricated and dry.

Operating pressure:

Maximum 16 bar, see individual details.

Flow:

ISO #1 1230 l/min
ISO #2 2450 l/min
ISO #3 4400 l/min

Ambient temperature:

-15°C to +50°C solenoid models
-15°C to +80°C pilot models.
Consult our Technical Service for use below +2°C.

Materials

Body: die-cast aluminium

Spool & sleeve: hard anodised aluminium with special Teflon coating

Seals: nitrile

Alternative models

ISO #4 models are also available – contact our Technical Service.

Lockable manual override.

External pilot supply versions.

For details of ISO soft start valves see page 238

Solenoid

| Size | Function | Actuation | Flow regulator | Mid position | End solenoid models Op. pressure kg (bar) | Model | CNOMO solenoid models | | | |
|------------|----------------|-----------|----------------|--------------|---|-------|-----------------------|--------|------|----------------------|
| | | | | | | | Op. pressure kg (bar) | Model | | |
| ISO #1 5/2 | Sol/spring | – | – | – | 1,8-10 | 0,33 | SXE 9573-A71-00/**** | 1,8-16 | 0,33 | SXE 9573-Z71-81/**** |
| ISO #1 5/2 | Sol/spring | Built-in | – | – | 1,8-10 | 0,33 | SXE 9573-A81-00/**** | 1,8-16 | 0,33 | SXE 9573-Z81-81/**** |
| ISO #1 5/2 | Sol/Air spring | – | – | – | 1-10 | 0,33 | SXE 9573-A70-00/**** | 1-10 | 0,33 | SXE 9573-Z70-60/**** |
| ISO #1 5/2 | Sol/Air spring | Built-in | – | – | 1-10 | 0,33 | SXE 9573-A80-00/**** | 1-10 | 0,33 | SXE 9573-Z80-60/**** |
| ISO #1 5/2 | Sol/sol | – | – | – | 2-10 | 0,45 | SXE 0573-A50-00/**** | 2-16 | 0,45 | SXE 0573-Z50-81/**** |
| ISO #1 5/2 | Sol/sol | Built-in | – | – | 2-10 | 0,45 | SXE 0573-A60-00/**** | 2-16 | 0,45 | SXE 0573-Z60-81/**** |
| ISO #1 5/3 | Sol/sol | Built-in | APB | – | 2-10 | 0,45 | SXE 9673-A60-00/**** | 2-16 | 0,45 | SXE 9673-Z60-81/**** |
| ISO #1 5/3 | Sol/sol | Built-in | COE | – | 2-10 | 0,45 | SXE 9773-A60-00/**** | 2-16 | 0,45 | SXE 9773-Z60-81/**** |
| ISO #1 5/3 | Sol/sol | Built-in | COP | – | 2-10 | 0,45 | SXE 9873-A60-00/**** | 2-16 | 0,45 | SXE 9873-Z60-81/**** |
| ISO #2 5/2 | Sol/spring | – | – | – | 1,8-10 | 0,57 | SXE 9574-A71-00/**** | 1,8-16 | 0,57 | SXE 9574-Z71-81/**** |
| ISO #2 5/2 | Sol/spring | Built-in | – | – | 1,8-10 | 0,57 | SXE 9574-A81-00/**** | 1,8-16 | 0,57 | SXE 9574-Z81-81/**** |
| ISO #2 5/2 | Sol/Air spring | – | – | – | 1-10 | 0,59 | SXE 9574-A70-00/**** | 1-10 | 0,59 | SXE 9574-Z70-60/**** |
| ISO #2 5/2 | Sol/Air spring | Built-in | – | – | 1-10 | 0,59 | SXE 9574-A80-00/**** | 1-10 | 0,59 | SXE 9574-Z80-60/**** |
| ISO #2 5/2 | Sol/sol | – | – | – | 2-10 | 0,72 | SXE 0574-A50-00/**** | 2-16 | 0,72 | SXE 0574-Z50-81/**** |
| ISO #2 5/2 | Sol/sol | Built-in | – | – | 2-10 | 0,72 | SXE 0574-A60-00/**** | 2-16 | 0,72 | SXE 0574-Z60-81/**** |
| ISO #2 5/3 | Sol/sol | Built-in | APB | – | 2-10 | 0,72 | SXE 9674-A60-00/**** | 2-16 | 0,72 | SXE 9674-Z60-81/**** |
| ISO #2 5/3 | Sol/sol | Built-in | COE | – | 2-10 | 0,72 | SXE 9774-A60-00/**** | 2-16 | 0,72 | SXE 9774-Z60-81/**** |
| ISO #2 5/3 | Sol/sol | Built-in | COP | – | 2-10 | 0,83 | SXE 9874-A60-00/**** | 2-16 | 0,83 | SXE 9874-Z60-81/**** |
| ISO #3 5/2 | Sol/spring | – | – | – | 1,8-10 | 0,85 | SXE 9575-A71-00/**** | 1,8-16 | 0,85 | SXE 9575-Z71-81/**** |
| ISO #3 5/2 | Sol/Air spring | – | – | – | 1-10 | 0,85 | SXE 9575-A70-00/**** | 1-10 | 0,85 | SXE 9575-Z70-60/**** |
| ISO #3 5/2 | Sol/sol | – | – | – | 2-10 | 0,96 | SXE 0575-A50-00/**** | 2-16 | 0,96 | SXE 0575-Z50-81/**** |
| ISO #3 5/3 | Sol/sol | – | APB | – | 2-10 | 0,96 | SXE 9675-A50-00/**** | 2-16 | 0,96 | SXE 9675-Z50-81/**** |
| ISO #3 5/3 | Sol/sol | – | COE | – | 2-10 | 0,96 | SXE 9775-A50-00/**** | 2-16 | 0,96 | SXE 9775-Z50-81/**** |
| ISO #3 5/3 | Sol/sol | – | COP | – | 2-10 | 0,96 | SXE 9875-A50-00/**** | 2-16 | 0,96 | SXE 9875-Z50-81/**** |

APB = All Ports Blocked, COE = Centre Open Exhaust, COP = Centre Open Pressure. Service kits not available for these valves.

****Insert voltage codes for standard or CNOMO model from correct table below. Order connector plugs separately.

Manual override – push to operate spring return.

Voltage codes and spare coils for end solenoid models

| Voltage | 22 mm Coil with connector interface acc. to Industrial Standard | | Spare coil part no. | 22 mm Coil with connector interface acc. to DIN 43650 table B | | 30 mm Coil with connector interface acc. to DIN 43650 table A | | Spare coil part no. | |
|--------------------|---|-------------------|---------------------|---|-------------------|---|-------------------|---------------------|------------|
| | Code | Power inrush/hold | | Code | Power inrush/hold | Code | Power inrush/hold | | |
| 12 V d.c. | 12J | 2 W | QM/48/160/21 | 12L | 2 W | V10626-A12 | 22N | 1,5 W | V10633-A12 |
| 24 V d.c. | 13J | 2 W | QM/48/127/21 | 13L | 2 W | V10626-A13 | 23N | 1,5 W | V10633-A13 |
| 24 V 50/60 Hz | 14J | 4/2,5 VA | QM/48/164/21 | 14L | 4/2,5 VA | V10626-A14 | 24N | 3/2 VA | V10633-A14 |
| 48 V 50/60 Hz | 16J | 4/2,5 VA | QM/48/165/21 | 16L | 4/2,5 VA | V10626-A16 | 26N | 3/2 VA | V10633-A16 |
| 110/120 V 50/60 Hz | 18J | 4/2,5 VA | QM/48/166/21 | 18L | 4/2,5 VA | V10626-A18 | 28N | 3/2 VA | V10633-A18 |
| 220/240 V 50/60 Hz | 19J | 9/5,0 VA | QM/48/167/21 | 19L | 9/5,0 VA | V10626-A19 | 89N | 10/8 VA | V10633-A39 |

Voltage codes for CNOMO solenoid models

| Voltage | 30 mm Coil with connector interface acc. to DIN 43650 table A for 16 bar solenoid pilot | | Part no. |
|--------------------|---|---------|------------|
| 24 V d.c. | 33N | 4 W | V10633-A23 |
| 110/120 V 50/60 Hz | 86N | 10/8 VA | V10633-A38 |
| 230 V 50/60 Hz | 89N | 10/8 VA | V10633-A39 |

Electrical details for end & CNOMO solenoid operators

| | |
|------------------------|---|
| Voltage tolerance: | ±10% |
| Rating: | 100% E.D. |
| Inlet orifice: | 1,0 mm |
| Electrical connection: | Corresponding to chosen coil. See voltage code tables |
| Solenoid coil | May be rotated at 90° intervals |
| Protection class: | IP 65 with sealed plug (ISO 6952) |

For details of connector plugs and indicators see page 283.

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ISO★STAR

NORGREN

VALVES

ISO★STAR

Solenoid & pilot actuated

Sub-base

5/2 & 5/3, ISO #1-ISO #3

Pilot

| Size | Function | Actuation | Flow regulator | Mid position | Operating pressure (bar) | kg | Model |
|--------|----------|--------------|----------------|--------------|--------------------------|------|-----------------|
| ISO #1 | 5/2 | Pilot/spring | — | — | -0,9 - 16 | 0,21 | SXP 9573-170-00 |
| ISO #1 | 5/2 | Pilot/spring | Built-in | — | -0,9 - 16 | 0,26 | SXP 9573-180-00 |
| ISO #1 | 5/2 | Pilot/pilot | — | — | -0,9 - 16 | 0,30 | SXP 0573-170-00 |
| ISO #1 | 5/2 | Pilot/pilot | Built-in | — | -0,9 - 16 | 0,30 | SXP 0573-180-00 |
| ISO #1 | 5/3 | Pilot/pilot | Built-in | APB | -0,9 - 16 | 0,25 | SXP 9673-180-00 |
| ISO #1 | 5/3 | Pilot/pilot | Built-in | COE | -0,9 - 16 | 0,24 | SXP 9773-180-00 |
| ISO #1 | 5/3 | Pilot/pilot | Built-in | COP | -0,9 - 16 | 0,25 | SXP 9873-180-00 |
| ISO #2 | 5/2 | Pilot/spring | — | — | -0,9 - 16 | 0,45 | SXP 9574-170-00 |
| ISO #2 | 5/2 | Pilot/spring | Built-in | — | -0,9 - 16 | 0,45 | SXP 9574-180-00 |
| ISO #2 | 5/2 | Pilot/pilot | — | — | -0,9 - 16 | 0,50 | SXP 0574-170-00 |
| ISO #2 | 5/2 | Pilot/pilot | Built-in | — | -0,9 - 16 | 0,50 | SXP 0574-180-00 |
| ISO #2 | 5/3 | Pilot/pilot | Built-in | APB | -0,9 - 16 | 0,58 | SXP 9674-180-00 |
| ISO #2 | 5/3 | Pilot/pilot | Built-in | COE | -0,9 - 16 | 0,58 | SXP 9774-180-00 |
| ISO #2 | 5/3 | Pilot/pilot | Built-in | COP | -0,9 - 16 | 0,58 | SXP 9874-180-00 |
| ISO #3 | 5/2 | Pilot/spring | — | — | -0,9 - 16 | 0,72 | SXP 9575-170 |
| ISO #3 | 5/2 | Pilot/pilot | — | — | -0,9 - 16 | 0,72 | SXP 0575-170 |
| ISO #3 | 5/3 | Pilot/pilot | — | APB | -0,9 - 16 | 0,80 | SXP 9675-170 |
| ISO #3 | 5/3 | Pilot/pilot | — | COE | -0,9 - 16 | 0,80 | SXP 9775-170 |
| ISO #3 | 5/3 | Pilot/pilot | — | COP | -0,9 - 16 | 0,80 | SXP 9875-170 |

APB = All Ports Blocked, COE = Centre Open Exhaust, COP = Centre Open Pressure. Service kits not available for these valves.

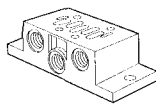
**Insert voltage codes for standard or CNOMO model from correct table below. Order connector plugs separately.

Manual override – push to operate spring return.



VDMA 24 345 sub-bases

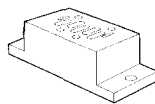
Form 'A'
Side ported*



For ISO#1 models
For ISO#2 models
For ISO#3 models

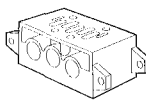
M/P19126 (G1/4)
M/P19132 (G3/8)
M/P19138 (G1/2)

Form 'B'
Bottom ported



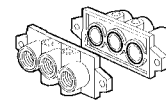
M/P19125 (G1/4)
M/P19131 (G3/8)
M/P19137 (G1/2)

Form 'C'
Manifold



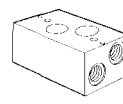
CQM/22152/3/21
CQM/22253/3/21
CQM/22354/3/21

Form 'D'
End plates



CQM/22152/3/22
CQM/22253/3/22
CQM/22354/3/22

Form 'E'
Connecting plate



FP8361
FP8461
FP8561

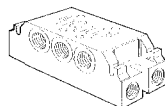
Blanking disk



FP 8382
FP 8482
FP 8582

Universal base options (side & bottom ported)

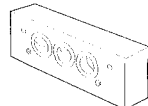
Modular base



For ISO#1 models
For ISO#2 models

CQM/22152/3/27 (G1/4)
CQM/22253/3/27 (G3/8)

Transition plate



CQM/22153/3/29 (#1-#2)

Blanking disc (dual supply)



M/P43173
M/P43174

End plate†



CQM/22152/3/28 (G1/4)
CQM/22253/3/28 (G3/8)

End plate, side ports open

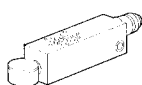


CQM/22152/3/31
CQM/22253/3/31

†All ports supplied blanked for optimum system configuration.

Accessories

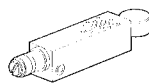
Pressure regulator



For ISO #1 models
For ISO #2 models
For ISO #3 models

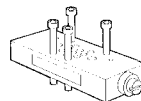
V71012-KB2 Port 2 regulated
V71012-KC2 Port 2 regulated
V71012-KD2 Port 2 regulated

Pressure regulator



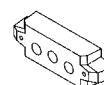
V71012-KB3 Port 4 regulated
V71012-KC3 Port 4 regulated
V71012-KD3 Port 4 regulated

Flow regulator



—
—
CQM/22354/3/26

Manifold adaptor*



CQM/22152/3/24
CQM/22253/3/24
—

Blanking plate



CQM/22152/3/23
CQM/22253/3/23
CQM/22354/3/23

*These adaptors enable the model size shown to be connected to the next larger size, e.g. CQM/22152/3/24 connects an ISO #1 VDMA manifold base to an ISO #2 VDMA manifold base. Additional single (port 1 regulated) and double (ports 2 and 4 regulated) pressure regulators available. Please contact our Technical Service for information.

VALVES

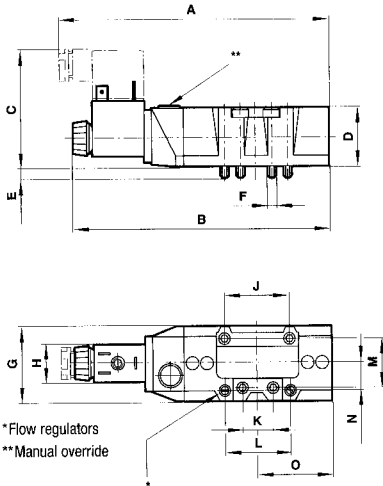
ISO★STAR

Solenoid & pilot actuated

Sub-base

5/2 & 5/3, ISO #1-ISO #3

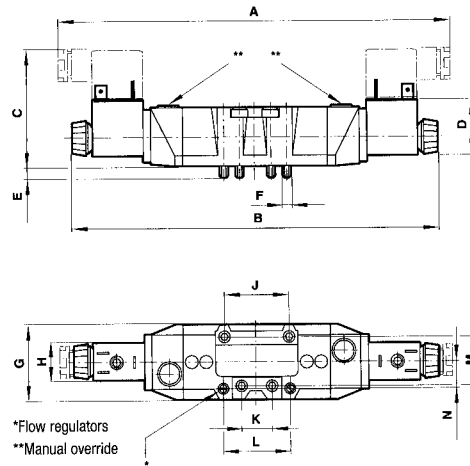
Single end solenoid models



*Flow regulators
**Manual override

| | ISO 1 | ISO 2 | ISO 3 |
|---|-------|-------|-------|
| A | 155 | 183 | 215 |
| B | 147 | 175 | 208,5 |
| C | 66 | 70 | 74 |
| D | 33 | 42 | 47 |
| E | 7,5 | 8 | 8,5 |
| F | M5 | M6 | M8 |
| G | 42 | 55 | 62,5 |
| H | 22 | 22 | 22 |
| J | 36 | 48 | 64 |
| K | 18 | 24 | 32 |
| L | 42 | 53 | 74,5 |
| M | 28 | 38 | 48 |

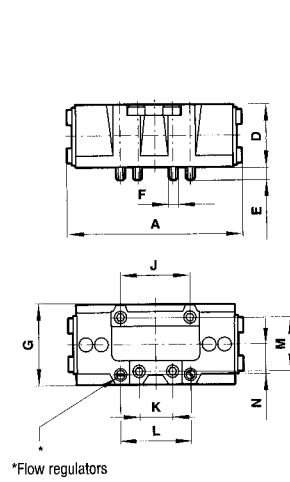
Double end solenoid models



*Flow regulators
**Manual override

| | ISO 1 | ISO 2 | ISO 3 |
|---|-------|-------|-------|
| A | 226 | 259 | 281 |
| B | 209 | 243 | 267,5 |
| C | 66 | 70 | 74 |
| D | 33 | 42 | 47 |
| E | 7,5 | 8 | 8,5 |
| F | M5 | M6 | M8 |
| G | 42 | 55 | 62,5 |
| H | 22 | 22 | 22 |
| J | 36 | 48 | 64 |
| K | 18 | 24 | 32 |
| M | 28 | 38 | 48 |

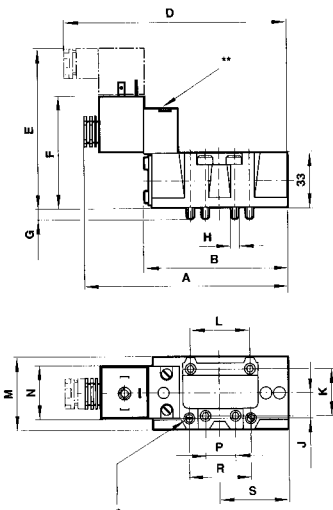
Single and double pilot models



*Flow regulators

| | ISO 1 Single | ISO 1 Double | ISO 2 Single | ISO 2 Double | ISO 3 |
|---|-----------------|-----------------|-----------------|-----------------|-------|
| A | 88,5 | 93 | 109 | 120 | 170 |
| B | 36 | 36 | 48 | 48 | 64 |
| C | 18 | 18 | 24 | 24 | 32 |
| D | 42 | 42 | 55 | 55 | 62,5 |
| E | 28 | 28 | 38 | 38 | 48 |
| G | M5 | M5 | M6 | M6 | M8 |
| H | 33 | 33 | 42 | 42 | 47 |
| J | 7 | 7 | 8 | 8 | 8,5 |
| L | - | - | - | - | 145 |

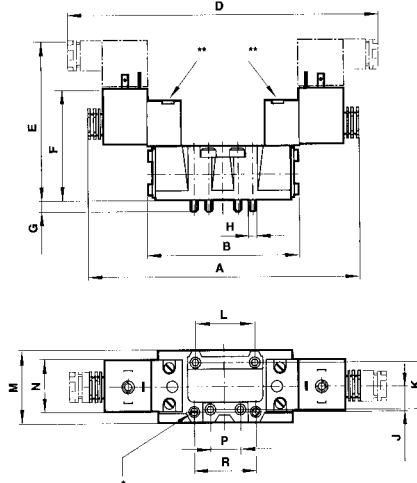
Single CNOMO solenoid valves



*Manual override
**Flow regulator (not on ISO #3 model)

| | ISO 1 | ISO 2 | ISO 3 |
|---|-------|-------|-------|
| A | 146,5 | 166 | 183 |
| B | 88,4 | 109 | 153 |
| C | 33 | 42 | 48 |
| D | 155,5 | 175 | 192 |
| E | 97,5 | 107 | 122 |
| F | 69,5 | 79 | 94 |
| G | 7,5 | 8 | 8,5 |
| H | M5 | M6 | M8 |
| J | 14,85 | 20 | - |
| K | 28 | 38 | 48 |
| L | 36 | 48 | 64 |
| M | 42 | 55 | 62,5 |
| N | 32 | 32 | 32 |
| P | 18 | 24 | 32 |
| R | 37,6 | 48 | - |
| S | 42 | 53 | - |

Double CNOMO solenoid valves



*Manual override
**Flow regulator (not on ISO #3 model)

| | ISO 1 | ISO 2 | ISO 3 |
|---|-------|-------|-------|
| A | 209 | 226 | 218 |
| B | 92 | 120 | 158 |
| C | 33 | 42 | 48 |
| D | 226,6 | 244 | 235,6 |
| E | 97,5 | 107 | 122 |
| F | 69,5 | 79 | 94 |
| G | 7,5 | 8 | 8,5 |
| H | M5 | M6 | M8 |
| J | 14,85 | 20 | - |
| K | 28 | 38 | 48 |
| L | 36 | 48 | 64 |
| M | 42 | 55 | 62,5 |
| N | 32 | 32 | 32 |
| P | 18 | 24 | 32 |
| R | 37,6 | 48 | - |

VALVES

ISO★STAR

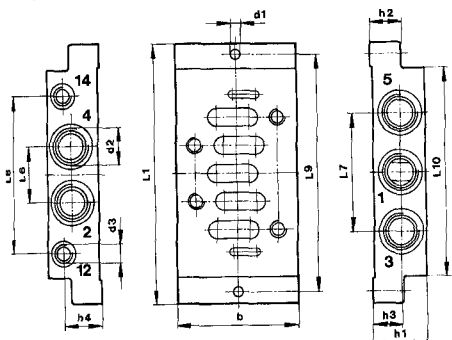
Solenoid & pilot actuated

Sub-base

5/2 & 5/3, ISO #1-ISO #3

VDMA 24 345 Sub-bases

Side ported

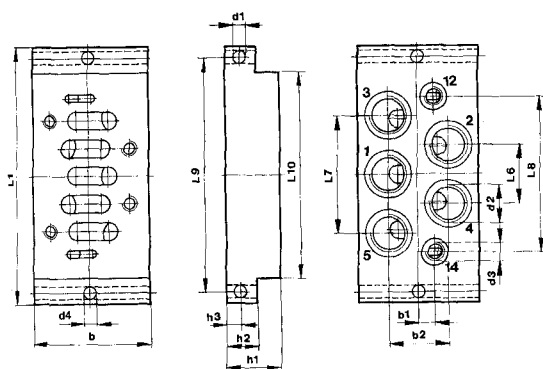


| ISO | Type | b | d1 | d2 | d3 | h1 | h2 | h3* |
|-----|----------|----|-----|------|------|----|----|-------------|
| 1 | M/P19126 | 48 | 5,5 | G1/4 | G1/8 | 32 | 10 | 10,5 (21,5) |
| 2 | M/P19132 | 57 | 6,6 | G3/8 | G1/8 | 40 | 13 | 14 (26) |
| 3 | M/P19138 | 71 | 6,6 | G1/2 | G1/8 | 32 | 18 | 179 |

| ISO | Type | h4 | L1 | L6 | L7 | L8 | L9 | L10 |
|-----|----------|------|-----|----|----|----|-----|-----|
| 1 | M/P19126 | 23,5 | 110 | 24 | 43 | 58 | 98 | 84 |
| 2 | M/P19132 | 30 | 124 | 30 | 56 | 74 | 112 | 95 |
| 3 | M/P19138 | 22 | 149 | 32 | 68 | 90 | 136 | 119 |

(*) Dimension for ports 3 and 5.

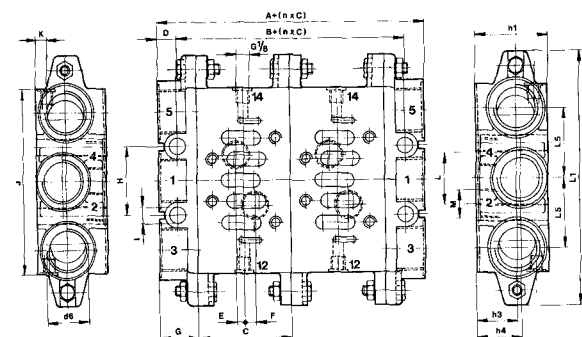
Bottom ported



| ISO | Type | b | b1 | b2 | d1 | d2 | d3 | d4 |
|-----|----------|----|----|----|-----|------|------|------|
| 1 | M/P19125 | 46 | 7 | 23 | 5,5 | G1/4 | G1/8 | 5,5 |
| 2 | M/P19131 | 56 | 8 | 27 | 6,6 | G3/8 | G1/8 | 6,6 |
| 3 | M/P19137 | 71 | 10 | 34 | 6,6 | G1/2 | G1/8 | 6,69 |

| ISO | Type | h1 | h2 | h3 | L1 | L6 | L7 | L8 | L9 | L10 |
|-----|----------|----|----|-----|-----|----|----|----|-----|-----|
| 1 | M/P19125 | 30 | 10 | 5 | 110 | 23 | 46 | 62 | 98 | 84 |
| 2 | M/P19131 | 35 | 13 | 6,5 | 124 | 28 | 56 | 73 | 112 | 95 |
| 3 | M/P19137 | 32 | 18 | 9 | 149 | 34 | 68 | 90 | 136 | 119 |

End plates and manifold



| ISO | A | B | C | D | E | F | G | H | I | J |
|-----|----|----|----|----|-----|-----|----|----|----|-----|
| 1 | 44 | 22 | 43 | 11 | 1,5 | 7,5 | 22 | 28 | 7 | 85 |
| 2 | 52 | 26 | 56 | 13 | 5 | 6 | 26 | 35 | 9 | 100 |
| 3 | 60 | 30 | 71 | 15 | 6 | 8 | 30 | 52 | 12 | 140 |

| ISO | K | L | M | h1 | h3 | h4 | L1 | L5 | d6 |
|-----|-----|----|------|----|----|----|-----|----|------|
| 1 | 8,5 | 26 | G1/4 | 46 | 21 | 24 | 110 | 28 | G3/8 |
| 2 | 9 | 30 | G3/8 | 47 | 22 | 24 | 135 | 34 | G1/2 |
| 3 | 10 | 38 | G1/2 | 56 | 31 | 34 | 190 | 52 | G1 |

Maximum 12 stations.

VALVES

ISO★STAR

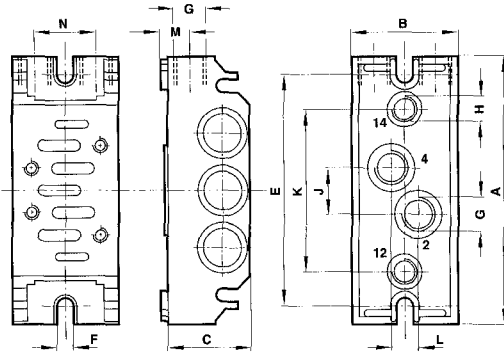
Solenoid & pilot actuated

Sub-base

5/2 & 5/3, ISO #1-ISO #3

Universal sub-base options

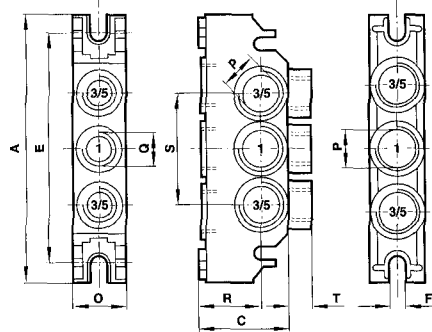
Modular base with side, end and bottom ports open
CQM/22152/3/27, CQM22253/3/27



| ISO | A | B | C | E | F | G | H | J | K | L | M | N | kg |
|-----|-----|----|----|-----|-----|------|------|----|----|----|----|----|------|
| 1 | 106 | 43 | 36 | 92 | 5,5 | G1/4 | G1/8 | 18 | 64 | 11 | 12 | 28 | 0,16 |
| 2 | 120 | 56 | 43 | 102 | 6,5 | G3/8 | G1/8 | 24 | 68 | 19 | 15 | 38 | 0,35 |

Universal end plate, all ports blocked
CQM/22152/28, CQM/22253/3/28

Universal end plate, side ports open
CQM/22152/3/31, CQM22253/3/31

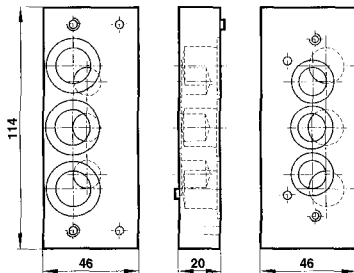


| ISO | A | C | E | F | O | P | Q | R | S | T | kg |
|-----|-----|----|-----|-----|----|------|------|----|----|---|------|
| 1 | 106 | 36 | 92 | 5,5 | 22 | G3/8 | G1/4 | 25 | 44 | 9 | 0,13 |
| 2 | 120 | 46 | 102 | 6,5 | 29 | G1/2 | G1/4 | 31 | 58 | 7 | 0,23 |

Drill dimensions for opening ports

| | |
|------|--------|
| G1/4 | Ø 11,8 |
| G3/8 | Ø 15,3 |
| G1/2 | Ø 19,0 |

Transition plate from ISO #1 to ISO #2 universal sub-bases
CQM/22152/3/29



Blanking disk for ISO #1 and ISO #2 universal sub-bases
M/P43173, M/P43174

