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Honeywell Universal Gas Valves

EXPERTS IN BURNER & BOILER CONTROLS

Welcome to the new Honeywell Universal Gas Valves catalogue. It's your entry point to an entire programme of solenoid valves, gas pressure regulators, servo motors, butterfly valves, valve proving systems, combination valves as well a wide range of gas filters. This gives you a wide choice of specifications and options to match your requirements exactly.

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The catalogue is just part of our special kind of supplier-specifier relationship. In short, we want to make doing business as simple as possible. It begins by organizing products by applications for the quickest selection of a product for a specified application. It extends to ease of ordering, fast delivery and additional customer services. All backed by highly qualified support engineers willing and able to discuss your needs and suggest solutions.

Availability

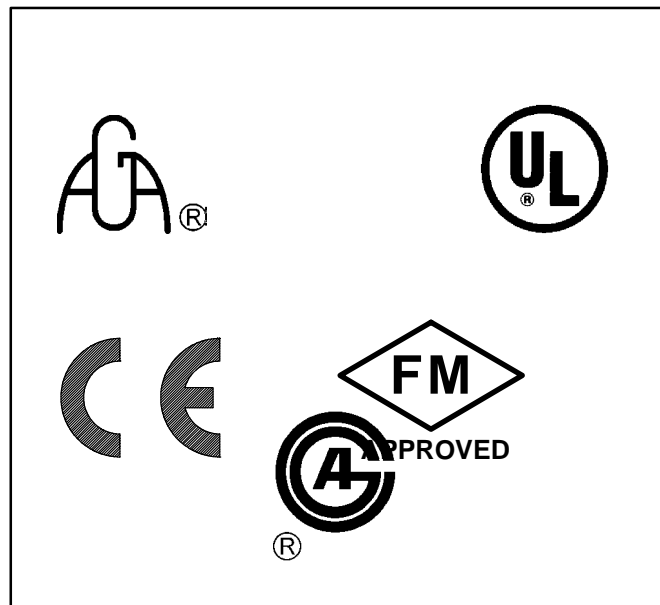
With over 600 product listed, the valve, pressure regulator, servo motor or valve proving system you need is probably available from our standard range. What's more, the same valves are available from our distributors anywhere in the world. So wherever you are you can order with complete confidence.

Quality assured

Certification by ISO 9002, is formal recognition of Honeywell Universal Gas Valves commitment to total quality. It is the outward sign of a company dedicated to customer satisfaction and is part of the Honeywell commitment to deliver reliable and safe products.

All the approval you need

All the listed product have the appropriate North American or European approvals. Details can be found for every type under the heading Standards and Approvals.



Illustrations and product descriptions published in this catalogue are not binding in detail. To determine the suitability of a product for a specific application, the customer should consult the product specification sheet provided with the product, or contact Honeywell directly. In keeping with its policy of continued improvement, Honeywell reserves the right to change or modify design or specifications of product without notice or obligation.

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.**

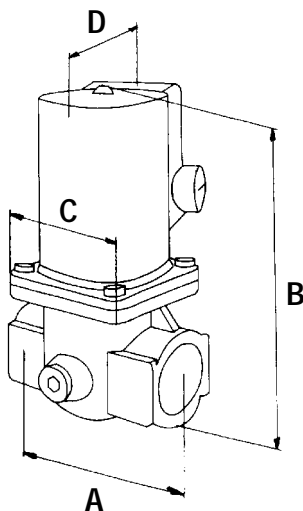


Fig. 1. Dimensional drawing VE4000A1 Series

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.

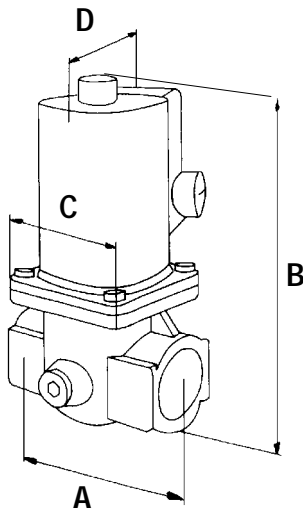


Fig. 2. Dimensional drawing VE4000B1 Series

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).

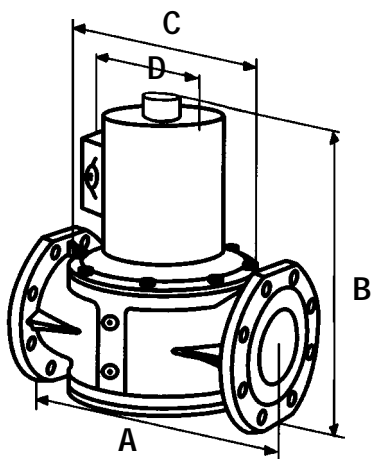


Fig. 3. Dimensional drawing VE4000B3 Series

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.

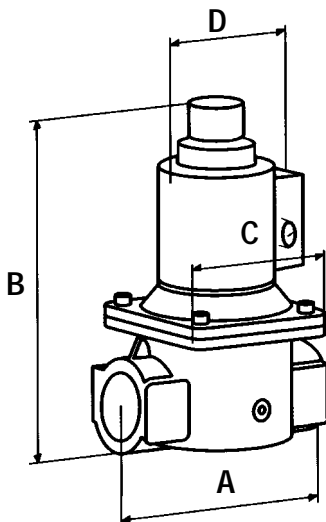


Fig. 4. Dimensional drawing VE4000C1 Series

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.

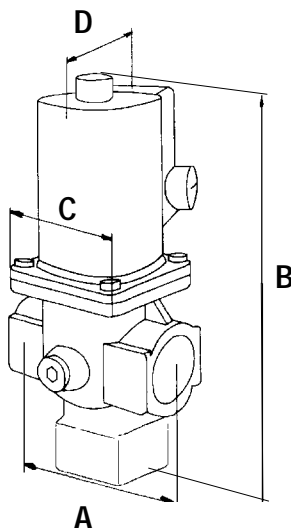


Fig. 5. Dimensional drawing VE4000S1/2 Series

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".

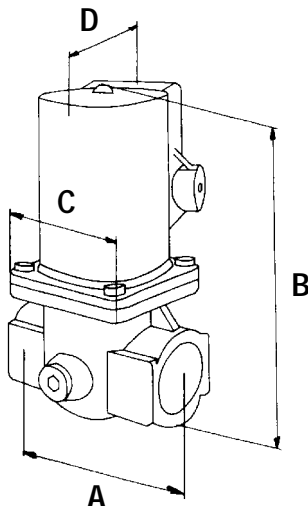


Fig. 6. Dimensional drawing V4295A/V8295A Series

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.

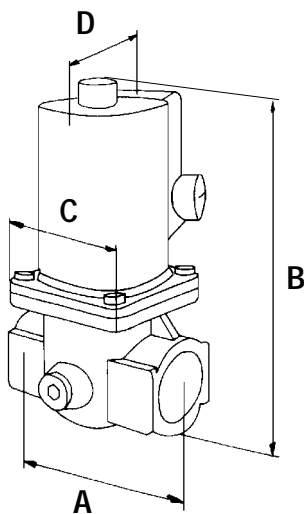


Fig. 7. Dimensional drawing V4295S1/V8295S1 Series

APPLICATION

The V4295S1/V8295S1 Series are specially designed for the North American market. The electrically operated V4295S1 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

V4295S1/V8295S1, 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 V4295S1/V8295S1 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.**

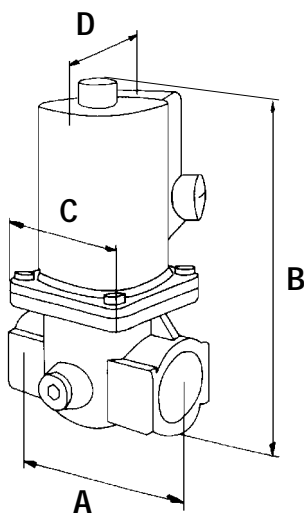


Fig. 8. Dimensional drawing VEN4000B1 Series

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.

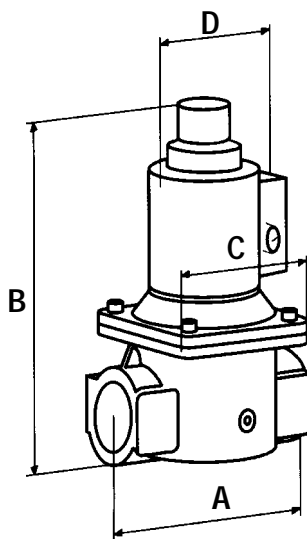


Fig. 9. Dimensional drawing VEN4000C1 Series

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. VEN400C1 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 Consump. (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	✓

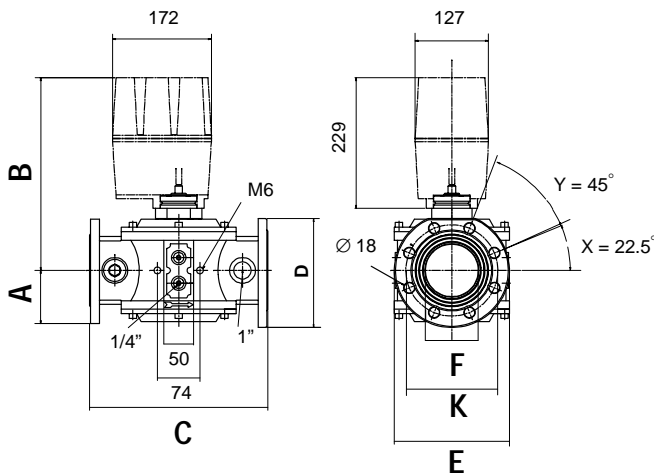
VE5000 Series

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

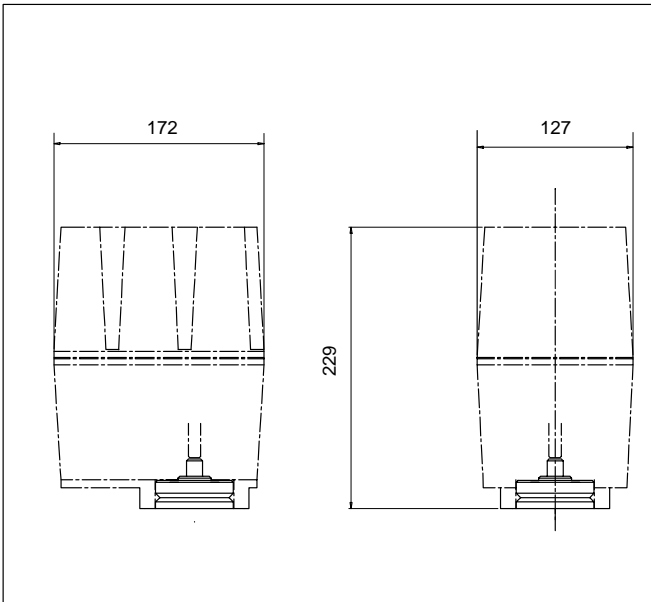


Fig. 11. V4055, V4062A, V9055A Series dimensions

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

CLASS "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.

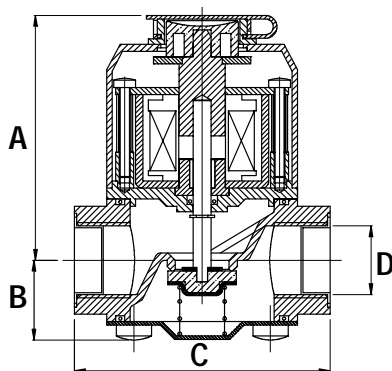
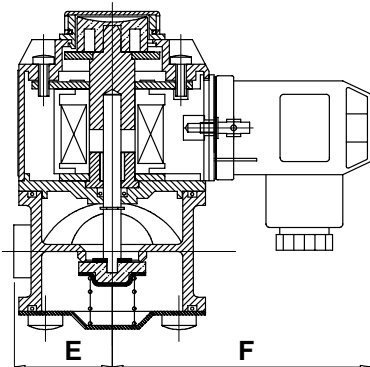


Fig. 12. Dimensional drawing VG400AA Series

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

CLASS "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.

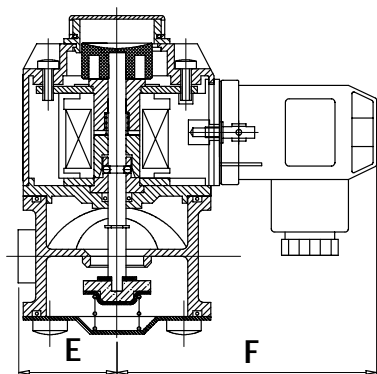
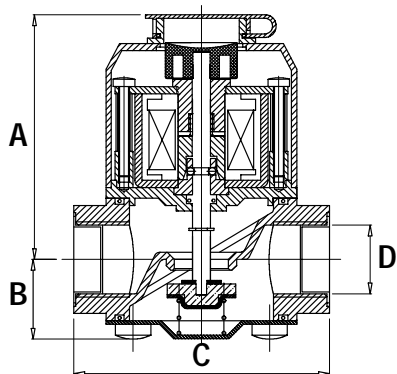


Fig. 13. Dimensional drawing VG400SA Series

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.

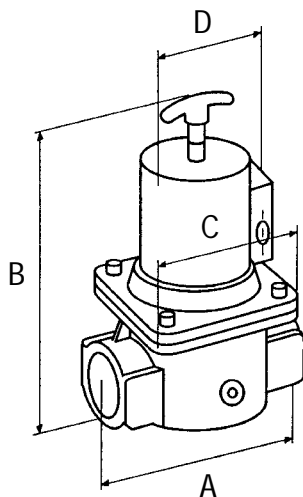


Fig. 14. Dimensional drawing VG4000A1 Series

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.

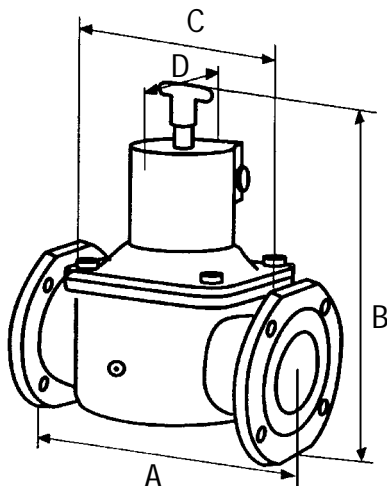


Fig. 15. Dimensional drawing VG4000A3 Series

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 Consump. (W)	Enclosure	Weight (kg)	Bottom 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°.

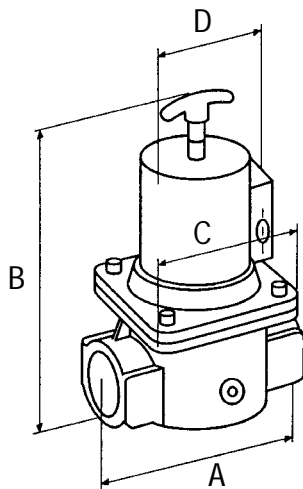


Fig. 16. Dimensional drawing VG4000S1 Series

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°.

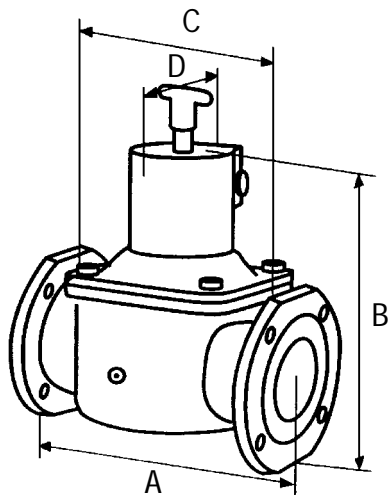


Fig. 17. Dimensional drawing VG4000S3 Series

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. VG400S3 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-ect. (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.

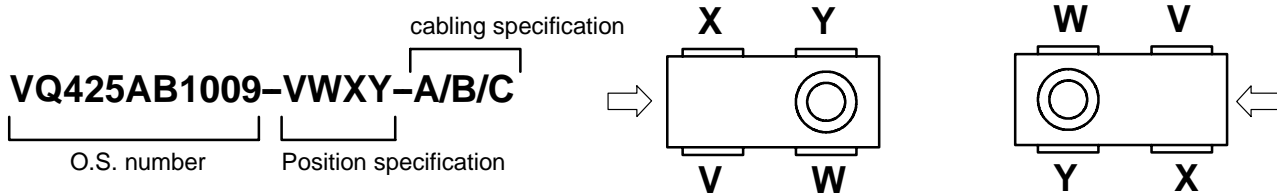
Ordering example

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

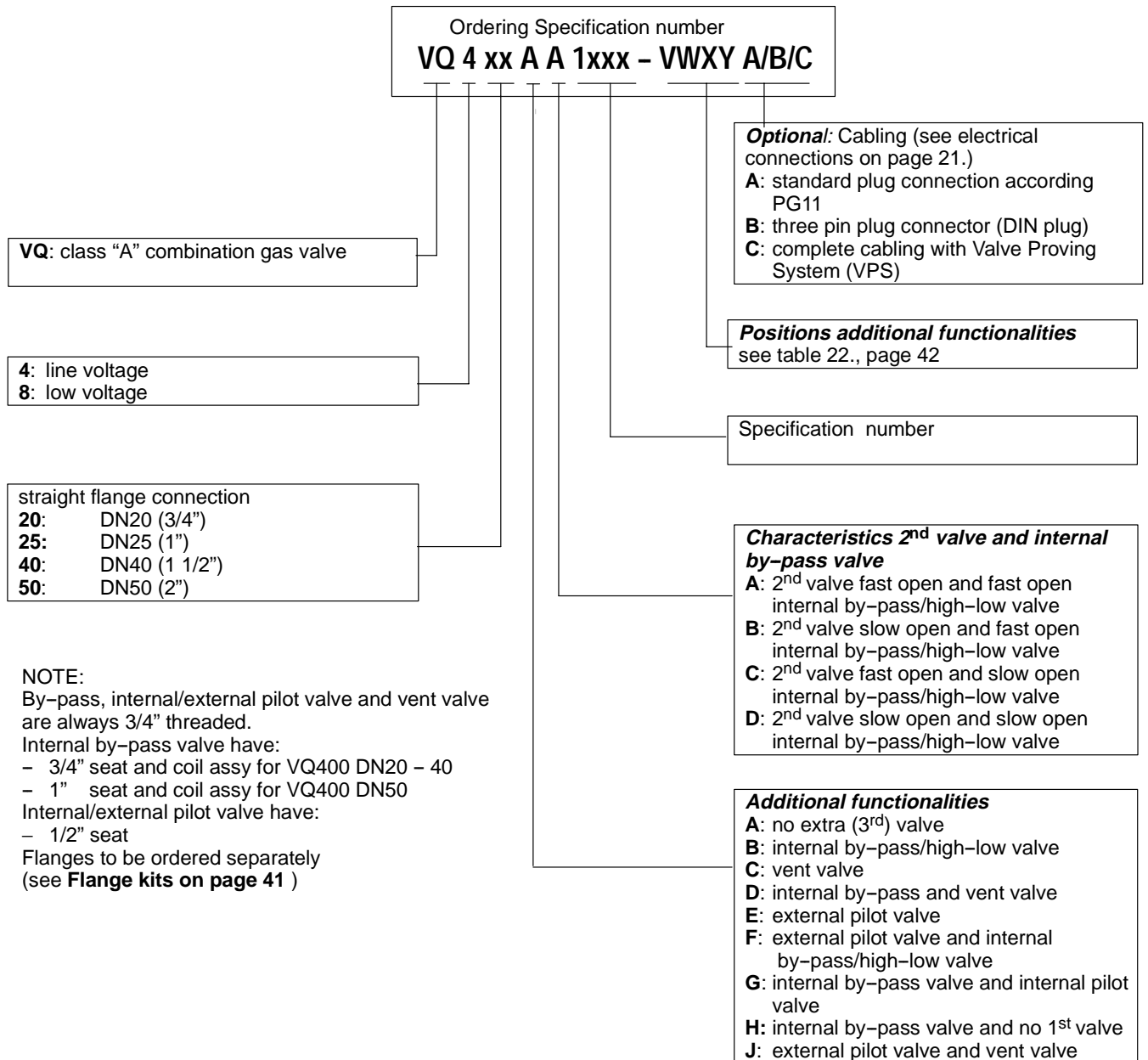
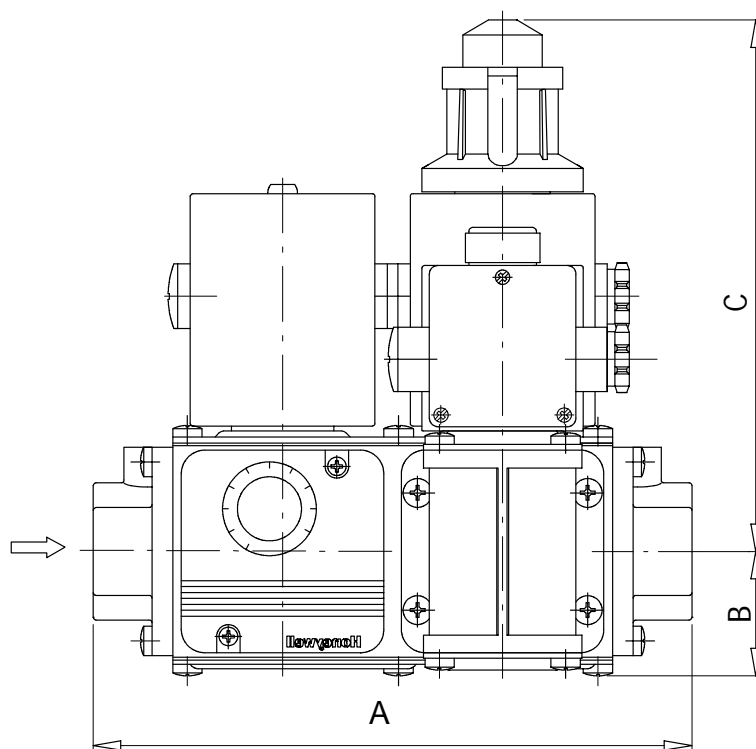
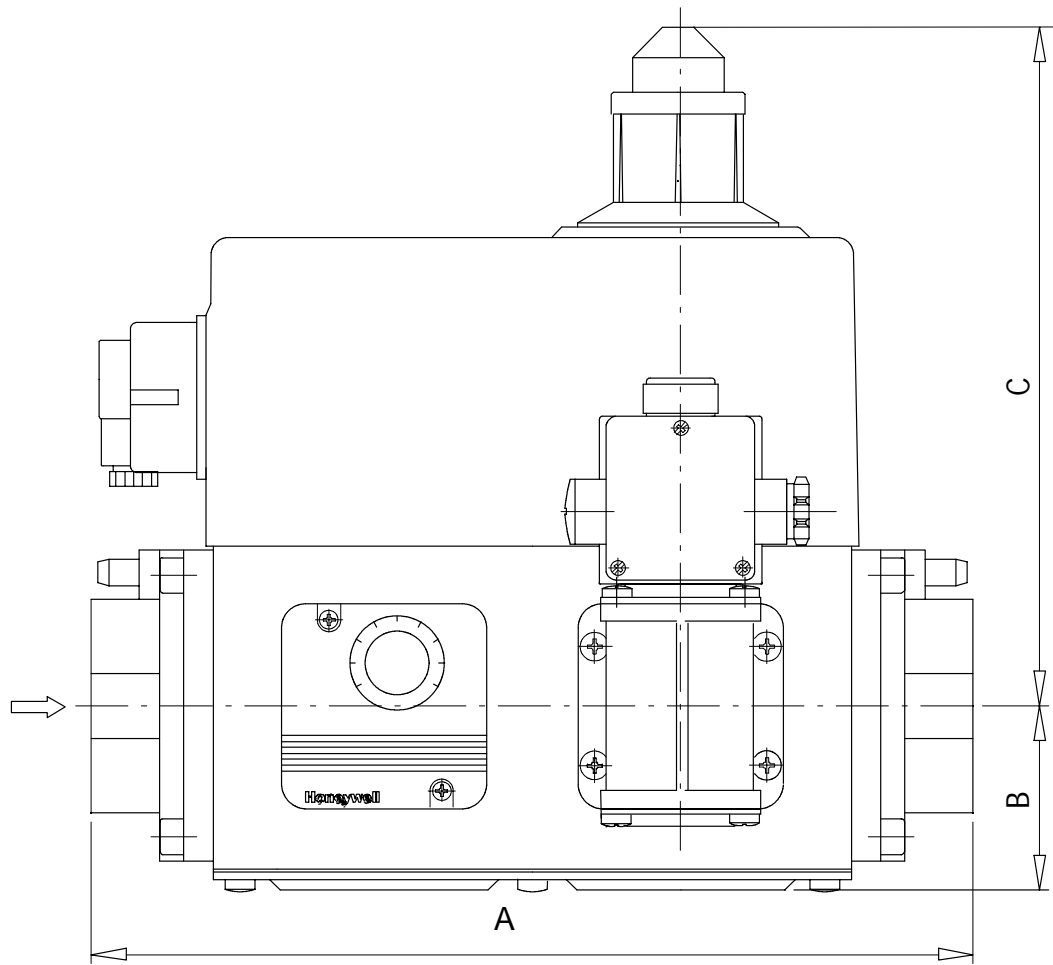
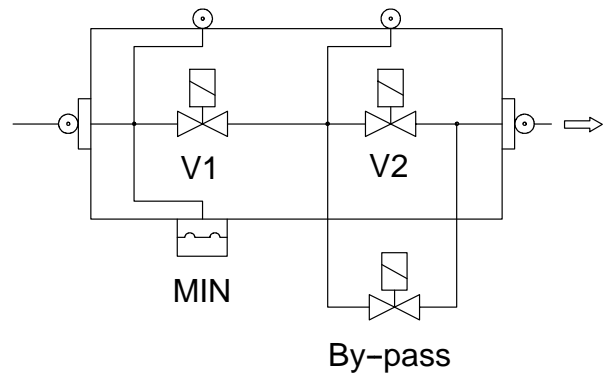
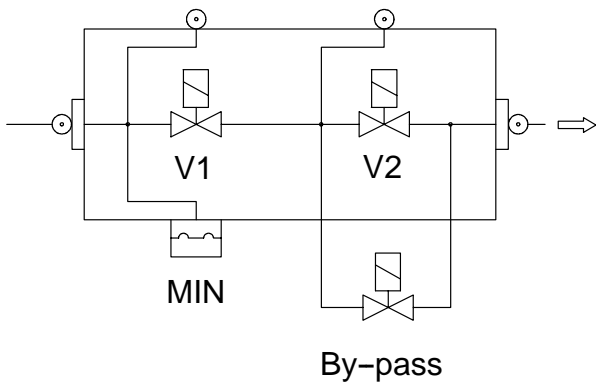
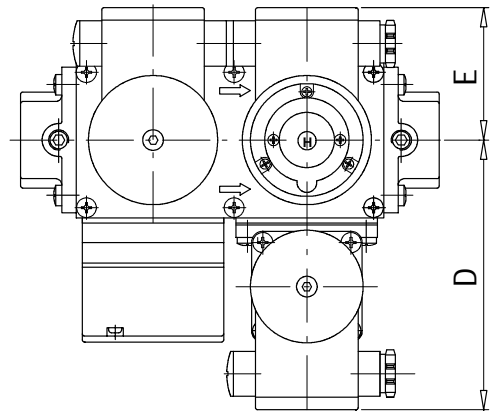
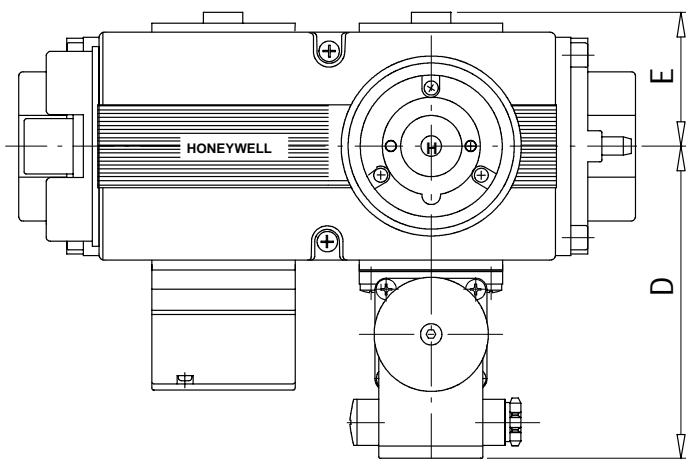


Fig. 18. Ordering information VQ400 Series combination valves





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

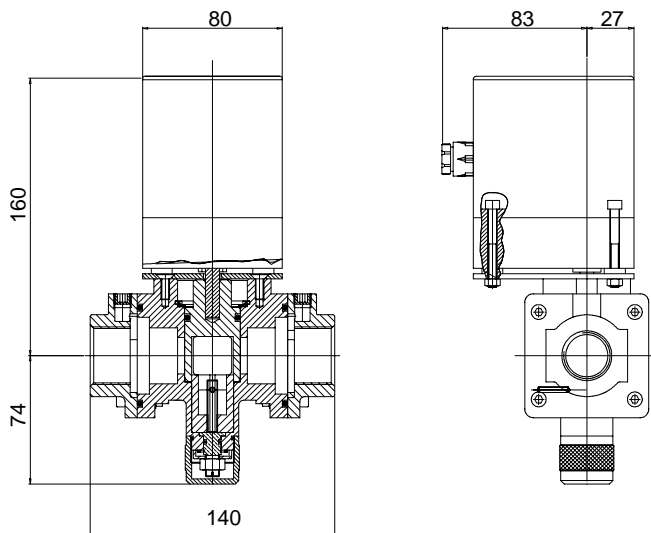


Fig. 20. Dimensional drawing VT4025 Series

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.

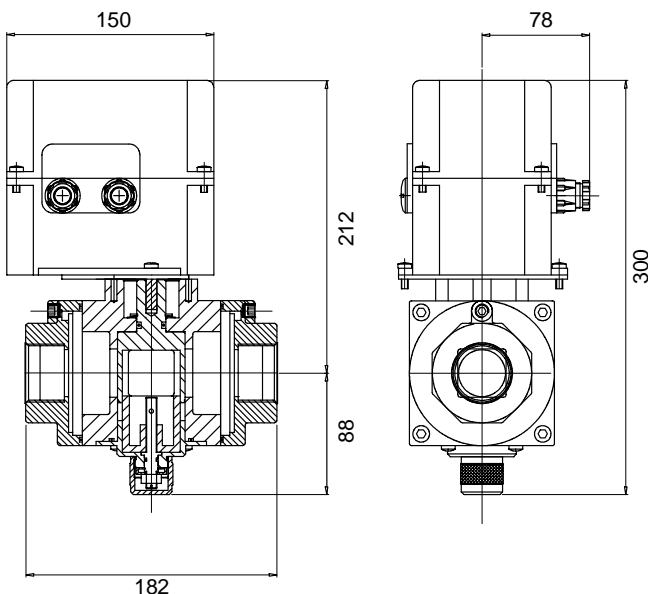


Fig. 21. Dimensional drawing VT4050 Series

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.

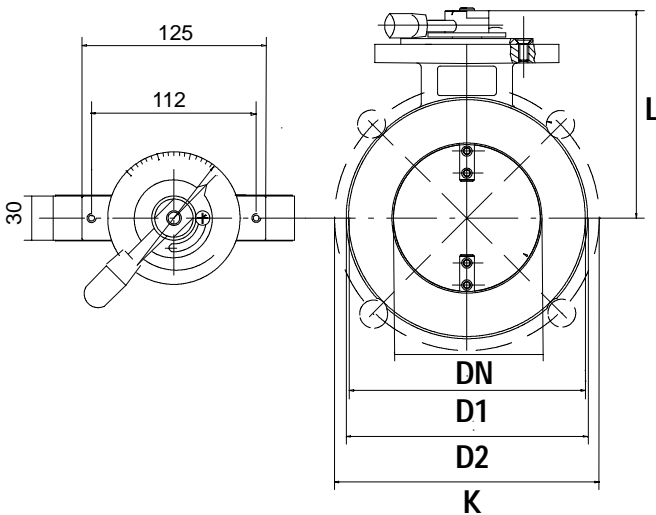


Fig. 22. Dimensional drawing VF5000A3/R3 Series

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
KTBTFO1	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.

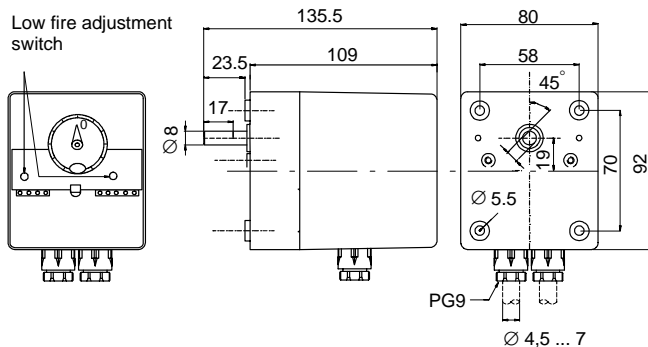


Fig. 23. Dimensional drawing MT4000 Series

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).

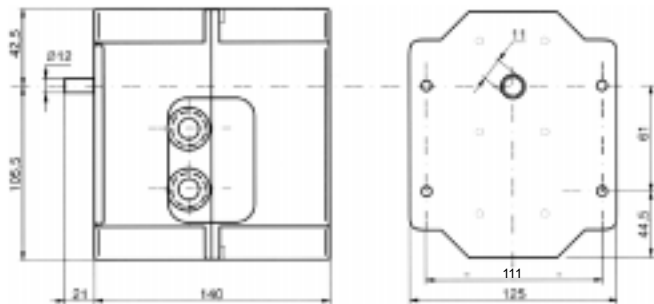


Fig. 24. Dimensional drawing MF4000 Series

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.

HUPF/HUP Series

GAS PRESSURE REGULATORS HUPF/HUP...A1/A3



FEATURES

- Spring-loaded regulator with inlet pressure compensation and zero shut-off.
- The outlet pressure is kept constant with changing gas flow as a function of the spring setting.
- Filter replaceable
- Double diaphragm
- The zero shut-off prevents the outlet pressure from increasing when there is no gas flow through the regulator.

APPLICATION

To regulate gas and air inlet pressure for gas burners, including mixed and combined systems and in industrial distribution systems. Applicable types of fuel: manufactured gases (town gas); natural gases (group H – methane); liquefied petroleum gas (LPG); non-aggressive gases and air. The gas pressure regulators comply with the requirements of EN88, class B, group 2.

These gas pressure regulators are available in two versions; with or without incorporated filter, see product range. The features and specifications of both models are identical (unless specified otherwise).

SPECIFICATIONS

Product range

model HUPF (pipe sizes 1/2" up to DN80); with filter and model HUP (pipe sizes DN65 up to DN100) without filter

Dimensions

See dimensional drawings and table

Pipe sizes

1/2" up to 2" inlet and outlet internal pipe thread according to ISO 7-1.

DN65, DN80 and DN100 inlet and outlet flange connections according to PN16 ISO 7005-1

Connections

Pressure taps at inlet and outlet connections.

Capacity

See Capacity curves HUPF/HUP Series on page 75.

Pressure regulation

The pressure regulation curves and data can be found in the product handbook EN2R-9024.

Maximum inlet pressure

200 or 500 mbar, depending on model

NOTE: Minimum inlet pressure range: desired outlet pressure + 5 mbar up to 200 mbar or desired outlet pressure + 30 mbar up to 500 mbar.

Outlet pressure range

6 to 150 mbar, higher outlet pressures on request.

The appropriate outlet pressure range is obtained by the use of different springs

NOTE: NOTE:

The regulators are supplied standard with *neutral spring* – see "Spring setting range" table in the instruction sheet MU1R-9158

Closing pressure

Conform EN 88 specifications (i.e.. zero shut-off)

Torsion and bending stress

Pipe connections meet group 2, according to EN88 requirements.

Set point accuracy

± 3% of the full scale, when outlet pressure has been set with a pressure device

Ambient temperature range

-10 ... 60 °C

Seals and gaskets

Hydrocarbon resistant NBR rubber type

Material of pressure receiving parts

NBR diaphragms

Safety diaphragm

An external breather/outlet pipe is not necessary as the incorporated safety diaphragm ensures that, in the event of breakage of the operating diaphragm, no gas leakage into the environment of over 30 dm³/h is possible. The above in compliance with para. 3.3.2. of UNI EN 88 specifications.

Body material

Aluminium alloy die cast

Spring

AISI 303 steel

Valve plunger

Chrome plated FE 360B steel sliding on anti-friction bearing

Filter

HUPF Series only.

Filter element with two long-life Viledon P15/500S

DIN F017/82 panels

Threaded versions: cartridge of synthetic material

Flanged versions: galvanized steel cartridge

Standards and Approvals

The HUPF and HUP Series gas pressure regulator with and without incorporated filter conform with the following EC-directives:

- Gas Appliance Directive (90/396/EEC)

PIN: CE-0051AQ550-554

PIN: CE-0051AQ635

PIN: CE-0051AQ636

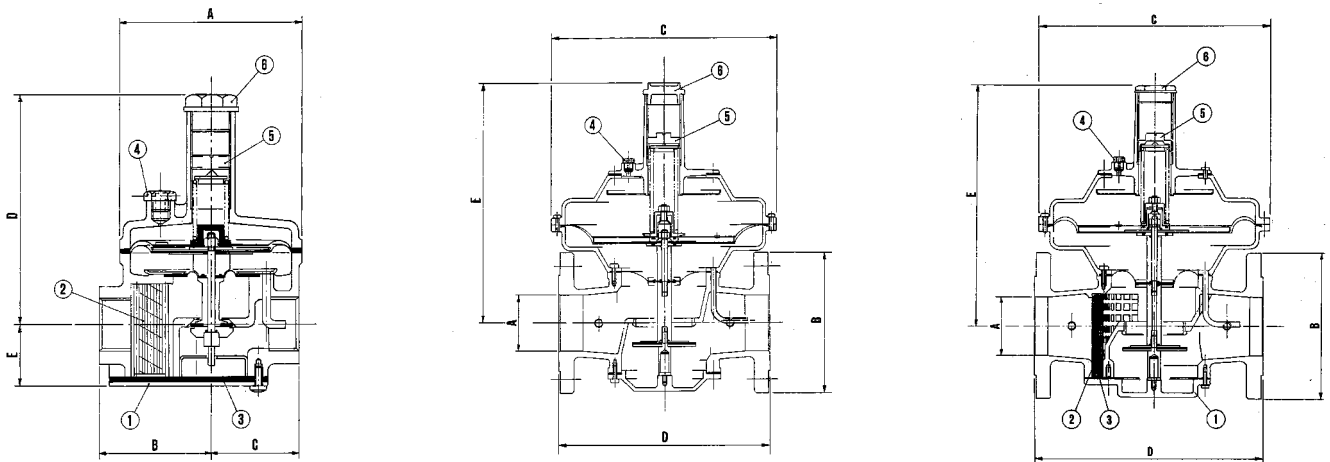


Table 30. HUPF Series gas pressure regulator (with filter)

Model	Connection (inch)	Maximum Operating Pressure Range (mbar)	Dimensions (mm)					Weight (kg)	Note
			A	B	C	D	E		
HUPF015A120	1/2	200	90	55	45	105	35	0.8	-
HUPF015A150	1/2	500	90	55	45	105	35	0.8	-
HUPF020A120	3/4	200	90	55	45	105	35	0.8	-
HUPF020A150	3/4	500	90	55	45	105	35	0.8	-
HUPF020A151	3/4	500	90	55	45	105	35	0.8	NPT
HUPF025A120	1	200	105	65	50	125	40	1	-
HUPF015A150	1/2	500	90	55	45	105	35	1	-
HUPF025A150	1	500	105	65	50	125	40	1	-
HUPF032A120	1 1/4	200	185	100	75	170	50	2.5	-
HUPF032A150	1 1/4	500	185	100	75	170	50	2.5	-
HUPF032A151	1 1/4	500	185	100	75	170	50	2.5	NPT
HUPF040A120	1 1/2	200	185	100	75	170	50	2.5	-
HUPF040A150	1 1/2	500	185	100	75	170	50	2.5	-
HUPF050A120	2	200	260	135	85	250	65	6	-
HUPF050A150	2	500	260	135	85	250	65	6	-
HUPF065A320	DN65	200	65	185	320	315	340	12	-
HUPF065A350	DN65	500	65	185	320	315	340	12	-
HUPF080A320	DN80	200	80	200	320	315	340	13	-
HUPF080A350	DN80	500	80	200	320	315	340	13	-

Table 31. HUP Series gas pressure regulators (without filter)

Model	Connection (inch)	Maximum Operating Pressure Range (mbar)	Dimensions (mm)					Weight (kg)	Note
			A	B	C	D	E		
HUP065A320	DN65	200	65	185	320	315	340	11	-
HUP065A350	DN65	500	65	185	320	315	340	11	-
HUP080A320	DN80	200	80	200	320	315	340	12	-
HUP080A350	DN80	500	80	200	320	315	340	12	-
HUP100A320	DN100	200	80	200	320	315	340	19	-
HUP100A350	DN100	500	80	200	320	315	340	19	-

HUF Series

GAS FILTERS HUF...A1/A3



FEATURES

- Gas filter flanged and threaded versions
- Filter element made of Viledon
- Filter element easy replaceable by use of cartridge

APPLICATION

To filter fuel gas and combustion air supply to all gas consuming appliances. Applicable types of fuel: manufactured gases (town gas); natural gases (group H – methane); liquefied petroleum gas (LPG); non-aggressive gases and air. The filters comply with the requirements of DIN 3386

SPECIFICATIONS

Product range

model HUF (pipe sizes 1/2" up to DN150)

Dimensions

See dimensional drawings and table

Pipe sizes

1/2" up to 2" inlet and outlet internal pipe thread according to ISO 7-1.

DN40 up to DN150 inlet and outlet flange connections according to PN16 ISO 7005-1

Connections

Threaded versions: no pressure taps

Flanged versions: Rp 1/8" connections for inlet or outlet pressure taps.

Capacity

See capacity curves on page 76.

Maximum inlet pressure

Threaded versions: 1 bar

Flanged versions: 4 bar

Torsion and bending stress

Pipe connections meet group 2, according to EN161 requirements.

Ambient temperature range

-10 ... 80 °C

Seals and gaskets

Hydrocarbon resistant NBR rubber type

Body material

Aluminium alloy die cast

Filter

Cartridge with two long-life Viledon P15/500S

DIN F017/82 filter elements

Threaded versions: cartridge of synthetic material

Flanged versions: galvanized steel cartridge

Standards and Approvals

The HUF Series gas filter conform with the following EC-directives:

- Gas Appliance Directive (90/396/EEC)
PIN: CE-0051AS1094-1102

Table 32. HUF Series gas filters, flanged and threaded versions

Model	Connection (inch)	Maximum operating pressure (bar)	Overall dimensions (mm)					
	a		b	c	d	e	h	l
HUF015A110	1/2	1	92	-	-	-	37	120
HUF020A110	3/4	1	92	-	-	-	37	120
HUF025A110	1	1	103	-	-	-	50	160
HUF032A110	1 1/4	1	103	-	-	-	50	160
HUF040A110	1 1/2	1	103	-	-	-	50	160
HUF050A110	2	1	140	-	-	-	73	186
HUF040A340	DN40	4	-	110	18	150	60	200
HUF050A340	DN50	4	-	125	18	165	70	230
HUF065A340	DN65	4	-	145	18	185	91	290
HUF080A340	DN80	4	-	160	18	200	106	320
HUF100A340	DN100	4	-	180	18	220	126	380
HUF150A340	DN150	4	-	240	22	288	151	450

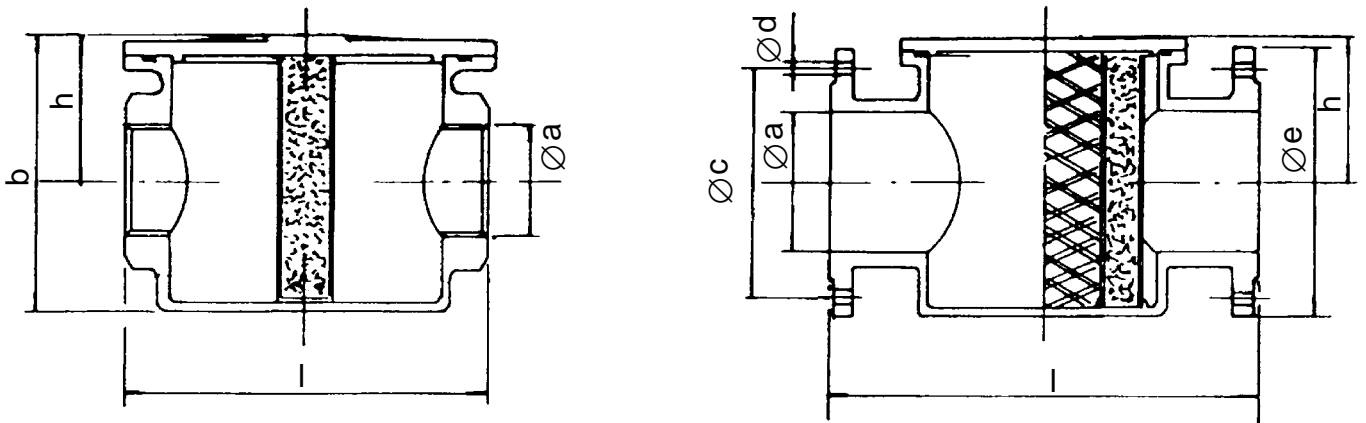


Fig. 25. Dimensional drawing HUF Series

HUG Series

FLEXIBLE TUBINGS



FEATURES

- Stainless steel construction
- Flanged and threaded versions

APPLICATION

Stainless steel flexible tubings for stress-free (axial, angular and lateral extensibility) and therefore safe pipe installation and for avoiding the transmission of vibrations.
 Applicable types of fuel: manufactured gases (town gases); natural gases (group H – methane); liquefied gas (LPG); non-aggressive gases and air.

SPECIFICATIONS

Models

HUG (pipe sizes Rp 1/2" up to DN150)

Dimensions

See dimensional drawing and tables.

Pipe sizes

1/2" up to 2" inlet and outlet external pipe thread according ISO 7-1.

DN65 up to DN150 inlet and outlet flange connections according to PN16 ISO 7005-1

Maximum operating pressure

1 bar

Ambient temperature range

-10 ... 450 °C

Construction

In accordance with DIN 30681.

Bellows: stainless steel

Threaded versions:

Threaded connection: stainless steel

Flanged versions:

Lose back flange: carbon steel

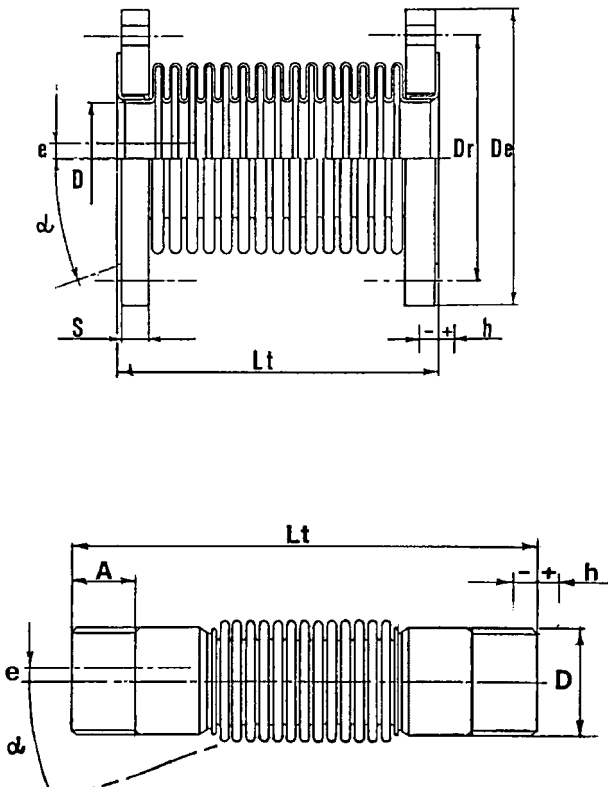


Fig. 26. Dimensional drawing HUG Series

Table 33. Threaded versions

Model	Connection (inch)	Maximum operating pressure	Axial compensation (mm)			Angular	Lateral (mm)	Dimensions (mm)	
			D	bar	h ₊			h ₋	h _{total}
HUG015A110	1/2	1	10	10	20	35	5	18	170
HUG020A110	3/4	1	10	10	20	30	5	20	180
HUG025A110	1	1	10	10	20	25	6	20	200
HUG032A110	1 1/4	1	15	15	30	30	10	20	220
HUG040A110	1 1/2	1	20	20	40	25	10	20	240
HUG050A110	2	1	20	20	40	20	10	25	240

Table 34. Flanged versions

Model	D	bar	h ₊	h ₋	h _{total}	α±	e±	De	Dr	Lt	S
HUG065A310	DN65	1	20	20	40	20	10	185	145	150	20
HUG080A310	DN80	1	20	20	40	25	10	200	160	160	22
HUG100A310	DN100	1	20	20	40	25	10	220	180	170	22
HUG125A310	DN125	1	25	25	50	4	6	250	210	250	24
HUG150A310	DN150	1	25	25	50	4	6	285	240	250	24

C6058A Series

GAS PRESSURE SWITCH C6058A



FEATURES

- Can be used in positive pressure applications.
- Available in stand alone as well as flanged mounted.
- Pressure set point visible from the outside.
- A pressure test nipple is provided to facilitate monitoring the pressure (stand alone models only)
- PG11 or DIN plug connection.
- All models incorporate a single pole, double throw snap action micro switch (SPDT).
- Stand alone versions with differential pressure option.

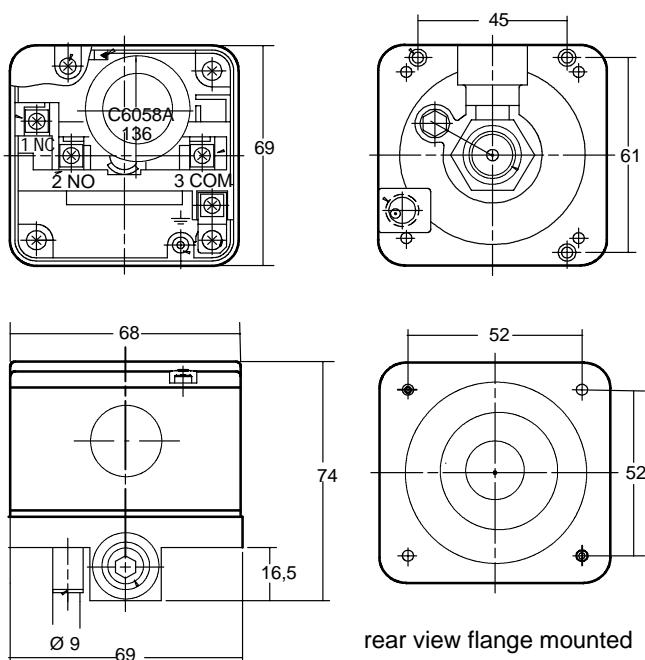


Fig. 27. Dimensional drawing C6058A Series

APPLICATION

The gas pressure switch C6058A is used to detect the pressure of city gas, natural gas, LP gas or air etc.

When the gas pressure changes, the diaphragm of the pressure receiving part detects it and operates the (SPDT) switch to ON/OFF control the external electrical circuit.

These switches are widely used to detect the upper limit or lower limit pressure of gas or air to be supplied to a gas burner, or to detect the clogging of the interlock filter of a burner blower.

SPECIFICATION

Product range

There are two versions available: stand alone and flange mounted, see tables 35. and 36.

Dimensions

See figure below.

Connection (stand alone model)

Inlet high pressure Rp 1/4" internal pipe thread (2 x).
Differential pressure Rp 1/8" internal pipe thread.

Set point accuracy

±15% of the full scale (when pressure is increased)

NOTE: The knob readings are approximations of the actual settings.

Torsion and bending stress

Pipe connections meet group 2, according to EN161 requirements.

Contact ratings

Resistive load: 250 Vac, 5A
Inductive load: 250 Vac, 3A (power factor 0.6)

For C6058A1167:

Resistive load: 250 Vac, 2.5A
Inductive load: 250 Vac, 1.5A (power factor 0.6)
Minimum contact current and voltage: 50 mA, 24 Vac

Material of pressure receiving parts

NBR single diaphragm

Material of housing

aluminium alloy die-cast

Material of case

Polybutylene terephthalate

Material of cover

Polycarbonate

Ambient temperature range

-15 ... 60 °C

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

Sensed medium temperature range

-15 ... 80 °C

Electrical connection

Plug connection according to PG11 or three pin plug connector ("DIN plug") according to ISO 4400.

Protection against electrical shock: class I

Wire connection terminals

M3.5 screw terminals, including earth connection

Enclosure

IP54

Seals and gaskets

Hydrocarbon resistant NBR rubber type

Standards and Approvals

The C6058 Series gas pressure switch conforms with the following EC directives:

- Gas Appliance Directive (90/396/EEC)
PIN: CE-0063AR1571
- Low Voltage Directive (73/23/EEC)
- Electro Magnetic Compatibility Directive (89/336/EEC)

Table 35. C6058A gas pressure switch for flanged mounting on VQ400 Series. Single pack including DIN plug, 2 mounting screws and “O”-ring

O.S Number	Operating Pressure Range (mbar)	Nominal Operating Differential (mbar)	Maximum Operating Pressure (mbar)	Weight (kg)
C6058A136S	2.5 ... 50	0.6	300	0.26
C6058A140S	30 ... 150	2.8	500	0.26
C6058A144S	100 ... 500	7.0	1500	0.26

Table 36. C6058A stand alone gas pressure switch. Single pack including DIN plug, 2 mounting screws and “O”-ring

O.S Number	Operating Pressure Range (mbar)	Nominal Operating Differential (mbar)	Maximum Pressure Operating (mbar)	Weight (kg)
C6058A1167	1.5 ... 10	0.4	200	0.25
C6058A1175	2.5 ... 50	0.6	300	0.25
C6058A1183	30 ... 150	2.8	500	0.25
C6058A1191	100 ... 500	7.0	1500	0.25

NOTE: The operating differential is the difference between the upper and lower operating pressures at one set point.

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.

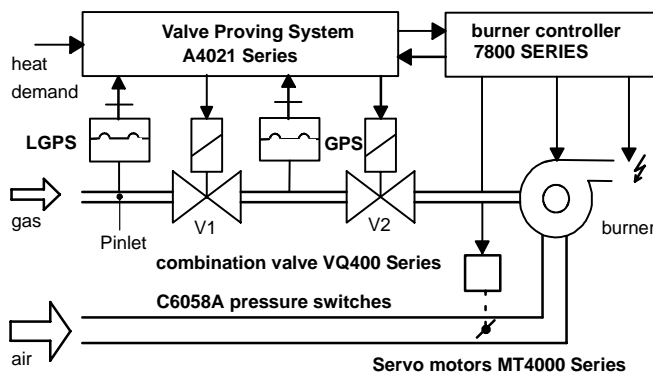


Fig. 28. System set-up for direct burner ignition .

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.

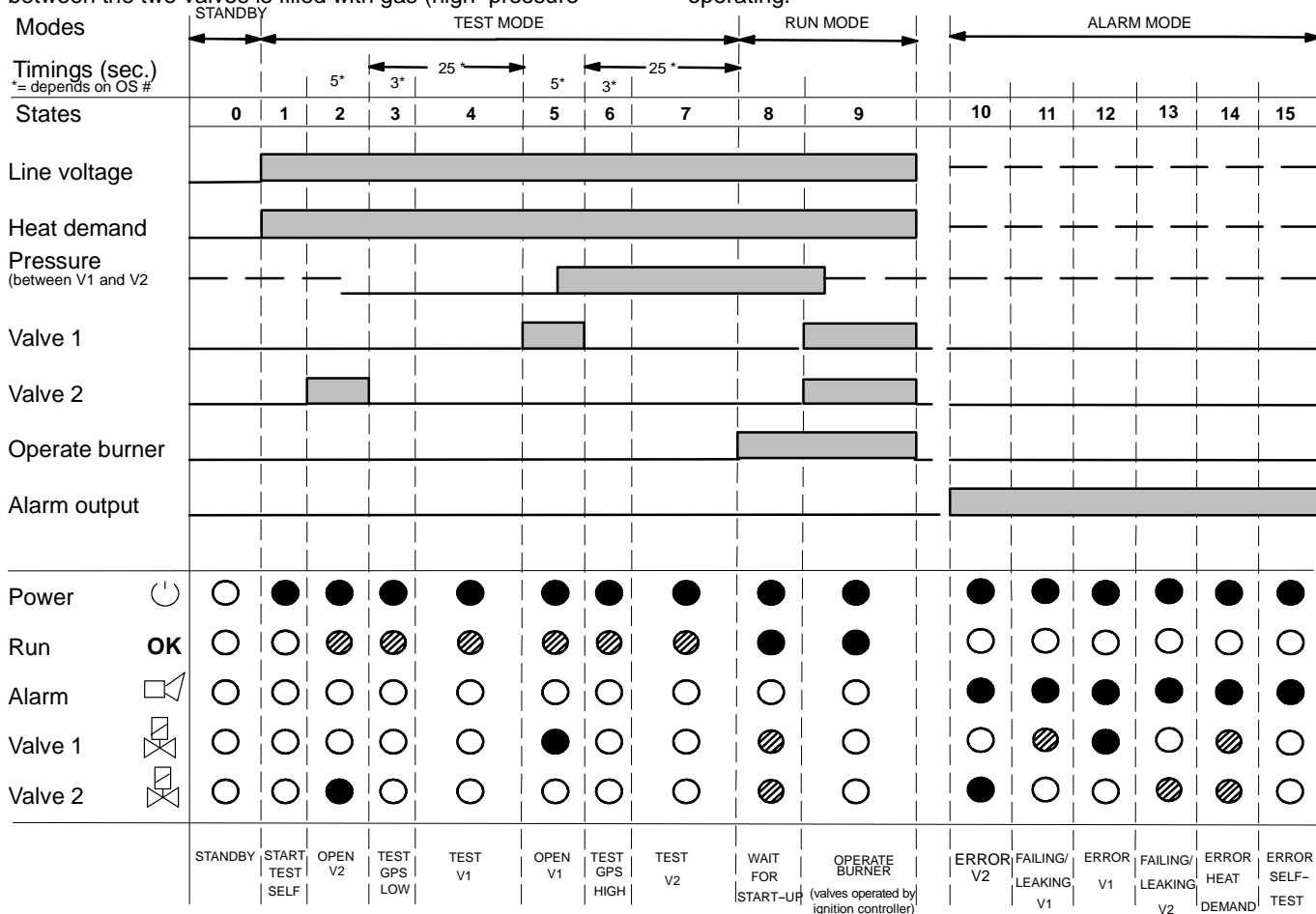


Fig. 29. Sequence and LED indication of A4021 display

Capacity curves

VE4000, VEN4000 AND VG4000 SERIES

Table 38. Capacity in m³/h air at $\Delta p = 2,5$ 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

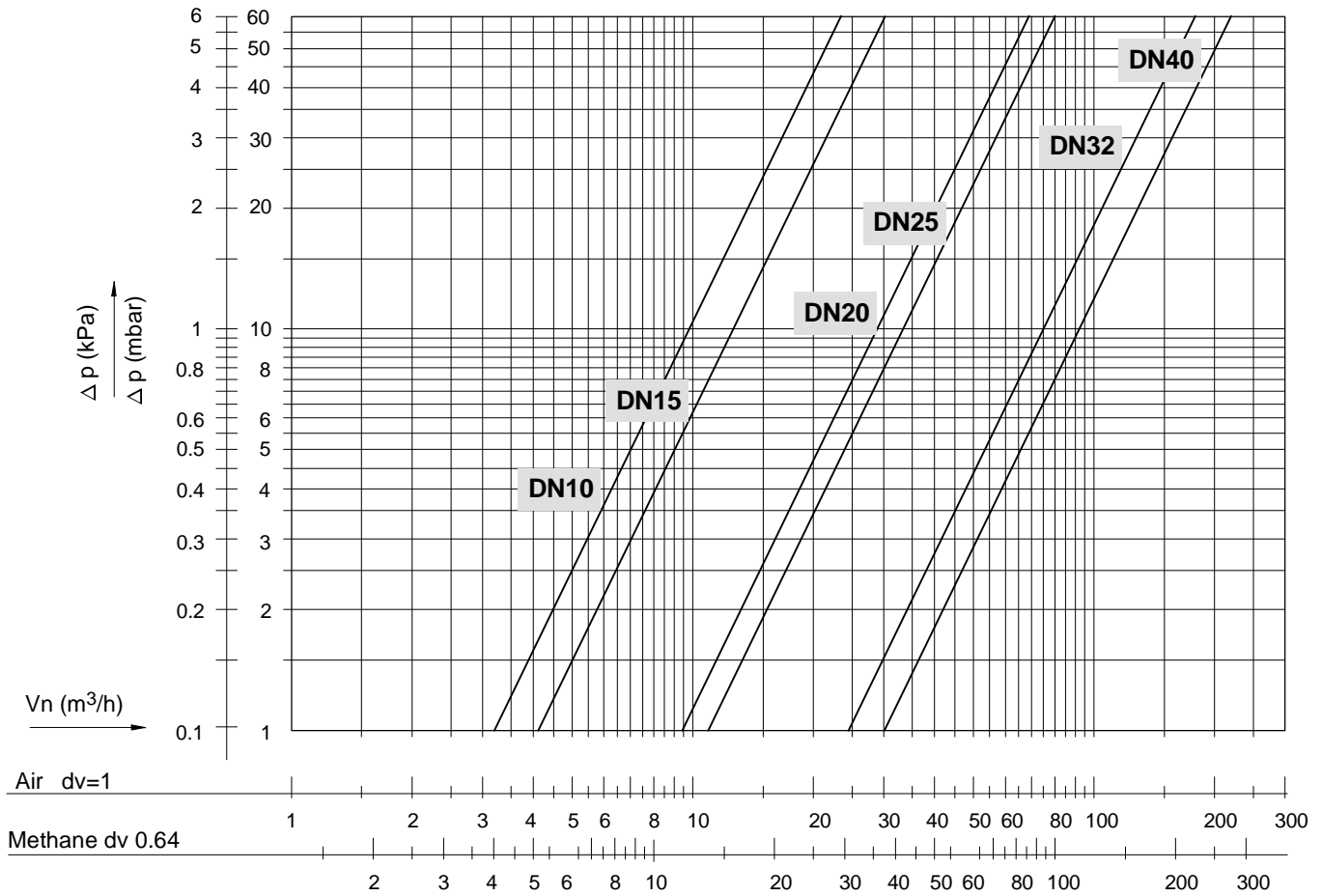


Fig. 30. Capacity curves for VE400, VEN4000 and VG4000 Series (threaded connections)

Tavola 39. Capacity in m³/h air at $\Delta p = 2,5$ mbar (SG=1 at 1013 mbar, 15°)

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

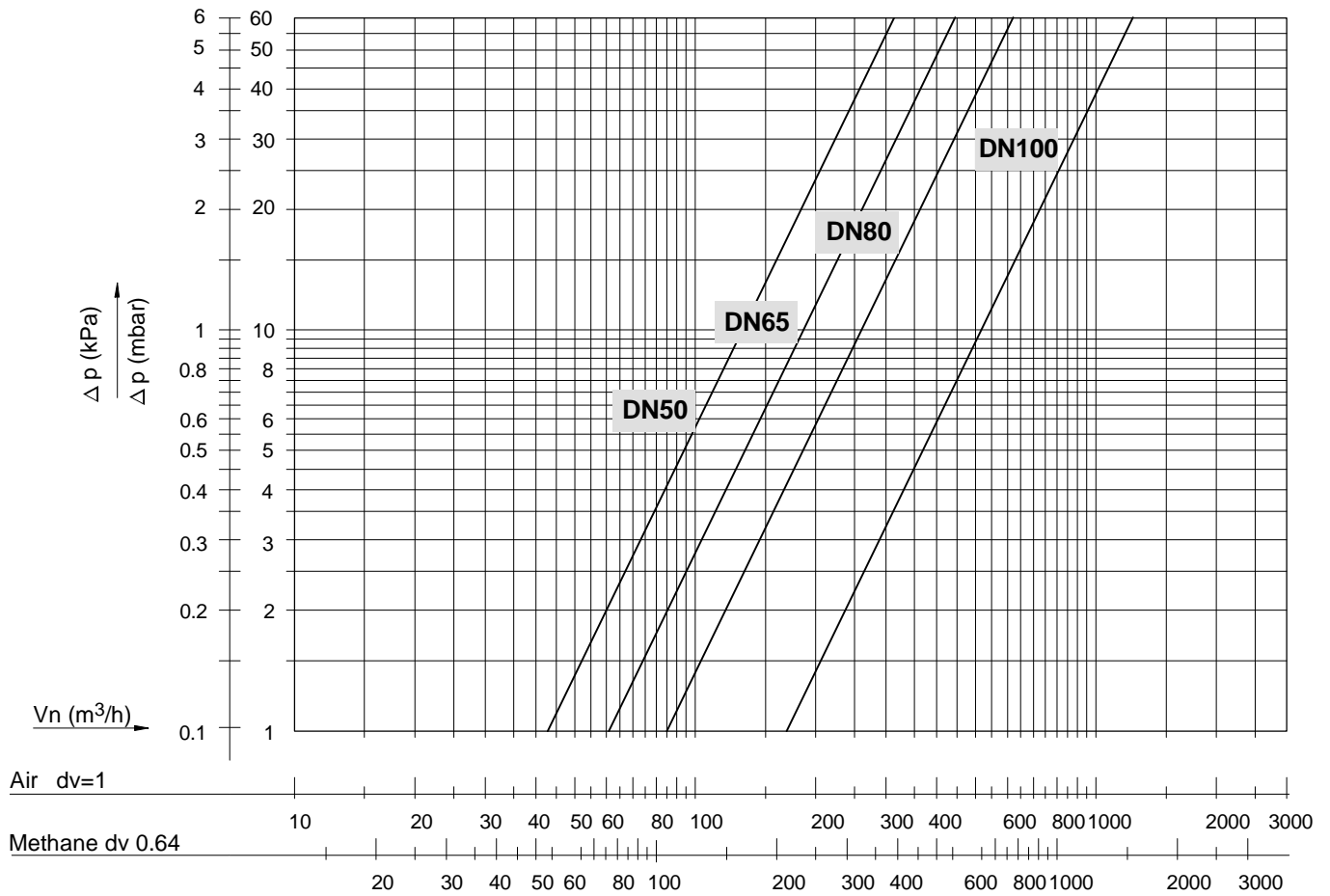


Fig. 31. Capacity curves for VE4000, VEN4000 and VG4000 Series (threaded and flanged)

VG400AA/VG400SA SERIES

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

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

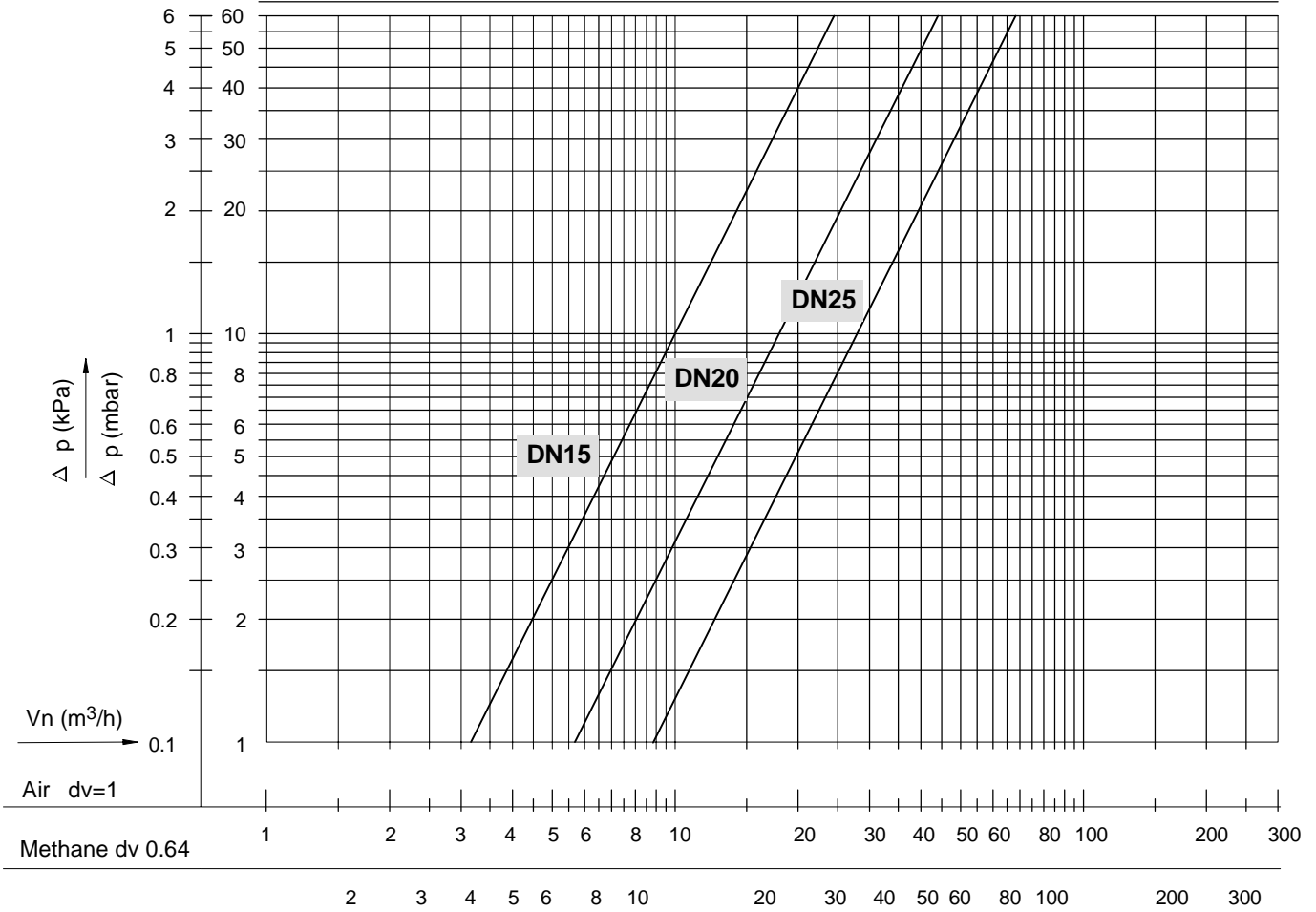


Fig. 32. Capacity curves for VG400AA/VG400SA Series

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.)

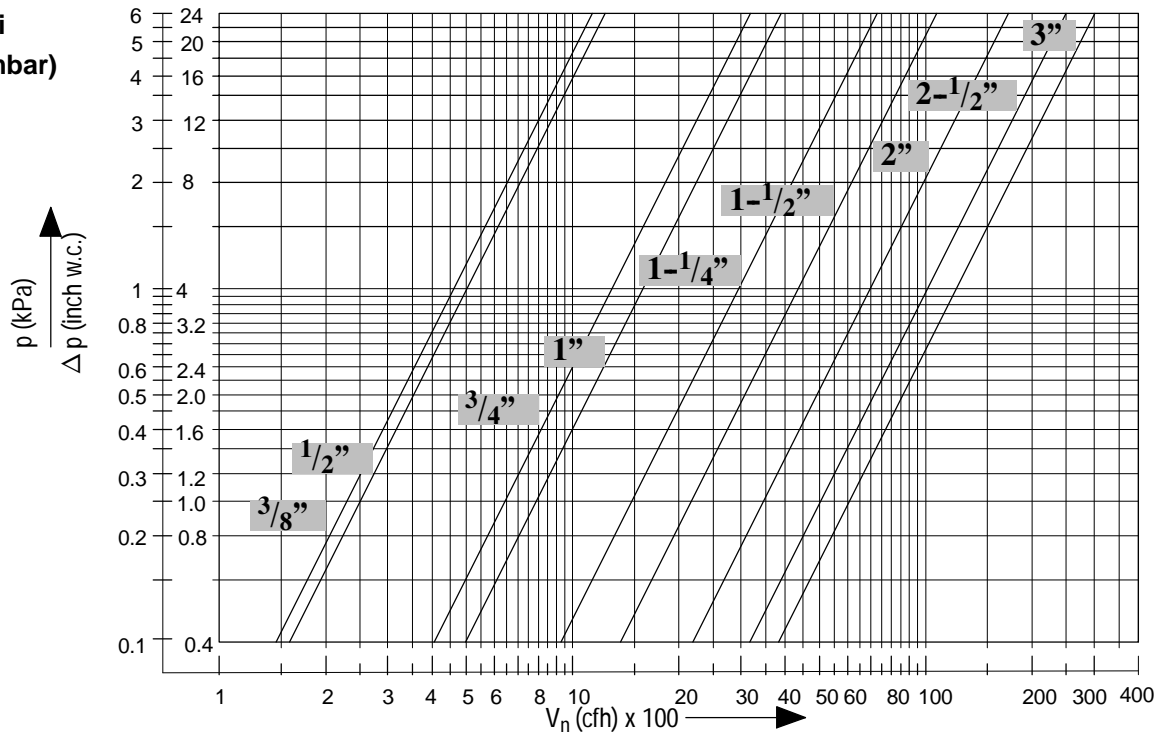
Maximum operating pressure (mbar)	3/8" DN10	1/2" DN15	3/4" DN20	1" DN25	1 1/4" DN32	1 1/2" DN40	2" DN50	2 1/2" DN65	3" DN80*
2 psi	230	250	645	790	1,450	2,190	3,465	5,070	6,100
5 psi	210	290	610	825	1,950	2,270	3,740	-	-

* 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

2.0 psi
(140 mbar)



5.0 psi
(350 mbar)

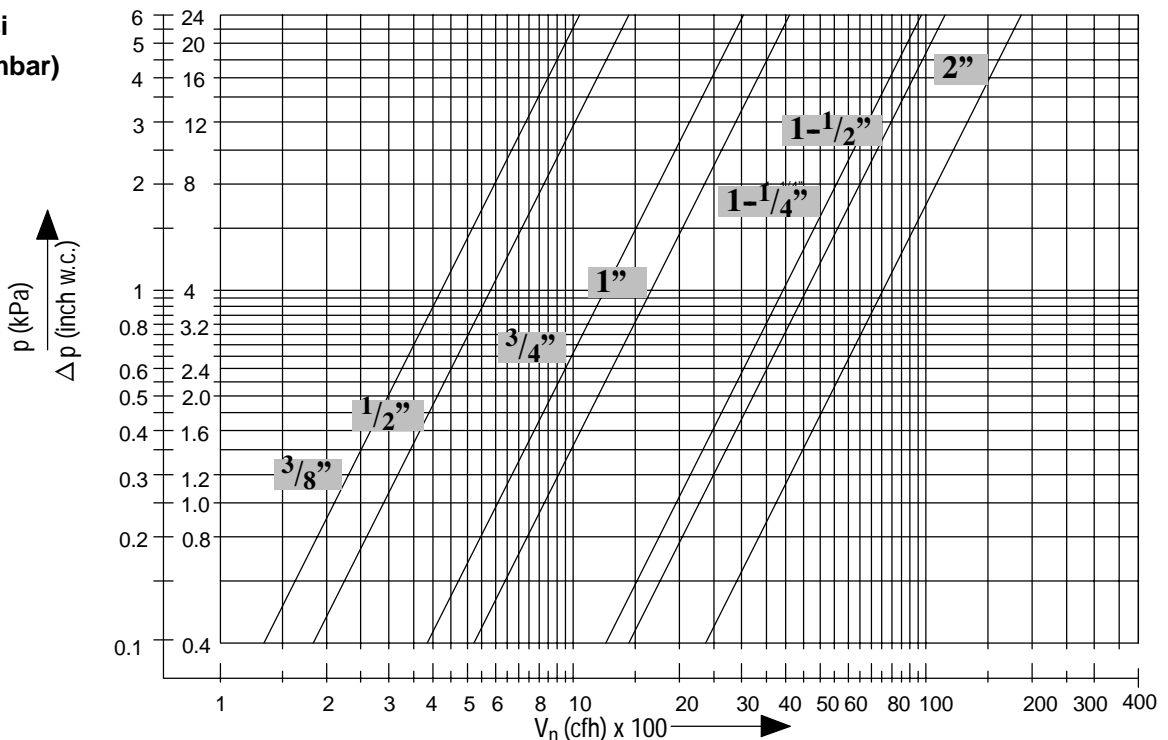


Fig. 33. Capacity curves for V4295, V8295A Series Normally closed safety shut-off valve

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 Δp = 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 Δp = 2,5 mbar (SG=1 at 1013 mbar, 15°)

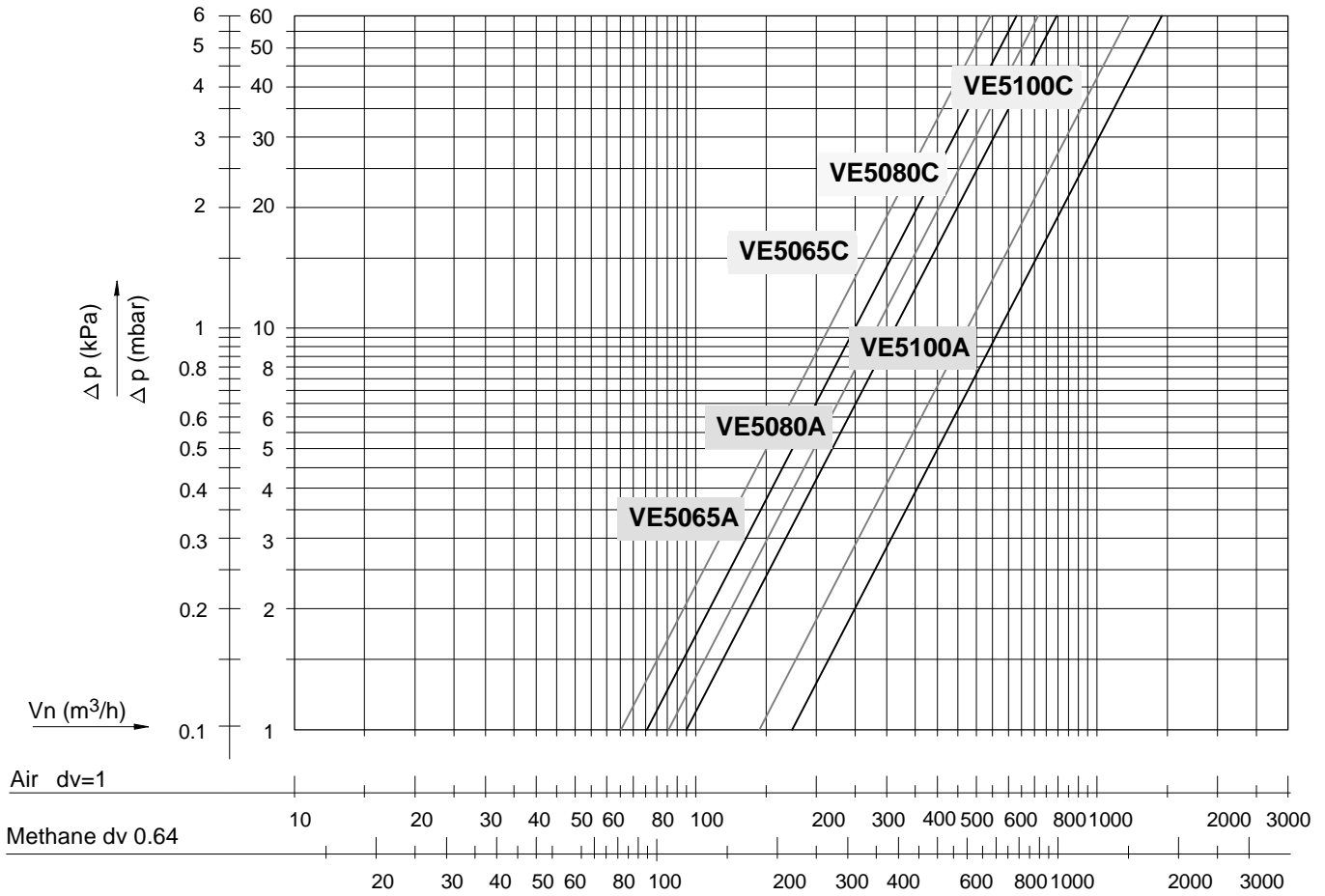


Fig. 34. Capacity curves for VE5000A Series

VQ400 SERIES

Table 45. Capacity in m³/h air at $\Delta p = 2,5$ 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

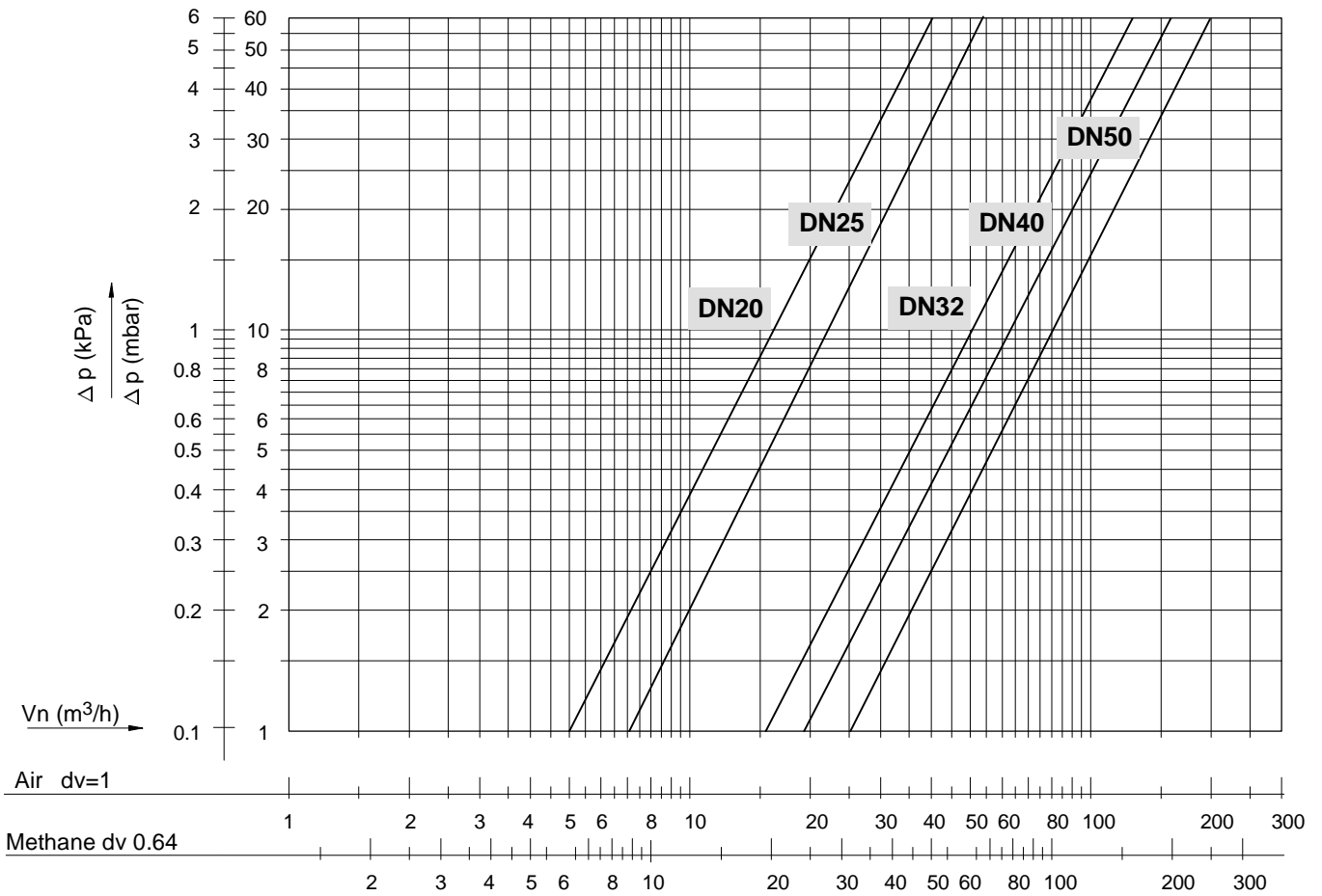


Fig. 35. Capacity curves for VQ400 Series combination valve

VT4000 SERIES

Table 46. Capacity in m³/h air at $\Delta p = 2,5 \text{ mbar}$ (SG=1 at 1013 mbar, 15°)

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

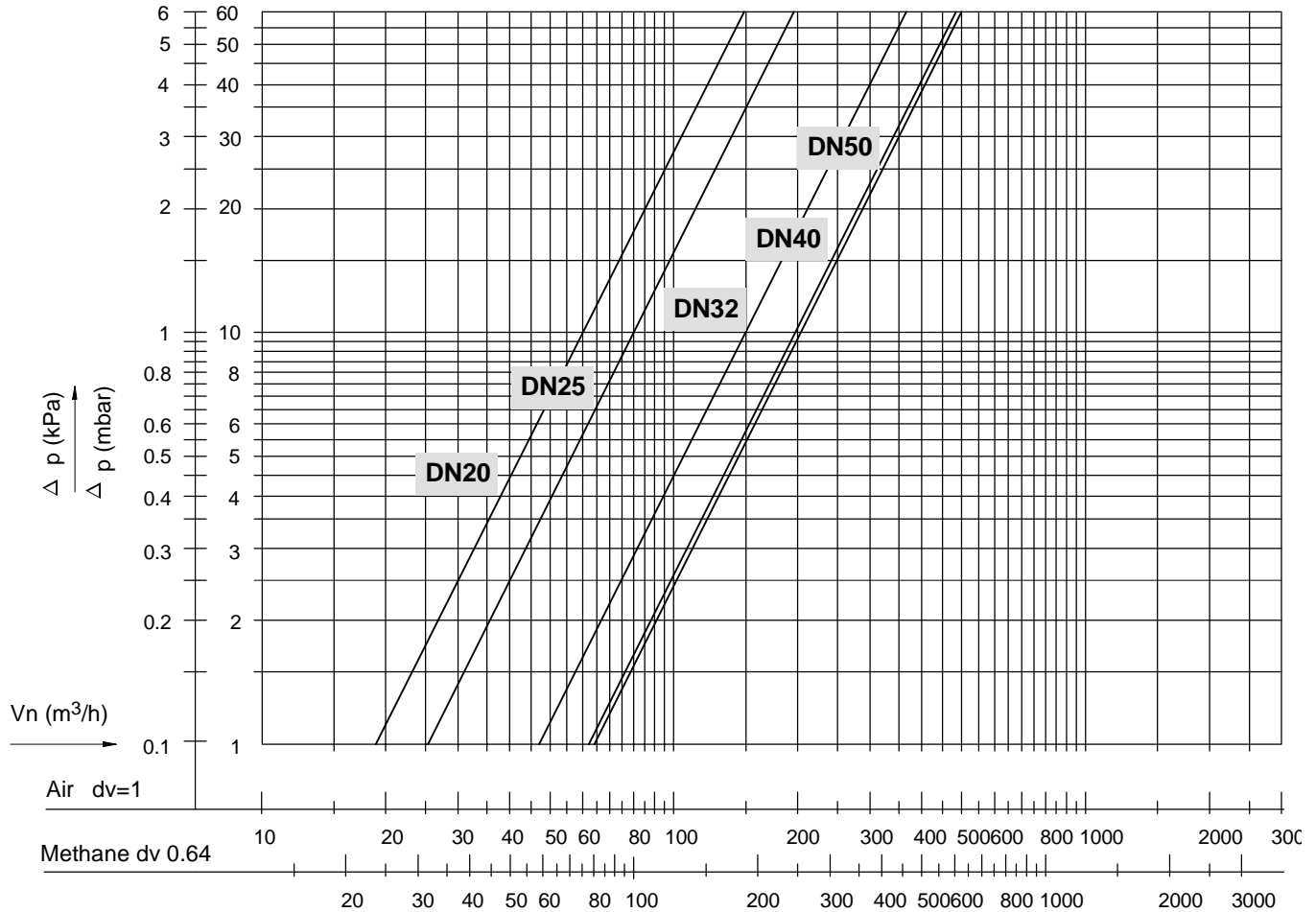


Fig. 36. Capacity curves for VT4000 Series motorized throttle valve

VF5000A SERIES

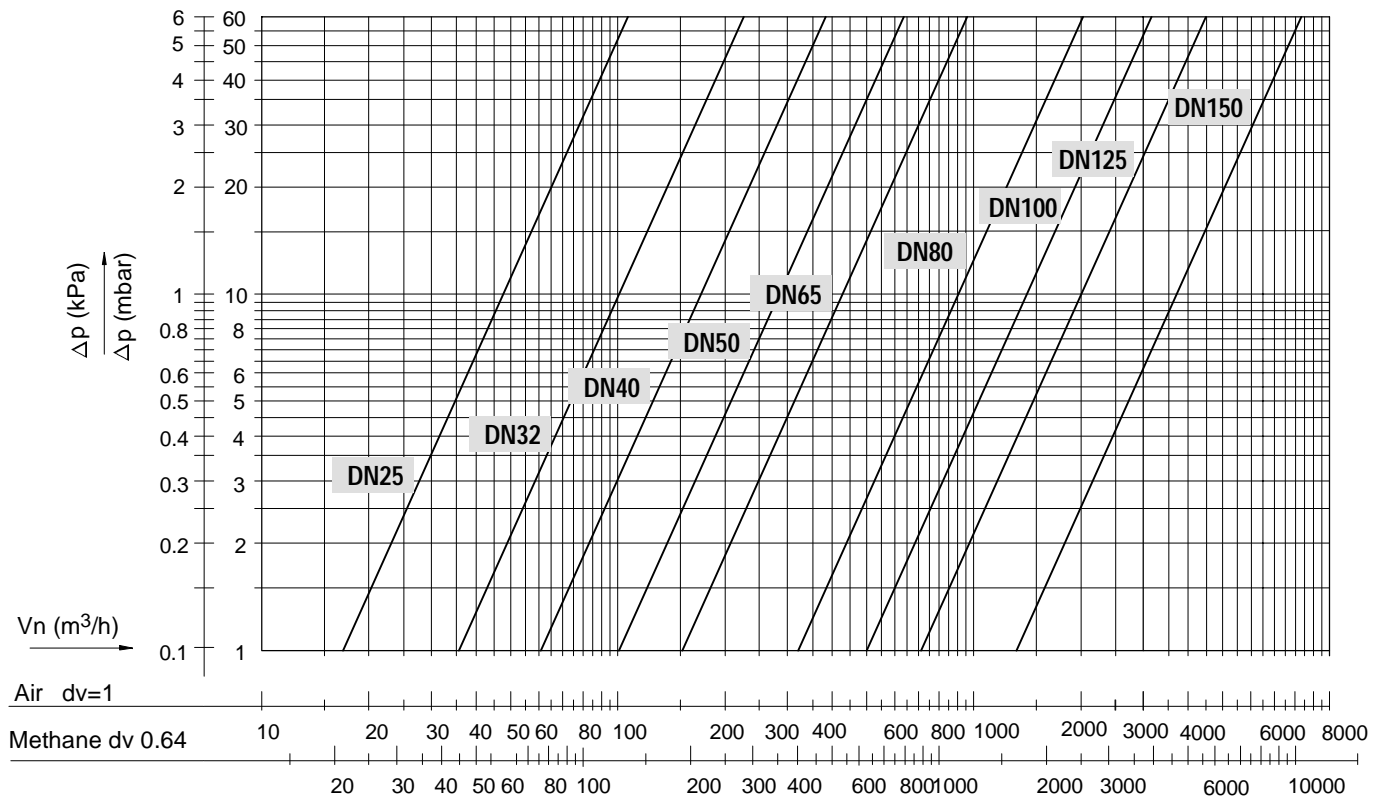


Fig. 37. Capacity curves for VF5000A Series butterfly valves

VF5000R SERIES

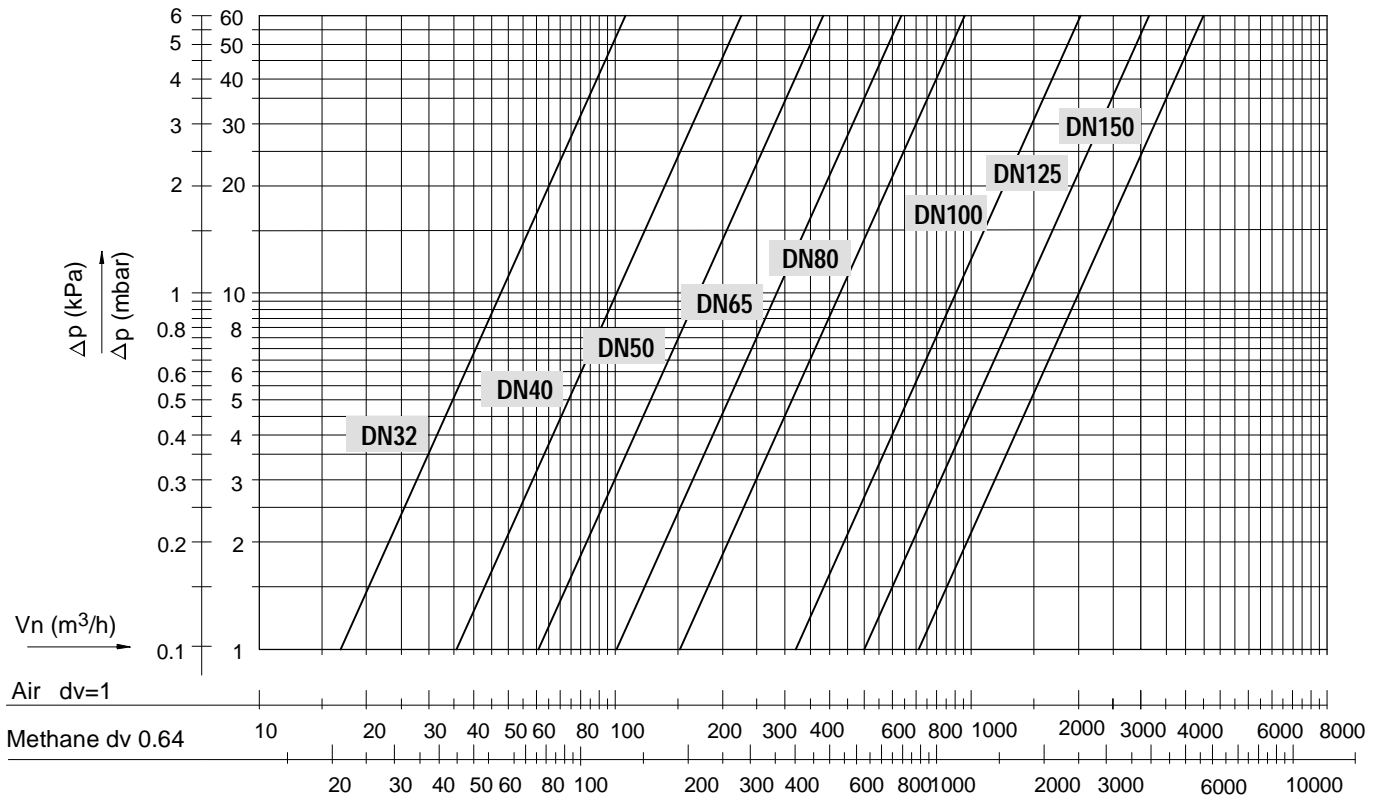


Fig. 38. Capacity curves for VF5000R Series butterfly valves with reduced capacity

HUPF/HUP SERIES

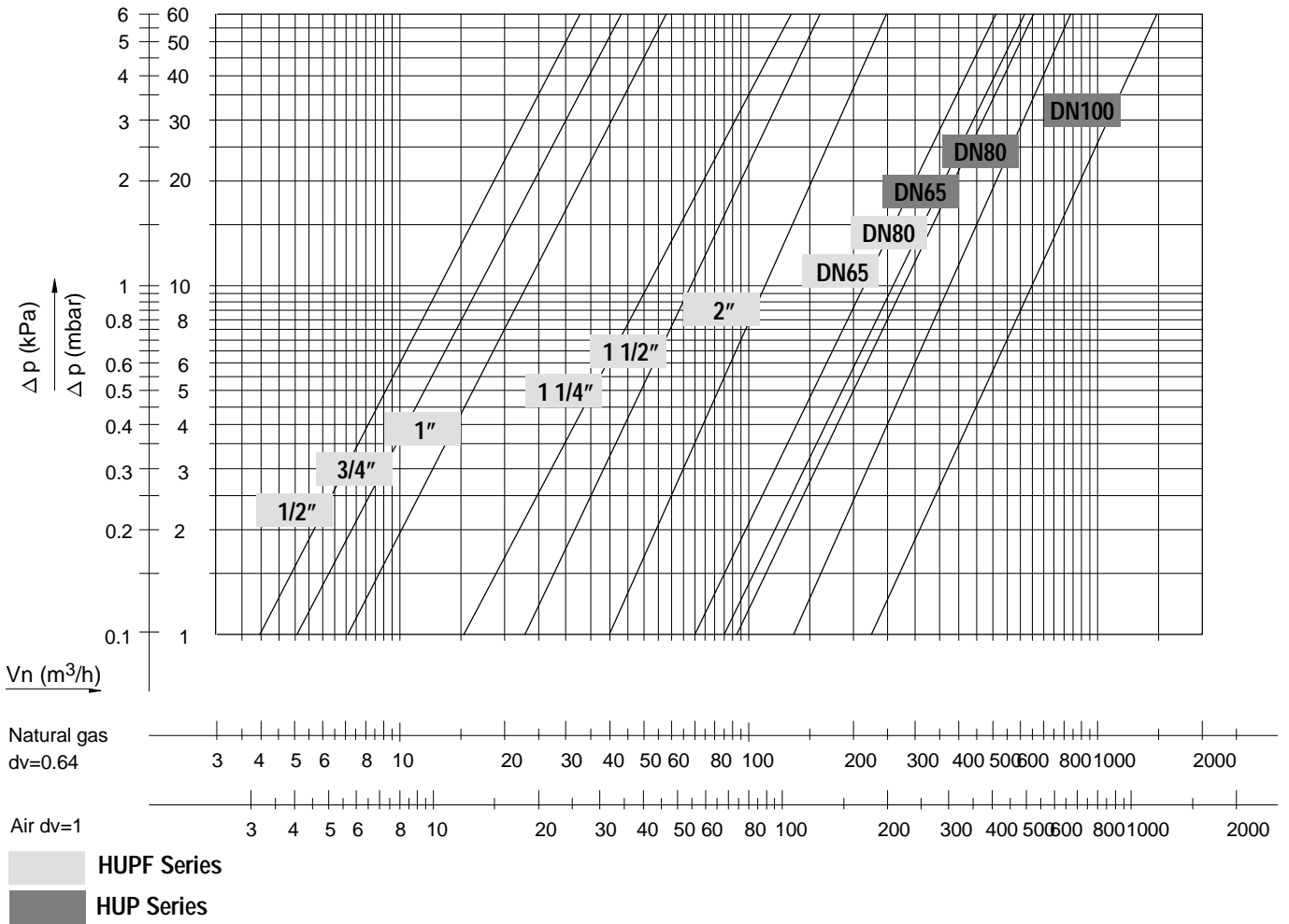


Fig. 39. Capacity curves HUPF/HUP Series pressure regulators

HUF SERIES

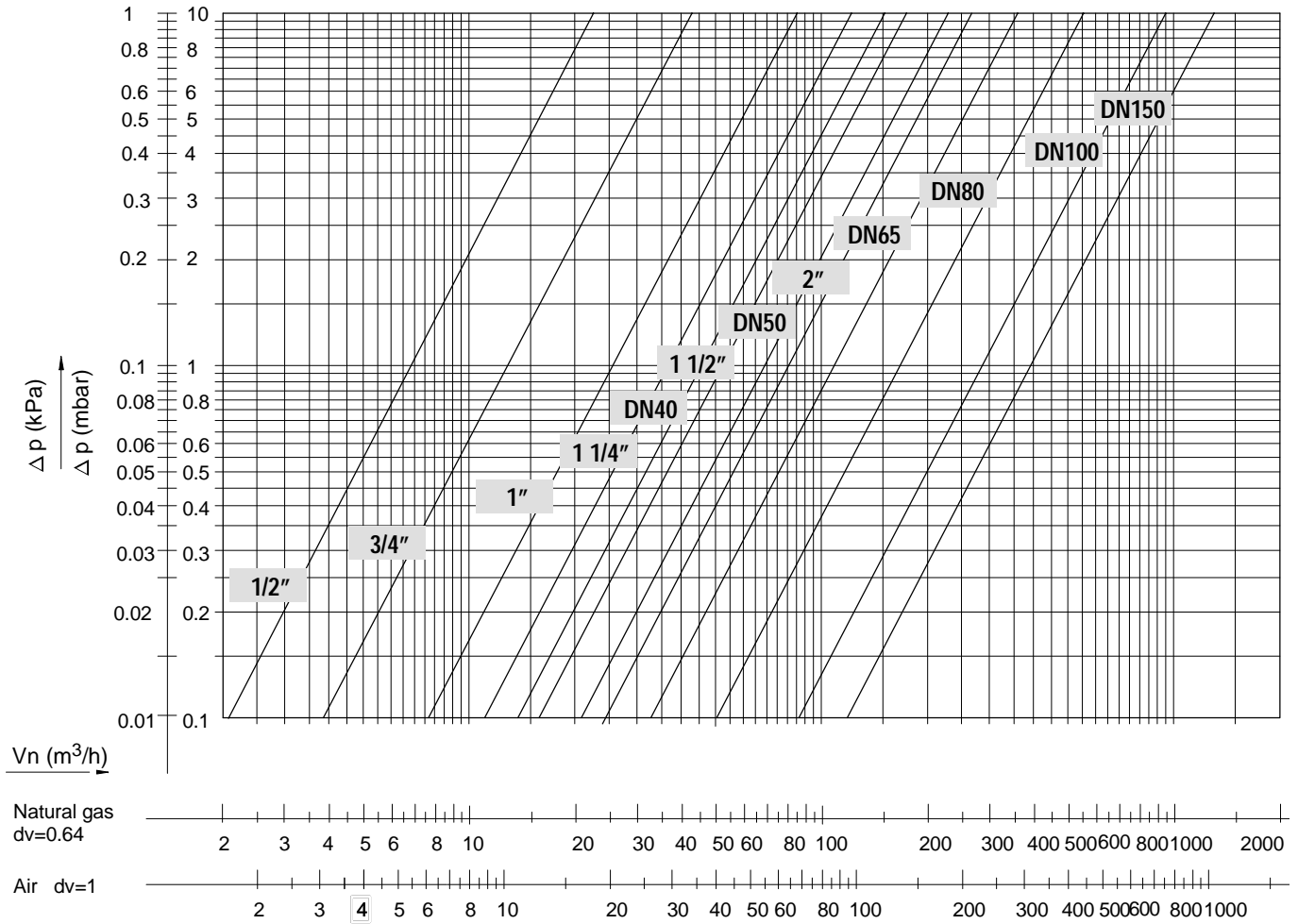


Fig. 40. Capacity curves HUF Series gas filters

Replacement parts & Accessories

COILS FOR VE4000 SERIES

Table 47. Coils for VE4000 Series

Model	O.S. number	Rated voltage (Vac)	Rated Voltage (Vac)		Packing Quantity
			200 mbar	360 mbar	
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
VE4050A	BB052303	220 ... 240	•		1
	BB052307	220 ... 240		•	1
	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
	VE4065A	BB052365	220 ... 240	•	
BB051165		110	•		1
VE4010B/C & VE4015B/C & VE4020S & VE4025S	BB152301	220 ... 240	•		1
	BB151101	110	•		1
	BB152401	24	•		1
VE4020B/C & VE4025B/C	BB152325	220 ... 240	•	•	1
	BB151125	110	•	•	1
	BB152425	24	•		1
	BB152825	24 ... 28 Vdc	•		1
VE4032B/C & VE4040B/C	BB152340	220 ... 240		•	1
	BB152326	220 ... 240	•		1
	BB151140	110	•		1
	BB151103	110		•	1
	BB152440	24	•		1
	BB152840	24 ... 28 Vdc	•		1
VE4050B/C	BB152303	220 ... 240		•	1
	BB152340	220 ... 240	•		1
	BB151103	110	•		1
	BB151152	110		•	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
VG4100B3	BB151180	110	•		1
	BB151105	110		•	1
	BB052200	220 ... 240	•		1
	BB052202	220 ... 240		•	1
VG4100B3	BB051100	110	•		1
	BB051111	110		•	1

COILS FOR VG4000A

Table 48. Coils for VG4000 Series

Model	O.S. number	Rated Voltage (Vac)	Rated Voltage (Vac)		Packing Quantity
			360 mbar	500 mbar	
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)	Rated Voltage (Vac)		Packing Quantity
			200 mbar	360 mbar	
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 VG4020S2 VG4025S2	BB020076	220	1
	BB020078	24Vdc	1
	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 VG420AA VG425AA	BB020120	220 ... 240	•	1
	BB020124	110	•	1
	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 VG420SA VG425SA	BB020125	220 ... 240	•	1
	BB020126	110	•	1
	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	
	BB152841	24 ... 28 Vdc	•		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

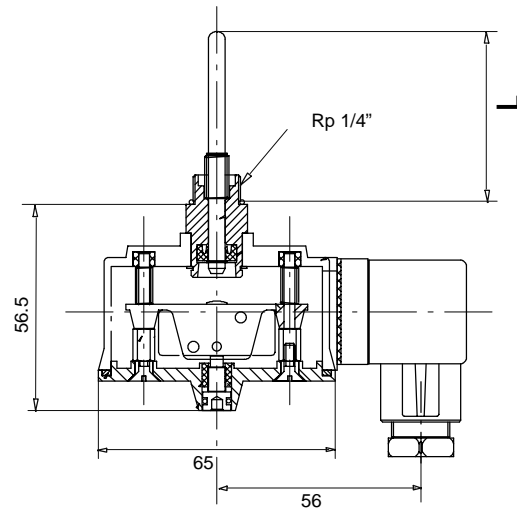


Fig. 41. Dimensional drawing CPI switch

NOTES