

Égő- és kazánvezérlés



Szelepek és meghajtók



Honeywell

UNIVERSAL GAS VALVES

VE 4025C1008 Series 01
V 220 Hz 50/60 VA IP54
Cl. A Gr 2 Pmax 200 mbar DN 25
Amb. temp. - 15 + 60 °C ED 100% Gas 1-2-3
EN 161
DATE 93 31 2003065201
Made in Italy

UGV TYPE - EVRF65 Aut. Min. Int. 648-112A

VE4000 Series

CLASS "A" SOLENOID VALVE VE4000A1



FEATURES

- Normally Closed valve.
(spring loaded valve disc, closed when de-energized).
- Non regulated ON/OFF.
- Opening/closing time: <1 sec.
- Maximum working frequency: 20 cycles/min.
- Wrench boss as well on inlet side as on outlet side for pipe fitting incorporated in the valve housing.
- 2 auxiliary pressure taps with Rp 1/4" threaded connections, both on the inlet pressure side.
- Coil field replaceable.
- Coil suitable for permanent energization.
- Coil turnable over 360°.
- Internal fine mesh screen.

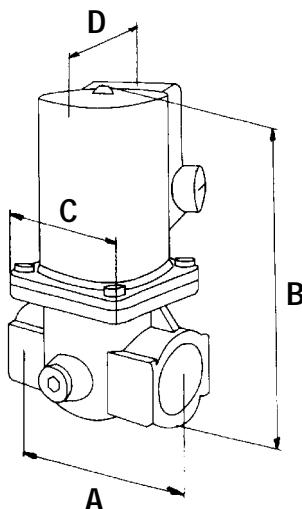


Fig. 1. Dimensional drawing VE4000A1 Series

APPLICATION

These series class "A" gas valves are used for control and regulation of gaseous fluids in gas power burners, atmospheric gas boilers, melting furnaces, incinerators and other gas consuming appliances.

SPECIFICATION

Model

VE4000A1

Dimensions

See figure and table below.

Pipe sizes

Inlet and outlet 3/8" up to 3" internal parallel pipe thread according to ISO 7-1.

Mounting and orientation

The valve may be assembled on the pipeline within plus or minus 90 degrees of the vertical axis and 30 cm. air space around the coil assy.

Capacity

See capacity curves VE4000 Series on page 66 and 67.

Maximum operating pressure

Rp 3/8" to Rp 1/2" types up to 360 mbar

Rp 3/4" to Rp 2. 1/2" types; 200 or 360 mbar

Torsion and bending stress

Pipe connections meet group 2, according to EN161 requirements.

Supply voltage

Line voltage: 220 ... 240 Vac, 50/60 Hz
110 Vac, 50/60 Hz
24 Vac, 50/60 Hz
24 ... 28 Vdc

Ambient temperature range

-15 ... 60 °C

Electrical connection

Plug connection according to PG11

Optional : Male DIN plug connector according to ISO4400

Coil insulation solenoid valves

Insulation material according to class F.

Electrical protection

IP54

IP65 on request.

Valve body

Aluminium alloy die-cast

Bottom plug

Rp 1/4" for Closed Position Indication (CPI) switch.

Strainer

AISI 303 steel

Closing spring

AISI 302 steel

Valve plunger

Chrome plated Fe 360B steel sliding on anti-friction bearing.

Seals and gaskets

Hydrocarbon resistant NBR rubber type

Optional : Viton rubber type

Standards and Approvals

Class "A" valve in accordance with EN161 standards.

The VE4000 Series gas valves conform with the following EC directives:

- Gas Appliance Directive (90/396/EEC)
PIN: CE-0063AP3075/1
- Low Voltage Directive (73/23/EEC)
- Electro Magnetic Compatibility Directive (89/336/EEC)

Table 1. VE4000A1 Series, Class “A” Normally Closed solenoid valve, ON/OFF.

| O.S. Number | Rated Voltage (Vac) | Connect (inch) | DN | Maximum Operating Pressure (mbar) | Overall Dimensions (mm) | | | | Power Cons. (W) | Enclosure | Weight (kg) | Bottom Plug | DIN Plug | Viton |
|-------------|---------------------|----------------|----|-----------------------------------|-------------------------|-----|-----|-----|-----------------|-----------|-------------|-------------|----------|-------|
| | | | | | A | B | C | D | | | | | | |
| VE4010A1006 | 220 ... 240 | 3/8 | 10 | 360 | 72 | 112 | 52 | 85 | 14 | IP54 | 1.1 | – | – | – |
| VE4010A1030 | 220 ... 240 | 3/8 | 10 | 360 | 72 | 112 | 52 | 85 | 14 | IP54 | 1.1 | – | – | – |
| VE4010A1048 | 220 ... 240 | 3/8 | 10 | 360 | 72 | 112 | 52 | 85 | 14 | IP54 | 1.1 | – | ✓ | ✓ |
| VE4010A1014 | 110 | 3/8 | 10 | 360 | 72 | 112 | 52 | 85 | 14 | IP54 | 1.1 | – | – | – |
| VE8010A1010 | 24 ... 28Vdc | 3/8 | 10 | 360 | 72 | 112 | 52 | 85 | 14 | IP54 | 1.1 | – | – | – |
| VE8010A1028 | 24 ... 28Vdc | 3/8 | 10 | 360 | 72 | 112 | 52 | 85 | 14 | IP54 | 1.1 | – | – | – |
| VE8010A1002 | 24 | 3/8 | 10 | 360 | 72 | 112 | 52 | 85 | 14 | IP54 | 1.1 | – | – | – |
| VE4015A1005 | 220 ... 240 | 1/2 | 15 | 360 | 72 | 112 | 52 | 85 | 14 | IP54 | 1.1 | – | – | – |
| VE4015A1039 | 220 ... 240 | 1/2 | 15 | 360 | 72 | 112 | 52 | 85 | 14 | IP65 | 1.1 | – | – | – |
| VE4015A1070 | 220 ... 240 | 1/2 | 15 | 360 | 72 | 112 | 52 | 85 | 14 | IP65 | 1.1 | – | – | – |
| VE4015A1013 | 110 | 1/2 | 15 | 360 | 72 | 112 | 52 | 85 | 14 | IP54 | 1.1 | – | – | – |
| VE4015A1054 | 110 | 1/2 | 15 | 360 | 72 | 112 | 52 | 85 | 14 | IP65 | 1.1 | – | – | – |
| VE8015A1001 | 24 | 1/2 | 15 | 360 | 72 | 112 | 52 | 85 | 14 | IP54 | 1.1 | – | – | – |
| VE8015A1019 | 24 ... 28Vdc | 1/2 | 15 | 360 | 72 | 112 | 52 | 85 | 14 | IP54 | 1.1 | – | – | – |
| VE8015A1027 | 12Vdc | 1/2 | 15 | 360 | 72 | 112 | 52 | 85 | 14 | IP54 | 1.1 | – | – | – |
| VE4020A1005 | 220 ... 240 | 3/4 | 20 | 200 | 86 | 156 | 70 | 96 | 20 | IP54 | 1.9 | ✓ | – | – |
| VE4020A1062 | 220 ... 240 | 3/4 | 20 | 360 | 86 | 156 | 70 | 96 | 20 | IP54 | 1.9 | ✓ | – | – |
| VE4020A1104 | 220 ... 240 | 3/4 | 20 | 200 | 86 | 156 | 70 | 96 | 20 | IP54 | 1.9 | ✓ | ✓ | – |
| VE4020A1054 | 110 | 3/4 | 20 | 200 | 86 | 156 | 70 | 96 | 18 | IP54 | 1.9 | ✓ | – | – |
| VE4020A1088 | 110 | 3/4 | 20 | 360 | 86 | 156 | 70 | 96 | 21 | IP54 | 1.9 | ✓ | – | – |
| VE4020A1096 | 110 | 3/4 | 20 | 360 | 86 | 156 | 70 | 96 | 21 | IP54 | 1.9 | ✓ | – | ✓ |
| VE8020A1019 | 24 ... Vdc | 3/4 | 20 | 200 | 86 | 156 | 70 | 96 | 21 | IP54 | 1.9 | ✓ | – | – |
| VE8020A1001 | 24 | 3/4 | 20 | 200 | 86 | 156 | 70 | 96 | 21 | IP54 | 1.9 | ✓ | – | – |
| VE8020A1027 | 12Vdc | 3/4 | 20 | 200 | 86 | 156 | 70 | 96 | 21 | IP54 | 1.9 | ✓ | – | – |
| VE4025A1004 | 220 ... 240 | 1 | 25 | 200 | 100 | 156 | 75 | 96 | 20 | IP54 | 2.0 | ✓ | – | – |
| VE4025A1061 | 220 ... 240 | 1 | 25 | 360 | 100 | 156 | 75 | 96 | 20 | IP54 | 2.0 | ✓ | – | – |
| VE4025A1095 | 220 ... 240 | 1 | 25 | 200 | 100 | 156 | 75 | 96 | 20 | IP54 | 2.0 | ✓ | – | – |
| VE4025A1053 | 110 | 1 | 25 | 200 | 100 | 156 | 75 | 96 | 18 | IP54 | 2.0 | ✓ | ✓ | – |
| VE4025A1103 | 110 | 1 | 25 | 360 | 100 | 156 | 75 | 96 | 21 | IP54 | 2.0 | ✓ | – | – |
| VE4025A1187 | 110 | 1 | 25 | 360 | 100 | 156 | 75 | 96 | 21 | IP65 | 2.0 | ✓ | – | – |
| VE4025A1111 | 110 | 1 | 25 | 200 | 100 | 156 | 75 | 96 | 21 | IP65 | 2.0 | ✓ | – | – |
| VE4025A1129 | 110 | 1 | 25 | 200 | 100 | 156 | 75 | 96 | 21 | IP65 | 2.0 | ✓ | ✓ | ✓ |
| VE8025A1018 | 24 ... 28Vdc | 1 | 25 | 200 | 100 | 156 | 75 | 96 | 21 | IP54 | 2.0 | ✓ | – | – |
| VE8025A1034 | 24 ... 28Vdc | 1 | 25 | 360 | 100 | 156 | 75 | 96 | 21 | IP54 | 2.0 | ✓ | ✓ | – |
| VE8025A1000 | 24 | 1 | 25 | 200 | 100 | 156 | 75 | 96 | 21 | IP54 | 2.0 | ✓ | – | – |
| VE8025A1026 | 12Vdc | 1 | 25 | 200 | 100 | 156 | 75 | 96 | 21 | IP54 | 2.0 | ✓ | – | – |
| VE4032A1000 | 220 ... 240 | 1 1/4 | 32 | 200 | 150 | 214 | 110 | 118 | 40 | IP54 | 5.8 | ✓ | – | – |
| VE4032A1018 | 110 | 1 1/4 | 32 | 200 | 150 | 214 | 110 | 118 | 47 | IP54 | 5.8 | ✓ | – | – |
| VE4032A1067 | 110 | 1 1/4 | 32 | 200 | 150 | 214 | 110 | 118 | 47 | IP65 | 5.8 | ✓ | – | – |
| VE8032A1014 | 24 ... 28Vdc | 1 1/4 | 32 | 200 | 150 | 214 | 110 | 118 | 53 | IP54 | 5.8 | ✓ | – | – |
| VE8032A1022 | 24 ... 28Vdc | 1 1/4 | 32 | 200 | 150 | 214 | 110 | 118 | 53 | IP54 | 5.8 | ✓ | ✓ | – |
| VE8032A1006 | 24 | 1 1/4 | 32 | 200 | 150 | 214 | 110 | 118 | 53 | IP54 | 5.8 | ✓ | – | – |
| VE4040A1003 | 220 ... 240 | 1 1/2 | 40 | 200 | 150 | 214 | 110 | 118 | 40 | IP54 | 5.8 | ✓ | – | – |
| VE4040A1094 | 220 ... 240 | 1 1/2 | 40 | 200 | 150 | 214 | 110 | 118 | 40 | IP65 | 5.8 | ✓ | – | – |
| VE4040A1102 | 220 ... 240 | 1 1/2 | 40 | 200 | 150 | 214 | 110 | 118 | 40 | IP65 | 5.8 | ✓ | ✓ | – |
| VE4040A1052 | 110 | 1 1/2 | 40 | 200 | 150 | 214 | 110 | 118 | 47 | IP54 | 5.8 | ✓ | – | – |
| VE4040A1086 | 110 | 1 1/2 | 40 | 200 | 150 | 214 | 110 | 118 | 47 | IP65 | 5.8 | ✓ | – | – |
| VE8040A1017 | 24 ... 28Vdc | 1 1/2 | 40 | 200 | 150 | 214 | 110 | 118 | 53 | IP54 | 5.8 | ✓ | – | – |
| VE8040A1009 | 24 | 1 1/2 | 40 | 200 | 150 | 214 | 110 | 118 | 53 | IP54 | 5.8 | ✓ | – | – |
| VE4050A1002 | 220 ... 240 | 2 | 50 | 200 | 170 | 220 | 135 | 123 | 41 | IP54 | 6.4 | ✓ | – | – |
| VE4050A1077 | 220 ... 240 | 2 | 50 | 200 | 170 | 220 | 135 | 123 | 41 | IP65 | 6.4 | ✓ | – | – |
| VE4050A1051 | 110 | 2 | 50 | 200 | 170 | 220 | 135 | 123 | 48 | IP54 | 6.4 | ✓ | – | – |
| VE4050A1085 | 110 | 2 | 50 | 200 | 170 | 220 | 135 | 123 | 48 | IP65 | 6.4 | ✓ | – | – |
| VE8050A1016 | 24 ... 28Vdc | 2 | 50 | 200 | 170 | 220 | 135 | 123 | 50 | IP54 | 6.4 | ✓ | – | – |
| VE8050A1008 | 24 | 2 | 50 | 200 | 170 | 220 | 135 | 123 | 50 | IP54 | 6.4 | ✓ | – | – |
| VE4065A1000 | 220 ... 240 | 2 1/2 | 65 | 200 | 225 | 290 | 170 | 145 | 73 | IP54 | 12.2 | ✓ | – | – |

VE4000 Series

CLASS "A" SOLENOID VALVE VE4000B1



FEATURES

- Normally Closed valve.
(spring loaded valve disc, closed when de-energized).
- Adjustable flow rate regulator on top of the coil.
- Opening/closing time: <1 sec.
- Maximum working frequency: 20 cycles/min.
- Wrench boss as well on inlet side as on outlet side for pipe fitting incorporated in the valve housing.
- 2 auxiliary pressure taps with Rp 1/4" threaded connections, both on the inlet pressure side.
- Coil field replaceable.
- Coil suitable for permanent energization.
- Coil turnable over 360°.
- Internal fine mesh screen.

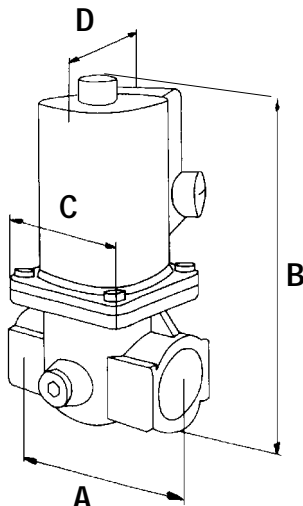


Fig. 2. Dimensional drawing VE4000B1 Series

APPLICATION

These series class "A" gas valves are used for control and regulation of gaseous fluids in gas power burners, atmospheric gas boilers, melting furnaces, incinerators and other gas consuming appliances.

SPECIFICATION

Model

VE4000B1

Dimensions

See figure and table below.

Pipe sizes

Inlet and outlet 3/8" up to 2" internal parallel pipe thread according to ISO 7-1.

Mounting and orientation

The valve may be assembled on the pipeline within plus or minus 90 degrees of the vertical axis and 30 cm. air space around the coil assy.

Capacity

See capacity curves VE4000 Series on page 66 and 67.

Maximum operating pressure:

Rp 3/8" to Rp 1/2" types up to 360 mbar

Rp 3/4" to Rp 3" types, 200 or 360 mbar

Torsion and bending stress

Pipe connections meet group 2, according to EN161 requirements.

Supply voltage

Line voltage: 220 ... 240 Vac, 50/60 Hz

110 Vac, 50/60 Hz

24 Vac, 50/60 Hz

24 ... 28 Vdc

Ambient temperature range

-15 ... 60 °C

Electrical connection

Plug connection according to PG11.

Optional : Male DIN plug connector according to ISO4400

Coil insulation solenoid valves

Insulation material according to class F.

Enclosure

IP54

IP65 on request

Valve body

Aluminium alloy die-cast

Bottom plug

Rp 1/4" for Closed Position Indication (CPI) switch.

Strainer

AISI 303 steel

Closing spring

AISI 302 steel

Valve plunger

Chrome plated Fe 360B steel sliding on anti-friction bearing.

Seals and gaskets

Hydrocarbon resistant NBR rubber type.

Optional : Viton rubber type

Standards and Approvals

Class "A" valve in accordance with EN161 standards.

The VE4000 Series gas valves conform with the following EC directives:

- Gas Appliance Directive (90/396/EEC)
PIN: CE-0063AP3075/1
- Low Voltage Directive (73/23/EEC)
- Electro Magnetic Compatibility Directive (89/336/EEC)

Table 2. VE4000B1 Series, Class “A” Normally Closed solenoid valve, ON/OFF with flow rate adjuster.

| O.S. Number | Rated Voltage (Vac) | Connect. (inch) | DN | Maximum Operating Pressure (mbar) | Overall Dimensions (mm) | | | | Power Cons. (W) | Enclosure | Weight (kg) | Bottom Plug | CPI switch | DIN |
|-------------|---------------------|-----------------|----|-----------------------------------|-------------------------|-----|-----|-----|-----------------|-----------|-------------|-------------|------------|-----|
| | | | | | A | B | C | D | | | | | | |
| VE4010B1005 | 220 ... 240 | 3/8 | 10 | 360 | 72 | 121 | 52 | 85 | 14 | IP54 | 1.1 | – | – | – |
| VE4010B1013 | 110 | 3/8 | 10 | 360 | 72 | 121 | 52 | 85 | 14 | IP54 | 1.1 | – | – | – |
| VE8010B1027 | 24 ... 28 Vdc | 3/8 | 10 | 360 | 72 | 121 | 52 | 85 | 17 | IP54 | 1.1 | – | – | – |
| VE8010B1019 | 24 ... 28 Vdc | 3/8 | 10 | 360 | 72 | 121 | 52 | 85 | 17 | IP65 | 1.1 | – | – | – |
| VE8010B1001 | 24 | 3/8 | 10 | 360 | 72 | 121 | 52 | 85 | 14 | IP54 | 1.1 | – | – | – |
| VE4015B1004 | 220 ... 240 | 1/2 | 15 | 360 | 72 | 121 | 52 | 85 | 14 | IP54 | 1.1 | – | – | – |
| VE4015B1038 | 220 ... 240 | 1/2 | 15 | 360 | 72 | 121 | 52 | 85 | 14 | IP65 | 1.1 | – | – | – |
| VE4015B1061 | 220 ... 240 | 1/2 | 15 | 360 | 72 | 121 | 52 | 85 | 14 | IP54 | 1.1 | – | – | ✓ |
| VE4015B1012 | 110 | 1/2 | 15 | 360 | 72 | 121 | 52 | 85 | 14 | IP54 | 1.1 | – | – | – |
| VE4015B1053 | 110 | 1/2 | 15 | 360 | 72 | 121 | 52 | 85 | 14 | IP65 | 1.1 | – | – | – |
| VE8015B1026 | 24 ... 28 Vdc | 1/2 | 15 | 360 | 72 | 121 | 52 | 85 | 17 | IP54 | 1.1 | – | – | – |
| VE8015B1018 | 24 ... 28 Vdc | 1/2 | 15 | 360 | 72 | 121 | 52 | 85 | 17 | IP65 | 1.1 | – | – | – |
| VE8015B1000 | 24 | 1/2 | 15 | 360 | 72 | 121 | 52 | 85 | 14 | IP54 | 1.1 | – | – | – |
| VE8015B1034 | 24 | 1/2 | 15 | 360 | 72 | 121 | 52 | 85 | 14 | IP65 | 1.1 | – | – | – |
| VE4020B1004 | 220 ... 240 | 3/4 | 20 | 200 | 86 | 168 | 70 | 96 | 20 | IP54 | 1.9 | ✓ | – | – |
| VE4020B1046 | 220 ... 240 | 3/4 | 20 | 360 | 86 | 168 | 70 | 96 | 20 | IP54 | 1.9 | ✓ | – | – |
| VE4020B1012 | 110 | 3/4 | 20 | 200 | 86 | 168 | 70 | 96 | 18 | IP54 | 1.9 | ✓ | – | – |
| VE4020B1087 | 110 | 3/4 | 20 | 360 | 86 | 168 | 70 | 96 | 18 | IP54 | 1.9 | ✓ | – | – |
| VE4020B1061 | 110 | 3/4 | 20 | 200 | 86 | 168 | 70 | 96 | 18 | IP65 | 1.9 | ✓ | – | – |
| VE8020B1026 | 24 ... 28 Vdc | 3/4 | 20 | 200 | 86 | 168 | 70 | 96 | 24 | IP54 | 1.9 | ✓ | – | – |
| VE8020B1000 | 24 | 3/4 | 20 | 200 | 86 | 168 | 70 | 96 | 21 | IP54 | 1.9 | ✓ | – | – |
| VE8020B1034 | 24 | 3/4 | 20 | 200 | 86 | 168 | 70 | 96 | 24 | IP65 | 1.9 | ✓ | – | – |
| VE4025B1003 | 220 ... 240 | 1 | 25 | 200 | 100 | 168 | 75 | 96 | 20 | IP54 | 2.0 | ✓ | – | – |
| VE4025B1045 | 220 ... 240 | 1 | 25 | 360 | 100 | 168 | 75 | 96 | 20 | IP54 | 2.0 | ✓ | – | – |
| VE4025B1011 | 110 | 1 | 25 | 200 | 100 | 168 | 75 | 96 | 18 | IP54 | 2.0 | ✓ | – | – |
| VE4025B1060 | 110 | 1 | 25 | 200 | 100 | 168 | 75 | 96 | 18 | IP65 | 2.0 | ✓ | – | – |
| VE4025B1078 | 110 | 1 | 25 | 360 | 100 | 168 | 75 | 96 | 18 | IP54 | 2.0 | ✓ | – | – |
| VE4025B1094 | 110 | 1 | 25 | 360 | 100 | 168 | 75 | 96 | 18 | IP65 | 2.0 | ✓ | ✓ | – |
| VE8025B1025 | 24 ... 28 Vdc | 1 | 25 | 200 | 100 | 168 | 75 | 96 | 24 | IP54 | 2.0 | ✓ | – | – |
| VE8025B1041 | 24 ... 28 Vdc | 1 | 25 | 200 | 100 | 168 | 75 | 96 | 24 | IP65 | 2.0 | ✓ | – | – |
| VE8025B1009 | 24 | 1 | 25 | 200 | 100 | 168 | 75 | 96 | 21 | IP54 | 2.0 | ✓ | – | – |
| VE8025B1017 | 24 | 1 | 25 | 360 | 100 | 168 | 75 | 96 | 21 | IP65 | 2.0 | ✓ | – | – |
| VE8025B1033 | 24 | 1 | 25 | 200 | 100 | 168 | 75 | 96 | 24 | IP65 | 2.0 | ✓ | – | – |
| VE4032B1009 | 220 ... 240 | 1 1/4 | 32 | 200 | 150 | 233 | 110 | 118 | 40 | IP54 | 5.8 | ✓ | – | – |
| VE4032B1041 | 220 ... 240 | 1 1/4 | 32 | 360 | 150 | 233 | 110 | 118 | 41 | IP54 | 5.8 | ✓ | – | – |
| VE4032B1017 | 110 | 1 1/4 | 32 | 200 | 150 | 233 | 110 | 118 | 47 | IP54 | 5.8 | ✓ | – | – |
| VE4032B1074 | 110 | 1 1/4 | 32 | 360 | 150 | 233 | 110 | 118 | 48 | IP54 | 5.8 | ✓ | – | – |
| VE8032B1013 | 24 ... 28 Vdc | 1 1/4 | 32 | 200 | 150 | 233 | 110 | 118 | 67 | IP54 | 5.8 | ✓ | – | – |
| VE8032B1005 | 24 | 1 1/4 | 32 | 200 | 150 | 233 | 110 | 118 | 53 | IP54 | 5.8 | ✓ | – | – |
| VE4040B1002 | 220 ... 240 | 1 1/2 | 40 | 200 | 150 | 233 | 110 | 118 | 40 | IP54 | 5.8 | ✓ | – | – |
| VE4040B1044 | 220 ... 240 | 1 1/2 | 40 | 360 | 150 | 233 | 110 | 118 | 41 | IP54 | 5.8 | ✓ | – | – |
| VE4040B1010 | 110 | 1 1/2 | 40 | 200 | 150 | 233 | 110 | 118 | 47 | IP54 | 5.8 | ✓ | – | – |
| VE4040B1069 | 110 | 1 1/2 | 40 | 360 | 150 | 233 | 110 | 118 | 40 | IP54 | 5.8 | ✓ | – | – |
| VE4040B1093 | 110 | 1 1/2 | 40 | 360 | 150 | 233 | 110 | 118 | 40 | IP65 | 5.8 | ✓ | ✓ | – |
| VE8040B1024 | 24 ... 28 Vdc | 1 1/2 | 40 | 200 | 150 | 233 | 110 | 118 | 67 | IP54 | 5.8 | ✓ | – | – |
| VE8040B1008 | 24 | 1 1/2 | 40 | 200 | 150 | 233 | 110 | 118 | 53 | IP54 | 5.8 | ✓ | – | – |
| VE4050B1001 | 220 ... 240 | 2 | 50 | 200 | 170 | 260 | 135 | 118 | 41 | IP54 | 6.4 | ✓ | – | – |
| VE4050B1043 | 220 ... 240 | 2 | 50 | 360 | 170 | 260 | 135 | 118 | 60 | IP54 | 6.4 | ✓ | – | – |
| VE4050B1019 | 110 | 2 | 50 | 200 | 170 | 260 | 135 | 118 | 48 | IP54 | 6.4 | ✓ | – | – |
| VE4050B1068 | 110 | 2 | 50 | 360 | 170 | 260 | 135 | 118 | 63 | IP54 | 6.4 | ✓ | – | – |
| VE4050B1084 | 110 | 2 | 50 | 360 | 170 | 260 | 135 | 118 | 63 | IP65 | 6.4 | ✓ | – | – |
| VE8050B1015 | 24 ... 28 Vdc | 2 | 50 | 200 | 170 | 260 | 135 | 118 | 64 | IP54 | 6.4 | ✓ | – | – |
| VE8050B1007 | 24 | 2 | 50 | 200 | 170 | 260 | 135 | 118 | 48 | IP54 | 6.4 | ✓ | – | – |
| VE4065B1017 | 220 ... 240 | 2 1/2 | 65 | 200 | 242 | 238 | 200 | 149 | 62 | IP54 | 6.4 | ✓ | – | – |
| VE4065B1032 | 220 ... 240 | 2 1/2 | 65 | 360 | 242 | 238 | 200 | 163 | 118 | IP54 | 6.4 | ✓ | – | – |
| VE4065B1025 | 110 | 2 1/2 | 65 | 200 | 242 | 238 | 200 | 149 | 60 | IP54 | 6.4 | ✓ | – | – |
| VE4065B1041 | 110 | 2 1/2 | 65 | 360 | 242 | 238 | 200 | 163 | 125 | IP54 | 6.4 | ✓ | – | – |
| VE4080B1016 | 220 ... 240 | 3 | 80 | 200 | 242 | 238 | 200 | 163 | 118 | IP54 | 6.4 | ✓ | – | – |
| VE4080B1024 | 110 | 3 | 80 | 200 | 242 | 238 | 200 | 163 | 125 | IP54 | 6.4 | ✓ | – | – |

VE4000 Series

CLASS "A" SOLENOID VALVE VE4000B3



FEATURES

- Normally Closed valve. (spring loaded valve disc, closed when de-energized).
- Adjustable flow rate regulator on top of the coil.
- Opening/closing time: <1 sec.
- Maximum working frequency: 20 cycles/min.
- 4 auxiliary pressure taps with Rp 1/4" threaded connections, 2 on the inlet pressure side and 2 on the outlet pressure side.
- Equipped at both sides with mounting holes to adapt a pilot solenoid valve combination Rp 1" (for DN100 Rp 3/4"), to allow either internal or external pilot gas. Optional mounting possibility to adapt an A4021A Valve Proving System.
- Coil field replaceable.
- Coil suitable for permanent energization.
- Coil turnable over 360°.
- Internal fine mesh screen (except DN100).

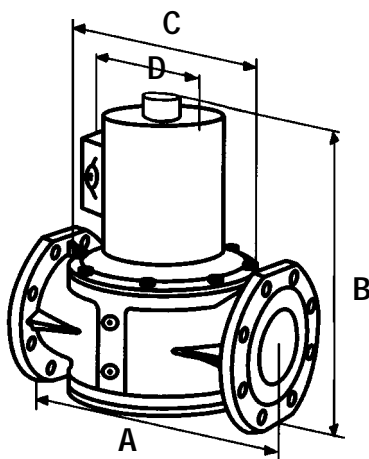


Fig. 3. Dimensional drawing VE4000B3 Series

APPLICATION

These series class "A" gas valves are used for control and regulation of gaseous fluids in gas power burners, atmospheric gas boilers, melting furnaces, incinerators and other gas consuming appliances.

SPECIFICATION

Model

VE4000B3

Dimensions

See figure and table below.

Pipe sizes

Inlet and outlet flange connection DN65, DN80 and DN100 according to PN16 ISO 7005-1.

Mounting and orientation

The valve may be assembled on the pipe line within plus or minus 90 degrees of the vertical axis and 30 cm. air space around the coil assy.

Capacity

See capacity curves VE4000 Series on page 67.

Maximum operating pressure:

DN65, DN80 and DN100 types, 200 or 360 mbar.

Torsion and bending stress

Pipe connections meet group 2, according to EN161, requirements

Supply voltage

Line voltage: 220 ... 240 Vac, 50/60 Hz
110 Vac, 50/60 Hz

Ambient temperature range

-15 ... 60 °C

Electrical connection

Plug connection according to PG11.

Coil insulation solenoid valves

Insulation material according to class F.

Enclosure

IP54

IP65 on request.

Valve body

Aluminium alloy die-cast

Strainer

AISI 303 steel.

Closing spring

AISI 302 steel.

Valve plunger

Chrome plated Fe 360B steel sliding on anti-friction bearing.

Seals and gaskets

Hydrocarbon resistant NBR rubber type.

Optional : Viton rubber type

Standards and Approvals

Class "A" valve in accordance with EN161 standards.

The VE4000 Series gas valves conform with the following EC directives:

- Gas Appliance Directive (90/396/EEC)
PIN: CE-0063AP3075/1
- Low Voltage Directive (73/23/EEC)
- Electro Magnetic Compatibility Directive (89/336/EEC)

Table 3. VE4000B3 Series, Class “A” Normally Closed solenoid valve, ON/OFF with flow rate adjuster and flanged body

| O.S. Number | Rated Voltage (Vac) | Passing DN | Maximum Operating Pressure (mbar) | Overall Dimensions (mm) | | | | Power Cons. (W) | Enclosure | Weight (kg) | Bottom Plug |
|-------------|---------------------|------------|-----------------------------------|-------------------------|-----|-----|-----|-----------------|-----------|-------------|-------------|
| | | | | A | B | C | D | | | | |
| VE4065B3005 | 220 ... 240 | 65 | 200 | 310 | 343 | 200 | 148 | 62 | IP54 | 15 | ✓ |
| VE4065B3039 | 220 ... 240 | 65 | 360 | 310 | 343 | 200 | 163 | 110 | IP54 | 15 | ✓ |
| VE4065B3013 | 110 | 65 | 200 | 310 | 343 | 200 | 148 | 60 | IP54 | 15 | ✓ |
| VE4065B3062 | 110 | 65 | 360 | 310 | 343 | 200 | 163 | 125 | IP65 | 15 | ✓ |
| VE4080B3004 | 220 ... 240 | 80 | 200 | 310 | 343 | 200 | 163 | 118 | IP54 | 15 | ✓ |
| VE4080B3012 | 110 | 80 | 200 | 310 | 343 | 200 | 163 | 125 | IP54 | 15 | ✓ |
| VE4080B3053 | 110 | 80 | 200 | 310 | 343 | 200 | 163 | 220 | IP65 | 15 | ✓ |
| VE4100B3000 | 220 ... 240 | 100 | 200 | 350 | 384 | 250 | 185 | 130 | IP54 | 34.9 | – |
| VE4100B3018 | 110 | 100 | 200 | 350 | 384 | 250 | 185 | 129 | IP54 | 34.9 | – |

VE4000 Series

CLASS "A" SOLENOID VALVE VE4000C1



FEATURES

- Normally Closed valve.
(spring loaded valve disc, closed when de-energized).
- Characterized opening from 1 to 30 seconds, step pressure and flow regulation on top of the coil.
- Closing time: <1 sec.
- Maximum working frequency: 1 cycles/min.
- Wrench boss as well on inlet side as on outlet side for pipe fitting incorporated in the valve housing.
- 2 Auxiliary pressure taps with Rp 1/4" threaded connections, both on the inlet pressure side.
- Coil field replaceable.
- Coil suitable for permanent energization.
- Coil turnable over 360°.
- Internal fine mesh screen.

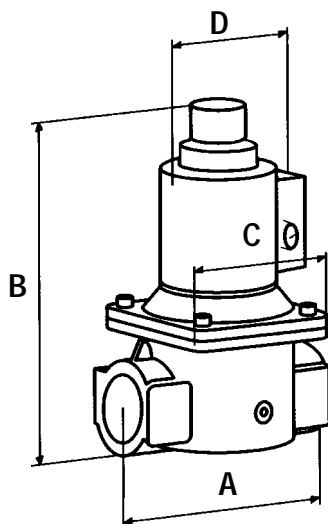


Fig. 4. Dimensional drawing VE4000C1 Series

APPLICATION

These series class "A" gas valves are used for control and regulation of gaseous fluids in gas power burners, atmospheric gas boilers, melting furnaces, incinerators and other gas consuming appliances.

SPECIFICATION

Model

VE4000C1

Dimensions

See figure and table below.

Pipe sizes

Inlet and outlet 3/8" up to 2" internal parallel pipe thread according to ISO 7-1.

Mounting and orientation

The valve may be assembled on the pipeline within plus or minus 90 degrees of the vertical axis and 30 cm. air space around the coil assy.

Capacity

See capacity curves VE4000 Series on page 66 and 67.

Maximum operating pressure

Rp 3/8" to Rp 2" types, 200 or 360 mbar

Torsion and bending stress

Pipe connections meet group 2, according to EN161 requirements

Supply voltage

Line voltage: 220 ... 240 Vac, 50/60 Hz
110 Vac, 50/60 Hz
24 Vac, 50/60 Hz
24 ... 28 Vdc

Ambient temperature range

-15 ... 60 °C

Electrical connection

Plug connection according to PG11.

Optional : Male DIN plug connector according to ISO4400

Coil insulation solenoid valves

Insulation material according to Class F.

Enclosure

IP54

IP65 on request.

Valve body

Aluminium alloy die-cast

Bottom plug

Rp 1/4" for Closed Position Indication (CPI) switch.

Strainer

AISI 303 steel

Closing spring

AISI 302 steel

Valve plunger

Chrome plated Fe 360B steel sliding on anti-friction bearing.

Seals and gaskets

Hydrocarbon resistant NBR rubber type

Optional : Viton rubber type

Standards and Approvals

Class "A" valve in accordance with EN161 standards.

The VE4000 Series gas valves conform with the following EC directives:

- Gas Appliance Directive (90/396/EEC)
PIN: CE-0063AP3075/1
- Low Voltage Directive (73/23/EEC)
- Electro Magnetic Compatibility Directive (89/336/EEC)

Table 4. VE4000C1 Series, Normally Closed solenoid valve, ON/OFF, with flow rate adjuster and characterized opening.

| O.S. Number | Rated Voltage (Vac) | Connect. (inch) | DN | Maximum Operating Pressure (mbar) | Overall Dimensions (mm) | | | | Power Cons. (W) | Enclosure | Weight (kg) | Bottom Plug | DIN | Viton |
|-------------|---------------------|-----------------|----|-----------------------------------|-------------------------|-----|-----|-----|-----------------|-----------|-------------|-------------|-----|-------|
| | | | | | A | B | C | D | | | | | | |
| VE4010C1004 | 220 ... 240 | 3/8 | 10 | 200 | 72 | 168 | 52 | 85 | 14 | IP54 | 1.2 | – | – | – |
| VE4010C1038 | 220 ... 240 | 3/8 | 10 | 360 | 72 | 168 | 52 | 85 | 14 | IP54 | 1.2 | – | – | – |
| VE4010C1012 | 110 | 3/8 | 10 | 200 | 72 | 168 | 52 | 85 | 14 | IP54 | 1.2 | – | – | – |
| VE4010C1046 | 110 | 3/8 | 10 | 360 | 72 | 168 | 52 | 85 | 14 | IP54 | 1.2 | – | – | – |
| VE8010C1018 | 24 ... 28 Vdc | 3/8 | 10 | 200 | 72 | 168 | 52 | 85 | 17 | IP54 | 1.2 | – | – | – |
| VE8010C1026 | 24 ... 28 Vdc | 3/8 | 10 | 200 | 72 | 168 | 52 | 85 | 17 | IP54 | 1.2 | – | – | ✓ |
| VE8010C1000 | 24 | 3/8 | 10 | 200 | 72 | 168 | 52 | 85 | 14 | IP54 | 1.2 | – | – | – |
| VE4015C1003 | 220 ... 240 | 1/2 | 15 | 200 | 72 | 168 | 52 | 85 | 14 | IP54 | 1.2 | – | – | – |
| VE4015C1045 | 220 ... 240 | 1/2 | 15 | 360 | 72 | 168 | 52 | 85 | 14 | IP54 | 1.2 | – | – | – |
| VE4015C1060 | 220 ... 240 | 1/2 | 15 | 200 | 72 | 168 | 52 | 85 | 14 | IP54 | 1.2 | – | ✓ | – |
| VE4015C1011 | 110 | 1/2 | 15 | 200 | 72 | 168 | 52 | 85 | 14 | IP54 | 1.2 | – | – | – |
| VE4015C1052 | 110 | 1/2 | 15 | 360 | 72 | 168 | 52 | 85 | 14 | IP54 | 1.2 | – | – | – |
| VE8015C1017 | 24 ... 28 Vdc | 1/2 | 15 | 200 | 72 | 168 | 52 | 85 | 17 | IP54 | 1.2 | – | – | – |
| VE8015C1025 | 24 ... 28 Vdc | 1/2 | 15 | 200 | 72 | 168 | 52 | 85 | 17 | IP54 | 1.2 | – | – | ✓ |
| VE8015C1009 | 24 | 1/2 | 15 | 200 | 72 | 168 | 52 | 85 | 14 | IP54 | 1.2 | – | – | – |
| VE4020C1003 | 220 ... 240 | 3/4 | 20 | 200 | 86 | 200 | 70 | 96 | 14 | IP54 | 2.3 | ✓ | – | – |
| VE4020C1045 | 220 ... 240 | 3/4 | 20 | 360 | 86 | 200 | 70 | 96 | 20 | IP54 | 2.3 | ✓ | – | – |
| VE4020C1060 | 220 ... 240 | 3/4 | 20 | 200 | 86 | 200 | 70 | 96 | 20 | IP54 | 2.3 | ✓ | ✓ | – |
| VE4020C1011 | 110 | 3/4 | 20 | 200 | 86 | 200 | 70 | 96 | 18 | IP54 | 2.3 | ✓ | – | – |
| VE4020C1052 | 110 | 3/4 | 20 | 360 | 86 | 200 | 70 | 96 | 20 | IP54 | 2.3 | ✓ | – | – |
| VE8020C1017 | 24 ... 28 Vdc | 3/4 | 20 | 200 | 86 | 200 | 70 | 96 | 24 | IP54 | 2.3 | ✓ | – | – |
| VE8020C1009 | 24 | 3/4 | 20 | 200 | 86 | 200 | 70 | 96 | 21 | IP54 | 2.3 | ✓ | – | – |
| VE4025C1002 | 220 ... 240 | 1 | 25 | 200 | 100 | 200 | 75 | 96 | 20 | IP54 | 2.4 | ✓ | – | – |
| VE4025C1077 | 220 ... 240 | 1 | 25 | 200 | 100 | 200 | 75 | 96 | 20 | IP65 | 2.4 | ✓ | – | – |
| VE4025C1085 | 220 ... 240 | 1 | 25 | 200 | 100 | 200 | 75 | 96 | 20 | IP54 | 2.4 | ✓ | ✓ | – |
| VE4025C1051 | 220 ... 240 | 1 | 25 | 360 | 100 | 200 | 75 | 96 | 20 | IP54 | 2.4 | ✓ | – | – |
| VE4025C1010 | 110 | 1 | 25 | 200 | 100 | 200 | 75 | 96 | 18 | IP54 | 2.4 | ✓ | – | – |
| VE4025C1069 | 110 | 1 | 25 | 360 | 100 | 200 | 75 | 96 | 18 | IP54 | 2.4 | ✓ | – | – |
| VE4025C1093 | 110 | 1 | 25 | 200 | 100 | 200 | 75 | 96 | 18 | IP65 | 2.4 | ✓ | – | – |
| VE8025C1016 | 24 ... 28 Vdc | 1 | 25 | 200 | 100 | 200 | 75 | 96 | 24 | IP54 | 2.4 | ✓ | – | – |
| VE8025C1024 | 24 ... 28 Vdc | 1 | 25 | 200 | 100 | 200 | 75 | 96 | 24 | IP54 | 2.4 | ✓ | – | ✓ |
| VE8025C1008 | 24 | 1 | 25 | 200 | 100 | 200 | 75 | 96 | 21 | IP54 | 2.4 | ✓ | – | – |
| VE4032C1008 | 220 ... 240 | 1 1/4 | 32 | 200 | 150 | 288 | 110 | 118 | 40 | IP54 | 6.1 | ✓ | – | – |
| VE4032C1032 | 220 ... 240 | 1 1/4 | 32 | 360 | 150 | 288 | 110 | 118 | 41 | IP54 | 6.1 | ✓ | – | – |
| VE4032C1016 | 110 | 1 1/4 | 32 | 200 | 150 | 288 | 110 | 118 | 48 | IP54 | 6.1 | ✓ | – | – |
| VE4032C1040 | 110 | 1 1/4 | 32 | 360 | 150 | 288 | 110 | 118 | 47 | IP54 | 6.1 | ✓ | – | – |
| VE8032C1012 | 24 ... 28 Vdc | 1 1/4 | 32 | 200 | 150 | 288 | 110 | 118 | 67 | IP54 | 6.1 | ✓ | – | – |
| VE8032C1004 | 24 | 1 1/4 | 32 | 200 | 150 | 288 | 110 | 118 | 53 | IP54 | 6.1 | ✓ | – | – |
| VE4040C1001 | 220 ... 240 | 1 1/2 | 40 | 200 | 150 | 288 | 110 | 118 | 40 | IP54 | 6.1 | ✓ | – | – |
| VE4040C1076 | 220 ... 240 | 1 1/2 | 40 | 200 | 150 | 288 | 110 | 118 | 40 | IP65 | 6.1 | ✓ | – | – |
| VE4040C1084 | 220 ... 240 | 1 1/2 | 40 | 200 | 150 | 288 | 110 | 118 | 40 | IP65 | 6.1 | ✓ | ✓ | – |
| VE4040C1050 | 220 ... 240 | 1 1/2 | 40 | 360 | 150 | 288 | 110 | 118 | 41 | IP54 | 6.1 | ✓ | – | – |
| VE4040C1019 | 110 | 1 1/2 | 40 | 200 | 150 | 288 | 110 | 118 | 47 | IP54 | 6.1 | ✓ | – | – |
| VE4040C1068 | 110 | 1 1/2 | 40 | 360 | 150 | 288 | 110 | 118 | 48 | IP54 | 6.1 | ✓ | – | – |
| VE8040C1015 | 24 ... 28 Vdc | 1 1/2 | 40 | 200 | 150 | 288 | 110 | 118 | 67 | IP54 | 6.1 | ✓ | – | – |
| VE8040C1023 | 24 ... 28 Vdc | 1 1/2 | 40 | 200 | 150 | 288 | 110 | 118 | 67 | IP54 | 6.1 | ✓ | – | ✓ |
| VE8040C1007 | 24 | 1 1/2 | 40 | 200 | 150 | 288 | 110 | 118 | 53 | IP54 | 6.1 | ✓ | – | – |
| VE4050C1000 | 220 ... 240 | 2 | 50 | 200 | 170 | 304 | 135 | 118 | 41 | IP54 | 6.7 | ✓ | – | – |
| VE4050C1059 | 220 ... 240 | 2 | 50 | 360 | 170 | 304 | 135 | 118 | 60 | IP54 | 6.7 | ✓ | – | – |
| VE4050C1018 | 110 | 2 | 50 | 200 | 170 | 304 | 135 | 118 | 48 | IP54 | 6.7 | ✓ | – | – |
| VE4050C1067 | 110 | 2 | 50 | 360 | 170 | 304 | 135 | 118 | 63 | IP54 | 6.7 | ✓ | – | – |
| VE8050C1014 | 24 ... 28 Vdc | 2 | 50 | 200 | 170 | 304 | 135 | 118 | 64 | IP54 | 6.7 | ✓ | – | – |
| VE8050C1022 | 24 ... 28 Vdc | 2 | 50 | 200 | 170 | 304 | 135 | 118 | 64 | IP54 | 6.7 | ✓ | – | ✓ |
| VE8050C1006 | 24 | 2 | 50 | 200 | 170 | 304 | 135 | 118 | 48 | IP54 | 6.7 | ✓ | – | – |

VE4000 Series

SAFETY RELIEF SOLENOID VALVE VE4000S1/2



FEATURES

- Normally Open valve.
(spring loaded valve disc, opened when de-energized)
- Non regulated ON/OFF.
- Closed Position Indication switch (optional for VE4000S1).
- Opening/closing time: <1 sec.
- Maximum working frequency: 20 cycles/min.
- Wrench boss as well on inlet side as on outlet side for pipe fitting incorporated in the valve housing.
- 2 Auxiliary pressure taps with Rp 1/4" threaded connections, both on the inlet pressure side.
- Coil field replaceable.
- Coil suitable for permanent energization.
- Coil turnable over 360°.
- Internal fine mesh screen.

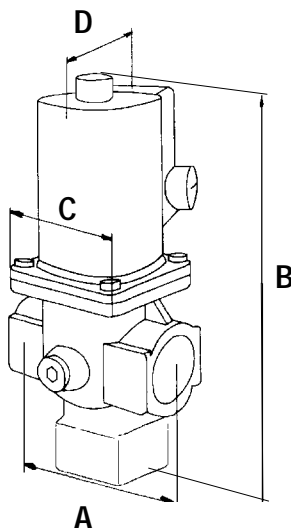


Fig. 5. Dimensional drawing VE4000S1/2 Series

APPLICATION

The VE4000S1 and VE4000S2 Series safety relief solenoid valves are used for safety and control of gaseous fluids in gas power burners, atmospheric gas boilers, melting furnaces, incinerators and other gas consuming appliances.

SPECIFICATION

Models

VE4000S1, without Closed Position Indication (CPI) switch
VE4000S2, with CPI switch

Dimensions

See figure and table below.

Pipe sizes

Inlet and outlet 3/4" and 1" internal parallel pipe thread according to ISO 7-1. The valve may be assembled on the pipeline within plus or minus 90 degrees of the vertical axis and 30 cm. air space around the coil assy.

Capacity

See capacity curves VE4000 Series on page 66.

Maximum operating pressure

200 or 360 mbar

Torsion and bending stress

Pipe connections meet group 2, according to EN161 requirements

Supply voltage

Line voltage: 220 ... 240 Vac, 50/60 Hz
110 Vac, 50/60 Hz
24 Vac, 50/60 Hz
24 ... 28 Vdc

Ambient temperature range

-15 ... 60 °C

Electrical connection

Plug connection according to PG11.

Optional : Male DIN plug connector according to ISO4400

Coil insulation solenoid valves

Insulation material according to class F.

Enclosure

IP54

IP65 on request

Valve body

Aluminium alloy die-cast

Bottom plug

Rp 1/4" for Closed Position Indication (CPI) switch.

Strainer

AISI 303 steel

Closing spring

AISI 302 steel

Valve plunger

Chrome plated Fe 360B steel sliding on anti-friction bearing.

Seals and gaskets

Hydrocarbon resistant NBR rubber type.

Optional : Viton rubber type

Standards and Approvals

Class "A" valve in accordance with EN161 standards.

The VE4000 Series gas valves conform with the following EC directives:

- Gas Appliance Directive (90/396/EEC)
PIN: CE-0063AP3075/1
- Low Voltage Directive (73/23/EEC)
- Electro Magnetic Compatibility Directive (89/336/EEC)

Table 5. VE4000S1 Series, safety relief valve ON/OFF, Normally Open without CPI switch.

| O.S. Number | Rated Voltage (Vac) | Connec- tion (inch) | DN | Maximum Operating Pressure (mbar) | Overall Dimensions (mm) | | | | Power Cons. (W) | Enclo- sure | Weight (kg) | Bottom Plug | Viton |
|-------------|---------------------|------------------------|----|-----------------------------------|-------------------------|-----|----|----|-----------------|----------------|-------------|-------------|-------|
| | | | | | A | B | C | D | | | | | |
| VE4020S1004 | 220 ... 240 | 3/4 | 20 | 200 | 86 | 145 | 70 | 87 | 14 | IP54 | 1.9 | ✓ | – |
| VE4020S1038 | 220 ... 240 | 3/4 | 20 | 360 | 86 | 145 | 70 | 87 | 14 | IP54 | 1.9 | ✓ | – |
| VE4020S1020 | 110 | 3/4 | 20 | 200 | 86 | 145 | 70 | 87 | 14 | IP54 | 1.9 | ✓ | – |
| VE4020S1046 | 110 | 3/4 | 20 | 360 | 86 | 145 | 70 | 87 | 14 | IP54 | 1.9 | ✓ | – |
| VE8020S1000 | 24 ... 28Vdc | 3/4 | 20 | 200 | 86 | 145 | 70 | 87 | 14 | IP54 | 1.9 | ✓ | – |
| VE8020S1018 | 24 | 3/4 | 20 | 200 | 86 | 145 | 70 | 87 | 14 | IP54 | 1.9 | ✓ | – |
| VE4025S1003 | 220 ... 240 | 1 | 25 | 200 | 100 | 145 | 75 | 87 | 14 | IP54 | 2.0 | ✓ | – |
| VE4025S1037 | 220 ... 240 | 1 | 25 | 360 | 100 | 145 | 75 | 87 | 14 | IP54 | 2.0 | ✓ | – |
| VE4025S1029 | 110 | 1 | 25 | 200 | 100 | 145 | 75 | 87 | 14 | IP54 | 2.0 | ✓ | – |
| VE4025S1045 | 110 | 1 | 25 | 360 | 100 | 145 | 75 | 87 | 14 | IP54 | 2.0 | ✓ | – |
| VE8025S1009 | 24 ... 28Vdc | 1 | 25 | 200 | 100 | 145 | 75 | 87 | 14 | IP54 | 2.0 | ✓ | – |
| VE8025S1017 | 24 ... 28Vdc | 1 | 25 | 200 | 100 | 145 | 75 | 87 | 14 | IP54 | 2.0 | ✓ | ✓ |

Table 6. VE4000S2 Series, safety relief valve ON/OFF, Normally Open with CPI switch.

| O.S. Number | Rated Voltage (Vac) | Connect. (inch) | Passing DN | Maximum Operating Pressure (mbar) | Overall Dimensions (mm) | | | | Power Cons. (W) | Enclosure | Weight (kg) | CPI switch |
|-------------|---------------------|-----------------|------------|-----------------------------------|-------------------------|-----|----|----|-----------------|-----------|-------------|------------|
| | | | | | A | B | C | D | | | | |
| VE4020S2002 | 220 ... 240 | 3/4 | 20 | 200 | 86 | 200 | 70 | 87 | 14 | IP54 | 1.9 | ✓ |
| VE4020S2044 | 220 ... 240 | 3/4 | 20 | 360 | 86 | 200 | 70 | 87 | 14 | IP54 | 1.9 | ✓ |
| VE4020S2028 | 110 | 3/4 | 20 | 200 | 86 | 200 | 70 | 87 | 14 | IP54 | 1.9 | ✓ |
| VE4020S2051 | 110 | 3/4 | 20 | 360 | 86 | 200 | 70 | 87 | 14 | IP54 | 1.9 | ✓ |
| VE4020S2069 | 110 | 3/4 | 20 | 200 | 86 | 200 | 70 | 87 | 14 | IP65 | 1.9 | ✓ |
| VE8020S2008 | 24 ... 28Vdc | 3/4 | 20 | 200 | 86 | 200 | 70 | 87 | 14 | IP54 | 1.9 | ✓ |
| VE8020S2016 | 24 | 3/4 | 20 | 200 | 86 | 200 | 70 | 87 | 14 | IP54 | 1.9 | ✓ |
| VE4025S2001 | 220 ... 240 | 1 | 25 | 200 | 100 | 200 | 75 | 87 | 14 | IP54 | 2.0 | ✓ |
| VE4025S2035 | 220 ... 240 | 1 | 25 | 360 | 100 | 200 | 75 | 87 | 14 | IP54 | 2.0 | ✓ |
| VE4025S2027 | 110 | 1 | 25 | 200 | 100 | 200 | 75 | 87 | 14 | IP54 | 2.0 | ✓ |
| VE4025S2043 | 110 | 1 | 25 | 360 | 100 | 200 | 75 | 87 | 14 | IP54 | 2.0 | ✓ |
| VE8025S2007 | 24 | 1 | 25 | 200 | 100 | 200 | 75 | 87 | 14 | IP54 | 2.0 | ✓ |

V4295/V8295 Series

CLASS "B" SOLENOID VALVE V4295A1/V8295A1



FEATURES

- Normally Closed safety shut-off valve.
- Non regulated ON/OFF.
- Opening/closing time: <1 sec.
- Maximum working frequency: 20 cycles/min.
- Wrench boss as well on inlet side as on outlet side for pipe fitting incorporated in the valve housing.
- 3 auxiliary pressure taps with NPT 1/4" threaded connections, 2 on the inlet and 1 on the outlet pressure side.
- Coil field replaceable.
- Coil suitable for permanent energization.
- Coil turnable over 360°.
- Internal fine mesh screen.
- Option for mounting valve position indication switch at 5 psi series valves from 1" to 2".

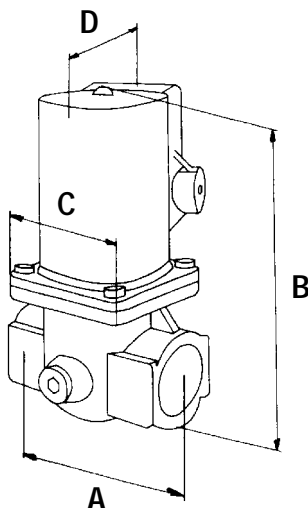


Fig. 6. Dimensional drawing V4295A/V8295A Series

APPLICATION

The V4295/V8295 Series are specially designed for the North American market. The electrically operated V4295A solenoid gas valves control the flow of natural and LP (liquefied petroleum) gases.

These valves are used on atmospheric boilers, commercial water heaters, roof-top make-up air burners, power burners and boilers.

SPECIFICATION

Model

V4295A/V8295A, Normally Closed safety shut-off valve.

Dimensions

See figure and table below.

Pipe sizes

Inlet and outlet 3/8" up to 3" internal NPT pipe thread.

Mounting and orientation

The valve may be assembled on the pipeline within plus or minus 90 degrees of the vertical axis and 30 cm. air space around the coil assy.

Capacity

See capacity curves for V4295A/V8395A serie on page 69.

Maximum operating pressure

Rp 3/8" to Rp 2" : 350 mbar (5.0 psi)

Rp 3/8" to 3" : 140 mbar (2.0 psi)

Supply voltage

Line voltage: 120 Vac, 50/60 Hz

24 Vac, 50/60 Hz

Ambient temperature range

-40 ... 63 °C (-40 ... 145 °F)

Electrical connection

Plug connection

Coil insulation solenoid valves

Insulation material according to class F.

Enclosure

NEMA 1

Valve body

Aluminium alloy die-cast

Strainer

AISI 303 steel

Closing spring

AISI 302 steel

Valve plunger

Chrome plated Fe 360B steel sliding on anti-friction bearing.

Seals and gaskets

Hydrocarbon resistant NBR rubber type.

Standards and Approvals

Underwriters Laboratories, Inc., File Number MH 18476,
Guide number YLOZ

AGA and CGA, File Number C2030014

Complies with standard ANSI Z21.21-CGA6.5

Automatic Valves for gas appliances and automatic safety shut-off gas valves (revised edition of the former ANSI

Z21.21, CAN/CGA-6.5-M89, CAN/CGA-3.9-M87)

Factory Mutual (3/8", 1/2" and 3/4" only)

CSD-1 Acceptable.

Table 7. V4295A1 Series, Normally Closed safety shut-off valve.

| O.S. Number | Rated Voltage (Vac) | Connect. (inch) NPT thread | Passing DN | Maximum Operating Pressure (mbar) | Overall Dimensions (mm) | | | | Power Cons. (W) | Enclosure | Weight (kg) | Bottom Plug |
|-------------|---------------------|----------------------------|------------|-----------------------------------|-------------------------|-----|-----|-----|-----------------|-----------|-------------|-------------|
| | | | | | A | B | C | D | | | | |
| V4295A1098 | 120 | 3/8 | 10 | 350 | 72 | 113 | 52 | 95 | 18 | NEMA 1 | 1 | – |
| V4295A1007 | 120 | 3/8 | 10 | 140 | 72 | 113 | 52 | 95 | 17 | NEMA 1 | 1.1 | – |
| V8295A1008 | 24 | 3/8 | 10 | 140 | 72 | 113 | 52 | 95 | 20 | NEMA 1 | 1.1 | – |
| V4295A1106 | 120 | 1/2 | 15 | 350 | 72 | 113 | 52 | 95 | 18 | NEMA 1 | 1 | – |
| V4295A1015 | 120 | 1/2 | 15 | 140 | 72 | 113 | 52 | 95 | 17 | NEMA 1 | 1.1 | – |
| V8295A1016 | 24 | 1/2 | 15 | 140 | 72 | 113 | 52 | 95 | 20 | NEMA 1 | 1.1 | – |
| V4295A1114 | 120 | 3/4 | 20 | 350 | 87 | 155 | 69 | 103 | 23 | NEMA 1 | 2 | – |
| V4295A1023 | 120 | 3/4 | 20 | 140 | 87 | 155 | 69 | 103 | 17 | NEMA 1 | 1.3 | – |
| V8295A1024 | 24 | 3/4 | 20 | 140 | 87 | 155 | 69 | 103 | 20 | NEMA 1 | 1.3 | – |
| V4295A1122 | 120 | 1 | 25 | 350 | 100 | 160 | 75 | 103 | 23 | NEMA 1 | 1.3 | – |
| V4295A1031 | 120 | 1 | 25 | 140 | 100 | 160 | 75 | 103 | 17 | NEMA 1 | 1.3 | – |
| V8295A1032 | 24 | 1 | 25 | 140 | 100 | 160 | 75 | 103 | 20 | NEMA 1 | 1.3 | – |
| V4295A1130 | 120 | 1 1/4 | 32 | 350 | 150 | 217 | 110 | 125 | 60 | NEMA 1 | 4.8 | – |
| V4295A1049 | 120 | 1 1/4 | 32 | 140 | 150 | 217 | 110 | 125 | 37 | NEMA 1 | 3.2 | – |
| V8295A1040 | 24 | 1 1/4 | 32 | 140 | 150 | 217 | 110 | 125 | 38 | NEMA 1 | 3.2 | – |
| V4295A1148 | 120 | 1 1/2 | 40 | 350 | 150 | 217 | 110 | 125 | 60 | NEMA 1 | 4.8 | – |
| V4295A1056 | 120 | 1 1/2 | 40 | 140 | 150 | 217 | 110 | 125 | 33 | NEMA 1 | 4.4 | – |
| V8295A1057 | 24 | 1 1/2 | 40 | 140 | 150 | 217 | 110 | 125 | 40 | NEMA 1 | 4.4 | – |
| V4295A1155 | 120 | 2 | 50 | 350 | 170 | 234 | 135 | 135 | 58 | NEMA 1 | 6.1 | – |
| V4295A1064 | 120 | 2 | 50 | 140 | 170 | 234 | 135 | 135 | 56 | NEMA 1 | 6.1 | – |
| V8295A1065 | 24 | 2 | 50 | 140 | 170 | 234 | 135 | 135 | 67 | NEMA 1 | 6.1 | – |
| V4295A1072 | 120 | 2 1/2 | 65 | 140 | 241 | 234 | 200 | 156 | 65 | NEMA 1 | 13 | – |
| V4295A1080 | 120 | 3 | 80 | 140 | 241 | 234 | 200 | 156 | 74 | NEMA 1 | 14 | – |

V4295/V8295 Series

SOLENOID VALVE V4295S1/V8295S1



FEATURES

- Normally Open vent valve (double block and bleed).
- Non regulated ON/OFF.
- Opening/closing time: <1 sec.
- Maximum working frequency: 20 cycles/min.
- Wrench boss as well on inlet side as on outlet side for pipe fitting incorporated in the valve housing.
- 3 auxiliary pressure taps with NPT 1/4" threaded connections, 2 on the inlet and 1 on the outlet pressure side.
- Coil field replaceable.
- Coil suitable for permanent energization.
- Coil turnable over 360°.
- Internal fine mesh screen.

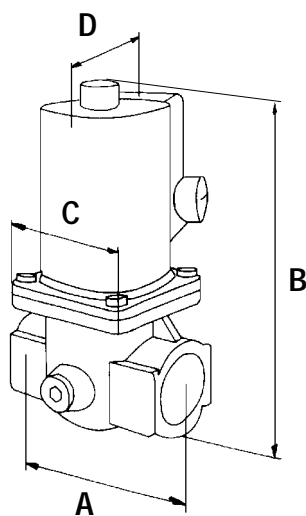


Fig. 7. Dimensional drawing V4295S/V8295S Series

APPLICATION

The V4295S/V8295S Series are specially designed for the North American market. The electrically operated V4295S solenoid gas valves control the flow of natural and LP (liquefied petroleum) gases.

These valves are used on atmospheric boilers, commercial water heaters, roof-top make-up air burners, power burners and boilers.

SPECIFICATION

Model

V4295S/V8295S, Normally Open vent valve

Dimensions

See figure and table below.

Pipe sizes

Inlet and outlet 3/4" up to 1 1/4" internal NPT pipe thread.

Mounting and orientation

The valve may be assembled on the pipeline within plus or minus 90 degrees of the vertical axis and 30 cm. air space around the coil assy.

Capacity

See capacity curves V4295/V8295 Series on page 69.

Maximum operating pressure

Rp 3/4" to Rp 1 1/4" : 140 mbar (2.0 psi).

Supply voltage

Line voltage: 120 Vac, 50/60 Hz
24 Vac, 50/60 Hz

Ambient temperature range

-40 ... 63 °C (-40 ... 145 °F)

Electrical connection

Plug connection

Coil insulation solenoid valves

Insulation material according to class F.

Enclosure

NEMA 1

Valve body

Aluminium alloy die-cast

Strainer

AISI 303 steel

Closing spring

AISI 302 steel

Valve plunger

Chrome plated Fe 360B steel sliding on anti-friction bearing.

Seals and gaskets

Hydrocarbon resistant NBR rubber type.

Standards and Approvals

Underwriters Laboratories, Inc., File Number MH 18476,
Guide number YLOZ

AGA and CGA, File Number C2030014

Complies with standard ANSI Z21.21-CGA6.5

Automatic Valves for gas appliances and automatic safety shut-off gas valves (revised edition of the former ANSI Z21.21, CAN/CGA-6.5-M89, CAN/CGA-3.9-M87)

Factory Mutual (3/8", 1/2" and 3/4" only)

CSD-1 Acceptable.

Table 8. V4295S1/V8295S1 Series, Normally Open vent valve

| O.S. Number | Rated Voltage (Vac) | Connect. (inch) NPT thread | Passing DN | Maximum Operating Pressure (mbar) | Overall Dimensions (mm) | | | | Power Cons. (W) | Enclosure | Weight (kg) | Bottom Plug |
|-------------|---------------------|----------------------------|------------|-----------------------------------|-------------------------|-----|-----|-----|-----------------|-----------|-------------|-------------|
| | | | | | A | B | C | D | | | | |
| V4295S1005 | 120 | 3/4 | 20 | 140 | 87 | 133 | 69 | 95 | 17 | NEMA 1 | 1.9 | – |
| V8295S1006 | 24 | 3/4 | 20 | 140 | 87 | 133 | 69 | 95 | 20 | NEMA 1 | 1.9 | – |
| V4295S1013 | 120 | 1 | 25 | 140 | 100 | 133 | 76 | 95 | 17 | NEMA 1 | 2 | – |
| V8295S1014 | 24 | 1 | 25 | 140 | 100 | 133 | 76 | 95 | 20 | NEMA 1 | 2 | – |
| V4295S1021 | 120 | 1 1/4 | 32 | 140 | 151 | 203 | 111 | 103 | 37 | NEMA 1 | 3.2 | – |
| V8295S1022 | 24 | 1 1/4 | 32 | 140 | 151 | 203 | 111 | 103 | 57 | NEMA 1 | 3.2 | – |

VEN4000 Series

CLASS "A" SOLENOID VALVE VEN4000B1



FEATURES

- Normally Closed valve.
(spring loaded valve disc, closed when de-energized).
- Adjustable flow rate regulator on top of the coil.
- Opening/closing time: <1 sec.
- Maximum working frequency: 20 cycles/min.
- Wrench boss as well on inlet side as on outlet side for pipe fitting incorporated in the valve housing.
- 2 auxiliary pressure taps with Rp 1/4" threaded connections, both on the inlet pressure side.
- Coil field replaceable.
- Coil suitable for permanent energization.
- Coil turnable over 360°.
- Internal fine mesh screen.

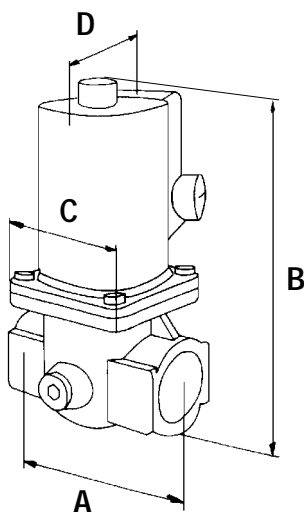


Fig. 8. Dimensional drawing VEN4000B1 Series

APPLICATION

The VEN4000 Series class "A" gas valves are specially designed for the Japanese market. These valves are used for control and regulation of gaseous fluids in gas power burners, atmospheric gas boilers, melting furnaces, incinerators and other gas consuming appliances.

SPECIFICATION

Model

VEN4000B1

Dimensions

See figure and table below.

Pipe sizes

Inlet and outlet 3/8" up to 3" internal parallel pipe thread according to ISO 7-1.

Mounting and orientation

The valve may be assembled on the pipeline within plus or minus 90 degrees of the vertical axis and 30 cm. air space around the coil assy.

Capacity

See capacity curves VEN4000 Series on page 66 and 67.

Maximum operating pressure

Rp 3/8" to Rp 1/2" types up to 360 mbar (36 KPa).

Rp 3/4" to Rp 3" types, 200 mbar (20 KPa).

Torsion and bending stress

Pipe connections meet group 2, according to EN161 requirements

Supply voltage

Line voltage: 200 Vac, 50/60 Hz
100 Vac, 50/60 Hz

Ambient temperature range

-15 ... 60 °C

Electrical connection

Plug connection according to PG11.

Coil insulation solenoid valves

Insulation material according to class F.

Enclosure

IP65

Valve body

Aluminium alloy die-cast

Bottom plug

Rp 1/4" for Closed Position Indication (CPI) switch.

Strainer

AISI 303 steel

Closing spring

AISI 302 steel

Valve plunger

Chrome plated Fe 360B steel sliding on anti-friction bearing.

Seals and gaskets

Hydrocarbon resistant NBR rubber type.

Standards and Approvals

Class "A" valve in accordance with EN161 standards.

The VEN4000B1 Series gas valves conform with the following EC directives:

- Gas Appliance Directive (90/396/EEC)
PIN: CE-0063AP3075/1
- Low Voltage Directive (73/23/EEC)

Table 9. VEN4000B1 Series, Class “A” Normally Closed solenoid valve, ON/OFF with flow rate adjuster.

| O.S. Number | Rated Voltage (Vac) | Connect. (inch) | Passing DN | Maximum Operating Pressure (mbar) | Overall Dimensions (mm) | | | | Power Consump. (W) | Enclosure | Weight (kg) | Bottom Plug |
|--------------|---------------------|-----------------|------------|-----------------------------------|-------------------------|-----|-----|-----|--------------------|-----------|-------------|-------------|
| | | | | | A | B | C | D | | | | |
| VEN4010B1100 | 100 | 3/8 | 10 | 360 | 72 | 125 | 52 | 65 | 14 | IP65 | 1.1 | – |
| VEN4010B1200 | 200 | 3/8 | 10 | 360 | 72 | 125 | 52 | 65 | 17 | IP65 | 1.1 | – |
| VEN4015B1100 | 100 | 1/2 | 15 | 360 | 72 | 125 | 52 | 65 | 14 | IP65 | 1.1 | – |
| VEN4015B1200 | 200 | 1/2 | 15 | 360 | 72 | 125 | 52 | 65 | 17 | IP65 | 1.1 | – |
| VEN4020B1100 | 100 | 3/4 | 20 | 200 | 86 | 165 | 70 | 63 | 15 | IP65 | 1.9 | ✓ |
| VEN4020B1200 | 200 | 3/4 | 20 | 200 | 86 | 165 | 70 | 63 | 19 | IP65 | 1.9 | ✓ |
| VEN4025B1100 | 100 | 1 | 25 | 200 | 100 | 141 | 75 | 63 | 15 | IP65 | 2.0 | ✓ |
| VEN4025B1200 | 200 | 1 | 25 | 200 | 100 | 141 | 75 | 63 | 19 | IP65 | 2.0 | ✓ |
| VEN4032B1100 | 100 | 1 1/4 | 32 | 200 | 150 | 230 | 110 | 85 | 45 | IP65 | 5.8 | ✓ |
| VEN4032B1200 | 200 | 1 1/4 | 32 | 200 | 150 | 230 | 110 | 85 | 47 | IP65 | 5.8 | ✓ |
| VEN4040B1100 | 100 | 1 1/2 | 40 | 200 | 150 | 230 | 110 | 85 | 45 | IP65 | 5.8 | ✓ |
| VEN4040B1200 | 200 | 1 1/2 | 40 | 200 | 150 | 230 | 110 | 85 | 47 | IP65 | 5.8 | ✓ |
| VEN4050B1100 | 100 | 2 | 50 | 200 | 170 | 245 | 135 | 95 | 40 | IP65 | 6.4 | ✓ |
| VEN4050B1200 | 200 | 2 | 50 | 200 | 170 | 245 | 135 | 95 | 53 | IP65 | 6.4 | ✓ |
| VEN4065B1100 | 100 | 2 1/2 | 65 | 200 | 240 | 240 | 135 | 115 | 50 | IP65 | 13 | ✓ |
| VEN4065B1200 | 200 | 2 1/2 | 65 | 200 | 240 | 240 | 135 | 115 | 61 | IP65 | 13 | ✓ |
| VEN4080B1100 | 100 | 3 | 80 | 200 | 240 | 240 | 135 | 130 | 118 | IP65 | 14 | ✓ |
| VEN4080B1200 | 200 | 3 | 80 | 200 | 240 | 240 | 135 | 130 | 120 | IP65 | 14 | ✓ |

VEN4000 Series

CLASS "A" SOLENOID VALVE VEN4000C1



FEATURES

- Normally Closed valve.
(spring loaded valve disc, closed when de-energized).
- Characterized opening from 1 to 30 seconds, step pressure and flow regulator on top of the coil.
- Closing time: <1 sec.
- Maximum working frequency: 1 cycles/min.
- Wrench boss as well on inlet side as on outlet side for pipe fitting incorporated in the valve housing.
- 2 Auxiliary pressure taps with Rp 1/4" threaded connections, both on the inlet pressure side.
- Coil field replaceable.
- Coil suitable for permanent energization.
- Coil turnable over 360°.
- Internal fine mesh screen.

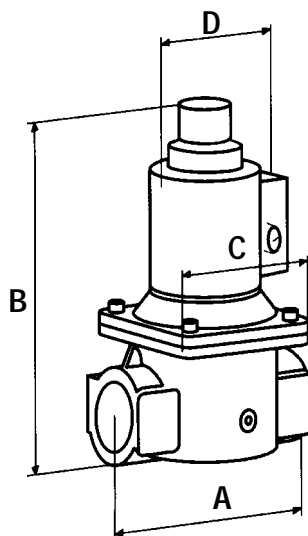


Fig. 9. Dimensional drawing VEN4000C1 Series

APPLICATION

The VEN4000 Series class "A" solenoid valves are special designed for the Japanese market. These gas valves are used for control and regulation of gaseous fluids in gas power burners, atmospheric gas boilers, melting furnaces, incinerators and other gas consuming appliances.

SPECIFICATION

Model

VEN4000C1

Dimensions

See figure and table below.

Pipe sizes

Inlet and outlet 3/8" up to 2" internal parallel pipe thread according to ISO 7-1.

Mounting and orientation

The valve may be assembled on the pipeline within plus or minus 90 degrees of the vertical axis and 30 cm. air space around the coil assy.

Capacity

See capacity curves VEN4000 Series on page 66 and 67.

Maximum operating pressure

Rp 3/8" to Rp 2" types up to 200 mbar (20 KPa)

Torsion and bending stress

Pipe connections meet group 2, according to EN161 requirements

Supply voltage

Line voltage: 200 Vac, 50/60 Hz
100 Vac, 50/60 Hz

Ambient temperature range

-15 ... 60 °C

Electrical connection

Wiring conduit according to PG11.

Coil insulation solenoid valves

Insulation material according to Class F.

Enclosure

IP65

Valve body

Aluminium alloy die-cast

Bottom plug

Rp 1/4" for Closed Position Indication (CPI) switch.

Strainer

AISI 303 steel

Closing spring

AISI 302 steel

Valve plunger

Chrome plated Fe 360B steel sliding on anti-friction bearing.

Seals and gaskets

Hydrocarbon resistant NBR rubber type

Standards and Approvals

Class "A" valve in accordance with EN161 standards.
The VEN4000C1 Series gas valves conform with the following EC directives:

- Gas Appliance Directive (90/396/EEC)
PIN: CE-0063AP3075/1
- Low Voltage Directive (73/23/EEC)

Table 10. VEN4000C1 Series, Class “A” Normally Closed solenoid valve, ON/OFF, with flow rate adjuster and characterized opening.

| O.S. Number | Rated Voltage (Vac) | Connect. (inch) | Passing DN | Maximum Operating Pressure (mbar) | Overall Dimensions (mm) | | | | Power Con-sump. (W) | Enclosure | Weight (kg) | Bottom Plug |
|--------------|---------------------|-----------------|------------|-----------------------------------|-------------------------|-----|-----|----|---------------------|-----------|-------------|-------------|
| | | | | | A | B | C | D | | | | |
| VEN4010C1100 | 100 | 3/8 | 10 | 200 | 72 | 167 | 52 | 65 | 14 | IP65 | 1.2 | – |
| VEN4010C1200 | 200 | 3/8 | 10 | 200 | 72 | 167 | 52 | 65 | 17 | IP65 | 1.2 | – |
| VEN4015C1100 | 100 | 1/2 | 15 | 200 | 72 | 167 | 52 | 65 | 14 | IP65 | 1.2 | – |
| VEN4015C1200 | 200 | 1/2 | 15 | 200 | 72 | 167 | 52 | 65 | 17 | IP65 | 1.2 | – |
| VEN4020C1100 | 100 | 3/4 | 20 | 200 | 86 | 210 | 70 | 63 | 15 | IP65 | 2.3 | ✓ |
| VEN4020C1200 | 200 | 3/4 | 20 | 200 | 86 | 210 | 70 | 63 | 19 | IP65 | 2.3 | ✓ |
| VEN4025C1100 | 100 | 1 | 25 | 200 | 100 | 210 | 75 | 63 | 15 | IP65 | 2.4 | ✓ |
| VEN4025C1200 | 200 | 1 | 25 | 200 | 100 | 210 | 75 | 63 | 19 | IP65 | 2.4 | ✓ |
| VEN4032C1100 | 100 | 1 1/4 | 32 | 200 | 150 | 248 | 110 | 85 | 45 | IP65 | 6.1 | ✓ |
| VEN4032C1200 | 200 | 1 1/4 | 32 | 200 | 150 | 248 | 110 | 85 | 47 | IP65 | 6.1 | ✓ |
| VEN4040C1100 | 100 | 1 1/2 | 40 | 200 | 150 | 248 | 110 | 85 | 45 | IP65 | 6.1 | ✓ |
| VEN4040C1200 | 200 | 1 1/2 | 40 | 200 | 150 | 248 | 110 | 85 | 47 | IP65 | 6.1 | ✓ |
| VEN4050C1100 | 100 | 2 | 50 | 200 | 170 | 259 | 135 | 95 | 40 | IP65 | 6.7 | ✓ |
| VEN4050C1200 | 200 | 2 | 50 | 200 | 170 | 259 | 135 | 95 | 53 | IP65 | 6.7 | ✓ |

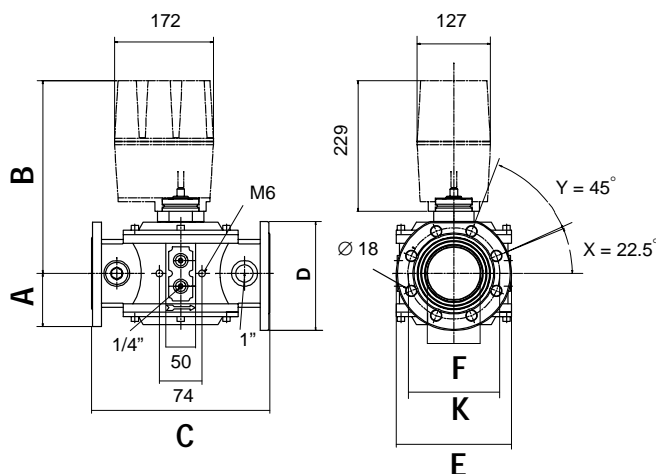
VE5000 Series

CLASS "A" SAFETY SHUT-OFF VALVE VE5000A/C



FEATURES

- Normally Closed valve.
(spring loaded valve disc, closed when de-energized).
- 4 auxiliary pressure taps with Rp 1/4" threaded connections, 2 on the inlet pressure side and 2 on the outlet pressure side.
- Equipped at both sides with mounting holes to adapt a pilot solenoid valve combination Rp 1" (for DN100 Rp 3/4"), to allow either internal or external pilot gas. Optional mounting possibility to adapt an A4021A Valve Proving System.
- The VE5000C series have a special characterized valve plug which provides characterized opening for HI-LOW-OFF or modulating control.
- The valve remains tight when the actuator is replaced.
- Internal fine mesh screen (except DN100).



NOTE: NOTE:
The VE5065A/C has 4 flange holes instead of 8;

NOTE:
Y = 90°, X = 45°

Fig. 10. Dimensional drawing VE5000 Series

APPLICATION

The VE5000 Series gas valves are for use with Honeywell V4055, V4062 and V9055 fluid power actuators to regulate the gas flow to commercial and industrial size burners. The valve meets current European approval requirements regarding flow control and safety shut-off functions. They may be used with natural and manufactured gases.

SPECIFICATION

Product range

The VE5000 Series safety shut-off valves offers several functionalities:

- Normally Closed, non regulating ON/OFF
- Normally Closed, HI-LO-OFF or modulating control

Dimensions

See figure and table below

Pipe sizes

Inlet and outlet flange connection DN65, DN80 and DN100 according to PN16 ISO 7005-1.

Mounting and orientation

The valve may be assembled on the pipeline within plus or minus 90 degrees of the vertical axis and 30 cm. air space around the actuator.

Capacity

See capacity curves VE5000 Series on page 70.

Maximum operating pressure (mbar)

| Model | Actuator type* | | | |
|---------|----------------|--------|-------|-------|
| | V4055A | V4055B | V4062 | V9055 |
| VE5065A | 360 | – | – | – |
| VE5080A | 360 | – | – | – |
| VE5100A | – | 360 | – | – |
| VE5065C | – | – | 360 | 360 |
| VE5080C | – | – | 360 | 360 |
| VE5100C | – | – | 200 | 200 |

* recommended Honeywell actuators

(supply voltage: 110 Vac or 220 Vac)

Maximum valve body rating

3 bar

Torsion and bending stress

Pipe connections meet group 2, according to EN161 requirements

Ambient temperature range

–15 ... 60 °C

Valve body

Aluminium alloy die-cast

Strainer

AISI 303 steel

Closing spring

AISI 302 steel

Valve plunger

AISI 303 steel sliding on anti-friction bearing.

Seals and gaskets

Hydrocarbon resistant NBR rubber type

Standards and Approvals

The VE5000 Series gas valves conform with the following EC directives:

- Gas Appliance Directive (90/396/EEC)
PIN: CE-0063AP3075/2

Table 11. VE5000A Series, Class “A” safety shut-off valve valve, non-regulated ON/OFF, for use with V4055, V4062 and V9055 fluid power actuators.

| O.S Number | Passing DN | Maximum Operating Pressure (mbar) ¹⁾ | Overall Dimensions (mm) | | | | | | | Weight (kg) |
|---------------------------|------------|---|-------------------------|-----|-----|-----|-----|-----|-----|-------------|
| | | | A | B | C | D | E | F | K | |
| VE5065A3005 | 65 | 360 | 93 | 338 | 310 | 183 | 190 | 92 | 145 | 7.3 |
| VE5065A3013 ²⁾ | 65 | 360 | 93 | 338 | 310 | 183 | 190 | 92 | 145 | 7.3 |
| VE5080A3004 | 80 | 360 | 93 | 338 | 310 | 191 | 190 | 92 | 160 | 7.6 |
| VE5080A3012 ²⁾ | 80 | 360 | 93 | 338 | 310 | 191 | 190 | 92 | 160 | 7.6 |
| VE5100A3000 | 100 | 360 | 103 | 345 | 350 | 206 | 250 | 109 | 180 | 15 |

¹⁾ depending on the actuator

²⁾ with two 1" outlet pressure taps

K = diameter of bolt circle

Table 12. VE5000C Series, Class “A” safety shut-off valve valve, HI-LO-OFF or modulating control, for use with V4062 and V9055 fluid power actuators.

| O.S Number | Passing DN | Maximum Operating Pressure (mbar) ¹⁾ | Overall Dimensions (mm) | | | | | | | Weight (kg) |
|-------------|------------|---|-------------------------|-----|-----|-----|-----|-----|-----|-------------|
| | | | A | B | C | D | E | F | K | |
| VE5065C3003 | 65 | 360 | 93 | 338 | 310 | 183 | 190 | 92 | 145 | 7.3 |
| VE5080C3002 | 80 | 360 | 93 | 338 | 310 | 191 | 190 | 92 | 160 | 7.6 |
| VE5100C3008 | 100 | 200 | 103 | 345 | 350 | 206 | 250 | 109 | 180 | 15 |

¹⁾ depending on the actuator

K = diameter of bolt circle

V4055, V4062A and V9055A Series

SERVO MOTORS FOR SAFETY SHUT-OFF VALVE VE5000A/C



FEATURES

- Opening time: 26 s at 60 Hz and 32 s at 50 Hz (or 13 s at 60 Hz and 16 s at 50 for the fast opening model).
- Closing time: < 1 s as required by the standards.
- Valve position indicator: RED open valve indicator, YELLOW closed valve indicator.
- Auxiliary damper connection arm, with or without spring return.
- Optional adjustable auxiliary switch (SPDT) on actuator.
- Optional Closed valve indicator switch
- Maximum flow regulation

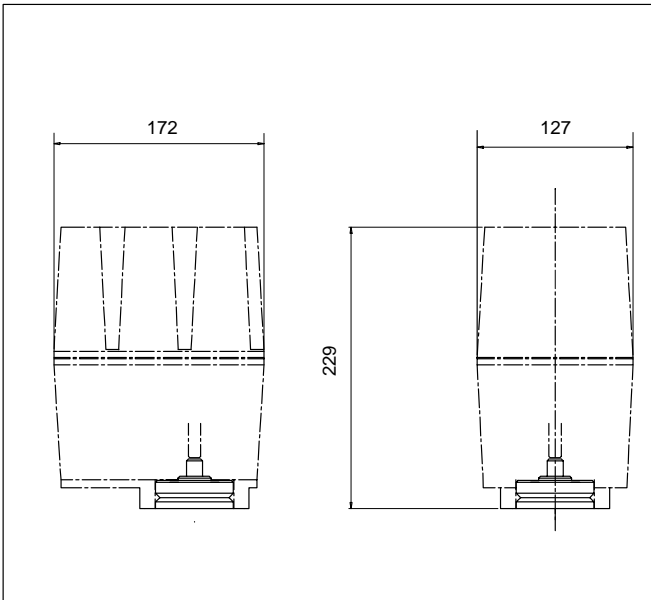


Fig. 11. V4055, V4062A, V9055A Series dimensions

APPLICATION

The V4055A,B,G, V4062A, V9055A are fluid power actuators, with the option to regulate the minimum opening, which can be used with the VE5000A and C valves for the control of gas flow on burners and combustion systems.

SPECIFICATION

Models

V4055A,B Series for ON/OFF control.

V4055G Series for ON/OFF control with manual reset in presence of electrical current

V4062A Series for high-low-off control

V9055A Series for modulating control

Dimensions

See figure

Assembly

Directly on the valve with two screws at 90° (assembly not carried out by Honeywell-UGV)

Mounting and orientation

The actuator can be mounted in any position

Supply voltage

Line voltage: 220 Vac, 50/60 Hz
110 Vac, 50/60 Hz

Ambient temperature

-23° ... 70° C

Adjustable minimum opening

From 25 to 50% of total travel (V4062A)

From 5 to 50% of total travel (V4055A)

External casing

Aluminium

Enclosure

NEMA1, optional NEMA4

Standards and Approvals

In combination with VE5000 valves these actuators conform with the following EC directives:

- Gas Appliance Directive (90/369/EEC)
PIN: 0063AP3075
- Underwrites Laboratories Inc., File No. MH1639, Guide No. YIOZ.
- Factory Mutual, Reports No. 20698, 20835, 21172 and 24061.

Table 13. Actuators for VE5000A/C Series safety shut-off valves

| Model | Voltage V/Frequency (Hz) | Opening time (s) | maximum flow regulation* |
|------------|-----------------------------|------------------|-----------------------------|
| V4055A1361 | 220 ... 240/50 | 16 | ✓ |
| V4055A1247 | 220/50 | 16 | – |
| V4055A1098 | 110/50 | 16 | – |
| | 120/60 | 13 | – |
| V4055G1004 | 110/50 | 16 | – |
| | 120/60 | 13 | – |
| V4055B1104 | 220 ... 240/50 | 16 | ✓ |
| V4055B1088 | 220/50 | 16 | – |
| V4055B1039 | 110/50 | 16 | – |
| | 120/60 | 13 | – |
| V4062A1206 | 220 ... 240/50 | 16 | ✓ |
| V4062A1099 | 220/50 | 16 | – |
| V4062A1131 | 110/50 | 16 | – |
| | 120/60 | 13 | – |
| V9055A1097 | 220/50 | 32 | – |
| V9055A1095 | 110/50 | 32 | – |
| | 120/60 | 26 | – |

NOTE: * with micro switch for regulation

Accessories (to specify when ordering if required)

Auxiliary switch SPDT 133568

Closed valve Position Indicator switch (CPI) 133569

Damper connection arm 7616BR

Modulating kit 4–20 mA 203422C

VG400AA Series

CLASSE "A" SEMI-AUTOMATIC SAFETY VALVE VG400AA



FEATURES

- Class "A" safety valves designed according to EN161 European standards.
- Normally closed valve.
- Closing time: <1 sec.
- Manual opening when electrically energized.
- Closing when electrically de-energized.

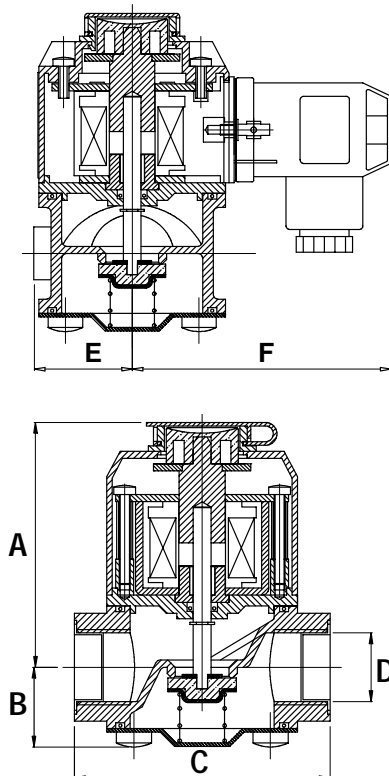


Fig. 12. Dimensional drawing VG400AA Series

APPLICATION

Normally closed, manually opened solenoid valve series, particularly recommended for the safety of gas consuming appliances controlled by leak detection systems.

SPECIFICATION

Model

VG400AA

Dimensions

See figure and table.

Pipe sizes

Inlet and outlet 1/2" up to 1", internal pipe thread according to ISO7-1.

Mounting and orientation

The valve may be assembled on the pipeline within plus or minus 90 degrees of the vertical axis and 30 cm. air space around the coil assy.

Capacity

See capacity curves VG400 Series on page 68.

maximum operating pressure

500 mbar.

Torsion and bending stress

Pipe connections meet group 2, according EN161.

Supply voltage

Line voltage: 220...240Vac, 50/60Hz
24 Vac, 50/60Hz
12 Vdc

Ambient temperature range

-15 ... 60 °C

Electrical connection

Three pin plug connector according ISO4400

Coil insulation solenoid valves

Insulation material according class F

Enclosure

IP65

Valve body

Aluminium alloy die-cast

Strainer

AISI 303

Closing spring

AISI 302

Seals and gaskets

Hydrocarbon resistant NBR rubber type.

Standards and Approvals

The VG400AA Normally closed safety solenoid valve series meets Class "A" specifications according EN161. The VG400AA series conforms with the following EC directives:

- Gas Appliance Directive (90/396/EEC)
PIN: CE0063AS1865
- Low Voltage Directive (73/23/EEC)
- Electro Magnetic Compatibility Directive (89/336/EEC)

Table 14. VG400AA Series normally closed, manually opened solenoid valves, Class “A”.

| O.S. number | Rated Voltage (Vac) | Connect. (inch) | Passing DN | Maximum operating Pressure (mbar) | Overall dimensions (mm) | | | | | | Power Cons. (W) | Enclosure | Weight (kg) |
|-------------|---------------------|-----------------|------------|-----------------------------------|-------------------------|----|----|------|----|----|-----------------|-----------|-------------|
| | | | | | A | B | C | D | E | F | | | |
| VG415AA1004 | 220 ... 240 | 1/2" | 15 | 500 | 68 | 22 | 71 | 1/2" | 28 | 74 | 2.4 | IP65 | 0.4 |
| VG815AA1034 | 24 | 1/2" | 15 | 500 | 68 | 22 | 71 | 1/2" | 28 | 74 | 2.4 | IP65 | 0.5 |
| VG815AA1018 | 12 Vdc | 1/2" | 15 | 500 | 68 | 22 | 71 | 1/2" | 28 | 74 | 2.4 | IP65 | 0.5 |
| VG420AA1007 | 220 ... 240 | 3/4" | 20 | 500 | 75 | 27 | 91 | 3/4" | 32 | 74 | 2.4 | IP65 | 0.4 |
| VG820AA1037 | 24 | 3/4" | 20 | 500 | 75 | 27 | 91 | 3/4" | 32 | 74 | 2.4 | IP65 | 0.4 |
| VG820AA1011 | 12 Vdc | 3/4" | 20 | 500 | 75 | 27 | 91 | 3/4" | 32 | 74 | 2.4 | IP65 | 0.5 |
| VG425AA1002 | 220 ... 240 | 1" | 25 | 500 | 75 | 27 | 91 | 1" | 32 | 74 | 2.4 | IP65 | 0.4 |
| VG825AA1032 | 24 | 1" | 25 | 500 | 75 | 27 | 91 | 1" | 32 | 74 | 2.4 | IP65 | 0.5 |
| VG825AA1016 | 12 Vdc | 1" | 25 | 500 | 75 | 27 | 91 | 1" | 32 | 74 | 2.4 | IP65 | 0.5 |

VG400SA Series

CLASSE "A" SEMI-AUTOMATIC SAFETY VALVE VG400SA



FEATURES

- Class "A" safety valves designed according to EN161 European standards.
- Normally open valve.
- Closing time: <1 sec.
- Manual opening, closing when electrically energized.
- Suitable for permanent energization.
- Coil field replaceable.

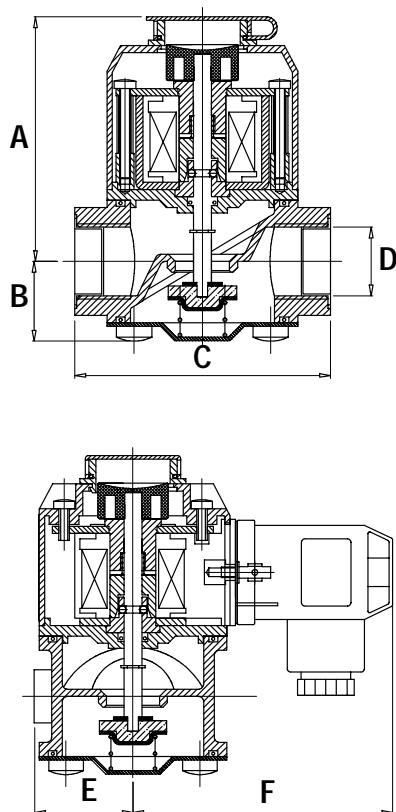


Fig. 13. Dimensional drawing VG400SA Series

APPLICATION

Normally open, manually closed solenoid valve series, particularly recommended for the safety of gas consuming appliances controlled by leak detection systems.

SPECIFICATION

Model

VG400SA

Dimensions

See figure and table.

Pipe sizes

Inlet and outlet 1/2" up to 1", internal pipe thread according to ISO7-1.

Mounting and orientation

The valve may be assembled on the pipeline within plus or minus 90 degrees of the vertical axis and 30 cm. air space around the coil assy.

Capacity

See capacity curves VG400SA Series on page 68.

maximum operating pressure

500 mbar.

Torsion and bending stress

Pipe connections meet group 2, according EN161.

Supply voltage

Line voltage: 220...240Vac, 50/60Hz
24 Vac, 50/60Hz
12 Vdc

Ambient temperature range

-15 ... 60 °C

Electrical connection

Three pin plug connector according ISO4400

Coil insulation solenoid valves

Insulation material according to class F

Enclosure

IP65

Valve body

Aluminium alloy die-cast

Strainer

AISI 303

Closing spring

AISI 302

Seals and gaskets

Hydrocarbon resistant NBR rubber type.

Standards and Approvals

The VG400SA Normally open safety solenoid valve Series meets Class "A" specifications according EN161.

The VG400SA Series conforms with the following EC directives:

- Gas Appliance Directive (90/396/EEC)
PIN: CE0063AS1865
- Low Voltage Directive (73/23/EEC)
- Electro Magnetic Compatibility Directive (89/336/EEC)

Table 15. VG400SA Series normally open safety solenoid valves, Class “A”.

| O.S. number | Rated Voltage (Vac) | Connect. (inch) | Passing DN | Maximum operating Pressure (mbar) | Overall dimensions (mm) | | | | | | Power Cons. (W) | Enclosure | Weight (kg) |
|-------------|---------------------|-----------------|------------|-----------------------------------|-------------------------|----|----|------|----|----|-----------------|-----------|-------------|
| | | | | | A | B | C | D | E | F | | | |
| VG415SA1002 | 220 ... 240 | 1/2" | 15 | 500 | 68 | 22 | 71 | 1/2" | 28 | 74 | 11 | IP65 | 0.4 |
| VG815SA1016 | 24 | 1/2" | 15 | 500 | 68 | 22 | 71 | 1/2" | 28 | 74 | 11 | IP65 | 0.5 |
| VG815SA1008 | 12 Vdc | 1/2" | 15 | 500 | 68 | 22 | 71 | 1/2" | 28 | 74 | 11 | IP65 | 0.5 |
| VG420SA1005 | 220 ... 240 | 3/4" | 20 | 500 | 75 | 27 | 91 | 3/4" | 32 | 74 | 11 | IP65 | 0.4 |
| VG820SA1019 | 24 | 3/4" | 20 | 500 | 75 | 27 | 91 | 3/4" | 32 | 74 | 11 | IP65 | 0.4 |
| VG820SA1001 | 12 Vdc | 3/4" | 20 | 500 | 75 | 27 | 91 | 3/4" | 32 | 74 | 11 | IP65 | 0.5 |
| VG425SA1000 | 220 ... 240 | 1" | 25 | 500 | 75 | 27 | 91 | 1" | 32 | 74 | 11 | IP65 | 0.4 |
| VG825SA1014 | 24 | 1" | 25 | 500 | 75 | 27 | 91 | 1" | 32 | 74 | 11 | IP65 | 0.5 |
| VG825SA1006 | 12 Vdc | 1" | 25 | 500 | 75 | 27 | 91 | 1" | 32 | 74 | 11 | IP65 | 0.5 |

VG4000 Series

CLASS "A" SAFETY SOLENOID VALVE VG4000A1



FEATURES

- Normally Closed valve.
- Manual opening when electrically energized.
- Closing time: <1 sec.
- Wrench boss as well on inlet side as on outlet side for pipe fitting incorporated in the valve housing.
- 2 auxiliary pressure taps with Rp 1/4" threaded connections, both on the inlet pressure side.
- Coil field replaceable.
- Coil suitable for permanent energization.
- Coil turnable over 360°.
- Internal fine mesh screen.

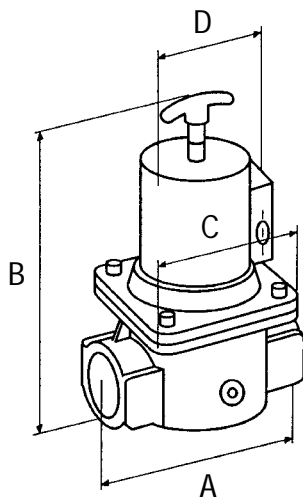


Fig. 14. Dimensional drawing VG4000A1 Series

APPLICATION

These series manually operated safety solenoid valves are used in gas leak detection systems.

SPECIFICATION

Model

VG4000A1

Dimensions

See figure and table below.

Pipe sizes

Inlet and outlet 1 1/4" up to 3" internal parallel pipe thread according to ISO 7-1.

Mounting and orientation

The valve may be assembled on the pipeline within plus or minus 90 degrees of the vertical axis and 30 cm. air space around the coil assy.

Capacity

See capacity curves VG4000 Series on page 66 and 67.

Maximum operating pressure

Rp 1 1/4" to Rp 2" : 500 mbar

Rp 2 1/2" to 3" : 360 mbar.

Torsion and bending stress

Pipe connections meet group 2, according to EN161 requirements

Supply voltage

Line voltage: 220 ... 240 Vac, 50/60 Hz
110 Vac, 50/60 Hz
24 ... 28 Vdc
24 Vac, 50/60 Hz
12 Vdc

Ambient temperature range

-15 ... 60 °C

Electrical connection

Plug connection according to PG11.

Coil insulation solenoid valves

Insulation material according to class F.

Enclosure

IP54

IP65 on request.

Valve body

Aluminium alloy die-cast

Bottom plug

Rp 1/4" for Closed Position Indication (CPI) switch.

Strainer

AISI 303 steel.

Closing spring

AISI 302 steel.

Seals and gaskets

Hydrocarbon resistant NBR rubber type.

Standards and Approvals

The VG4000A1 Series safety relief solenoid valves conform with the following EC directives:

- Gas Appliance Directive (90/396/EEC)

PIN: CE-0063AS1865

- Low Voltage Directive (73/23/EEC)

Table 16. VG4000A1 Series, electrical operated Normally Closed safety solenoid valve with manual reset.

| O.S. Number | Rated Voltage (Vac) | Connect. (inch) | Passing DN | Maximum Operating Pressure (mbar) | Overall Dimensions (mm) | | | | Power Cons. (W) | Enclosure | Weight (kg) | Bottom Plug |
|-------------|---------------------|-----------------|------------|-----------------------------------|-------------------------|-----|-----|-----|-----------------|-----------|-------------|-------------|
| | | | | | A | B | C | D | | | | |
| VG4032A1006 | 220 ... 240 | 1 1/4 | 32 | 500 | 150 | 210 | 110 | 88 | 4.3 | IP54 | 2 | ✓ |
| VG4032A1022 | 110 | 1 1/4 | 32 | 500 | 150 | 210 | 110 | 88 | 4 | IP54 | 2 | ✓ |
| VG8032A1002 | 24 | 1 1/4 | 32 | 500 | 150 | 210 | 110 | 88 | 4 | IP54 | 2 | ✓ |
| VG8032A1010 | 24 ... 28 Vdc | 1 1/4 | 32 | 500 | 150 | 210 | 110 | 88 | 4 | IP54 | 2 | ✓ |
| VG8032A1028 | 12 Vdc | 1 1/4 | 32 | 500 | 150 | 210 | 110 | 88 | 4.5 | IP54 | 2 | ✓ |
| VG4040A1009 | 220 ... 240 | 1 1/2 | 40 | 500 | 150 | 210 | 110 | 88 | 4.3 | IP54 | 2 | ✓ |
| VG4040A1025 | 110 | 1 1/2 | 40 | 500 | 150 | 210 | 110 | 88 | 4 | IP54 | 2 | ✓ |
| VG8040A1005 | 24 | 1 1/2 | 40 | 500 | 150 | 210 | 110 | 88 | 4 | IP54 | 2 | ✓ |
| VG8040A1013 | 24 ... 28 Vdc | 1 1/2 | 40 | 500 | 150 | 210 | 110 | 88 | 4.5 | IP54 | 2 | ✓ |
| VG8040A1021 | 12 Vdc | 1 1/2 | 40 | 500 | 150 | 210 | 110 | 88 | 4.5 | IP54 | 2 | ✓ |
| VG4050A1008 | 220 ... 240 | 2 | 50 | 500 | 170 | 285 | 135 | 123 | 15.3 | IP54 | 4.2 | ✓ |
| VG4050A1024 | 110 | 2 | 50 | 500 | 170 | 285 | 135 | 123 | 13 | IP54 | 4.2 | ✓ |
| VG8050A1004 | 24 | 2 | 50 | 500 | 170 | 285 | 135 | 123 | 14 | IP54 | 4.2 | ✓ |
| VG8050A1012 | 24 ... 28 Vdc | 2 | 50 | 500 | 170 | 285 | 135 | 123 | 16 | IP54 | 4.2 | ✓ |
| VG8050A1020 | 12 Vdc | 2 | 50 | 500 | 170 | 285 | 135 | 123 | 18 | IP54 | 4.2 | ✓ |
| VG4065A1006 | 220 ... 240 | 2 1/2 | 65 | 360 | 225 | 330 | 170 | 123 | 15.3 | IP54 | 7.5 | ✓ |
| VG4065A1030 | 220 ... 240 | 2 1/2 | 65 | 360 | 225 | 330 | 170 | 123 | 15.3 | IP65 | 7.5 | ✓ |
| VG4065A1022 | 110 | 2 1/2 | 65 | 360 | 225 | 330 | 170 | 123 | 13 | IP54 | 7.5 | ✓ |
| VG8065A1002 | 24 | 2 1/2 | 65 | 360 | 225 | 330 | 170 | 123 | 14 | IP54 | 7.5 | ✓ |
| VG8065A1010 | 24 ... 28 Vdc | 2 1/2 | 65 | 360 | 225 | 330 | 170 | 123 | 16 | IP54 | 7.5 | ✓ |
| VG8065A1028 | 12 Vdc | 2 1/2 | 65 | 360 | 225 | 330 | 170 | 123 | 17 | IP54 | 7.5 | ✓ |
| VG4080A1005 | 220 ... 240 | 3 | 80 | 360 | 225 | 330 | 170 | 123 | 15.3 | IP54 | 7.5 | ✓ |
| VG4080A1021 | 110 | 3 | 80 | 360 | 225 | 330 | 170 | 123 | 13 | IP54 | 7.5 | ✓ |
| VG8080A1001 | 24 | 3 | 80 | 360 | 225 | 330 | 170 | 123 | 14 | IP54 | 7.5 | ✓ |
| VG8080A1019 | 24 ... 28 Vdc | 3 | 80 | 360 | 225 | 330 | 170 | 123 | 16 | IP54 | 7.5 | ✓ |
| VG8080A1027 | 12 Vdc | 3 | 80 | 360 | 225 | 330 | 170 | 123 | 17 | IP54 | 7.5 | ✓ |
| VG4080A1021 | 110 | 3 | 80 | 360 | 225 | 330 | 170 | 120 | 13 | IP54 | 7.5 | ✓ |
| VG8080A1001 | 24 | 3 | 80 | 360 | 225 | 330 | 170 | 120 | 14 | IP54 | 7.5 | ✓ |
| VG8080A1019 | 24 ... 28 Vdc | 3 | 80 | 360 | 225 | 330 | 170 | 120 | 16 | IP54 | 7.5 | ✓ |
| VG8080A1027 | 12 Vdc | 3 | 80 | 360 | 225 | 330 | 170 | 120 | 17 | IP54 | 7.5 | ✓ |

VG4000 Series

CLASS "A" SAFETY SOLENOID VALVE VG4000A3



FEATURES

- Normally Closed valve.
- Manual opening when electrically energized.
- Closing time: <1 sec.
- 2 auxiliary pressure taps with Rp 1/4" threaded connections, both on the inlet pressure side.
- Coil field replaceable.
- Coil suitable for permanent energization.
- Coil turnable over 360°.
- Internal fine mesh screen.

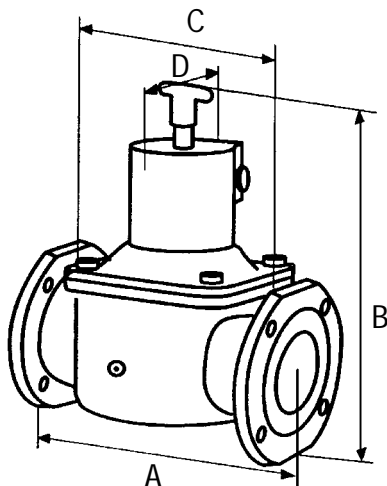


Fig. 15. Dimensional drawing VG4000A3 Series

APPLICATION

These series manually operated safety solenoid valves are used in gas leak detection systems.

SPECIFICATION

Model

VG4000A3

Dimensions

See figure and table below.

Pipe sizes

Inlet and outlet flanged connection DN65, DN80 and DN100 according to PN16 ISO 7005-1.

Mounting and orientation

The valve may be assembled on the pipeline within plus or minus 90 degrees of the vertical axis and 30 cm. air space around the coil assy.

Capacity

See capacity curves VG4000 series on page 67.

Maximum operating pressure

DN65, DN80 and DN100 types up to 360 mbar

Torsion and bending stress

Pipe connections meet group 2, according to EN161 requirements

Supply voltage

Line voltage: 220 ... 240 Vac, 50/60 Hz
110 Vac, 50/60 Hz
24 Vac, 50/60 Hz
24 ... 28 Vdc
12 Vdc

Ambient temperature range

-15 ... 60 °C

Electrical connection

Plug connection according to PG11.

Coil insulation solenoid valves

Insulation material according to class F.

Enclosure

IP54

IP65 on request.

Valve body

Aluminium alloy die-cast

Bottom plug

Rp 1/4" for Closed Position Indication (CPI) switch.

Strainer

AISI 303 steel.

Closing spring

AISI 302 steel.

Seals and gaskets

Hydrocarbon resistant NBR rubber type.

Standards and Approvals

The VG4000A3 Series safety solenoid valves meet the class "A" specification according EN161.

The VG4000A3 Series safety solenoid valves conform with the following EC directives:

- Gas Appliance Directive (90/396/EEC)
PIN: CE-0063AS1865
- Low Voltage Directive (73/23/EEC)

Table 17. VG4000A3 Series, electrical operated Normally Closed safety valve with manual reset with flanged body.

| O.S. Number | Rated Voltage (Vac) | Passing DN | Maximum Operating Pressure (mbar) | Overall Dimensions (mm) | | | | Power Con-sump. (W) | Enclosure | Weight (kg) | Bot-tom plug | CPI switch |
|-------------|---------------------|------------|-----------------------------------|-------------------------|-----|-----|-----|---------------------|-----------|-------------|--------------|------------|
| | | | | A | B | C | D | | | | | |
| VG4065A3002 | 220 ... 240 | 65 | 360 | 310 | 320 | 170 | 120 | 15.3 | IP54 | 11 | ✓ | – |
| VG4065A3036 | 220 ... 240 | 65 | 360 | 310 | 320 | 170 | 120 | 15.3 | IP54 | 11 | ✓ | ✓ |
| VG4065A3028 | 110 | 65 | 360 | 310 | 320 | 170 | 120 | 13 | IP54 | 11 | ✓ | – |
| VG8065A3008 | 24 | 65 | 360 | 310 | 320 | 170 | 120 | 14 | IP54 | 11 | ✓ | – |
| VG8065A3032 | 24 ... 28 Vdc | 65 | 360 | 310 | 320 | 170 | 120 | 16 | IP54 | 11 | ✓ | – |
| VG8065A3024 | 24 ... 28 Vdc | 65 | 360 | 310 | 320 | 170 | 120 | 16 | IP65 | 11 | ✓ | – |
| VG8065A3016 | 12 Vdc | 65 | 360 | 310 | 320 | 170 | 120 | 18 | IP54 | 11 | ✓ | – |
| VG4080A3001 | 220 ... 240 | 80 | 360 | 310 | 320 | 170 | 120 | 15.3 | IP54 | 11.3 | ✓ | – |
| VG4080A3043 | 220 ... 240 | 80 | 360 | 310 | 320 | 170 | 120 | 15.3 | IP54 | 11.3 | ✓ | ✓ |
| VG4080A3035 | 110 | 80 | 360 | 310 | 320 | 170 | 120 | 13 | IP54 | 11.3 | ✓ | – |
| VG8080A3007 | 24 | 80 | 360 | 310 | 320 | 170 | 120 | 14 | IP54 | 11.3 | ✓ | – |
| VG8080A3023 | 24 ... 28 Vdc | 80 | 360 | 310 | 320 | 170 | 120 | 16 | IP54 | 11.3 | ✓ | – |
| VG8080A3015 | 12 Vdc | 80 | 360 | 310 | 320 | 170 | 120 | 18 | IP54 | 11.3 | ✓ | – |
| VG4100A3007 | 220 ... 240 | 100 | 360 | 350 | 335 | 250 | 120 | 15.3 | IP54 | 17.1 | – | – |
| VG4100A3023 | 110 | 100 | 360 | 350 | 335 | 250 | 120 | 13 | IP54 | 17.1 | – | – |
| VG8100A3003 | 24 | 100 | 360 | 350 | 335 | 250 | 120 | 14 | IP54 | 17.1 | – | – |
| VG8100A3029 | 24 ... 28 Vdc | 100 | 360 | 350 | 335 | 250 | 120 | 14 | IP54 | 17.1 | – | – |
| VG8100A3011 | 12 Vdc | 100 | 360 | 350 | 335 | 250 | 120 | 17 | IP54 | 17.1 | – | – |

VG4000 Series

SAFETY SOLENOID VALVE VG4000S1



FEATURES

- Normally Open valve.
- Manual opening, closing when electrically energized.
- Closing time: <1 sec.
- Coil field replaceable.
- Coil suitable for permanent energization.
- Coil turnable over 360°.

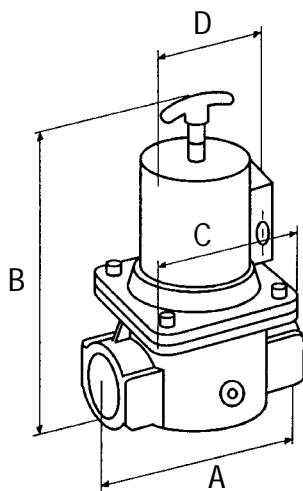


Fig. 16. Dimensional drawing VG4000S1 Series

APPLICATION

These series manually operated safety solenoid valves are used in gas leak detection systems.

SPECIFICATION

Model

VG4000S1

Dimensions

See figure and table.

Pipe sizes

Inlet and outlet 1 1/4" up to 3" internal parallel pipe thread according to ISO 7-1.

Mounting and orientation

The valve may be assembled on the pipe line within plus or minus 90 degrees of the vertical axis and 30 cm. air space around the coil assy.

Capacity

See capacity curves VG4000 Series on page 66 and 67.

Maximum operating pressure

Rp 1 1/4" to Rp 3" : 360 mbar

Torsion and bending stress

Pipe connections meet group 2, according to EN161 requirements

Supply voltage

Line voltage: 220 ... 240 Vac, 50/60 Hz
12 Vdc

Ambient temperature range

-15 ... 60 °C

Electrical connection

Plug connection according to PG11.

Coil insulation solenoid valves

Insulation material according to Class F.

Enclosure

IP54

IP65 on request.

Valve body

Aluminium alloy die-cast

Closing spring

AISI 302 steel

Seals and gaskets

Hydrocarbon resistant NBR rubber type

Standards and Approvals

The VG4000S1 Series safety solenoid valves conform with the following EC directives:

- Low Voltage Directive (73/23/EEC)

Table 18. VG4000S1 Series, electrical operated Normally Open safety solenoid valve with manual reset.

| O.S. Number | Rated Voltage (Vac) | Connect. (inch) | Passing DN | Maximum Operating Pressure (mbar) | Overall Dimensions (mm) | | | | Power Consump. (W) | Enclosure | Weight (kg) |
|-------------|---------------------|-----------------|------------|-----------------------------------|-------------------------|-----|-----|-----|--------------------|-----------|-------------|
| | | | | | A | B | C | D | | | |
| VG4032S1005 | 220 ... 240 | 1 1/4 | 32 | 360 | 150 | 210 | 110 | 88 | 20 | IP54 | 2 |
| VG4040S1008 | 220 ... 240 | 1 1/2 | 40 | 360 | 150 | 210 | 110 | 88 | 20 | IP54 | 2 |
| VG4050S1007 | 220 ... 240 | 2 | 50 | 360 | 170 | 225 | 135 | 88 | 20 | IP54 | 4.2 |
| VG4065S1005 | 220 ... 240 | 2 1/2 | 65 | 360 | 225 | 330 | 170 | 120 | 37 | IP54 | 7.5 |
| VG8065S1027 | 12 Vdc | 2 1/2 | 65 | 360 | 225 | 330 | 170 | 120 | 63 | IP54 | 7.5 |
| VG4080S1004 | 220 ... 240 | 3 | 80 | 360 | 225 | 330 | 170 | 120 | 37 | IP54 | 7.5 |

VG4000 Series

SAFETY SOLENOID VALVE VG4000S3



FEATURES

- Normally Open valve.
- Manual opening, closing when electrically energized.
- Closing time: <1 sec.
- 2 auxiliary pressure taps with Rp 1/4" threaded connections, both on the inlet pressure side.
- Coil field replaceable.
- Coil suitable for permanent energization.
- Coil turnable over 360°.

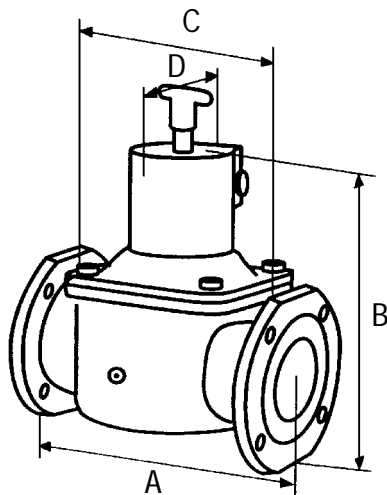


Fig. 17. Dimensional drawing VG4000S3 Series

APPLICATION

These series manually operated safety solenoid valves are used in gas leak detection systems.

SPECIFICATION

Model

VG4000S3

Dimensions

See figure and table.

Pipe sizes

Inlet and outlet flanged connection DN65, DN80 and DN100 according to PN16 ISO 7005-1.

Mounting and orientation

The valve may be assembled on the pipeline within plus or minus 90 degrees of the vertical axis and 30 cm. air space around the coil assy.

Capacity

See capacity curves VG4000 Series on page 67.

Maximum operating pressure

DN65, DN80 and DN100 types up to 360 mbar

Torsion and bending stress

Pipe connections meet group 2, according to EN161 requirements

Supply voltage

Line voltage: 220 ... 240 Vac, 50/60 Hz
24 ... 28 Vdc
12 Vdc

Ambient temperature range

-15 ... 60 °C

Electrical connection

Plug connection according to PG11.

Coil insulation solenoid valves

Insulation material according to class F.

Enclosure

IP54

IP65 on request.

Valve body

Aluminium alloy die-cast

Closing spring

AISI 302 steel

Seals and gaskets

Hydrocarbon resistant NBR rubber type

Standards and Approvals

The VG4000S3 Series safety solenoid valves conform with the following EC directives:

- Low Voltage Directive (73/23/EEC)

Table 19. VG4000S3 Series, electrical operated Normally Open safety valve with manual reset with flanged body.

| O.S. Number | Rated Voltage (Vac) | Passing DN | Maximum Operating Pressure (mbar) | Overall Dimensions (mm) | | | | Power Consump. (W) | Enclosure | Weight (kg) |
|-------------|---------------------|------------|-----------------------------------|-------------------------|-----|-----|-----|--------------------|-----------|-------------|
| | | | | A | B | C | D | | | |
| VG4065S3001 | 220 ... 240 | 65 | 360 | 310 | 324 | 170 | 127 | 37 | IP54 | 11 |
| VG8065S3015 | 24 ... 28 Vdc | 65 | 360 | 310 | 324 | 170 | 127 | 55 | IP54 | 11 |
| VG8065S3023 | 12 Vdc | 65 | 360 | 310 | 324 | 170 | 127 | 63 | IP54 | 11 |
| VG4080S3000 | 220 ... 240 | 80 | 360 | 310 | 360 | 170 | 120 | 37 | IP54 | 11.3 |
| VG8080S3014 | 24 ... 28 Vdc | 80 | 360 | 310 | 360 | 170 | 120 | 55 | IP54 | 11.3 |
| VG8080S3022 | 12 Vdc | 80 | 360 | 310 | 360 | 170 | 120 | 63 | IP54 | 11.3 |
| VG4100S3006 | 220 ... 240 | 100 | 360 | 350 | 335 | 250 | 120 | 37 | IP54 | 18.3 |
| VG8100S3010 | 24 ... 28 Vdc | 100 | 360 | 350 | 335 | 250 | 120 | 55 | IP54 | 18.3 |
| VG8100S3028 | 12 Vdc | 100 | 360 | 350 | 335 | 250 | 120 | 63 | IP54 | 18.3 |

VQ400 Series

CLASS "A" COMBINATION VALVE VQ420/25



FEATURES

- Class "A" safety combination valve for control of gaseous fluids in gas consuming appliances in accordance with international standards.
- Main body with two gas valves with single seat.
- Internal by-pass valve to achieve high-low flame control.
- Internal or external pilot valve.
- Vent valve.
- Minimum and maximum pressure switches.
- Valve Proving System (VPS).
- Closing time: < 1 second.
- Coils field replaceable.
- Coils suitable for permanent energization.
- Fine mesh screen between inlet flange and main body.
- Various pressure tap points at main body available, when no additional valves or pressure switches are used.
- Options for mounting flanged minimum and maximum pressure switches.
- Second main valve, either with adjustable flow regulator, or characterized opening mechanism with adjustable maximum flow rate and step pressure.
- Rectifier boards field replaceable.
- Optional mounting of Closed Position Indication switch (CPI) at bottom of safety valve V1.

APPLICATION

These series class "A" gas valves are used for control and regulation of gaseous fluids in gas power burners, atmospheric gas boilers, melting furnaces, incinerators and other gas consuming appliances.

SPECIFICATION

Models

The VQ400 Series combination valves are standard equipped with two main valves.

Additionally an internal by-pass valve (Vb), a vent valve (Vv) and/or a pilot valve (Vp) can be added.

Main gas volume is adjustable at regulating valve.

The start flow is adjustable at slow open regulating valve.

Dimensions

See dimensional drawings on page 71.

Pipe sizes

Main body: Inlet and outlet straight flange connection 3/4" and 1".

Pilot and vent valve: outlet 3/4" thread

(all internal pipe thread according to ISO 7-1)

Capacity

Main body: See capacity curves VQ400 Series combination valves on page 57.

Pilot and vent valve on VQ400 DN20 and 25 as VE4020

By-pass on VQ400 DN20 and 25 as VE4020

See also capacity curves VE4000 Series on page 52.

Maximum operating pressure

360 mbar.

Opening time

First valve (V1): < 1 sec.

Second valve (V2), by-pass valve and pilot valve:

fast: < 1 sec

slow: adjustable from 1 ... 30 sec.

Vent valve: < 1 sec.

Closing time

First valve (V1), second valve (V2), by-pass valve, pilot valve and vent valve : < 1 sec.

Connections

- Pressure taps at inlet and outlet flanges.
- Optional mounting of Closed Position Indication switch (CPI) at bottom of safety valve V1.

At the main body (4) flange connections are provided to mount either an:

- internal by-pass valve to achieve high-low flame control
- internal or external pilot valve
- vent valve
- pressure switches (Min. or Max.)
- Valve Proving System (VPS) + pressure switch.

Mounting and orientation

The gas valve can be mounted plus or minus 90 degrees from the vertical. The distance between the gas valve and the wall/ground, must be at least 30 cm.

Torsion and bending stress

Pipe connections meet group 2 according to EN161 requirements.

Supply voltages

Line voltage: 220 ... 240 Vac, 50/60 Hz
200 Vac, 50/60 Hz
100/110 Vac, 50/60 Hz
24 ... 28 Vdc

Other voltages on request.

Electrical equipment

DC current coils with separated rectifier inside the cover.

Electrical connections

Plug connection according to PG11 at main gas valve and additional valves.

Optional: DIN plug connector according ISO4400 .

Ambient temperature range

-15 ... 60 °C

Coil insulation solenoid valves

Insulation material according class F

Enclosure

IP 54

IP65 optional

Body material

Aluminium alloy die-cast

Flange kits

There are two different series of kits available:

The first series of kits consist of: 1 flange with sealing plug , 1 O-rings and 4 screws.

| Kit | Size (Rp) | Remarks |
|----------|-----------|-----------|
| KTCOMB20 | 3/4" | with plug |
| KTCOMB25 | 1" | with plug |

The second series of kits consist of: 1 flange with sealing plug, 1 strainer, 1 O-rings and 4 screws.

| Kit | Size (Rp) | Remarks |
|----------|-----------|-----------|
| KTCOMS20 | 3/4" | with plug |
| KTCOMS25 | 1" | with plug |

Accessories**DIN plug connectors**

| Model | Note |
|----------|--|
| CO020010 | female DIN plug – 2 connections & earth – black, to be used for pilot, by-pass and vent valves |
| CO020012 | female DIN plug – 3 connections & earth – black, to be used for main valves |
| CO020014 | female DIN plug – 3 connections & earth – gray, to be used for C6058 pressure switches |

Standards and approvals

Class "A" valve in accordance with EN161 standards.

The VQ400 Series combination valves conform with the following EC directives:

- Gas Appliance Directive (90/396/EEC)
PIN: CE-0063AR1520
- Low Voltage Directive (73/23/EEC)
- Electro Magnetic Compatibility Directive (89/336/EEC)

Table 20. VQ420/25 Series, Class "A" combination gas valve, with options to mount by-pass/vent/pilot/HI-LO valves, minimum and maximum pressure switches as well Valve Proving System (see section How to select your valve on page 42)).

| O.S. Number | Rated Voltage (Vac) | Con- nec- tion (inch) | Maximum Operating Pressure Range (mbar) | Features * | | | | | Dimensions (mm) | | | | | Power con- sump- tion (W) | Encl. | Weight (kg) |
|-------------|---------------------|--------------------------------|---|------------|------|------|----|----|-----------------|------|-----|-----|------|---------------------------------------|-------|----------------|
| | | | | V1 | V2 | Vb | Vv | Vp | A | B | C | D | E | | | |
| VQ420AA1005 | 220 ... 240 | 3/4 | 360 | fast | fast | - | - | - | 204 | 42.5 | 112 | 60 | 60 | 28 | IP54 | 3.5 |
| VQ420AB1004 | 220 ... 240 | 3/4 | 360 | fast | slow | - | - | - | 204 | 42.5 | 157 | 60 | 60 | 28 | IP54 | 3.5 |
| VQ420BA1003 | 220 ... 240 | 3/4 | 360 | fast | fast | fast | - | - | 204 | 42.5 | 112 | 132 | 60 | 42 | IP54 | 4.8 |
| VQ420BB1002 | 220 ... 240 | 3/4 | 360 | fast | slow | fast | - | - | 204 | 42.5 | 157 | 132 | 60 | 42 | IP54 | 4.8 |
| VQ420BC1001 | 220 ... 240 | 3/4 | 360 | fast | fast | slow | - | - | 204 | 42.5 | 112 | 132 | 60 | 42 | IP54 | 4.8 |
| VQ420BD1000 | 220 ... 240 | 3/4 | 360 | fast | slow | slow | - | - | 204 | 42.5 | 157 | 132 | 60 | 42 | IP54 | 4.8 |
| VQ420EA1006 | 220 ... 240 | 3/4 | 360 | fast | fast | - | - | ✓ | 204 | 42.5 | 112 | 132 | 60 | 42 | IP54 | 4.8 |
| VQ425AA1000 | 220 ... 240 | 1 | 360 | fast | fast | - | - | - | 204 | 42.5 | 136 | 60 | 64.5 | 40 | IP54 | 5.0 |
| VQ425AB1009 | 220 ... 240 | 1 | 360 | fast | slow | - | - | - | 204 | 42.5 | 181 | 60 | 64.5 | 40 | IP54 | 5.0 |
| VQ425BA1008 | 220 ... 240 | 1 | 360 | fast | fast | fast | - | - | 204 | 42.5 | 136 | 132 | 64.5 | 54 | IP54 | 6.3 |
| VQ425BB1007 | 220 ... 240 | 1 | 360 | fast | slow | fast | - | - | 204 | 42.5 | 181 | 132 | 64.5 | 54 | IP54 | 6.3 |
| VQ425BC1006 | 220 ... 240 | 1 | 360 | fast | fast | slow | - | - | 204 | 42.5 | 136 | 132 | 64.5 | 54 | IP54 | 6.3 |
| VQ425BD1005 | 220 ... 240 | 1 | 360 | fast | slow | slow | - | - | 204 | 42.5 | 181 | 132 | 64.5 | 54 | IP54 | 6.3 |
| VQ425CA1006 | 220 ... 240 | 1 | 360 | fast | fast | - | ✓ | - | 204 | 42.5 | 136 | 132 | 64.5 | 54 | IP54 | 6.3 |
| VQ425EA1001 | 220 ... 240 | 1 | 360 | fast | fast | - | - | ✓ | 204 | 42.5 | 136 | 132 | 64.5 | 54 | IP54 | 6.3 |

VQ400 Series

CLASS "A" COMBINATION VALVE VQ440/50



FEATURES

- Class "A" safety combination valve for control of gaseous fluids in gas consuming appliances in accordance with international standards.
- Main body with two gas valves with single seat.
- Internal by-pass valve to achieve high-low flame control.
- Internal or external pilot valve.
- Vent valve.
- Minimum and maximum pressure switches.
- Valve Proving System (VPS).
- Closing time: < 1 second.
- Coils field replaceable.
- Coils suitable for permanent energization.
- Fine mesh screen between inlet flange and main body.
- Various pressure tap points at main body available, when no additional valves or pressure switches are used.
- Options for mounting flanged minimum and maximum pressure switches.
- Second main valve, either with adjustable flow regulator, or characterized opening mechanism with adjustable maximum flow rate and step pressure.
- Rectifier board with LEDs to indicate energization of coil.
- Rectifier boards field replaceable.
- Plug connector according to ISO4400.
- Optional mounting of Closed Position Indication switch (CPI) at bottom of safety valve V1.

APPLICATION

These series class "A" gas valves are used for control and regulation of gaseous fluids in gas power burners, atmospheric gas boilers, melting furnaces, incinerators and other gas consuming appliances.

SPECIFICATION

Models

The VQ400 Series combination valves are standard equipped with two main valves.

Additionally an internal by-pass valve (Vb), a vent valve (Vv) and/or an external pilot valve (Vp) can be added.

Main gas volume is adjustable at regulating valve.

The start flow is adjustable at slow open regulating valve.

Dimensions

See dimensional drawings on page ..

Pipe sizes

Main body: Inlet and outlet straight flange connection 1 1/4", 1 1/2" and 2".

Pilot and vent valve: outlet 3/4" thread.

(all internal pipe thread according to ISO 7-1)

Capacity

Main body: See capacity curves on page 71.

Pilot and vent valve on VQ400 DN32 ... 50 as VE4020

By-pass on VQ400 DN32 ... 40: as VE4020

By-pass on VQ400 DN50: as VE4025

See also capacity curves VE4000 Series on page 66.

Maximum operating pressure

200 or 360 mbar, depending on model.

Opening time

First valve (V1) < 1 sec.

Second valve (V2), by-pass valve and pilot valve:

fast: < 1 sec

slow: adjustable from 1 ... 30 sec.

Vent valve: < 1 sec.

Closing time

First valve (V1), second valve (V2), by-pass valve, pilot valve and vent valve : < 1 sec.

Connections

- Pressure taps at inlet and outlet flanges.
 - Optional mounting of Closed Position Indication switch (CPI) at bottom of safety valve V1.
- At the main body (4) flange connections are provided to mount either an:
- internal by-pass valve to achieve high-low flame control
 - internal or external pilot valve
 - vent valve
 - pressure switches (Min. or Max.)
 - Valve Proving System (VPS) + pressure switch.

Mounting and orientation

The gas valve can be mounted plus or minus 90 degrees from the vertical. The distance between the gas valve and the wall/ground, must be at least 30 cm.

Torsion and bending stress

Pipe connections meet group 2 according to EN161 requirements.

Supply voltages

Line voltage: 220 ... 240 Vac, 50/60 Hz
200 Vac, 50/60 Hz
100/110 Vac, 50/60 Hz
24 ... 28 Vdc

Other voltages on request.

Electrical equipment

DC current coils with separated rectifier inside the cover.

Electrical connections

DIN plug according ISO4400 standard at VQ440/450 main gas valves.

Optional: at additional valves

Ambient temperature range

-15 ... 60 °C

Coil insulation solenoid valves

Insulation material according class F

Enclosure

IP 54

Body material

Aluminium alloy die-cast

Flange kits

There are two different series of kits available:

The first series of kits consist of: 1 flange with sealing plug, 1 O-rings and 4 screws.

| Kit | Size (Rp) | Remarks |
|----------|-----------|---------------------------------|
| KTCOMB32 | 1 1/4" | intended for 440 body, with tap |
| KTCOMB40 | 1 1/2" | with tap |
| KTCOMB50 | 2" | with tap |

The second series of kits consist of: 1 flange with sealing plug or cast pressure tap, 1 strainer, 1 O-rings and 4 screws.

| Kit | Size (Rp) | Remarks |
|----------|-----------|---------------------------------|
| KTCOMS32 | 1 1/4" | intended for 440 body, with tap |
| KTCOMS40 | 1 1/2" | with tap |
| KTCOMS50 | 2" | with tap |

Accessories**DIN plug connectors**

| Model | Note |
|----------|--|
| CO020010 | female DIN plug – 2 connections & earth – black, to be used for pilot, by-pass and vent valves |
| CO020012 | female DIN plug – 3 connections & earth – black, to be used for main valves |
| CO020014 | female DIN plug – 3 connections & earth – gray, to be used for C6058 pressure switches |

Standards and approvals

Class "A" valve in accordance with EN161 standards.

The VQ400 Series combination valves conform with the following EC directives:

- Gas Appliance Directive (90/396/EEC)
PIN: CE-0063AR1520
- Low Voltage Directive (73/23/EEC)
- Electro Magnetic Compatibility Directive (89/336/EEC)

Table 21. VQ440/50 Series, Class "A" combination gas valve, with options to mount by-pass/vent/pilot/HI-LO valves, minimum and maximum pressure switches as well a Valve Proving System (see section How to select your valve, on page 42).

| O.S. Number | Rated Voltage (Vac) | Conn. (Inch) | Maximum Operating Pressure (mbar) | Features | | | | | Overall Dimensions (mm) | | | | | Pow. Cons. (W) | Encl. | Weight (kg) |
|-------------|---------------------|--------------|-----------------------------------|----------|------|------|----|----|-------------------------|----|-----|------|------|----------------|-------|-------------|
| | | | | V1 | V2 | Vb | Vv | Vp | A | B | C | D | E | | | |
| VQ440AA1027 | 220 ... 240 | 1 1/2 | 360 | fast | fast | - | - | - | 297 | 62 | 174 | 63.5 | 63.5 | 80 | IP54 | 10.7 |
| VQ440AA1001 | 220 ... 240 | 1 1/2 | 200 | fast | fast | - | - | - | 297 | 62 | 174 | 63.5 | 63.5 | 80 | IP54 | 10.7 |
| VQ440AB1000 | 220 ... 240 | 1 1/2 | 200 | fast | slow | - | - | - | 297 | 62 | 228 | 63.5 | 63.5 | 80 | IP54 | 10.7 |
| VQ440BA1009 | 220 ... 240 | 1 1/2 | 200 | fast | fast | fast | - | - | 297 | 62 | 174 | 150 | 63.5 | 94 | IP54 | 11.9 |
| VQ440BB1008 | 220 ... 240 | 1 1/2 | 200 | fast | slow | fast | - | - | 297 | 62 | 228 | 150 | 63.5 | 94 | IP54 | 11.9 |
| VQ440BB1016 | 220 ... 240 | 1 1/2 | 360 | fast | slow | fast | - | - | 297 | 62 | 228 | 150 | 63.5 | 94 | IP54 | 11.9 |
| VQ440BC1007 | 220 ... 240 | 1 1/2 | 200 | fast | fast | slow | - | - | 297 | 62 | 174 | 150 | 63.5 | 94 | IP54 | 11.9 |
| VQ440BD1006 | 220 ... 240 | 1 1/2 | 200 | fast | slow | slow | - | - | 297 | 62 | 228 | 150 | 63.5 | 94 | IP54 | 11.9 |
| VQ440EA1002 | 220 ... 240 | 1 1/2 | 200 | fast | fast | - | - | ✓ | 297 | 62 | 228 | 150 | 63.5 | 94 | IP54 | 11.9 |
| VQ440EA1010 | 220 ... 240 | 1 1/2 | 360 | fast | fast | - | - | ✓ | 297 | 62 | 228 | 150 | 63.5 | 94 | IP54 | 11.9 |
| VQ440FB1009 | 220 ... 240 | 1 1/2 | 200 | fast | slow | fast | - | ✓ | 297 | 62 | 228 | 150 | 63.5 | 94 | IP54 | 11.9 |
| VQ450AA1008 | 220 ... 240 | 2 | 200 | fast | fast | - | - | - | 297 | 62 | 174 | 63.5 | 63.5 | 82 | IP54 | 12.1 |
| VQ450AA1016 | 220 ... 240 | 2 | 360 | fast | fast | - | - | - | 297 | 62 | 186 | 63.5 | 63.5 | 82 | IP54 | 12.1 |
| VQ450AB1007 | 220 ... 240 | 2 | 200 | fast | slow | - | - | - | 297 | 62 | 228 | 63.5 | 63.5 | 82 | IP54 | 12.1 |
| VQ450AB1015 | 220 ... 240 | 2 | 360 | fast | slow | - | - | - | 297 | 62 | 240 | 63.5 | 63.5 | 82 | IP54 | 12.1 |
| VQ450BA1006 | 220 ... 240 | 2 | 200 | fast | fast | fast | - | - | 297 | 62 | 174 | 150 | 63.5 | 102 | IP54 | 14.1 |
| VQ450BB1005 | 220 ... 240 | 2 | 200 | fast | slow | fast | - | - | 297 | 62 | 228 | 150 | 63.5 | 102 | IP54 | 14.1 |
| VQ450BB1013 | 220 ... 240 | 2 | 200 | fast | slow | fast | - | - | 297 | 62 | 228 | 150 | 63.5 | 102 | IP54 | 14.1 |
| VQ450BC1004 | 220 ... 240 | 2 | 200 | fast | fast | slow | - | - | 297 | 62 | 174 | 150 | 63.5 | 102 | IP54 | 14.1 |
| VQ450BD1003 | 220 ... 240 | 2 | 200 | fast | slow | slow | - | - | 297 | 62 | 228 | 150 | 63.5 | 102 | IP54 | 14.1 |
| VQ450CA1004 | 220 ... 240 | 2 | 200 | fast | fast | - | ✓ | - | 297 | 62 | 174 | 150 | 63.5 | 102 | IP54 | 14.1 |
| VQ450CA1012 | 220 ... 240 | 2 | 200 | fast | fast | - | ✓ | - | 297 | 62 | 174 | 150 | 63.5 | 102 | IP54 | 14.1 |
| VQ450CB1003 | 220 ... 240 | 2 | 200 | fast | slow | - | ✓ | - | 297 | 62 | 174 | 150 | 63.5 | 102 | IP54 | 14.1 |
| VQ450CB1011 | 110 | 2 | 200 | fast | slow | - | ✓ | - | 297 | 62 | 174 | 150 | 63.5 | 110 | IP54 | 14.1 |

HOW TO SELECT YOUR VALVE

Standard the VQ400 Series combination valves are equipped with two main valves V1 and V2. Safety valve V1 is always fast opening/closing. The second valve (V2) can be either fast (= with flow regulation) or slow (= with flow regulation and adjustable opening).

At the main body (4) flange connections are provided to mount either pressure switches (Min. or Max.), a by-pass valve, a pilot valve, a vent valve or a VPS + pressure switch. These additional functionalities can be mounted on various positions of the main body of the VQ400. The positions are specified by a letter code behind the O.S. number. With the table below you are able to compose your own customized combination valve to match your requirements exactly.

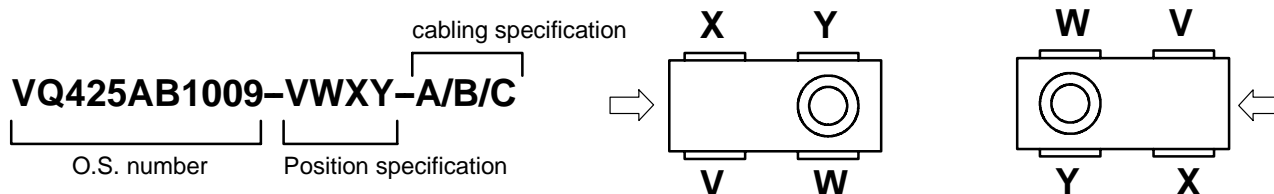
Ordering example

After you have decided the size and additional functionalities and their characteristics, continue with specifying the positions of the additional functionalities (see table 22.)

For example you want to order a VQ400 Series combination valve with the following specifications: 1" connection, second valve slow, a 2.5 ... 5.0 mbar pressure switch at position V a by-pass valve (fast) at position Y and DIN plug connections on all valves.

From Table 21. you find e.g. O.S. number VQ425BB1007. Continue with specifying the code behind the O.S. number, starting with position V and end with Y, using the table 22. For the positions you don't use, place a 0 (plug). In our example the code behind the O.S. number is 1003B

Table 22. VQ400 Series positions additional functionalities chart



| Type | Code | Positions | | | |
|------------------------------|------|-----------------|---|-----------------|---|
| | | V | W | X | Y |
| Plug | 0 | • | • | • | • |
| C6058A136 (2.5 ... 50 mbar) | 1 | • | • | • | • |
| C6058A140 (30 ... 150 mbar) | 2 | • | • | • | • |
| By-pass valve | 3 | | • | | • |
| External Pilot | 4 | | • | | • |
| Internal Pilot | 5 | | • | | • |
| Vent Valve | 6 | | • | | • |
| A4021A + C6058A | 7 | • ¹⁾ | • | • ¹⁾ | • |
| C6058A144 (100 ... 500 mbar) | 8 | • | • | • | • |

¹⁾ only when by-pass valve and pilot or vent valve are used

NOTE: For customer specials, such as cabling, a code will be released by the factory

Cabling specification

A: standard plug connection according PG11

B: three pin plug connector ("DIN" plug)

C: complete cabling with Valve Proving System (VPS)

ORDERING INFORMATION

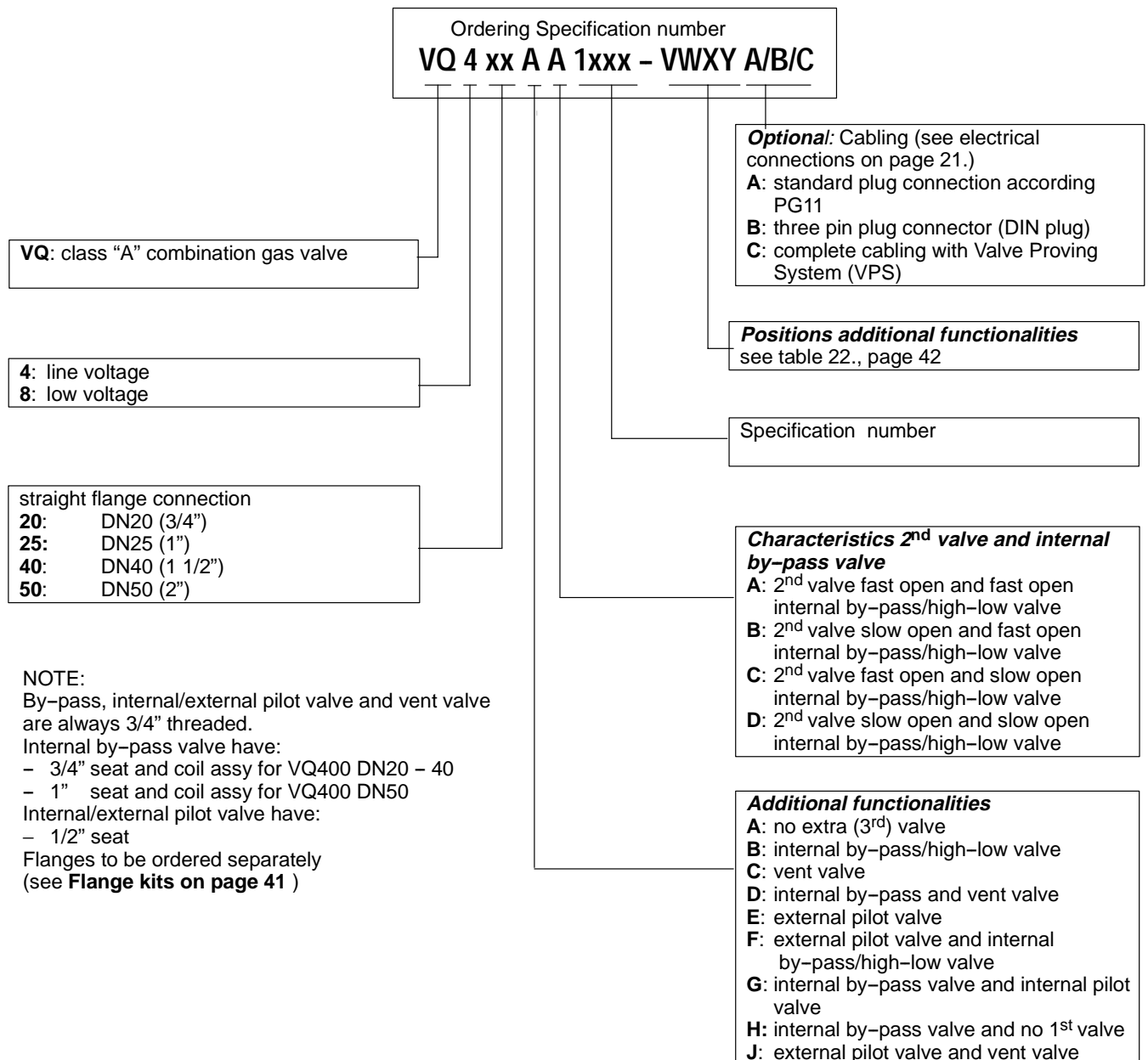
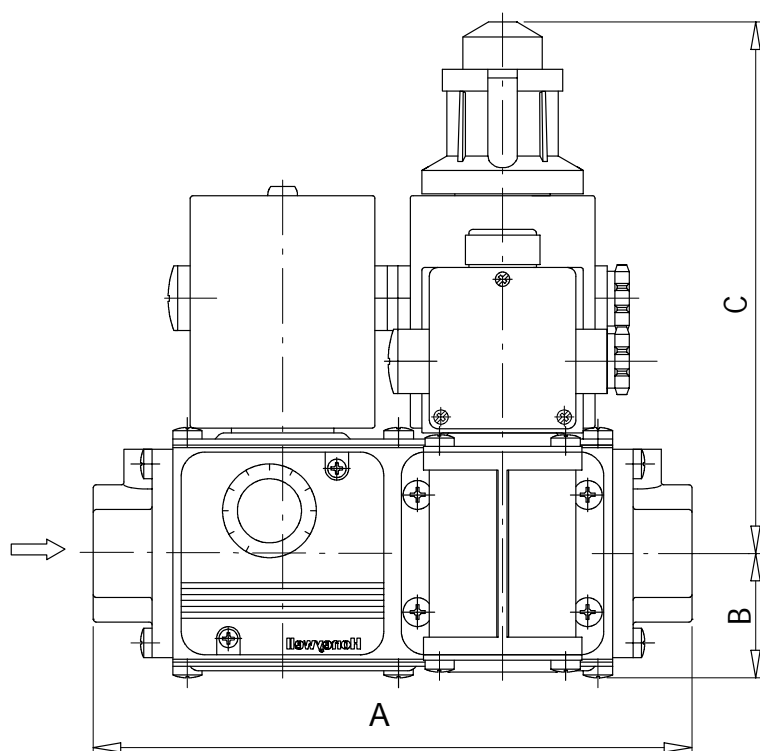
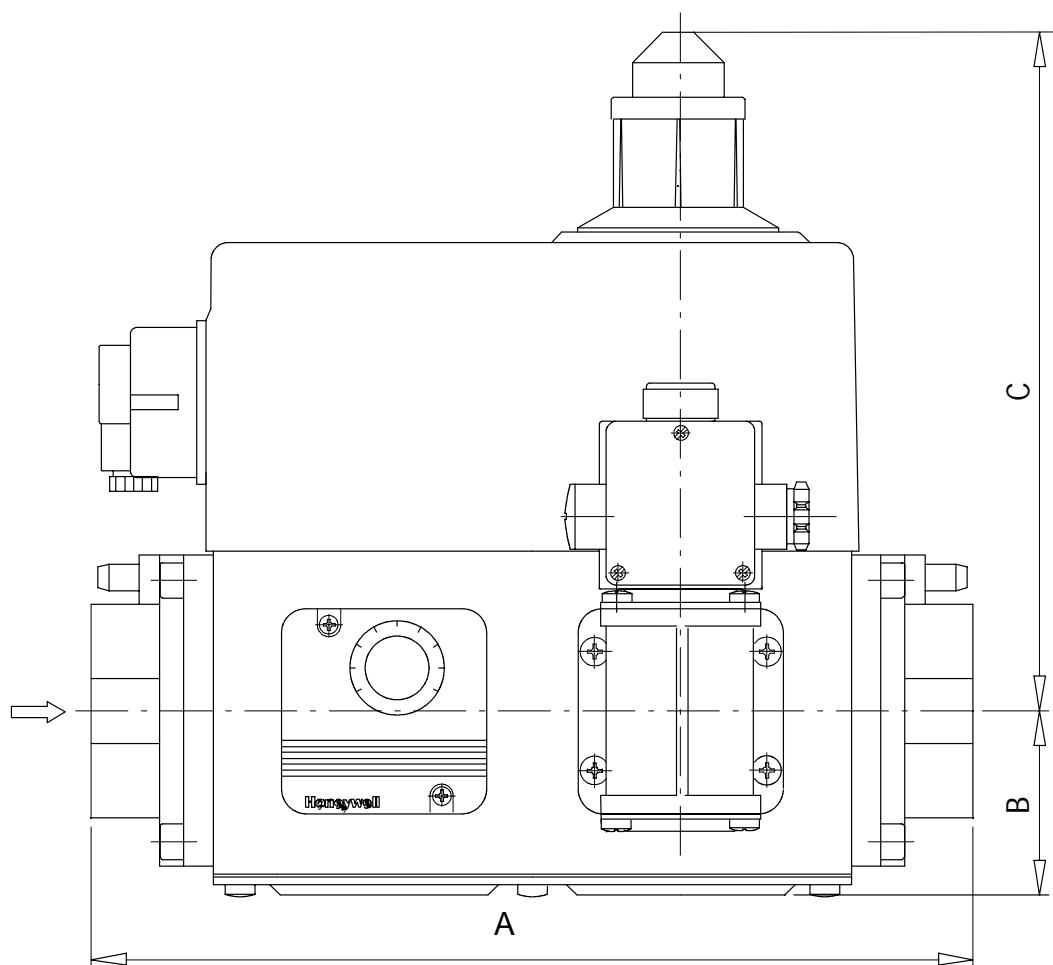
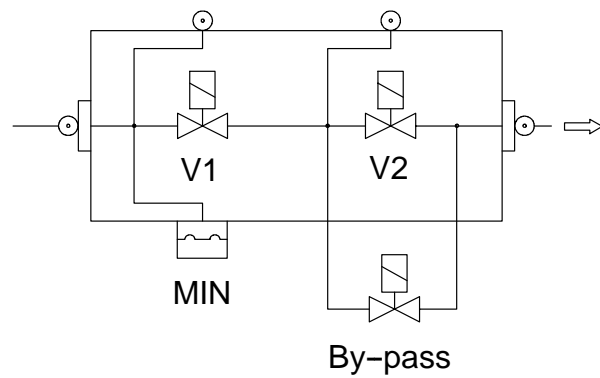
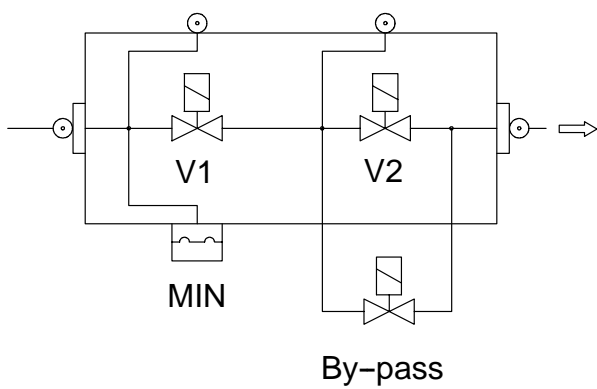
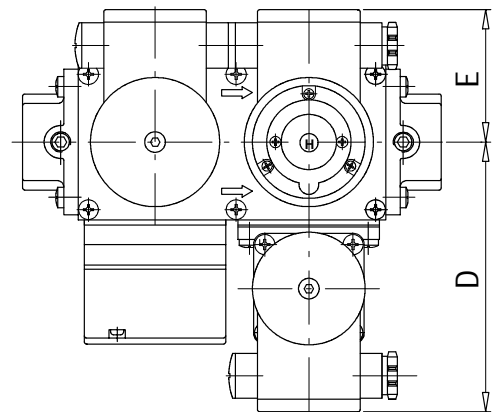
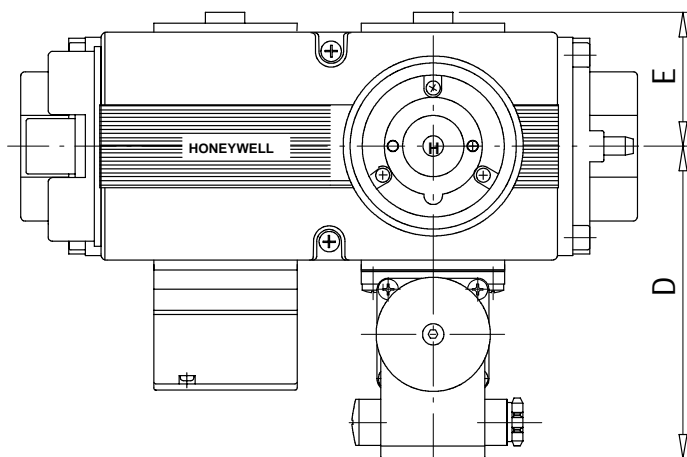


Fig. 18. Ordering information VQ400 Series combination valves





NOTE: The outer dimensions of the VQ432 series combination valves are identical to the VQ440/450 series.

Fig. 19. Overall dimensions VQ400 Series (shown 2nd valve slow)

VT4000 Series

MOTORIZED THROTTLE GAS VALVES VT4025



FEATURES

- Accurate flow modulation.
- Minimum and maximum flow can be adjusted independently.
- Combinations with various MT4000 and MF4000 servo motors are possible.
- VT5000M1 version with adapter plate to accommodate MODUTROL IV motor

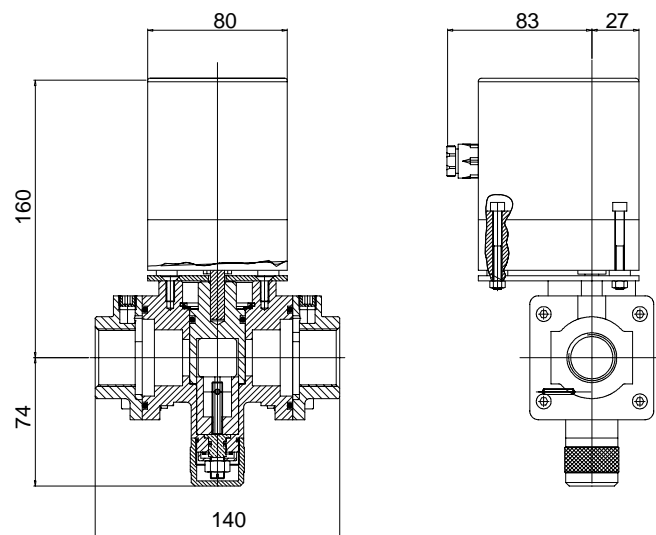


Fig. 20. Dimensional drawing VT4025 Series

APPLICATION

These Motorized throttle valves allow gas flow modulation with the possibility to set both, the minimum flow by setting the initial starting point of the motor and the maximum flow by adjusting the screw in the bottom of the valve body. Motors with various rotating speeds and control input signals allow various modulating and throttling characteristics. Depending on rotation speed, torque needed and the application type, the servo motors that can be selected are: MT4000 Series, MF4000 Series and Modutrol IV Series.

SPECIFICATIONS

Models

VT4025 (DN20, DN25)

Suffix:

A: ON/OFF

B: relay contact for ON/OFF cycling

M: Modulating version 4 ... 20 mA with Modutrol IV motor

Opening time

Depending on MT4000 or MF4000 servomotor type, whereas 24 to 30s is standard.

Dimensions

See Figure and table.

Pipe sizes

Inlet and outlet straight flange kit connection 3/4" and 1", to be ordered separately. (internal pipe thread according ISO 7-1)

Mounting and orientation

The valve may be assembled on the pipeline within plus or minus 90 degrees of the vertical axis and 30 cm. air space around the coil assy.

Capacity

See capacity curves VT4000 series on page 72.

Maximum operating pressure

360 mbar

Torsion and bending stress

Pipe connections meet group 2 according EN161 requirements

Supply voltages (depending on MT4000 or MF4000 servo motor type)

Line voltage: 220 ... 240 Vac, 50/60 Hz
110 Vac, 50/60 Hz

Ambient temperature range

-15 ... 60 °C.

Electrical connections

PG9 wiring conduits are provided in the MT4000 and MF4000 motor housing. The Modutrol IV has a wiring compartment with knock-outs.

Enclosure

IP40 for MT4000

IP65 for MF4000

IP40 for Modutrol IV

Valve body

Aluminium alloy die-cast

Seals and gaskets

Hydrocarbon resistant NBR rubber type

Standards and Approvals

The VT4000 Series motorized throttle valves conform with the following EC directives:

- Gas Appliance Directive (90/396/EEC)
PIN: CE-0063AR1521
- Low voltage Directive (73/23/EEC)
- Electro Magnetic Compatibility Directive (89/336/EEC)

Flange kits

The flange kit consists of one flange with plug, 1 O-ring, 1 square gasket, 4 M5x16 screws, 4 M5x25 screws, 4 washers and 4 nuts.

| O.S. number | Size (Rp) | Remarks |
|-------------|-----------|---------|
| KTVT20 | 3/4" | – |
| KTVT25 | 1" | – |

Table 23. VT4000 Series motorized throttle valves

| O.S. number | Voltage (Vac) | Connection (inch) | Maximum Operating Pressure (mbar) | Opening Time (s) | servo motor | Enclosure | Note |
|-------------|---|-------------------|-----------------------------------|------------------|-------------|-----------|------|
| VT4025A1009 | 220 ... 240 | 1 | 360 | 24 | MT4000A2027 | IP40 | |
| VT4025A1017 | 220 ... 240 | 1 | 360 | 24 | MT4000A2050 | IP40 | |
| VT4025A1025 | 220 ... 240 | 1 | 360 | 30 | MF4000P1042 | IP65 | |
| VT4025A1033 | 220 ... 240 | 1 | 360 | 30 | MF4000P1067 | IP65 | |
| VT5025M1005 | VT4000 with adapter plate to accommodate MODUTROL IV motor, to be ordered separately. | | | | | | |

VT4000 Series

MOTORIZED THROTTLE GAS VALVES VT4050



FEATURES

- Accurate flow modulation.
- Minimum and maximum flow can be adjusted independently.
- Combinations with various MT4000 and MF4000 servo motors are possible.
- VT5000M1 version with adapter plate to accommodate MODUTROL IV motor.

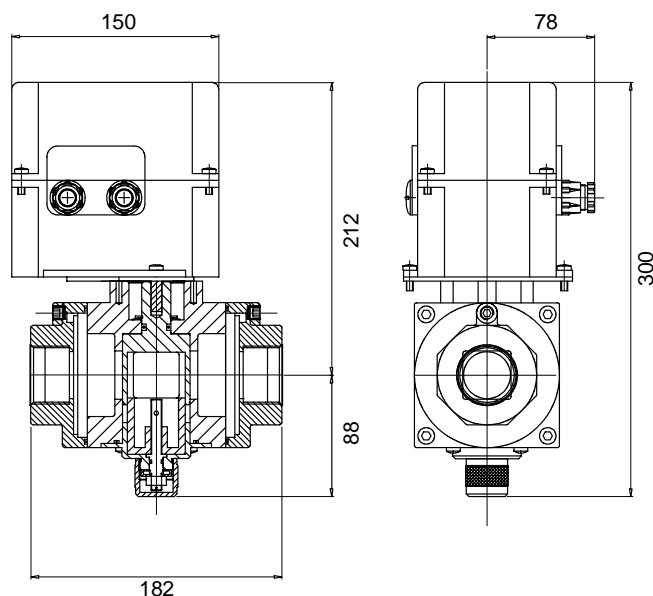


Fig. 21. Dimensional drawing VT4050 Series

APPLICATION

These Motorized Throttle Valves allow gas flow modulation with the possibility to set both, the minimum flow by setting the initial starting point of the motor and the maximum flow by adjusting the screw in the bottom of the valve body. Motors with various rotating speeds and control input signals allow various modulating and throttling characteristics. Depending on rotation speed, torque needed and the application type, the servo motors that can be selected are: MT4000 Series, MF4000 Series and Modutrol IV Series.

SPECIFICATIONS

Serie

VT4050 (DN32, DN40, DN50)

Suffix:

A: ON/OFF

B: relay contact for ON/OFF cycling

M: Modulating version 4 ... 20 mA with Modutrol IV motor

Opening time

Depending on MT4000 or MF4000 servomotor type, whereas 24 to 30s is standard.

Dimensions

See figure and table.

Pipe sizes

Inlet and outlet straight flange kit connection 1 1/4", 1 1/2" and 2", to be ordered separately.

(internal pipe thread according ISO 7-1)

Mounting and orientation

The valve may be assembled on the pipeline within plus or minus 90 degrees of the vertical axis and 30 cm. air space around the coil assy.

Capacity

See capacity curves VT4000 series on page 72.

Maximum operating pressure

360 mbar

Torsion and bending stress

Pipe connections meet group 2 according EN161 requirements

Supply voltages (depending on MT4000 or MF4000 servo motor type)

Line voltage: 220 ... 240 Vac, 50/60 Hz
110 Vac, 50/60 Hz

Ambient temperature range

-15 ... 60 °C.

Electrical connections

PG9 wiring conduits are provided in the MT4000 and MF4000 motor housing. The Modutrol IV has a wiring compartment with knock-outs.

Enclosure

IP40 for MT4000

IP65 for MF4000

IP40 for Modutrol IV

Valve body

Aluminium alloy die-cast

Seals and gaskets

Hydrocarbon resistant NBR rubber type

Standards and Approvals

The VT4000 Series motorized throttle valves conform with the following EC directives:

- Gas Appliance Directive (90/396/EEC)
PIN: CE-0063AR1521
- Low voltage Directive (73/23/EEC)
- Electro Magnetic Compatibility Directive (89/336/EEC)

Flange kits

The flange kit consists of one flange with plug, 1 O-ring, 1 square gasket, 4 M5x16 screws, 4 M5x25 screws, 4 washers and 4 nuts.

| O.S. number | Size (Rp) | Remarks |
|-------------|-----------|---------------------------------|
| KTVT32 | 1 1/4" | tap with internal closing screw |
| KTVT40 | 1 1/2" | |
| KTVT50 | 2" | |

Table 24. Serie VT4000 Series motorized throttle valves

| O.S number | Voltage (Vac) | Connection (inch) | maximum Operating Pressure (mbar) | Opening Time (s) | servo motor | Enclosure | Note |
|-------------|---|-------------------|-----------------------------------|------------------|-------------|-----------|------|
| VT4050A1007 | 220 ... 240 | 2 | 360 | 24 | MT4000A2027 | IP40 | - |
| VT4050A1015 | 220 ... 240 | 2 | 360 | 24 | MT4000A2050 | IP40 | - |
| VT4050A1023 | 220 ... 240 | 2 | 360 | 30 | MF4000P1042 | IP65 | - |
| VT4050A1031 | 220 ... 240 | 2 | 360 | 30 | MF4000P1067 | IP65 | - |
| VT5050M1003 | VT4000 with adapter plate to accommodate MODUTROL IV motor, to be ordered separately. | | | | | | |

VF5000 Series

MANUALLY OPERATED BUTTERFLY VALVE VF5000A3/R3



FEATURES

- Standard flanging to fit between two flanges in accordance with DIN 2633.
- Valve position indicator scale from 0 to 90 degrees scale.
- Valve plate can be locked in any position.
- Easily convertible from manual to motorized.
- The valve is not designed to be leaktight, leakage up to 2% when in closed position.

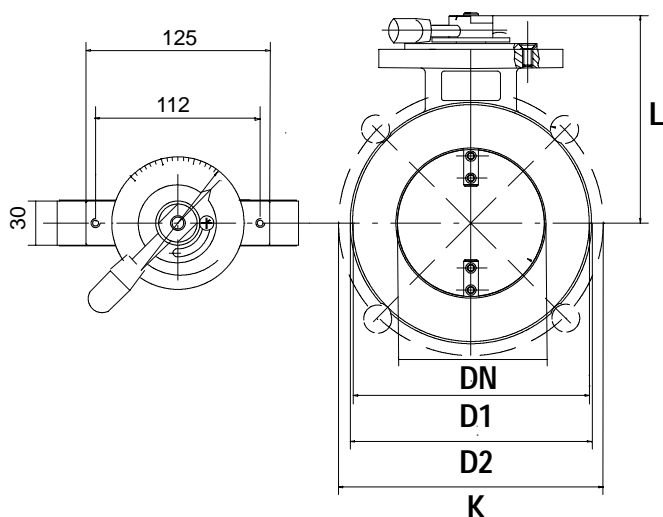


Fig. 22. Dimensional drawing VF5000A3/R3 Series

APPLICATION

The VF5000 Series manually operated butterfly valves are used to control and govern the burner airlock of gas fired burners. The VF5000 Series can be equipped with the MT4000 Series and MF4000 Series servomotors. The choice of the servomotor depends on the working pressure and size of the butterfly valve. The MF4000 Series is typically used in 500 mbar maximum working pressure applications and on sizes DN50 and larger.

SPECIFICATION

Model

VF5000A3

Manually operated butterfly valve with option to mount MT4000 and MF4000 Series servo motors.

VF5000R3

Butterfly valve with reduced capacity and option to mount MT4000 and MF4000 Series servo motors

Dimensions

See figure and table

Pipe sizes

Inlet and outlet flanged connection DN25 up to DN150 according to PN16 ISO 7005-1.

Mounting and orientation

Without motor there are no restrictions on the mounting orientation of the valve. When an actuator is used the valve may be assembled on the pipeline within plus or minus 90 degrees of the vertical axis.

Capacity

See capacity curves VF5000 Series on page 73.

Maximum operating pressure

500 mbar

Ambient temperature range

-15 ... 100 °C

Valve body

Aluminium alloy die-cast

Valve plate shaft

AISI 303 stainless steel

Seals and gaskets

Viton O-ring seals.

Standards and Approvals

The VF5000 Series manually operated butterfly valves conform with the following EC directive:

- Gas Appliance Directive (90/396/EEC)

PIN: CE-0063AR1583

Table 25. VF5000A3 Series, manually operated butterfly valve, with option to mount MT4000 or MF4000 Series servo motors.

| O.S. Number | Passing DN | Maximum Operating Pressure (mbar) | Overall Dimensions (mm) | | | | Weight (kg) |
|-------------|------------|-----------------------------------|-------------------------|-----|-----|-----|-------------|
| | | | L | D1 | D2 | K | |
| VF5025A3007 | 25 | 500 | 101 | 71 | 84 | 85 | 0.95 |
| VF5032A3003 | 32 | 500 | 101 | 81 | 84 | 100 | 1 |
| VF5040A3006 | 40 | 500 | 107 | 93 | 95 | 110 | 1.1 |
| VF5050A3005 | 50 | 500 | 114 | 108 | 110 | 125 | 1.25 |
| VF5065A3003 | 65 | 500 | 125 | 129 | 132 | 145 | 1.4 |
| VF5080A3002 | 80 | 500 | 132 | 141 | 144 | 160 | 1.6 |
| VF5100A3008 | 100 | 500 | 141 | 161 | 164 | 180 | 1.8 |
| VF5125A3005 | 125 | 500 | 156 | 191 | 194 | 210 | 2.2 |
| VF5150A3003 | 150 | 500 | 169 | 217 | 220 | 240 | 2.5 |

K = diameter of bolt circle

Table 26. VF5000R3 Series, manually operated butterfly valve with reduced capacity and option to mount MT4000 or MF4000 Series servo motors.

| O.S. Number | Passing DN | Maximum Operating Pressure (mbar) | Overall Dimensions (mm) | | | | Weight (kg) |
|-------------|------------|-----------------------------------|-------------------------|-----|-----|-----|-------------|
| | | | L | D1 | D2 | K | |
| VF5025R3009 | 20 | 500 | 101 | 71 | 84 | 85 | 0.95 |
| VF5032R3005 | 25 | 500 | 101 | 71 | 84 | 85 | 1 |
| VF5040R3008 | 32 | 500 | 101 | 81 | 84 | 100 | 1.1 |
| VF5050R3007 | 40 | 500 | 107 | 93 | 95 | 110 | 1.25 |
| VF5065R3005 | 50 | 500 | 114 | 108 | 110 | 125 | 1.4 |
| VF5080R3004 | 65 | 500 | 125 | 129 | 132 | 145 | 1.6 |
| VF5100R3000 | 80 | 500 | 132 | 141 | 144 | 160 | 1.8 |
| VF5125R3007 | 100 | 500 | 141 | 161 | 164 | 180 | 2.2 |
| VF5150R3005 | 125 | 500 | 156 | 191 | 194 | 210 | 2.5 |

K = diameter of bolt circle

Table 27. VF5000A3/R3 Series combinations with MT4000 or MF4000 Series servo motor.

| Stroke timing of servo motor | 200 mbar | | | | 360 mbar | | | | 500 mbar | | | |
|------------------------------|----------|--------|-----------|--------|----------|--------|-----------|--------|----------|--------|-----------|--------|
| | 6-12 sec | 15 sec | 24-30 sec | 60 sec | 6-12 sec | 15 sec | 24-30 sec | 60 sec | 6-12 sec | 15 sec | 24-30 sec | 60 sec |
| DN | | | | | | | | | | | | |
| 25 | ● | - | ● | - | ● | - | ● | - | ● | - | ● | - |
| 32 | ● | - | ● | - | ● | - | ● | - | ● | - | ● | - |
| 40 | ● | - | ● | - | ● | - | ● | - | ● | - | ● | - |
| 50 | ● | - | ● | - | ● | - | ● | - | ● | - | ● | - |
| 65 | ● | - | ● | - | ● | - | ● | - | ● | - | ● | - |
| 80 | ● | - | ● | - | - | ■ | ● | - | - | ■ | ● | - |
| 100 | - | ■ | ● | - | - | ■ | ■ | ■ | - | ■ | ■ | ■ |
| 125 | - | ■ | ■ | ■ | - | - | ■ | ■ | - | - | ■ | ■ |
| 150 | - | - | ■ | ■ | - | - | ■ | ■ | - | - | - | ■ |

- compatible with MT4000
- compatible with MF4000

Accessories

Mounting kits for VF5000 Series butterfly valves

| O.S. number | Description |
|-------------|----------------------------------|
| KTFFMT4 | adaptor kit for MT4000 Series |
| KTFFMF4 | adaptor kit for MF4000 Series |
| KTBTf01 | adaptor kit for US MOD IV motors |

NOTE: The VF4000A3 Series is formed by a VF5000 valve with MT4000 or MF4000 servo motor factory assembled.

MT4000 Series

SERVO MOTORS FOR AIR DAMPERS AND BUTTERFLY VALVES



FEATURES

- Synchronous reduction gear unit motor.
- Camshaft with maximum 5 cams and maximum 5 micro switches.
- Fail safe pre-purge timer (MT4003C only)
- Low fire adjustment switch to allow independent movement of the motor (optional, except for MT4000A/B).
- Cam adjustment in steps of 2 degrees.
- Actuator shaft, round with flat surface.
- Position indicator of the motor.
- Available in left and right handed rotation.
- Cam adjustment tool included in the housing.

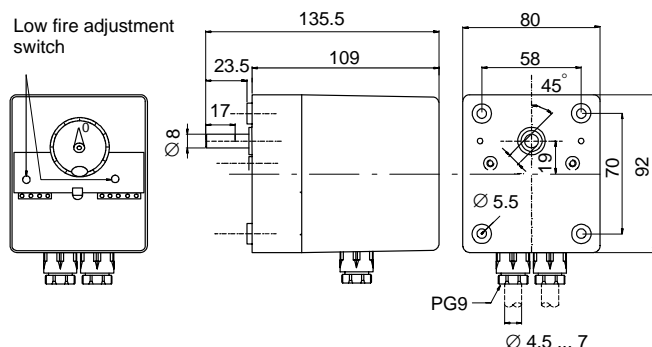


Fig. 23. Dimensional drawing MT4000 Series

APPLICATION

The MT4000, MT4001, MT4002 and MT4003 are servo motors to control and govern air lock of gaseous and liquid fuel burners.

The servo motors are suitable for burners with small to medium capacity.

SPECIFICATION

Models

MT4000A series for combustion air dampers and VF5000 butterfly valves. External signals for modulation required.

MT4000B series for combustion air dampers and VF5000 butterfly valves. Including relay for one external modulation input.

MT4001A series for air dampers in gas burners. To be used with full featured ignition controllers and 3 wire thermostats.

MT4001B series for air dampers in gas burners. To be used with full featured ignition controllers and 2 wire thermostats.

MT4002B series for air dampers in oil burners. Including relay for 2 wire thermostat connection.

MT4003C series can be used with standard low featured ON/OFF ignition controllers, where the pre-purge is provided by the servomotor. Including relays for 2 wire thermostat connection, low fire adjustment switch and fail safe pre-purge timer.

Dimensions

See figure below.

Supply voltage

Line voltage: 220 ... 240 Vac, 50/60 Hz
110 Vac, 50/60 Hz

Ambient temperature range

-15 ... 60 °C

Relative humidity: 0 - 90% at 40 °C (non-condensing)

Rated torque value

Maximum 3 Nm (depending on stroke timing)

Stroke timing over 90 degrees

6, 12, 24 and 30 s at 50 Hz

At 60 Hz, the timing is reduced with approximately 20%

Maximum adjustable stroke

0 to 160 degrees

Enclosure

IP40

Minimum camshaft step

2 degrees (including mechanical tolerances)

Electrical connection

Two PG9 wiring conduits are provided in the housing.

Pre-purge timer (MT4003C only)

T_{prep.}: 20s., tolerance -0 s, +10 s.

Standards and Approvals

The MT4000 Series conform with the following EC directives:

- Low Voltage Directive (73/23/EEC)
 - Electro Magnetic Compatibility Directive (89/336/EEC)
 - EN298 for MT4003C with pre-purge timer
- PIN: 0063AR1582

Table 28. MT4000 Series servo motors for combustion air dampers and on VF5000 Series butterfly valves

| MT4000 Series | O.S Number | Rated Voltage (Vac) | Stroke Timing over 90 degrees (s) | Rotation Direction | Remarks |
|--|-------------------|----------------------------|--|---------------------------|--|
| MT4000A series External signals for modulation required | MT4000A2001 | 220 ... 240 | 6 | right rotation | – |
| | MT4000A2019 | 220 ... 240 | 12 | right rotation | – |
| | MT4000A2027 | 220 ... 240 | 24 | right rotation | – |
| | MT4000A2035 | 110 | 6 | right rotation | – |
| | MT4000A2043 | 110 | 12 | right rotation | – |
| | MT4000A2050 | 110 | 24 | right rotation | – |
| MT4000B series Including relay for 1 external modulation input | MT4000B2000 | 220 ... 240 | 6 | right rotation | – |
| | MT4000B2018 | 220 ... 240 | 12 | right rotation | – |
| | MT4000B2026 | 220 ... 240 | 24 | right rotation | – |
| | MT4000B2034 | 110 | 6 | right rotation | – |
| | MT4000B2042 | 110 | 12 | right rotation | – |
| | MT4000B2059 | 110 | 24 | right rotation | – |
| MT4001 Series | O.S Number | Rated Voltage (Vac) | Stroke Timing over 90 degrees (s) | Rotation Direction | Remarks |
| MT4001A series Unit for 3 wire thermostat connection | MT4001A1001 | 220 ... 240 | 6 | left rotation | – |
| | MT4001A1019 | 220 ... 240 | 24 | left rotation | – |
| | MT4001A2009 | 220 ... 240 | 6 | right rotation | – |
| | MT4001A2017 | 220 ... 240 | 24 | right rotation | – |
| MT4001B series Unit for 2 wire thermostat connection | MT4001B1000 | 220 ... 240 | 6 | left rotation | – |
| | MT4001B1026 | 220 ... 240 | 24 | left rotation | – |
| | MT4001B1034 | 220 ... 240 | 6 | left rotation | low fire adj. switch |
| | MT4001B1042 | 220 ... 240 | 30 | left rotation | low fire adj. switch |
| | MT4001B2008 | 220 ... 240 | 6 | right rotation | – |
| | MT4001B2016 | 220 ... 240 | 24 | right rotation | – |
| | MT4001B2024 | 220 ... 240 | 6 | right rotation | low fire adj. switch |
| | MT4001B2032 | 220 ... 240 | 30 | right rotation | low fire adj. switch |
| MT4001C series | MT4001C1009 | 220 ... 240 | 6 | left rotation | For Satronic TMG740 |
| MT4002 Series | O.S Number | Rated Voltage (Vac) | Stroke Timing over 90 degrees (s) | Rotation Direction | Remarks |
| MT4002B series Including relay for 2 wire thermostat connection. | MT4002B1008 | 220 ... 240 | 6 | left rotation | – |
| | MT4002B1016 | 220 ... 240 | 6 | left rotation | low fire adj. switch |
| | MT4002B2009 | 220 ... 240 | 6 | right rotation | – |
| | MT4002B2024 | 220 ... 240 | 6 | right rotation | low fire adj. switch |
| MT4003 Series | O.S Number | Rated Voltage (Vac) | Stroke Timing over 90 degrees (s) | Rotation Direction | Remarks |
| MT4003C series Includes relay for 2 wire thermostat connection | MT4003C1005 | 220 ... 240 | 6 | left rotation | low fire adj. switch & fail safe pre-purge timer |
| | MT4003C1013 | 220 ... 240 | 6 | left rotation | |
| | MT4003C1021 | 220 ... 240 | 24 | left rotation | |
| | MT4003C2003 | 220 ... 240 | 6 | right rotation | |
| | MT4003C2011 | 220 ... 240 | 6 | right rotation | |

MF4000 Series

SERVOMOTOR FOR BUTTERFLY AND THROTTLE VALVES



FEATURES

- Synchronous reduction gear unit motor.
- Camshaft with maximum 5 cams and maximum 5 micro switches.
- Cam adjustment in steps of 2 degrees.
- Actuator shaft, round with flat surface.
- Position indicator of the motor (under the cover).

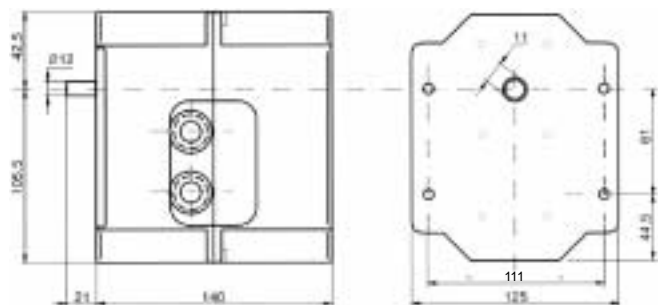


Fig. 24. Dimensional drawing MF4000 Series

APPLICATION

The MF4000 servomotors can be used to control and govern airlock of gaseous and liquid fuels or to action the VF5000 series butterfly valves, see also coupling table under VF5000 series at page

SPECIFICATIONS

Models

MF4000A series to drive air dampers and VF5000 butterfly valves, with floating adjustment and external signal.

MF4000B series to drive air dampers and VF5000 butterfly valves, with internal relay for ON/OFF adjustment

MF4000P series to drive air dampers and VF5000 butterfly valves, with floating or ON/OFF adjustment, with feed-back potentiometer

Dimensions

See Fig. MF4000 drawing below

Supply voltages

Line voltage: 220 ... 240 Vac, 50/60 Hz
110 Vac, 50/60 Hz

Ambient temperature range

-15 60°C

Relative humidity: 0 – 90% at 40°C (non-condensing)

Rated torque

Maximum torque at 15s rotation time over 90 degrees: 5 Nm

Maximum torque at 30s rotation time over 90 degrees: 10 Nm

Maximum torque at 60s rotation time over 90 degrees: 15 Nm

Stroke timing (for 90° rotation)

15, 30, 60 seconds at 50 Hz.

At 60 Hz the timing is reduced with approximately 20%

Maximum adjustable stroke

0 to 90 degrees.

Enclosure

IP65

Minimum camshaft step

2 degrees (including mechanical tolerances)

Electrical connection

Two PG11 wiring conduits are provided in the housing.

Table 29. MF4000 servomotor for butterfly and throttle valves

| Serie MF4000 | Model | Rated Voltage (Vac) | Stroke timing over 90degrees (sec) | Note |
|---|--------------|----------------------------|---|------------------------------|
| MF4000A series to drive air dampers and VF5000 butterfly valves, with floating adjustment and external signal. | MF4000A1014 | 220 ... 240 | 15 | – |
| | MF4000A1022 | 110 | 15 | – |
| | MF4000A1048 | 220 ... 240 | 30 | – |
| | MF4000A1055 | 110 | 30 | – |
| | MF4000A1071 | 220 ... 240 | 60 | – |
| | MF4000A1089 | 110 | 60 | – |
| MF4000P series to drive air dampers and VF5000 butterfly valves, with floating or ON/OFF adjustment, | MF4000P1026 | 220 ... 240 | 15 | with feed-back potentiometer |
| | MF4000P1034 | 110 | 15 | with feed-back potentiometer |
| | MF4000P1042 | 220 ... 240 | 30 | with feed-back potentiometer |
| | MF4000P1067 | 110 | 30 | with feed-back potentiometer |
| | MF4000P1109 | 220 ... 240 | 60 | with feed-back potentiometer |
| | MF4000P1091 | 110 | 60 | with feed-back potentiometer |
| MF4000B series to drive air dampers and VF5000 butterfly valves, with internal relay for ON/OFF adjustment | MF4000B1013 | 220 ... 240 | 15 | – |
| | MF4000B1021 | 110 | 15 | – |
| | MF4000B1047 | 220 ... 240 | 30 | – |
| | MF4000B1054 | 110 | 30 | – |
| | MF4000B1070 | 220 ... 240 | 60 | – |
| | MF4000B1088 | 110 | 60 | – |

NOTA: The potentiometer for the MF4000P series is standard 1 kOhm, other (resistances) values are available on request.

A4021 Series

VALVE PROVING SYSTEM A4021



FEATURES

- Microprocessor technology
- Based on 7800 SERIES Burner Programmer safety technology.
 - Dynamic relay test
 - Safe start test
 - Self-diagnostic test
- Testing independent of type of gas at any inlet pressure.
- Valve proving done by using the line pressure of the gas.
- Non-volatile lockout.
- Automatic valve proving before heat demand, after heat-demand or during pre-purge possible.
- Different test-times (per valve) available by different O.S. numbers.
- Clear visual indication of the test sequence and faults-causes through 5 LEDs.
- Storage of fault code when line interruption occurs
- Can be applied in all common valve configurations
- 2-wire gas pressure switch.
- Output for external alarm signal.
- Optional external remote reset.

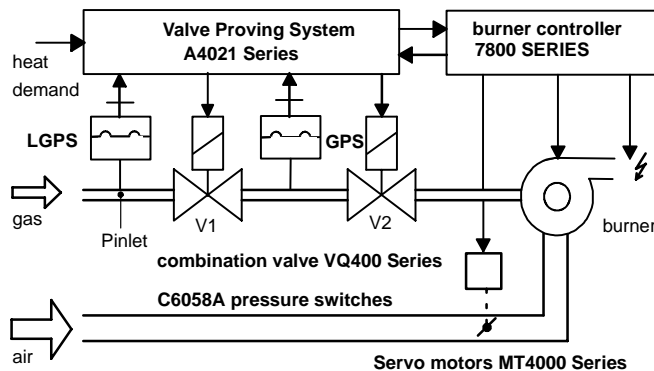


Fig. 28. System set-up for direct burner ignition .

APPLICATION

The A4021 is a self-checking microprocessor based Valve Proving System (VPS). The A4021 checks the effective closure of automatic shut-off valves by measuring the pressure differential between two valves during the test sequence.

Subbase and pressure switch are required to complete the system.

When during the test sequence of the A4021 a failing valve is detected, the A4021 will go into a non-volatile lock-out status, generates an alarm and prevents a burner start-up.

The intended application is for gas fired power burners and other large capacity gas firing installations, where according to the European norm EN676 a valve proving system can be used as an alternative for pre-purging the combustion chamber. And for installations with or without pre-purge with a capacity of more than 1200 kW.

SPECIFICATION

Model

A4021A

Dimensions

Subbase: 97 x 97 mm
Height (incl. subbase) 105 mm

Test time per valve

25 seconds.

Other test times available on request.

Supply voltage

Line voltage: 220 ... 240 Vac, 50 Hz
100 ... 120 Vac, 50 Hz

Power consumption

Maximum 5 VA

Contact ratings

Inductive load: 250 Vac, 4A (cosφ 0.7)

Ambient temperature range

-10 ... 60 °C

Relative humidity: 0 - 90% at 40 °C (non-condensing)

Electrical connection

4 Wiring conduit according to PG11 are provided in the subbase.

Wire connection terminals

M3.5 screw terminals, including earth connection

Enclosure

IP40

Standards and Approvals

The A4021 Series Valve Proving System conform with the following EC directives:

- Gas Appliance Directive (90/396/EEC)
PIN: CE-0063AS1822
- Low Voltage Directive (73/23/EEC)
- Electro Magnetic Compatibility Directive (89/336/EEC)

Table 37. A4021 Series Valve Proving System.

| O.S. Number | Rated Voltage (Vac) | Test time ¹⁾ per valve (s) | Power Consump. (W) | Enclosure ²⁾ | Functional description | | | | Application |
|-------------|---------------------|---------------------------------------|--------------------|-------------------------|------------------------|-----------------|--------------|--------------|--------------------------|
| | | | | | gas pressure switch | 3-valve config. | remote reset | alarm output | |
| A4021A1002 | 220 ... 240 | 25 | 5 | IP40 | 2-wire | yes | yes | voltage free | without subbase |
| A4021A1010 | 100 ... 120 | 25 | 5 | IP40 | 2-wire | yes | yes | voltage free | without subbase |
| ZL030001 | 100 ... 240 | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | Subbase for A4021 Series |

¹⁾ other test times on request

²⁾ with ZL030001 subbase

Working principle

The A4021 valve proving system is based on the pressure status-principle. This means that the valves are checked by means of measuring (on/off) the pressure in the gas-pipe between the two safety-valves. This system will only work when there is sufficient gas-pressure (line-pressure).

Therefore a Low Gas Pressure Switch (LGPS) is part of the installation. When the line-pressure (Pinlet) is too low the LGPS will disable the valve proving system. The section between the two valves is filled with gas (high-pressure

status) by opening valve-1 (upstream valve) and the pipe is emptied (low-pressure status) by closing valve-1 and opening valve-2 (down-stream). When one of the valves is leaking this will mean that either the pressure will not maintain the high-pressure status or the low-pressure status at the end of the test period.

If both valves are tight, the VPS will give the heat call to the ignition controller and the burner will be able to start operating.

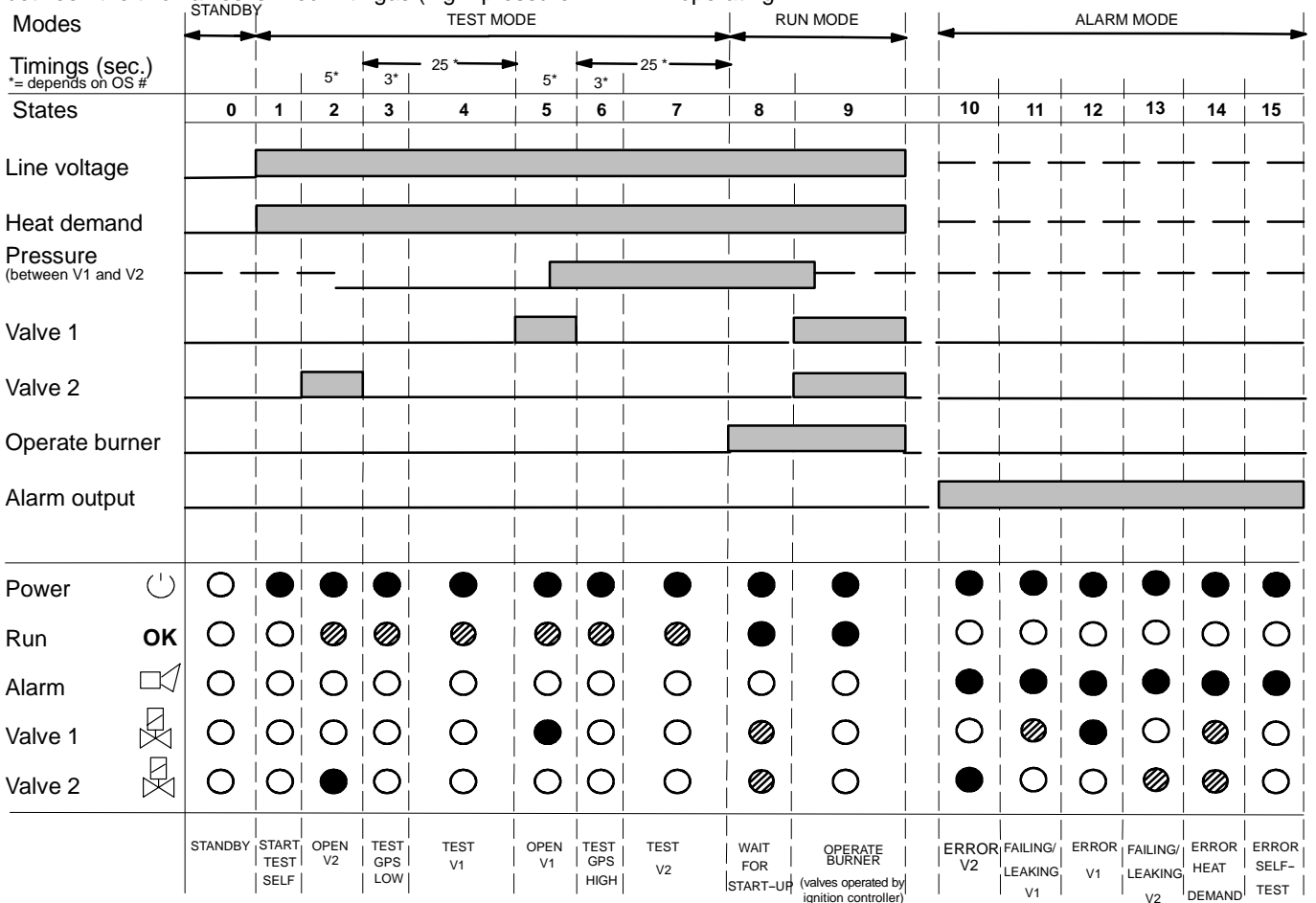


Fig. 29. Sequence and LED indication of A4021 display

Capacity curves

VE4000, VEN4000 AND VG4000 SERIES

Table 38. Capacity in m^3/h air at $\Delta p = 2,5 \text{ mbar}$ (SG=1 at 1013 mbar, 15°)

| 3/8" DN10 | 1/2" DN15 | 3/4" DN20 | 1" DN25 | 1 1/4" DN32 | 1 1/2" DN40 |
|-----------|-----------|-----------|---------|-------------|-------------|
| 5 | 6,4 | 14,8 | 16,7 | 38,5 | 47,1 |

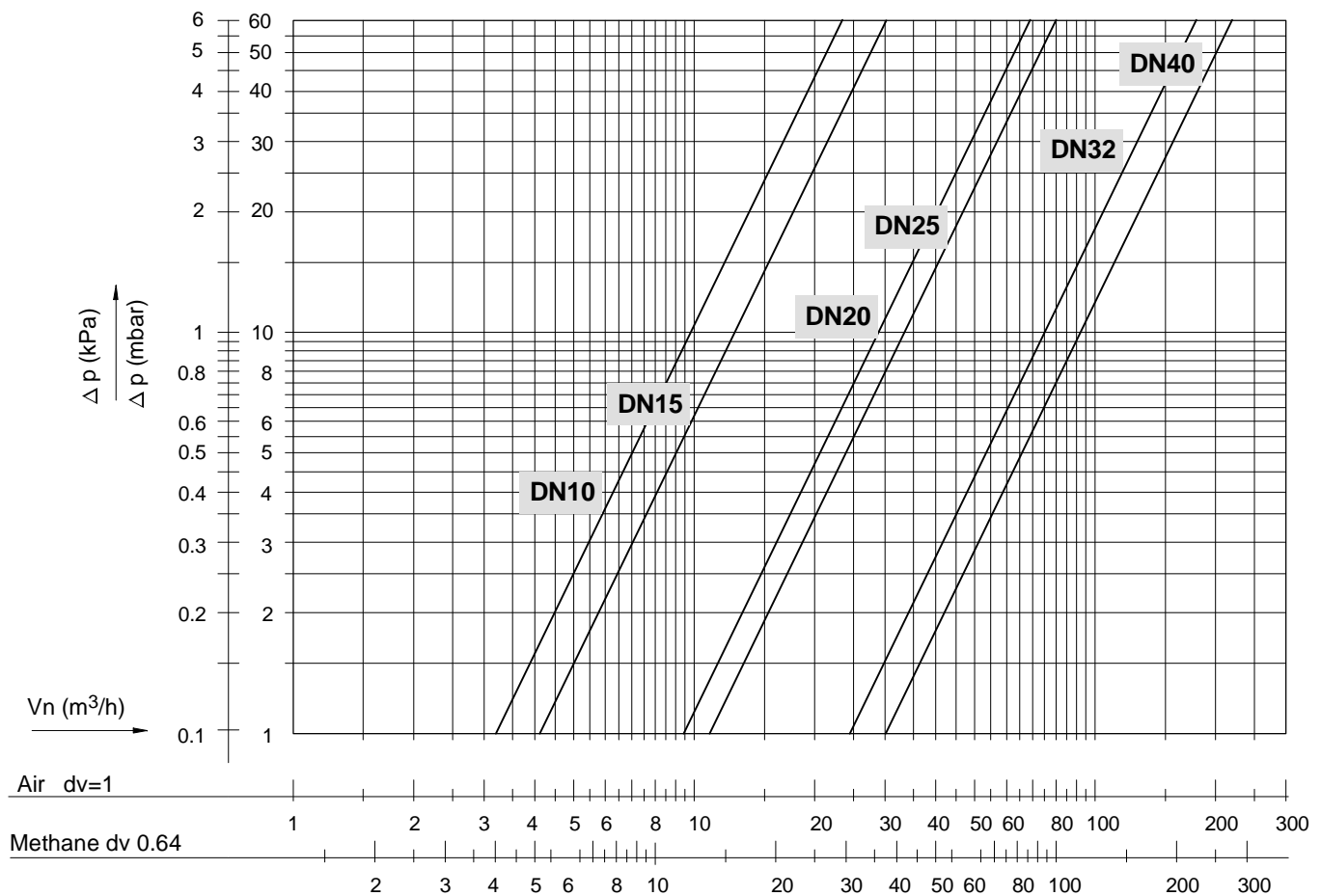


Fig. 30. Capacity curves for VE400, VEN4000 and VG4000 Series (threaded connections)

Tavola 39. Capacity in m^3/h air at $\Delta p = 2,5 \text{ mbar}$ (SG=1 at 1013 mbar, 15°)

| 2" DN50 | 2 1/2" DN65 | 3" DN80 | 4" DN100 |
|---------|-------------|---------|----------|
| 66,7 | 94,2 | 131 | 264 |

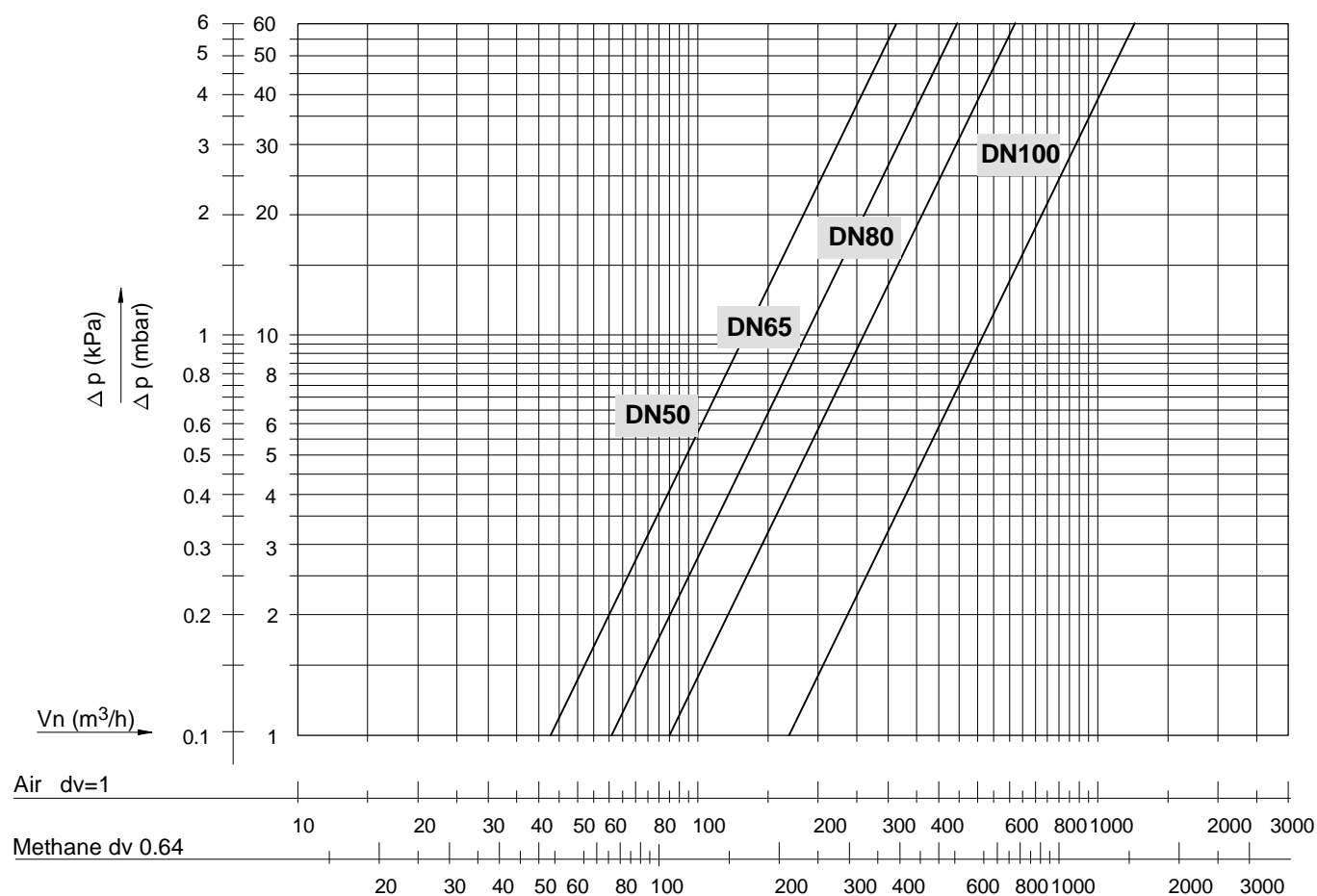


Fig. 31. Capacity curves for VE4000, VEN4000 and VG4000 Series (threaded and flanged)

VG400AA/VG400SA SERIES

Table 40. Capacity in m³/h air at $\Delta p = 2,5$ mbar (SG=1 at 1013 mbar, 15°)

| 1/2" DN15 | 3/4" DN20 | 1" DN25 |
|-----------|-----------|---------|
| 5 | 9 | 13.8 |

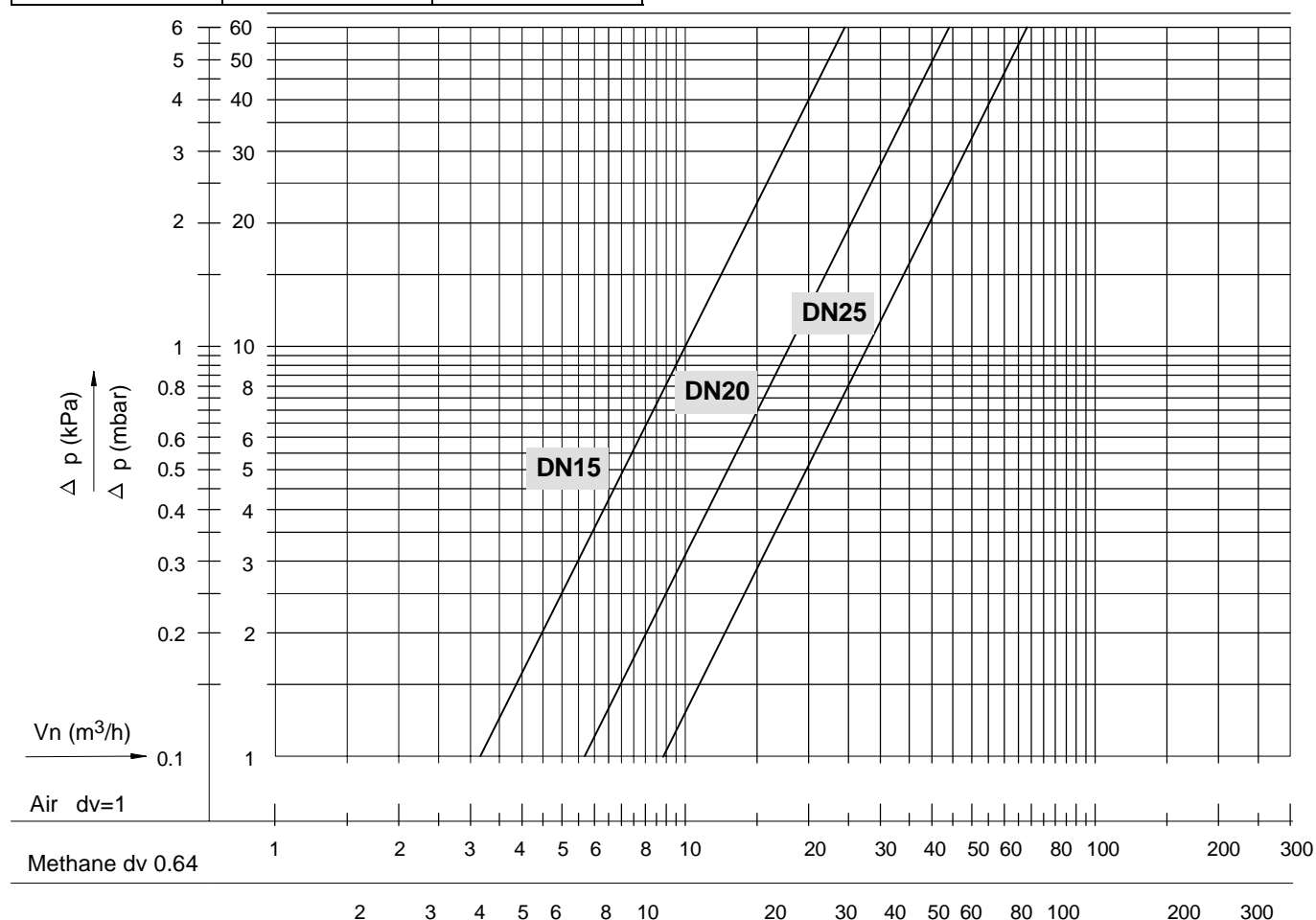


Fig. 32. Capacity curves for VG400AA/VG400SA Series

V4295/V8295 SERIES

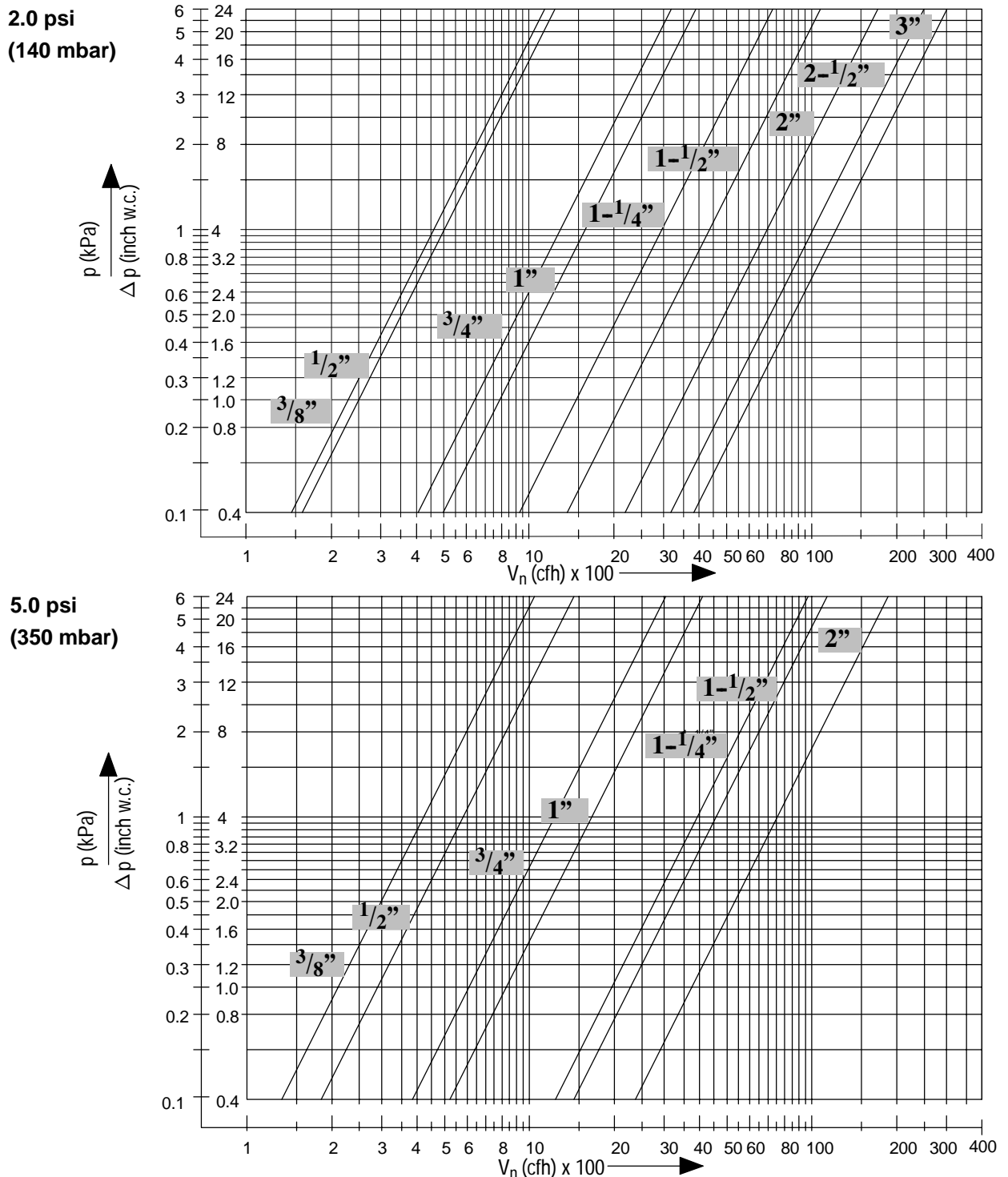
Table 41. Capacity in cfh at pressure drop of 1 inch water column sp. gr. = 0.64 for V4295A, V8295A (N.C.)

| Maximum operating pressure (mbar) | 3/8" DN10 | 1/2" DN15 | 3/4" DN20 | 1" DN25 | 1 1/4" DN32 | 1 1/2" DN40 | 2" DN50 | 2 1/2" DN65 | 3" DN80* |
|-----------------------------------|-----------|-----------|-----------|---------|-------------|-------------|---------|-------------|----------|
| 2 psi | 230 | 250 | 645 | 790 | 1,450 | 2,190 | 3,465 | 5,070 | 6,100 |
| 5 psi | 210 | 290 | 610 | 825 | 1,950 | 2,270 | 3,740 | - | - |

* only V4295A

Table 42. Capacity in cfh at pressure drop of 1 inch water column sp. gr. = 0.64 for V4295S, V8295S (N.O.)

| 3/4" DN20 | 1" DN25 | 1 1/4" DN32 |
|-----------|---------|-------------|
| 350 | 420 | 1,100 |



VE5000 SERIES

Table 43. VE5000A serie ON-OFF.

| Model | Connection | Capacity* |
|---------|------------|-----------|
| VE5065A | DN65 | 123 |
| VE5080A | DN80 | 155 |
| VE5100A | DN100 | 270 |

* capacity in m³/h air at $\Delta p = 2,5$ mbar
(SG=1 at 1013 mbar, 15°)

Table 44. VE5000C serie HI-LOW-OFF modulating.

| Model | Connection | Capacity* |
|---------|------------|-----------|
| VE5065C | DN65 | 107 |
| VE5080C | DN80 | 135 |
| VE5100C | DN100 | 235 |

* capacity in m³/h air at $\Delta p = 2,5$ mbar
(SG=1 at 1013 mbar, 15°)

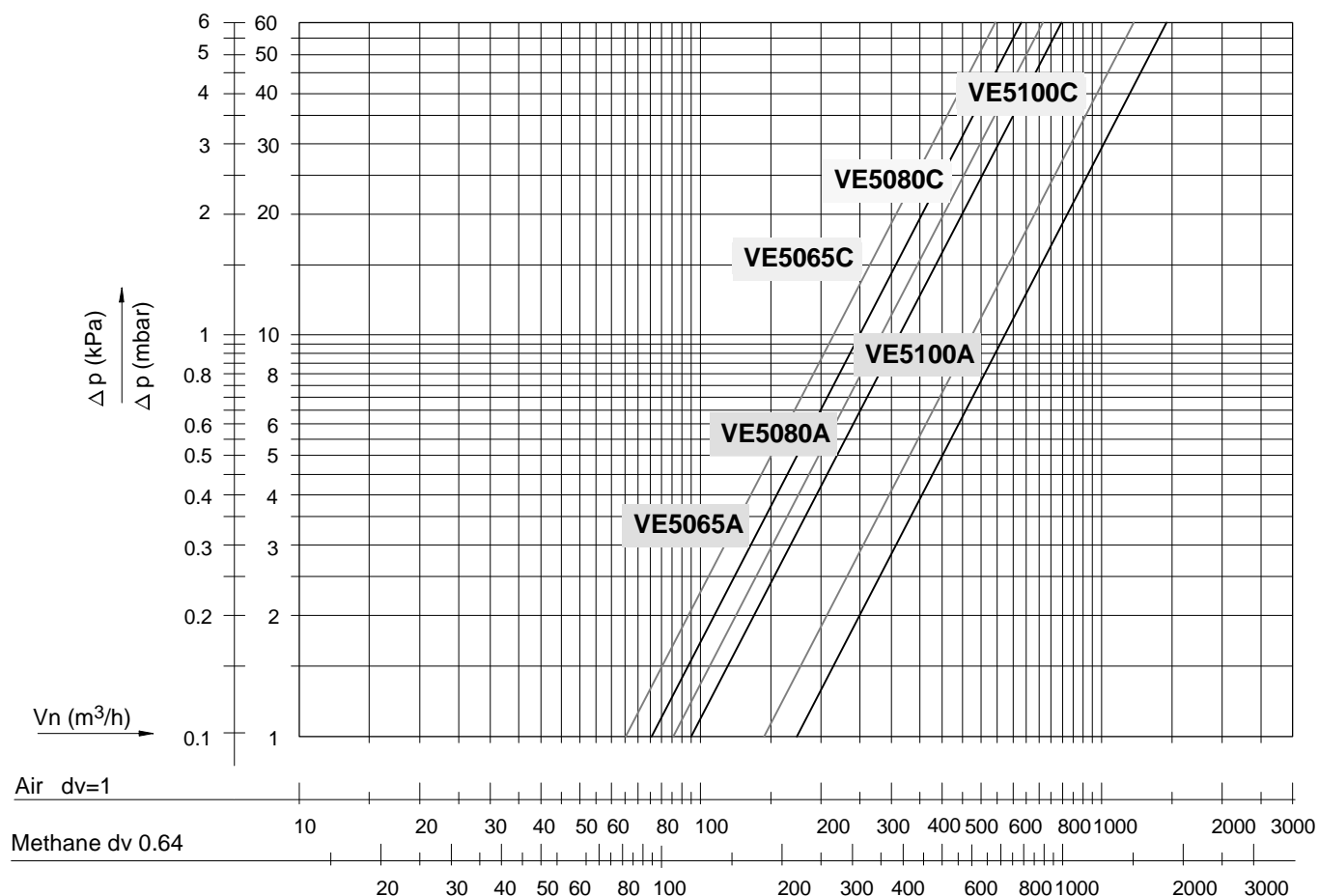


Fig. 34. Capacity curves for VE5000A Series

VQ400 SERIES

Table 45. Capacity in m^3/h air at $\Delta p = 2,5 \text{ mbar}$ (SG=1 at 1013 mbar, 15°)

| 3/4" DN20 | 1" DN25 | 1 1/4" DN32 | 1 1/2" DN40 | 2" DN50 |
|-----------|---------|-------------|-------------|---------|
| 8 | 11 | 25 | 31 | 40 |

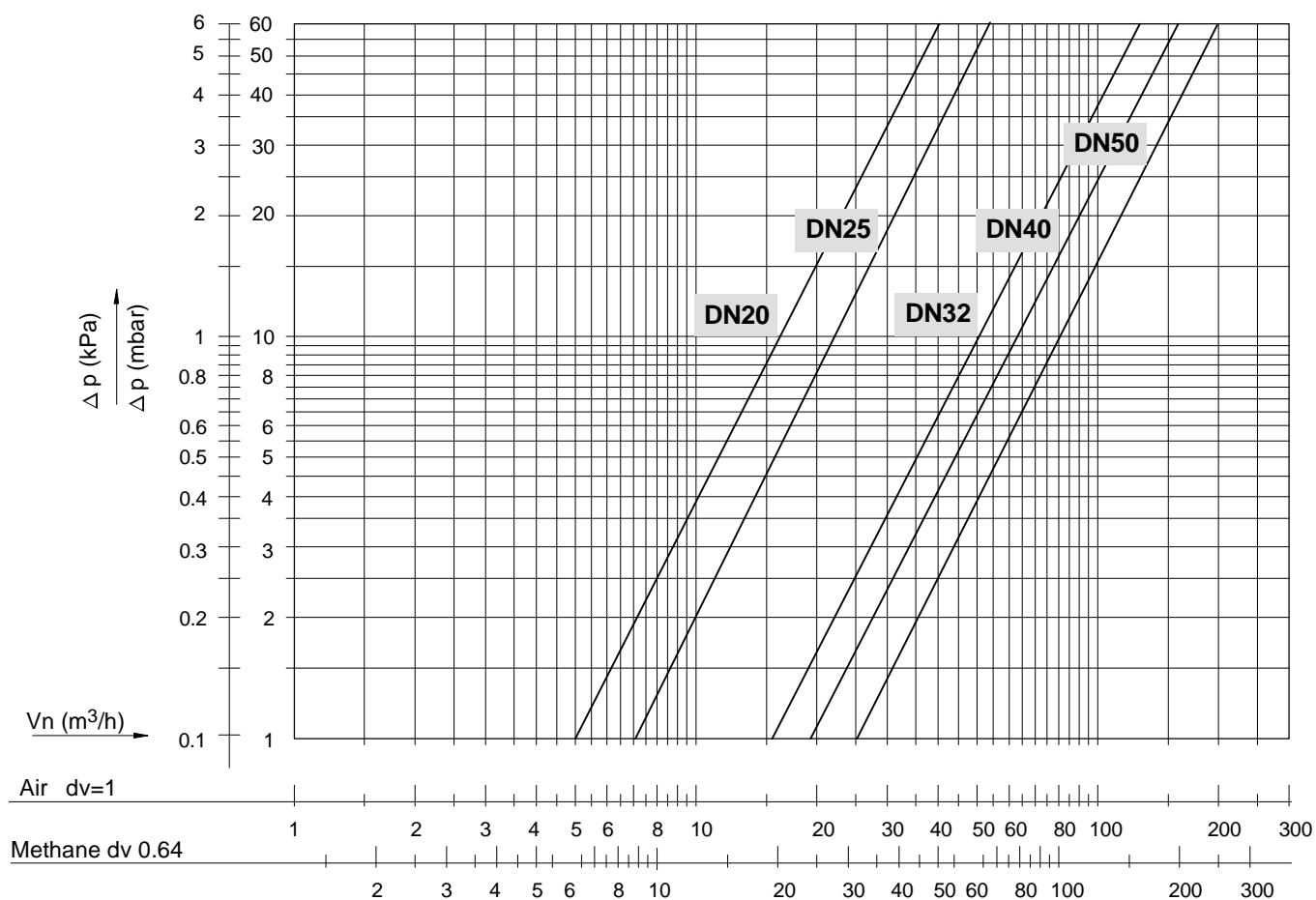


Fig. 35. Capacity curves for VQ400 Series combination valve

VT4000 SERIES

Table 46. Capacity in m³/h air at Δp = 2,5 mbar (SG=1 at 1013 mbar, 15°)

| 3/4" DN20 | 1" DN25 | 1 1/4" DN32 | 1 1/2" DN40 | 2" DN50 |
|-----------|---------|-------------|-------------|---------|
| 30 | 40 | 74 | 98 | 101 |

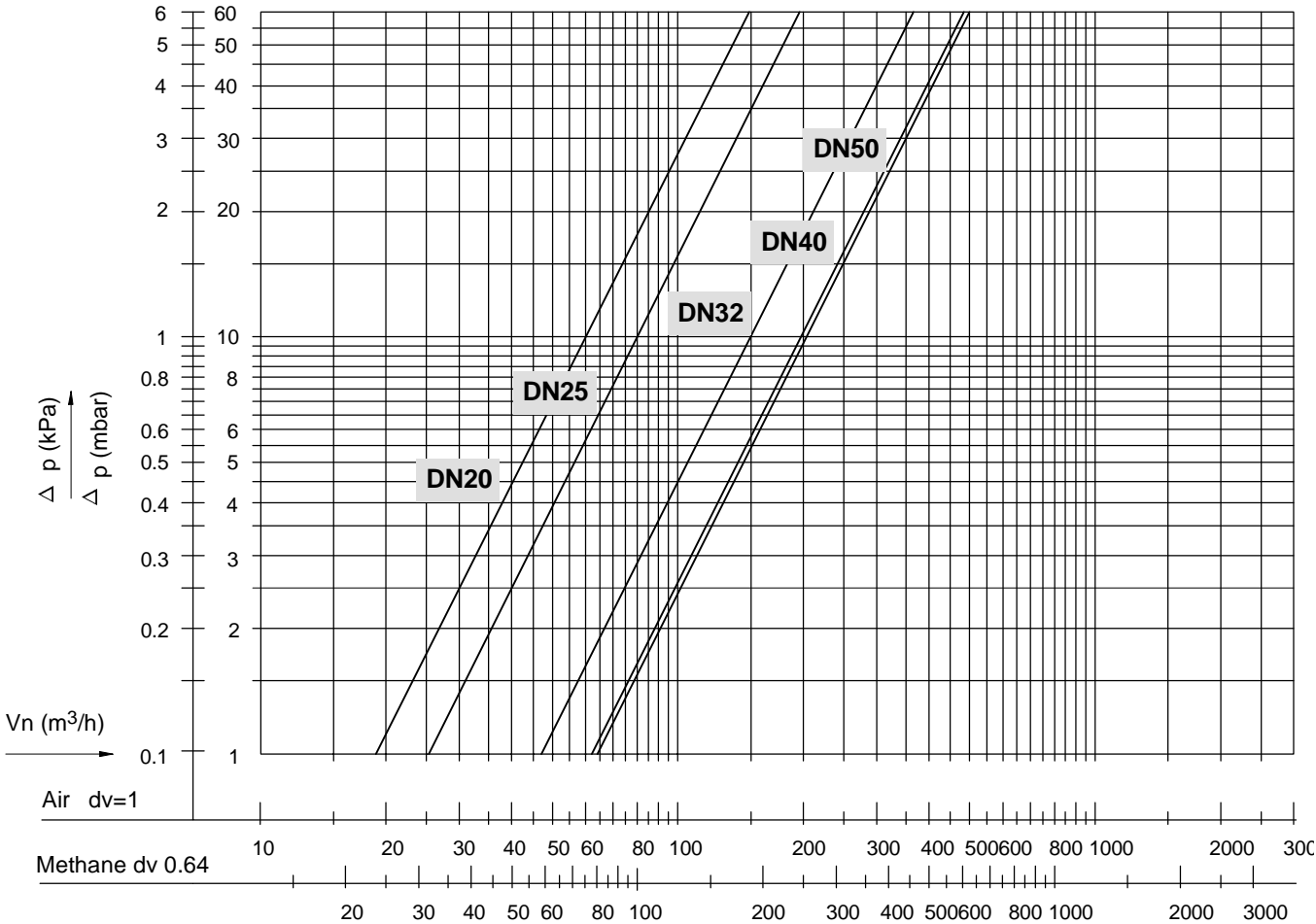


Fig. 36. Capacity curves for VT4000 Series motorized throttle valve

VF5000A SERIES

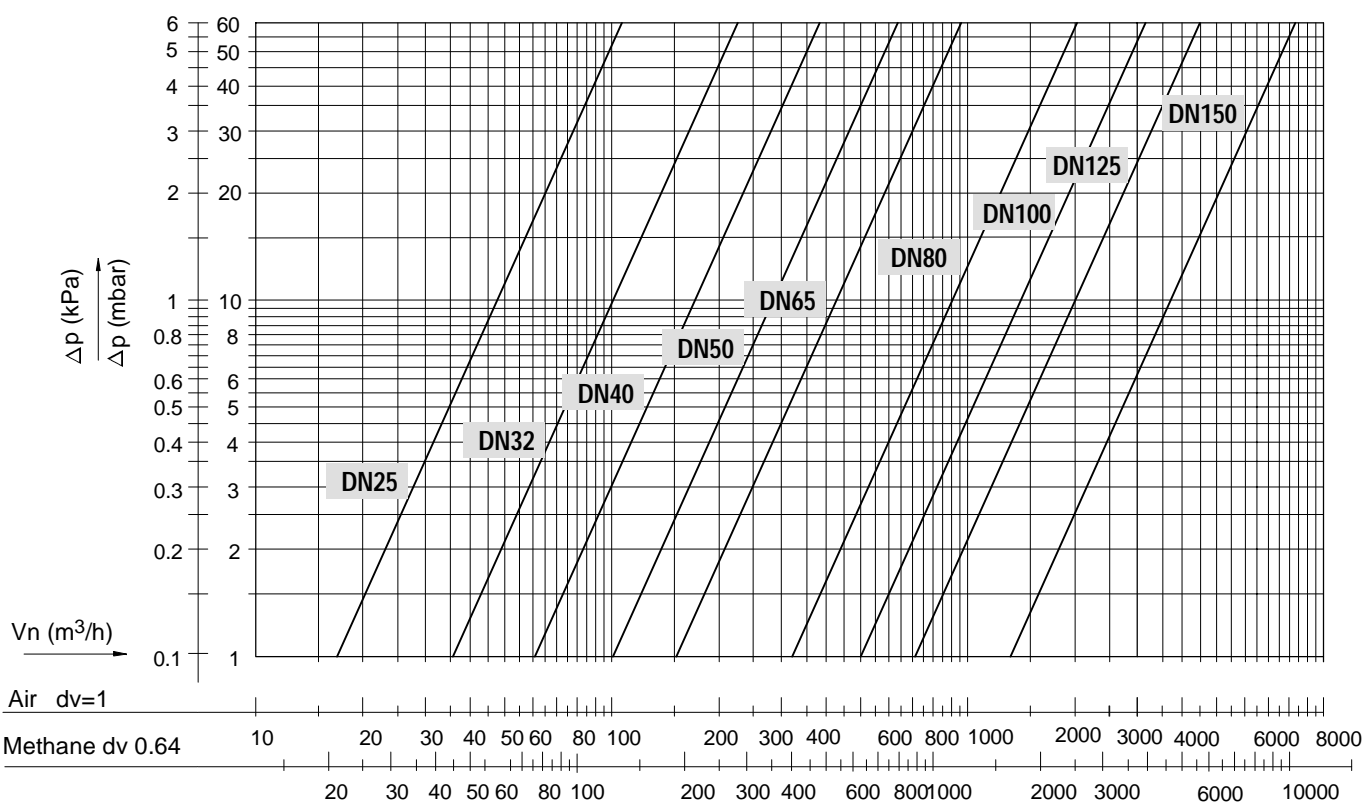


Fig. 37. Capacity curves for VF5000A Series butterfly valves

VF5000R SERIES

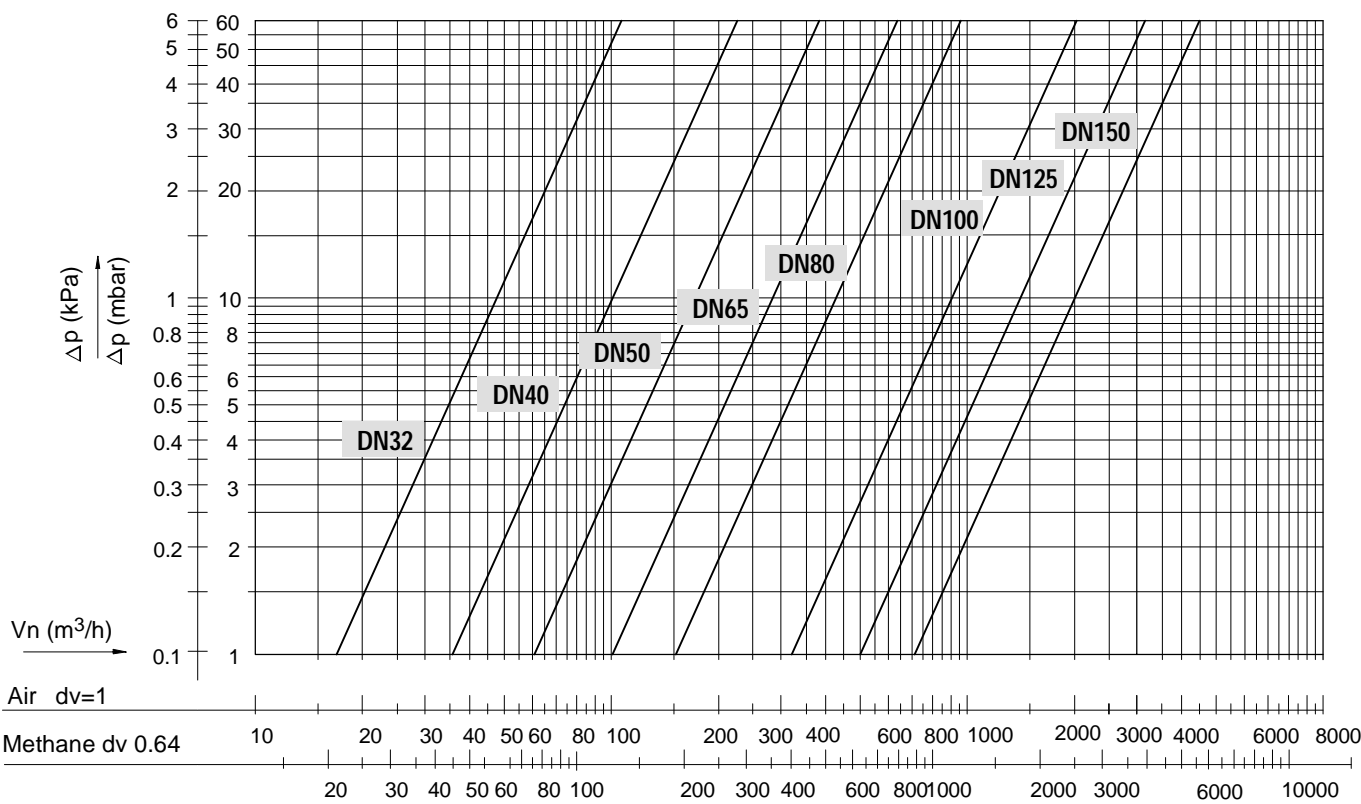


Fig. 38. Capacity curves for VF5000R Series butterfly valves with reduced capacity

Replacement parts & Accessories

COILS FOR VE4000 SERIES

Table 47. Coils for VE4000 Series

| Model | O.S. number | Rated voltage (Vac) | 200 mbar | 360 mbar | Packing Quantity |
|---|-------------|---------------------|----------|----------|------------------|
| VE4010A & VE4015A | BB052301 | 220 ... 240 | • | • | 1 |
| | BB051101 | 110 | • | • | 1 |
| | BB052401 | 24 | • | • | 1 |
| VE4020A & VE4025A | BB052325 | 220 ... 240 | • | • | 1 |
| | BB051125 | 110 | • | • | 1 |
| | BB052425 | 24 | • | • | 1 |
| VE4032A & VE4040A | BB052340 | 220 ... 240 | • | • | 1 |
| | BB052303 | 220 ... 240 | • | • | 1 |
| | BB052203* | 220 | • | • | 1 |
| | BB052204* | 220 | • | • | 1 |
| | BB051133 | 110 | • | • | 1 |
| | BB051150 | 110 | • | • | 1 |
| | BB051103* | 110 | • | • | 1 |
| | BB052432 | 24 | • | • | 1 |
| | BB052403* | 24 | • | • | 1 |
| | BB052842 | 24 ... 28 Vdc | • | • | 1 |
| | BB052402* | 24 ... 28 Vdc | • | • | 1 |
| | BB052303 | 220 ... 240 | • | • | 1 |
| | BB052307 | 220 ... 240 | • | • | 1 |
| VE4050A | BB052203* | 220 | • | • | 1 |
| | BB052204* | 220 | • | • | 1 |
| | BB051150 | 110 | • | • | 1 |
| | BB051103* | 110 | • | • | 1 |
| | BB052453 | 24 | • | • | 1 |
| | BB052403* | 24 | • | • | 1 |
| | BB052802 | 24 ... 28 Vdc | • | • | 1 |
| | BB052402* | 24 ... 28 Vdc | • | • | 1 |
| | BB052365 | 220 ... 240 | • | • | 1 |
| | BB051165 | 110 | • | • | 1 |
| | BB152301 | 220 ... 240 | • | • | 1 |
| | BB151101 | 110 | • | • | 1 |
| | BB152401 | 24 | • | • | 1 |
| VE4010B/C & VE4015B/C & VE4020S & VE4025S | BB152801 | 24 ... 28 Vdc | • | • | 1 |
| | BB152325 | 220 ... 240 | • | • | 1 |
| | BB151125 | 110 | • | • | 1 |
| | BB152425 | 24 | • | • | 1 |
| VE4020B/C & VE4025B/C | BB152825 | 24 ... 28 Vdc | • | • | 1 |
| | BB152340 | 220 ... 240 | • | • | 1 |
| | BB152326 | 220 ... 240 | • | • | 1 |
| | BB151140 | 110 | • | • | 1 |
| VE4032B/C & VE4040B/C | BB151103 | 110 | • | • | 1 |
| | BB152440 | 24 | • | • | 1 |
| | BB152840 | 24 ... 28 Vdc | • | • | 1 |
| | BB152340 | 220 ... 240 | • | • | 1 |
| VE4050B/C | BB152303 | 220 ... 240 | • | • | 1 |
| | BB151103 | 110 | • | • | 1 |
| | BB151152 | 110 | • | • | 1 |
| | BB152403 | 24 | • | • | 1 |
| | BB152403 | 24 | • | • | 1 |

| | | | | | |
|---------------------|----------|---------------|---|---|---|
| VE4065B1 & VE4065B3 | BB152803 | 24 ... 28 Vdc | • | • | 1 |
| | BB152380 | 220 ... 240 | • | • | 1 |
| | BB152365 | 220 ... 240 | • | • | 1 |
| | BB151165 | 110 | • | • | 1 |
| VE4080B1 & VE4080B3 | BB151180 | 110 | • | • | 1 |
| | BB152280 | 220 ... 240 | • | • | 1 |
| | BB152282 | 220 ... 240 | • | • | 1 |
| | BB151180 | 110 | • | • | 1 |
| VG4100B3 | BB151105 | 110 | • | • | 1 |
| | BB052200 | 220 ... 240 | • | • | 1 |
| | BB052202 | 220 ... 240 | • | • | 1 |
| | BB051100 | 110 | • | • | 1 |
| | BB051111 | 110 | • | • | 1 |

COILS FOR VG4000A

Table 48. Coils for VG4000 Series

| Model | O.S. number | Rated Voltage (Vac) | 360 mbar | 500 mbar | Packing Quantity |
|---------------------------------------|-------------|---------------------|----------|----------|------------------|
| VG4010A up to VG4040A | BB020054 | 220 ... 240 | • | • | 1 |
| | BB020033 | 110 | • | • | 1 |
| | BB020030 | 24 | • | • | 1 |
| | BB020029 | 12 | • | • | 1 |
| VG4050A & VG4065A & VG4080A & VG4100A | BB020055 | 220 ... 240 | • | • | 1 |
| | BB020031 | 110 | • | • | 1 |
| | BB020027 | 24 | • | • | 1 |
| | BB020028 | 12 | • | • | 1 |

COILS FOR VG4000S1 AND VG4000S3 SERIES

Table 49. Coils for VG4000S1 and S3 Series

| Model | O.S. number | Rated Voltage (Vac) | 200 mbar | 360 mbar | Packing Quantity |
|---|-------------|---------------------|----------|----------|------------------|
| VG4010S1 & VG4015S1 & VG4020S1 & VG4025S1 | BB152220 | 220 ... 240 | • | • | 1 |
| | BB151121 | 110 | • | • | 1 |
| | BB152422 | 24 | • | • | 1 |
| | BB152408 | 24 ... 28Vdc | • | • | 1 |
| | BB151223 | 12 | • | • | 1 |
| | BB151224 | 12 Vdc | • | • | 1 |
| VG4032S1 & VG4040S1 & VG4050S1 | BB152232 | 220...240 | • | • | 1 |
| | BB151133 | 110 | • | • | 1 |
| | BB152434 | 24 | • | • | 1 |
| | BB152437 | 24 ... 28 Vdc | • | • | 1 |
| | BB151235 | 12 | • | • | 1 |
| | BB151236 | 12 Vdc | • | • | 1 |

| | | | | | |
|----------------------------------|----------|---------------|--|---|---|
| VG4065S1 VG4080S1 VG4100S1 | BB152266 | 220...240 | | ● | 1 |
| | BB151166 | 110 | | ● | 1 |
| | BB152467 | 24 | | ● | 1 |
| | BB152438 | 24 ... 28 Vdc | | ● | 1 |
| | BB151238 | 12 Vdc | | ● | 1 |

COILS FOR VG4000S2 SERIES

Table 50. Coils for VG4000S2 Series

| Model | O.S. number | Rated Voltage (Vac) | Packing Quantity |
|----------|-------------|---------------------|------------------|
| VG4015S2 | BB020076 | 220 | 1 |
| VG4020S2 | BB020078 | 24Vdc | 1 |
| VG4025S2 | BB020077 | 12Vdc | 1 |

COILS FOR VG400AA SERIES

Table 51. Coils for VG400AA Series

| Model | O.S. number | Rated Voltage (Vac) | 500 mbar | Packing Quantity |
|---------|-------------|---------------------|----------|------------------|
| VG415AA | BB020120 | 220 ... 240 | ● | 1 |
| VG420AA | BB020124 | 110 | ● | 1 |
| VG425AA | BB020123 | 24 ... 28 Vdc | ● | 1 |

COILS FOR VG400SA SERIES

Table 52. Coils for VG400SA Series

| Model | O.S. number | Rated Voltage (Vac) | 500 mbar | Packing Quantity |
|---------|-------------|---------------------|----------|------------------|
| VG415SA | BB020125 | 220 ... 240 | ● | 1 |
| VG420SA | BB020126 | 110 | ● | 1 |
| VG425SA | BB020127 | 24 ... 28 Vdc | ● | 1 |

COILS FOR VQ400 SERIES

Table 53. coils for VQ400 Series

| Model | O.S. number | Rated Voltage (Vac) | 200 mbar | 360 mbar | Packing Quantity |
|-------|-------------|---------------------|---------------|----------|------------------|
| VQ420 | V1 | BB052301 | 220 ... 240 | ● | 1 |
| | | BB051101 | 110 | ● | 1 |
| | | BB052801 | 24 ... 28 Vdc | ● | 1 |
| | V2 | BB152301 | 220 ... 240 | ● | 1 |
| | | BB151101 | 110 | ● | 1 |
| | | BB152801 | 24 ... 28 Vdc | ● | 1 |
| VQ425 | V1 | BB052325 | 220 ... 240 | ● | 1 |
| | | BB051125 | 110 | ● | 1 |
| | | BB052825 | 24 ... 28 Vdc | ● | 1 |
| | V2 | BB152325 | 220 ... 240 | ● | 1 |
| | | BB151125 | 110 | ● | 1 |
| | | BB152825 | 24 ... 28 Vdc | ● | 1 |
| | | BB052341 | 220 ... 240 | ● | 1 |

| | | | | | |
|-------|----|----------|---------------|---|---|
| VQ440 | V1 | BB052304 | 220 ... 240 | ● | 1 |
| | | BB051135 | 110 | ● | 1 |
| | | BB051151 | 110 | ● | 1 |
| | | BB052841 | 24 ... 28 Vdc | ● | 1 |
| | V2 | BB152327 | 220 ... 240 | ● | 1 |
| | | BB152341 | 220 ... 240 | ● | 1 |
| | | BB151135 | 110 | ● | 1 |
| | | BB151151 | 110 | ● | 1 |
| VQ450 | V1 | BB052304 | 220 ... 240 | ● | 1 |
| | | BB052305 | 220 ... 240 | ● | 1 |
| | | BB051151 | 110 | ● | 1 |
| | | BB052806 | 24 ... 28 Vdc | ● | 1 |
| | V2 | BB152341 | 220 ... 240 | ● | 1 |
| | | BB152304 | 220 ... 240 | ● | 1 |
| | | BB151151 | 110 | ● | 1 |
| | | BB152806 | 24 ... 28 Vdc | ● | 1 |

RECTIFIER BOARDS

Table 54. Rectifier boards for VE4000 Series

| Model | O.S. number | Rated Voltage (Vac) | Packing Quantity |
|---|-------------|-------------------------|------------------|
| VE4000A/B/C (DN10 ... DN80) VG4000A (DN15 ... DN100) | CS020065 | 220 ... 240 110 | 10 |
| VE4000S (DN10 ... DN80) | CS020011 | 220 ... 240 110 | 10 |
| VE4000A/B/C (DN10 ... DN80) VG4000A/S (DN10 ... DN100) | CS020012 | 24 12 | 10 |
| | CS020013 | 24 ... 28 Vdc 12 Vdc | 10 |
| VE4000B3 (DN80, 360 mbar) (DN100, 200/360 mbar) | CS020100 | 220 ... 240 | 10 |

Table 55. Rectifier boards for VQ400 Series

| Model | O.S. number | Rated Voltage (Vac) | Packing Quantity |
|----------|-------------|---------------------|------------------|
| VQ420/25 | CS020010 | 220 ... 240 | 1 |
| | CS020070 | 110 | 1 |
| | CS020013 | 24 ... 28 Vdc | 1 |
| VQ440/50 | CS020014 | 220 ... 240 | 1 |
| | CS020015 | 110 | 1 |
| | CS020016 | 24 ... 28 Vdc | 1 |

MT4000 SERIES

Table 56. PCB boards for 220 ... 240 Vac versions

| Model | Without low fire adjustment switch | With low fire adjustment switch |
|---------|------------------------------------|---------------------------------|
| MT4000A | CSMT0151 | – |
| MT4000B | CSMT0161 | – |
| MT4001A | CSMT0061 | – |
| MT4001B | CSMT0071 | CSMTP071 |
| MT4001C | CSMT0091 | CSMTP091 |
| MT4002B | CSMT0081 | CSMTP081 |
| MT4003C | CSMT0111 | CSMTP111 |

Tavola 57. PCB boards for 110 Vac versions

| Model | Without low fire adjustment switch | With low fire adjustment switch |
|---------|------------------------------------|---------------------------------|
| MT4000A | CSMT0152 | – |
| MT4000B | CSMT0162 | – |

CONNECTORS

Tavola 58. ISO4400 connectors for VG400AA and VG400SA Series

| Model | O.S. number | Notes |
|--------------------|-------------|--|
| VG400AA VG400SA | COMPM012 | Female DIN connector – two connections + earth black |

CHARACTERIZED OPENING

Tavola 59. Characterized opening mechanism for for VE4000C1 Serie

| Model | O.S. number |
|--------------------------------------|-------------|
| VE4010 VE4015 VE4020 VE4025 | KTGRF01 |
| VE4032 VE4040 VE4050 | KTGRF02 |

CLOSED POSITION INDICATION SWITCH

Table 60. Closed Position indication (CPI) switch for VE4000 Series

| Model | O.S. number | length (mm) | Packing Quantity |
|-----------|-------------|-------------|------------------|
| VE4020/25 | MS05.25.00 | 47.5 | 1 |
| VE4032/40 | MS05.40.00 | 75 | 1 |
| VE4050 | MS05.50.00 | 90 | 1 |
| VE4065/80 | MS05.80.00 | 101 | 1 |

Table 61. Closed Position indication (CPI) switch for VQ400 Series

| Model | O.S. number | Length (mm) | Packing Quantity |
|-------|-------------|-------------|------------------|
| VQ420 | MS062001 | 56 | 1 |
| VQ425 | MS062501 | 53 | 1 |
| VQ440 | MS064001 | 78.5 | 1 |
| VQ450 | MS065001 | 77.5 | 1 |

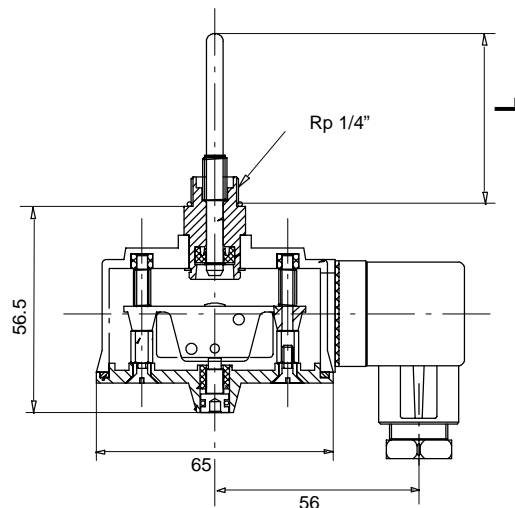


Fig. 41. Dimensional drawing CPI switch