

VS8 SERIES 2-WAY/ 3-WAY FCU CONTROL VALVE

SCOPE OF APPLICATION

VS8 series FCU control valves can be used in residential and office buildings to control the continuity of cold and hot fluids. The FCU control valve is made up of two parts: electric actuator and valve body.

VS8 series FCU control valve offers a wide range of voltages and screw thread connection standards for different regions. There are two-way and three-way valves to cover most of the building control applications.



Technical Specification

Actuator

Operating Voltages:	220Vac±10%, 110Vac±10% 24Vac±10% 50/60Hz
Control mode	Spring Return, Port "A" - Open
Working temperature:	0~50°C
Working relative humidity	10%~90%RH, non-condensating
Power consumption:	≤7VA
Leak-rate:	0.05%Kvs
Nominal Timing	Open: ≤20s Shut: ≤15s
Protection rating:	IP20

Valve

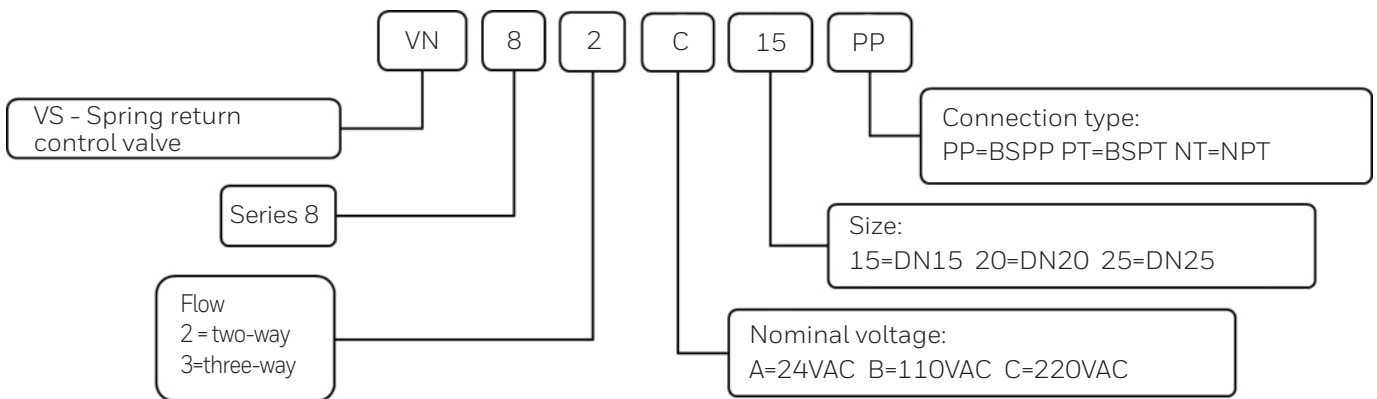
Applicable medium	cold or hot water or 50% glycol solution
Fluid temperature:	0~94°C
Operating temperature	0~50°C
Nominal pressure	PN20
Leakage rate:	0.05%kvs
Materials	Valve body: HPb59-2 Valve rod: HPb59-2 Valve flap: EPDM

Ordering Part Numbers

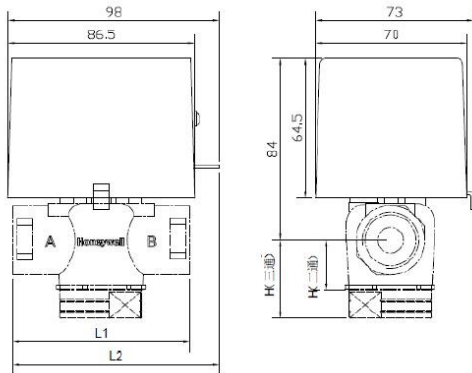
Part Number	Voltage	Flow	Size (diameter)	Connection Type	Nominal Flow Rating (Kvs)	CLOSE-OFF (PSI)
VS82C15PP	220Vac±10%	2	DN15, 1/2"	BSPP	1.7±10%	65
VS82C15PT	220Vac±10%	2	DN15, 1/2"	BSPT	1.7±10%	65
VS82C15NT	220Vac±10%	2	DN15, 1/2"	NPT	1.7±10%	65
VN82C20PP	220Vac±10%	2	DN20, 3/4"	BSPP	2.3±10%	50
VN82C20PT	220Vac±10%	2	DN20, 3/4"	BSPT	2.3±10%	50
VN82C20NT	220Vac±10%	2	DN20, 3/4"	NPT	2.3±10%	50
VN82C25PP	220Vac±10%	2	DN25, 1"	BSPP	3.1±10%	30
VN82C25PT	220Vac±10%	2	DN25, 1"	BSPT	3.1±10%	30
VN82C25NT	220Vac±10%	2	DN25, 1"	NPT	3.1±10%	30
VN83C15PP	220Vac±10%	3	DN15, 1/2"	BSPP	1.7±10%	65
VN83C15PT	220Vac±10%	3	DN15, 1/2"	BSPT	1.7±10%	65
VN83C15NT	220Vac±10%	3	DN15, 1/2"	NPT	1.7±10%	65
VN83C20PP	220Vac±10%	3	DN20, 3/4"	BSPP	2.7±10%	50
VN83C20PT	220Vac±10%	3	DN20, 3/4"	BSPT	2.7±10%	50
VN83C20NT	220Vac±10%	3	DN20, 3/4"	NPT	2.7±10%	50
VN83C25PP	220Vac±10%	3	DN25, 1"	BSPP	3.5±10%	30
VN83C25PT	220Vac±10%	3	DN25, 1"	BSPT	3.5±10%	30
VN83C25NT	220Vac±10%	3	DN25, 1"	NPT	3.5±10%	30

Note: For other models, please consult our product department

Product Identification System

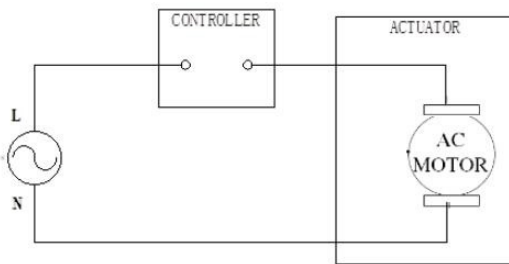


DIMENSION (mm)



Part Number	DIMENSION (mm)		
	L1	L2	H
VS82X15XX	64	87	23
VS82X20XX	82	96	23
VS82X25XX	88	99	26
VS83X15XX	64	87	30
VS83X20XX	82	96	36
VS83X25XX	88	99	41

WIRING DIAGRAM



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**VS8 SERIES 2-WAY/
 3-WAY
 FCU CONTROL VALVE**

Honeywell

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Working relative humidity	10%~90%RH, non-condensating
Power consumption:	≤7VA
Leak-rate:	0.05%Kvs
Nominal Timing	Open: ≤20s Shut: ≤15s
Protection rating:	IP20

Valve

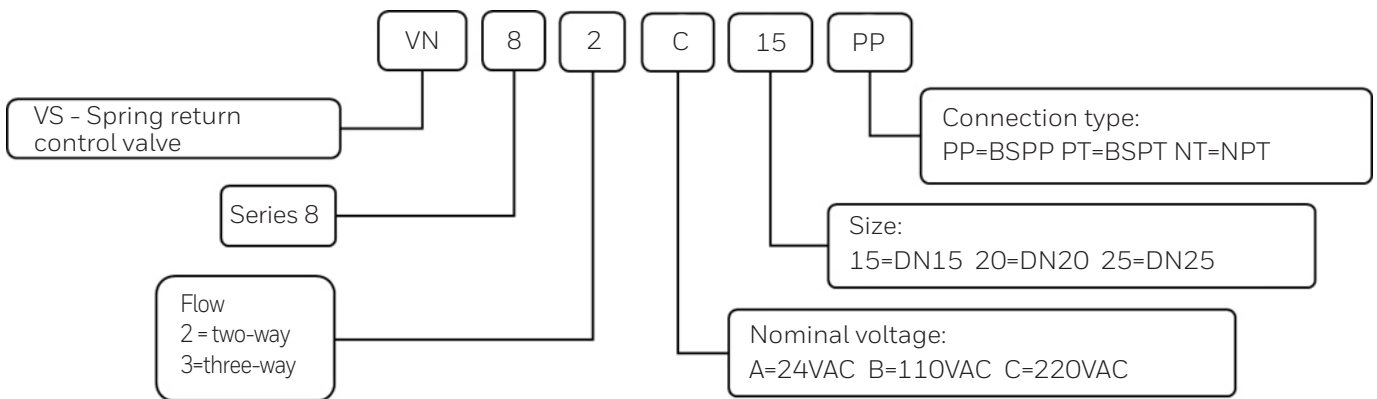
Applicable medium	cold or hot water or 50% glycol solution
Fluid temperature:	0~94°C
Operating temperature	0~50°C
Nominal pressure	PN20
Leakage rate:	0.05%kvs
Materials	Valve body: HPb59-2 Valve rod: HPb59-2 Valve flap: EPDM

Ordering Part Numbers

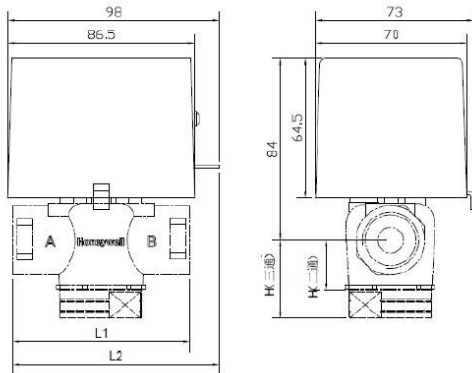
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VS82C15PT	220Vac±10%	2	DN15, 1/2"	BSPT	1.7±10%	65
VS82C15NT	220Vac±10%	2	DN15, 1/2"	NPT	1.7±10%	65
VN82C20PP	220Vac±10%	2	DN20, 3/4"	BSPP	2.3±10%	50
VN82C20PT	220Vac±10%	2	DN20, 3/4"	BSPT	2.3±10%	50
VN82C20NT	220Vac±10%	2	DN20, 3/4"	NPT	2.3±10%	50
VN82C25PP	220Vac±10%	2	DN25, 1"	BSPP	3.1±10%	30
VN82C25PT	220Vac±10%	2	DN25, 1"	BSPT	3.1±10%	30
VN82C25NT	220Vac±10%	2	DN25, 1"	NPT	3.1±10%	30
VN83C15PP	220Vac±10%	3	DN15, 1/2"	BSPP	1.7±10%	65
VN83C15PT	220Vac±10%	3	DN15, 1/2"	BSPT	1.7±10%	65
VN83C15NT	220Vac±10%	3	DN15, 1/2"	NPT	1.7±10%	65
VN83C20PP	220Vac±10%	3	DN20, 3/4"	BSPP	2.7±10%	50
VN83C20PT	220Vac±10%	3	DN20, 3/4"	BSPT	2.7±10%	50
VN83C20NT	220Vac±10%	3	DN20, 3/4"	NPT	2.7±10%	50
VN83C25PP	220Vac±10%	3	DN25, 1"	BSPP	3.5±10%	30
VN83C25PT	220Vac±10%	3	DN25, 1"	BSPT	3.5±10%	30
VN83C25NT	220Vac±10%	3	DN25, 1"	NPT	3.5±10%	30

Note: For other models, please consult our product department

Product Identification System

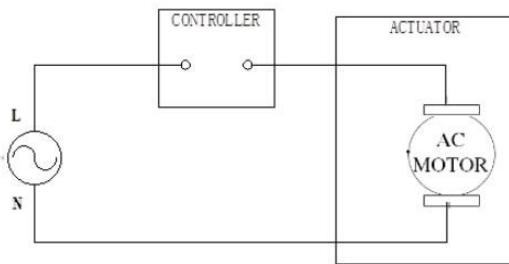


DIMENSION (mm)



Part Number	DIMENSION (mm)		
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WIRING DIAGRAM



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**VS8 SERIES 2-WAY/
 3-WAY
 FCU CONTROL VALVE**

Honeywell

V4-BLV SERIES MANUAL BALANCING VALVE

- Wide Size range (DN50-DN300)
- Operated by Hand Wheel
- Cast iron Body
- S.S Disc



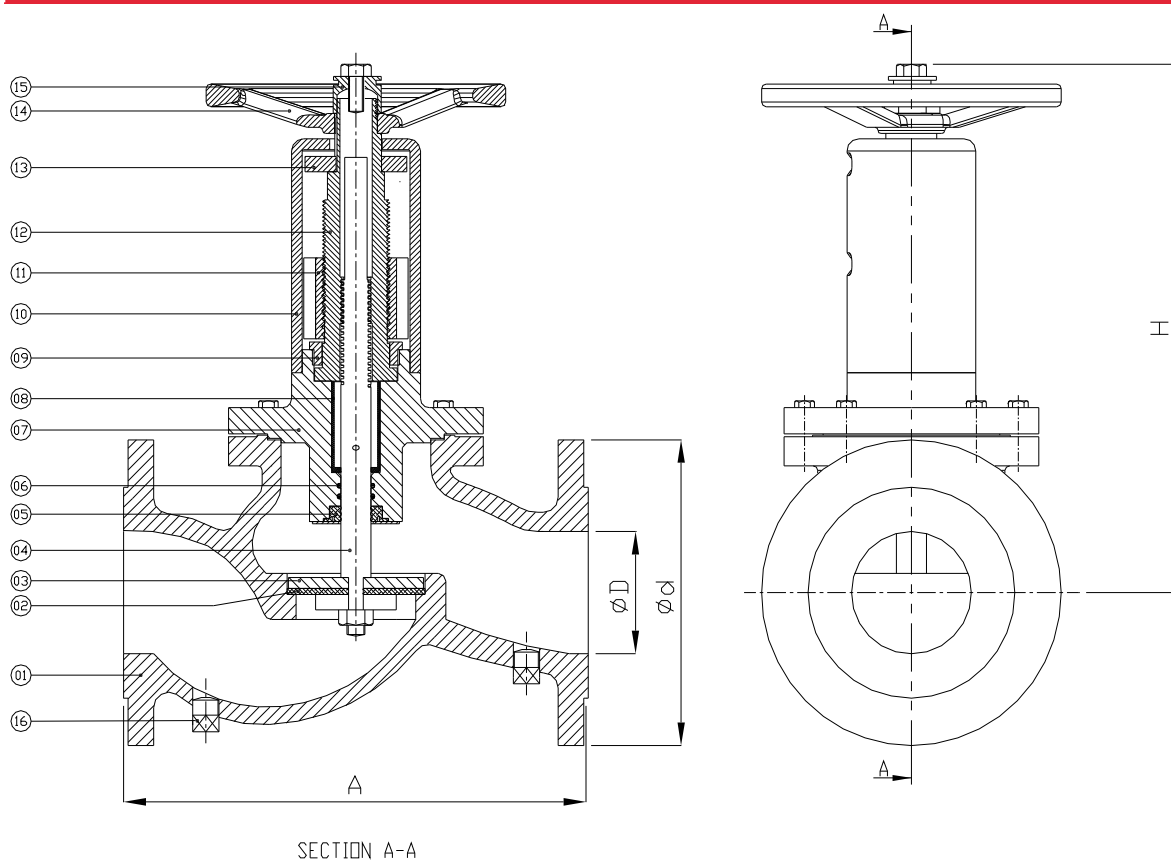
SYSTEM OVERVIEW

The Balancing Valves is designed for double regulating, control and shut off valve with built-in pressure drop measuring facility.

Technical Specification

Sizes	DN50-DN300
Nominal pressure	PN16
Medium Temperature	-10°C- +110°C Maximum
Body Material	IS:210, FG 220 CI
Stem Material	ASTM A276,GR SS 410
Disc Material	Stainless steel Disc
Hand Wheel	Cast Iron
Leakage Rate	No visible leakage
Medium Type	Water
Flange standard	IS1538
Shell Test pressure	24bar
Seal Test pressure	17bar

DIMENSIONS (mm)



Part Descriptions

PT No.	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Parts	Body	Seat	Disc	Stem	Seal	O-Ring	Bonnet	Guide	Check Nut	Cover	Scale-1	Balancing Nut	Scale-2	Hand Wheel	Nut	Plug
Material	IS:210 Gr FG200	EPDM	SS	SS410	EPDM	EPDM	IS:210 Gr FG200	Nylon	Brass	D.I	M.S	SS	IS:210 Gr FG200	IS:210 Gr FG200	M.S	M.S

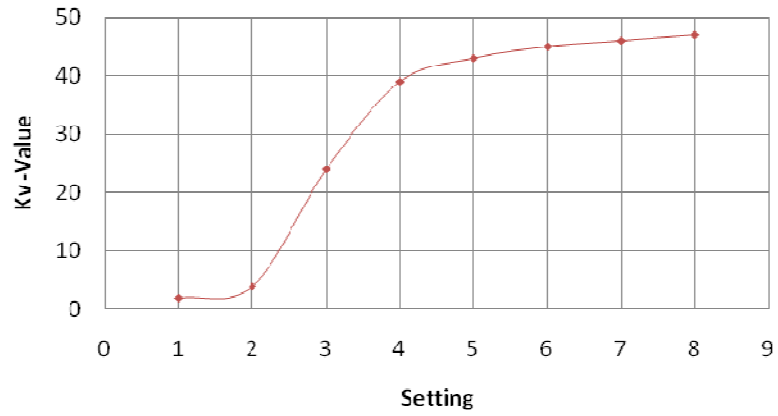
Outside Dimension (mm)

SIZE	50	65	80	100	125	150	200	250	300
A	230	290	310	350	400	480	600	730	850
H	218	223	355	275	290	370	415	535	565
ØD	50	65	80	100	125	150	200	250	300
Ød	165	185	200	220	250	285	340	405	460
PCD	125	145	160	180	210	240	295	350	400
No. of Holes	4	4	4	8	8	8	8	12	12
Hole dia.v	19	19	19	19	19	23	23	23	23
WHEEL Dia.	200	200	200	200	300	300	300	300	300

Balancing Valve DN50/PN16

Setting	Kv-value (m ³ /h)
1	2
2	4
3	24
4	39
5	43
6	45
7	46
8	47

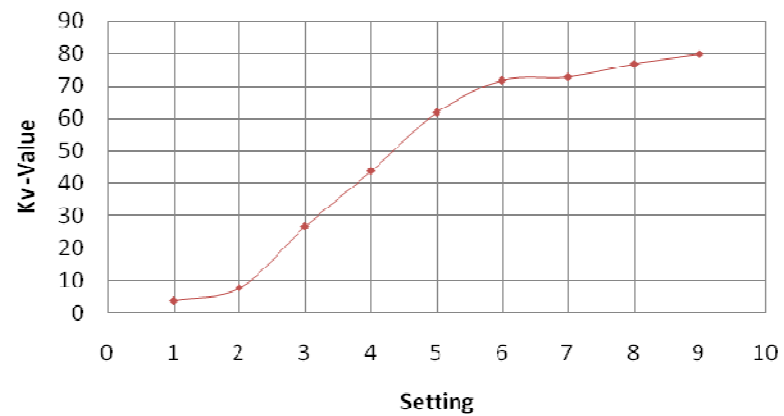
Flow characteristic



Balancing Valve DN65/PN16

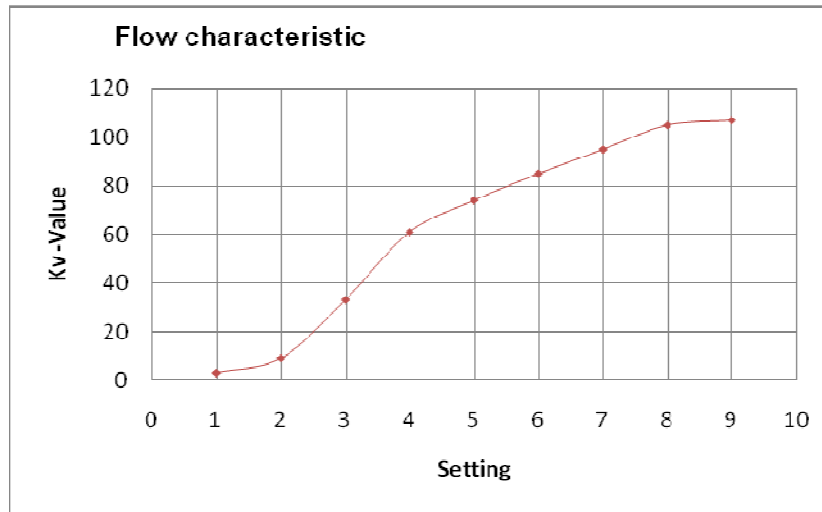
Setting	Kv-value (m ³ /h)
1	4
2	8
3	27
4	44
5	62
6	72
7	73
8	77
9	80

Flow characteristic



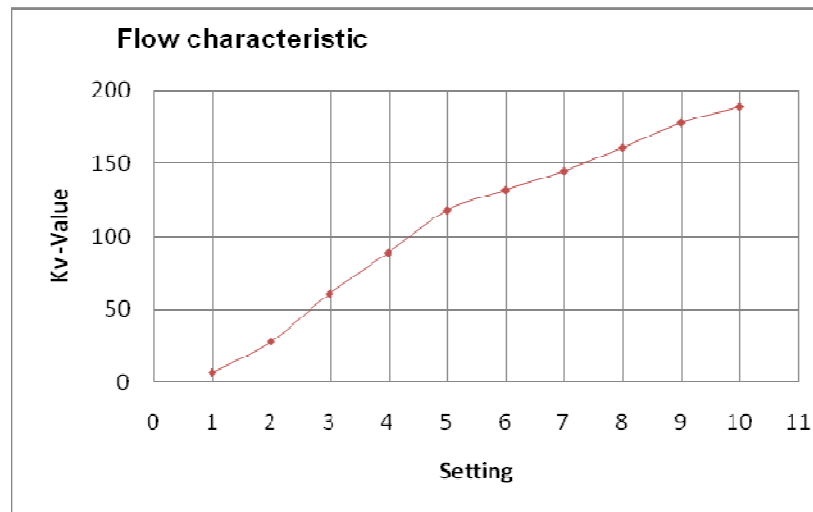
Balancing Valve DN80/PN16

Setting	Kv-value (m ³ /h)
1	3
2	9
3	33
4	61
5	74
6	85
7	95
8	105
9	107



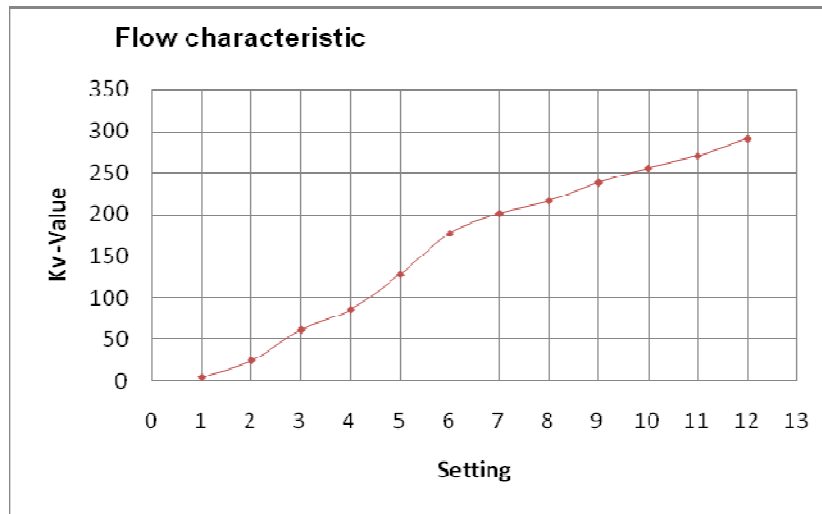
Balancing Valve DN100/PN16

Setting	Kv-value (m ³ /h)
1	6
2	20
3	55
4	70
5	105
6	132
7	145
8	161
9	178
10	190



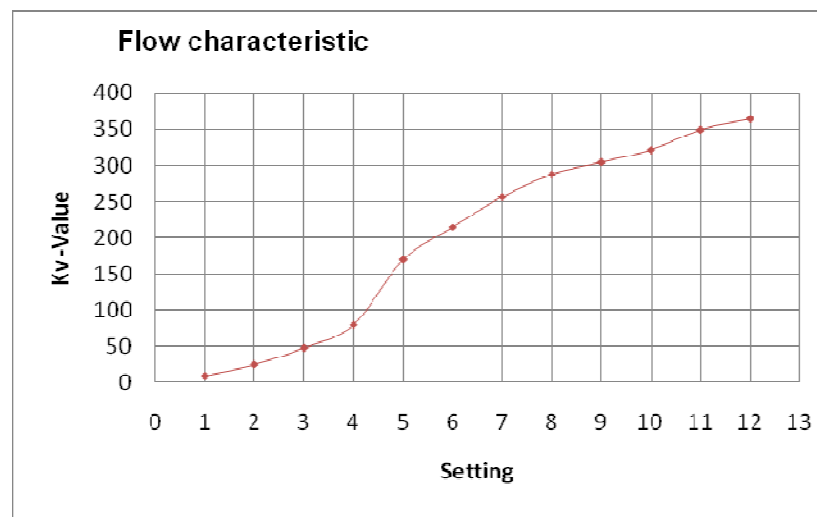
Balancing Valve DN125/PN16

Setting	Kv-value (m ³ /h)
1	5
2	25
3	62
4	86
5	128
6	177
7	201
8	216
9	238
10	255
11	270
12	290



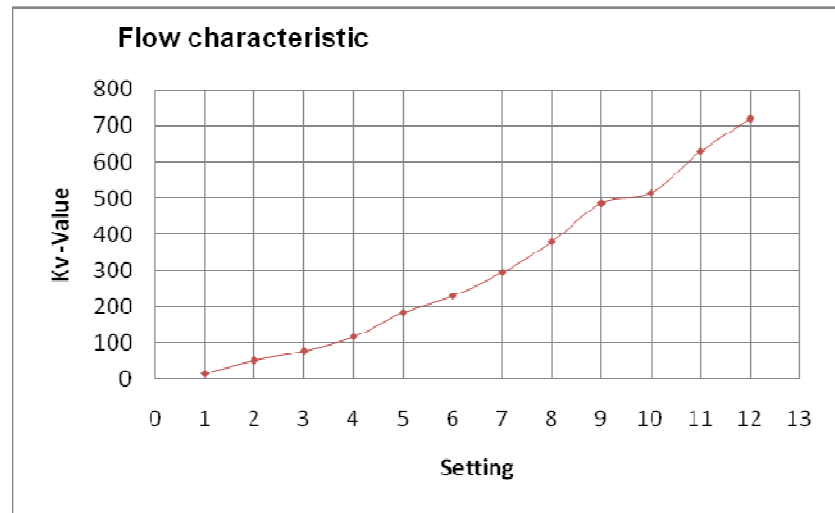
Balancing Valve DN150/PN16

Setting	Kv-value (m ³ /h)
1	9
2	25
3	48
4	80
5	170
6	215
7	257
8	288
9	305
10	322
11	350
12	365



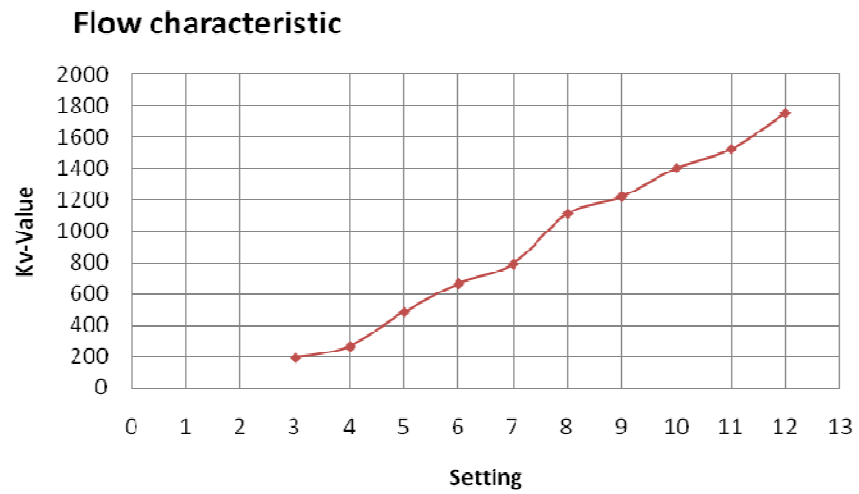
Balancing Valve DN200/PN16

Setting	Kv-value (m ³ /h)
1	15
2	52
3	78
4	117
5	184
6	230
7	295
8	380
9	487
10	515
11	630
12	720



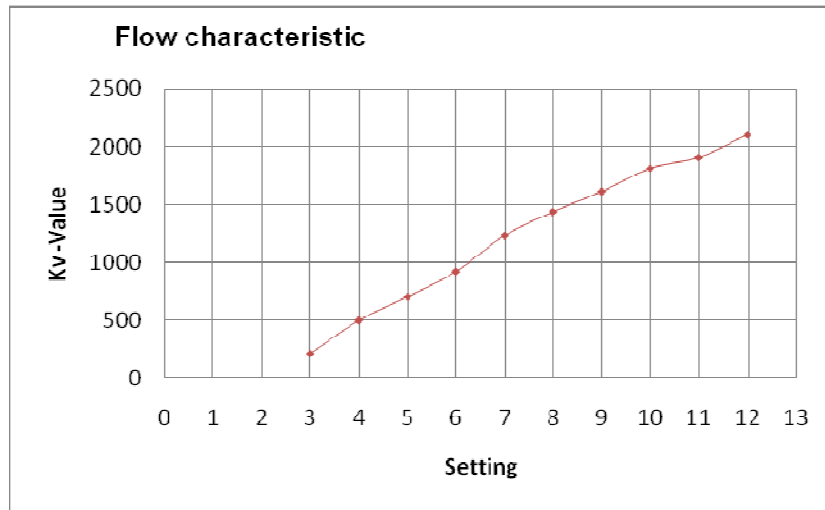
Balancing Valve DN250/PN16

Setting	Kv-value (m ³ /h)
3	192
4	265
5	485
6	665
7	790
8	1110
9	1220
10	1400
11	1520
12	1750



Balancing Valve DN300/PN16

Setting	Kv-value (m ³ /h)
3	215
4	502
5	705
6	923
7	1232
8	1438
9	1612
10	1811
11	1905
12	2100



Model Table

Size	Model Number	Description
DN50	V4-BLV-GP16-G050	DN50 Static Balancing valve, Hand Wheel, CI valve body, PN16
DN65	V4-BLV-GP16-G065	DN65 Static Balancing valve, Hand Wheel, CI valve body, PN16
DN80	V4-BLV-GP16-G080	DN80 Static Balancing valve, Hand Wheel, CI valve body, PN16
DN100	V4-BLV-GP16-G100	DN100 Static Balancing valve, Hand Wheel, CI valve body, PN16
DN125	V4-BLV-GP16-G125	DN125 Static Balancing valve, Hand Wheel, CI valve body, PN16
DN150	V4-BLV-GP16-G150	DN150 Static Balancing valve, Hand Wheel, CI valve body, PN16
DN200	V4-BLV-GP16-G200	DN200 Static Balancing valve, Hand Wheel, CI valve body, PN16

DN250	V4-BLV-GP16-G250	DN250 Static Balancing valve, Hand Wheel, CI valve body, PN16
DN300	V4-BLV-GP16-G300	DN300 Static Balancing valve, Hand Wheel, CI valve body, PN16

Note: valve sizes up to DN400 are also available. Please contact local sales for details.

For more information*

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V4-BLV SERIES
MANUAL BALANCING
VALVE

Honeywell

C7080A

TEMPERATURE/ HUMIDITY DUCT SENSOR

- Primary and/or secondary sensor for use with electronic control systems.
- Temp Sensor NTC10K, NTC20K, Pt1000.
- Operating range of 0 to 50°C.
- Mounts on a flat duct or plenum surface or, for a plenum-rated application, in a standard utility conduit box.
- Probe length of 300mm and a temperature sensor in the end.
- Rugged 14mm diameter stainless steel insertion probe.



SYSTEM OVERVIEW

The C7080A Air Temperature Sensor is a direct wired temperature sensor that is used to sense discharge or return air in a duct. The C7080A Sensor contains a temperature sensitive thermistor.

Models

OS Number	Temperature Sensor Type	Describe
C7080A1100	NTC10K	Temperature Only
C7080A2100	NTC20K	Temperature Only
C7080A3100	Pt1000	Temperature Only

Note: For humidity model, please refer to H7080 series.

Technical Specification

Temperature sensor range	0 to 50°C.
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Nominal value

NTC10K	10,000Ω@25°C
NTC20K	20,000Ω@25°C
Pt1000	1,000Ω@0°C

Accuracy

NTC10K	±0.2K at 25°C
NTC20K	±0.2K at 25°C
Pt1000	T = ±(0.3 + 0.005 x t) [t in °C] acc. to EN 60 751 Class B

Sensitivity

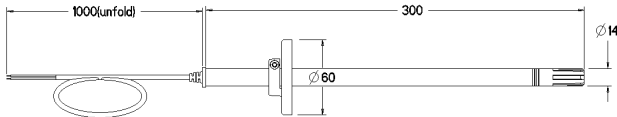
Pt1000	3.85Ω/K (between 0 and 100°C)
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Response time

t < 45s (63%, air velocity 5m/s)

Dimensions (mm):

Probe Length	300 mm.
Probe Diameter	14 mm.
Flange Diameter	60 mm.



Wiring:

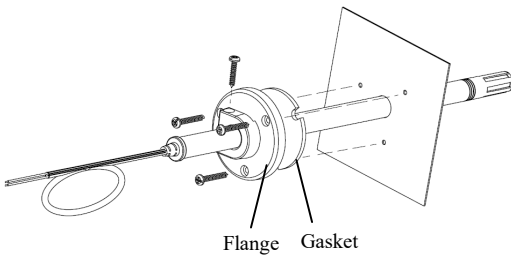
Offset for temperature sensor due to wire resistance per 10m distance from sensor to controller:

Wiring of Type	Pt1000	NTC
1.0mm ² (Awg18)	0.11K	negligible
0.5mm ² (Awg20)	0.18K	negligible
0.34mm ² (Awg22)	0.28K	negligible

Connect two terminals of the sensor to controller resistor input.

Note: Do not connect to power supply.

Installation:



- Drilling a mounting hole on the duct near measuring point.
- Use enclosed screws to install the flange and gasket on the duct. Insert the probe pipe into flange and duct.
- Fix the probe pipe on the flange by enclosed screw.

Note:

Mounts on flat duct or plenum surface or, for a plenum-rated applications, in a standard utility conduit box.

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Temperature Sensor Accuracy:

The C7080A1100 is furnished with a 10K ohm nonlinear NTC temperature sensor that follows a specific temperature- resistance curve. See Fig. 1.

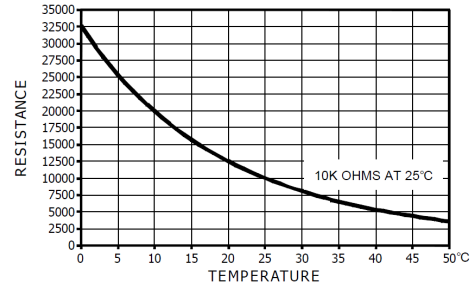


Fig. 1 NTC10K Temperature VS Resistance

The C7080A2100 is furnished with a 20K ohm nonlinear NTC temperature sensor that follows a specific temperature- resistance curve. See Fig. 2.

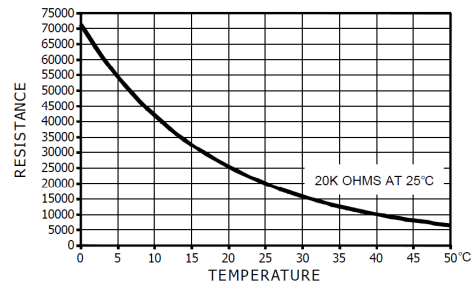


Fig. 2 NTC20K Temperature vs. resistance

The C7080A3100 is furnished with a 1000 ohm linear Platinum temperature sensor that follows a specific temperature- resistance curve. See Fig. 3.

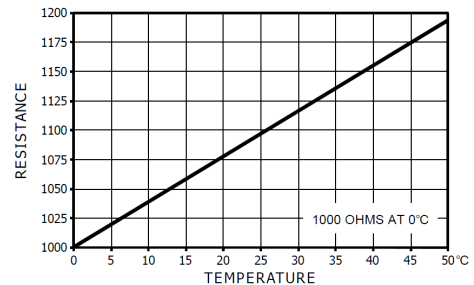


Fig. 3 PT1000 Temperature vs. resistance

Input Rating: 0.5 mA pulsed constant current.

Approvals:

CE.

IP54.

C7080A
TEMPERATURE/HUMIDITY
DUCT SENSOR


Honeywell

CO SERIES GD250 CO TRANSMITTER

- 4~20 mA, / 2~10 VDC Mod-bus output
- Option for Electrochemical sensor
- LCD display option for both Space
- Various mounted types selectable
- CO range is selectable in one model
- High reliability & accuracy
- Wide sensing range
- Rapid response



Technical Specification

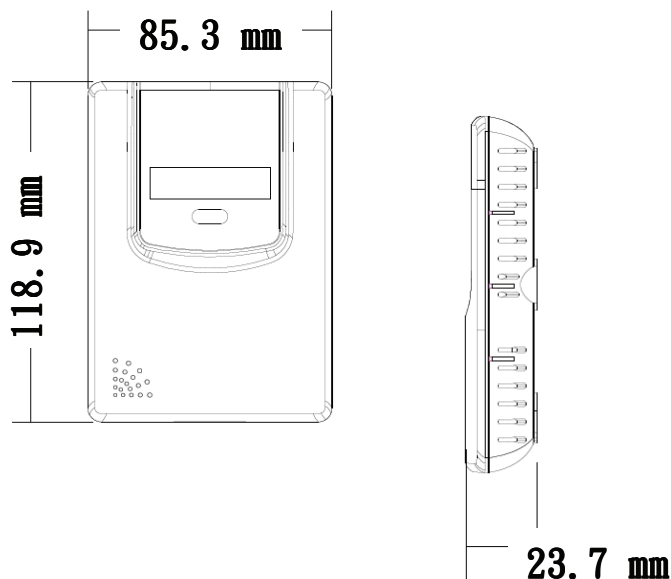
CO Sensor:	Electrochemical
Measurement:	0~ 250ppm
Signal Output:	4~20mA , 2~10VDC Modbus RTU
Accuracy:	+/-5% FS @25C. 50% RH for 0~100 ppm +/- 10% FS @25C. 50%RH for 100~ 250 ppm
Coverage area:	465m ² (recommended)
Relay contact setting	50 ppm /100 ppm /150 ppm
Relay output	isolated N.O. & N.C.
Power Supply:	2A,30V up to 0.5A, 125V dc/ac. Power Supply: 24 VAC/VDC (12~36V)
Current Output Load	500 Ohm Max
Working temperature:	Room type -10°C ~ +50°C 5% ~ 95% RH without condensation
Certification:	 Report No.
Housing Material:	Plastic (ABS) Flame retarded acc. to UL94-V1
Protection Standard:	Room type IP30 Calibration: Factory calibrated

APPLICATION

CO series Transmitters are designed for use with building automation, energy management, and computer monitoring systems. These sensors can be used for parking lot, tunnel and under ground places.

Appearance and Dimension (Dimension in mm)

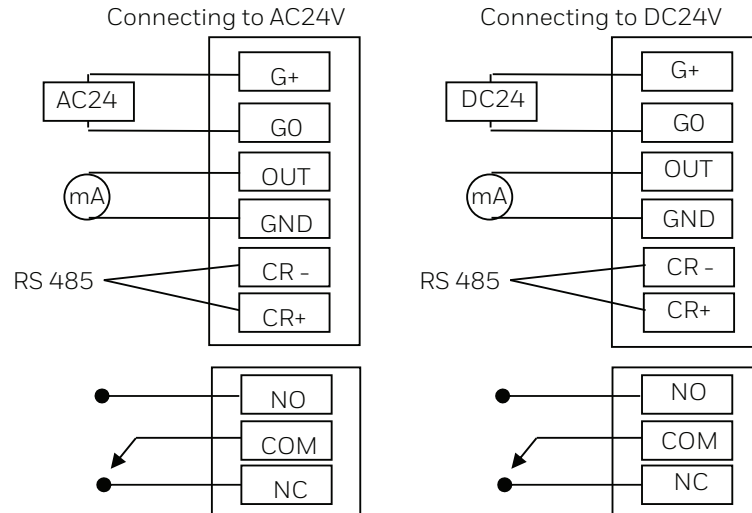
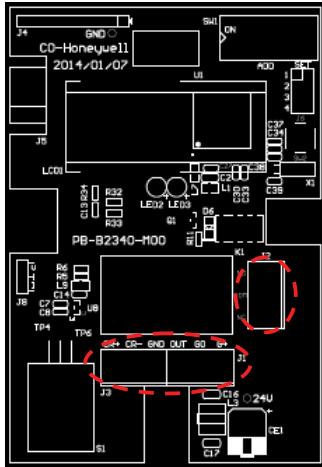
Space mount Transmitter



Model Selection

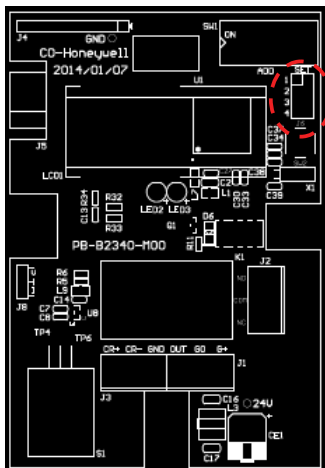
GD250W3E	CO Detector, 0~250ppm, Relay output
GD250W4E	CO Detector, 0~250ppm, 4~20mA / 2~10VDC output
GD250W4N	CO Detector, 0~250ppm, LCD, 4~20mA / 2~10VDC , Modbus, Relay output

WIRING



1.	G+	AC/DC 12~36V
2.	G0	System GND
3.	OUT	4~2mA / 2~10V
4.	GND	Singal GND
5.	NO	Normally opened
6.	COM	Com
7.	NC	Normally closed
8.	CR -	RS485 CR (-)
9.	CR +	RS485 CR (+)

RELAY CONTACT SETTING



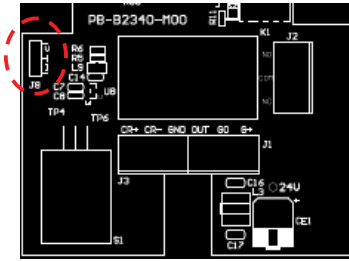
Jumper setting

1. Relay contact setting :

- set 1: pre-set at 50 ppm with hysteresis of 10ppm.
- set 2: pre-set at 1,00 ppm with hysteresis of 10ppm.
- set 3: pre-set at 1,50 ppm with hysteresis of 10ppm

Relay Output	Set 1	Set 2
Relay contact setting 50 ppm	1	1
Relay contact setting 100 ppm	1	0
Relay contact setting 150 ppm	0	1
Arbitrary density setting mode	0	0

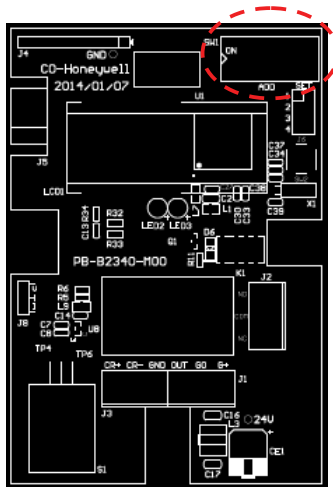
Outputs mode



J8, J9 are used to select 4~20mA / 2~10V linear outputs mode.

Output Configurations	JP8
4~20 mA	
2~10 V	

Device ID Selection



Device ID (ON =1 , OFF = 0)					
1	1000 0000		165	1010 0101	
2	0100 0000		195	1100 0011	
55	1110 1100		197	1010 0011	
100	0010 0110		200	00010011	
125	1011 1110		254	0111 1111	
127	1111 1110		255	1111 1111	

PROTOCOL

Baud Rate = 9600 Word Length = 8 Parity = none Stop Bits = 1⁰

Data Reading Type

	Device ID	Function	Address	Data Length	Error Check
CO ppm	01	03	0001	0001	XXXX

Responding Data Type

	Device ID	Function	Data byte	CO ₂ ppm	Error Check
CO ppm	01	06	02	0064	XXXX

** Remark 1

XXXX is the CRC16 checksum (Check Sum) ** Remark 2

CO₂ resulting data in hex.

The resulting data is 0x0064 into decimal, ie 100 ppm.

To Open the Wall Mounted Housing

Figure 1.. Closed housing seen from above
The housing is opened by pressing a screw driver into the lock opening slot.



Figure 2.. By pressing a flat screw-driver
Into the opening slot,the two locking hook
would be released.



INSTALLATION GUIDE FOR DUCT MOUNT SENSOR OR TRANSMITTER :

- Drilling a mounting hole with diameter 13mm on the duct near measuring point. Insert the probe pipe into duct.
- Unscrew & open the front cover of the product.
- Use enclosed screws to install the wiring box on the duct.
- Lead wire from DDC or PLC panel through opening by using a properly sized screw driver to connect each wire to the terminals of the transducer module according to field wiring diagram.
- Put front cover back and tighten front cover by screw.
- Use a properly sized screw driver to connect the lead wires to the terminals.

INSTALLATION GUIDE FOR WALL MOUNT SENSOR OR TRANSMITTER :

- Remove the front cover and place the back panel to the desired location.
- Attaching the enclosed screws to the back panel.
- Place the front cover to the back panel.
- Keep the sensor or transmitter away direct sun light, heat source and cold source.
- The recommended location of wall mount sensor or transmitter is 1.5M above the ground.

For more information,

<https://honeywellbuildings.in>

Call: 1-800-103-0339

Email: HBT-Indiabuildings@honeywell.com

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**CO SERIES
GD250
CO TRANSMITTER**

Honeywell

D15S PRESSURE REDUCING VALVE

DIAPHRAGM-ACTUATED WITH CARTRIDGE INSERT

- Inlet pressure balancing – no influence on outlet pressure by fluctuating inlet pressure
- Patented cartridge solution for easy assembly and maintenance
- Three cartridge inserts for all nominal widths make warehousing efficient
- High corrosion resistance due to stainless steel cartridge and PA coating
- The adjustment spring is not in contact with the drinking water
- With inlet and outlet pressure gauge
- Functionality and performance have been confirmed by an accelerated life test with over 400,000 cycles (requirement acc. to EN1567: 200,000 cycles)
- Conforms to BSEN 1567
- All materials are UBA conform
- All materials are ACS approved

APPROVALS

- DVGW
- WRAS (up to 23°C)
- KIWA (DN65-DN100)
- SVGW (DN65-DN100)

Technical Specification

Media

Medium	Drinking water
Optional medium	Compressed air*1 acc. ISO 8573-1 class 2 in consideration of valid standards (e.g. EN 12502)

Connections/Sizes

Connection sizes:	2", 2 1/2", 3", 4", 6", 8"
Nominal sizes:	DN50, DN65, DN80, DN100, DN150, DN200
	DN125 available with adapter flanges DN100/DN125



APPLICATION

According EN 806-2 pressure reducing valves of this type protect household water installations against excessive pressure from the supply. They can also be used for industrial or commercial applications within the range of their specification.

By installing a pressure reducing valve, pressurisation damage is avoided and water consumption is reduced. The set pressure is also maintained constant, even when there is wide inlet pressure fluctuation.

Reduction of the operating pressure and maintaining it at a constant level minimizes flow noise in the installation. DIAPHRAGM-ACTUATED WITH CARTRIDGE INSERT

Pressure values

Max. inlet pressure	16 bar
Outlet pressure	DN 50 - 100: 1.5 - 7.5 bar DN 150 - 200: 1.5 - 8 bar
Nominal pressure	PN 16
Min. pressure drop	1.0 bar

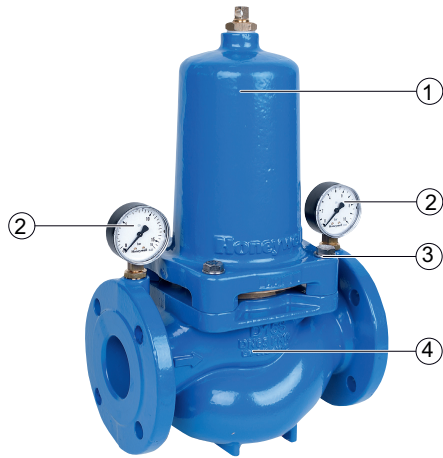
Operating temperatures

Max. operating temperature medium	65 °C (WRAS approved up to 23°C)
-----------------------------------	-------------------------------------

Note: *1 As part of an installation being approved according to PED requirements, this product must also be certified.

CONSTRUCTION

Overview



	Components	Materials
1	Spring bonnet with adjustment screw	Ductile cast iron (EN-GJS-400-15 EN 1563), coated with PA (polyamide)
2	Pressure gauge	-
3	Screws and nuts	Stainless steel
4	Housing with PN16 flanges per ISO 7005-2, EN 1092-2, face to face length acc. EN 558-1	Ductile cast iron (EN-GJS-400-15 EN 1563), coated with PA (polyamide)
	Not depicted components	
	Adjustment spring	Spring steel
	Diaphragm and seals	EPDM
	Cartridge insert	Stainless steel
	Groove ring and sealing disc	EPDM

METHOD OF OPERATION

Spring loaded pressure reducing valves operate by means of a force equalising system. The force of a diaphragm operates against the force of an adjustment spring. If the outlet pressure and therefore diaphragm force fall because water is drawn, the then greater force of the spring causes the valve to open. The outlet pressure then increases until the forces between the diaphragm and the spring are equal again.

The inlet pressure has no influence in either opening or closing of the valve. Because of this, inlet pressure fluctuation does not influence the outlet pressure, thus providing inlet pressure balancing.

INSTALLATION GUIDELINES

Setup requirements

- Install in horizontal pipework with spring bonnet directed upwards
- Installation in vertical pipework possible with increased maintenance effort
- Install shut-off valves
- The installation location should be protected against frost and be easily accessible
 - Pressure gauge can be read off easily
 - Simplified maintenance and cleaning
- Install downstream of the filter or strainer
 - This position ensures optimum protection for the pressure reducing valve against dirt
- Provide a straight section of pipework of at least five times the nominal valve size after the pressure reducing valve (in accordance with EN 806-2)
- Requires regular maintenance in accordance with EN 806-5

TRANSPORTATION AND STORAGE

Keep parts in their original packaging and unpack them shortly before use.

The following parameters apply during transportation and storage:

Parameter	Value
Environment:	clean, dry and dust free
Min. ambient temperature:	5 °C
Max. ambient temperature:	55 °C
Min. ambient relative humidity:	25 % *
Max. ambient relative humidity:	85 % *

*non condensing

Installation Example

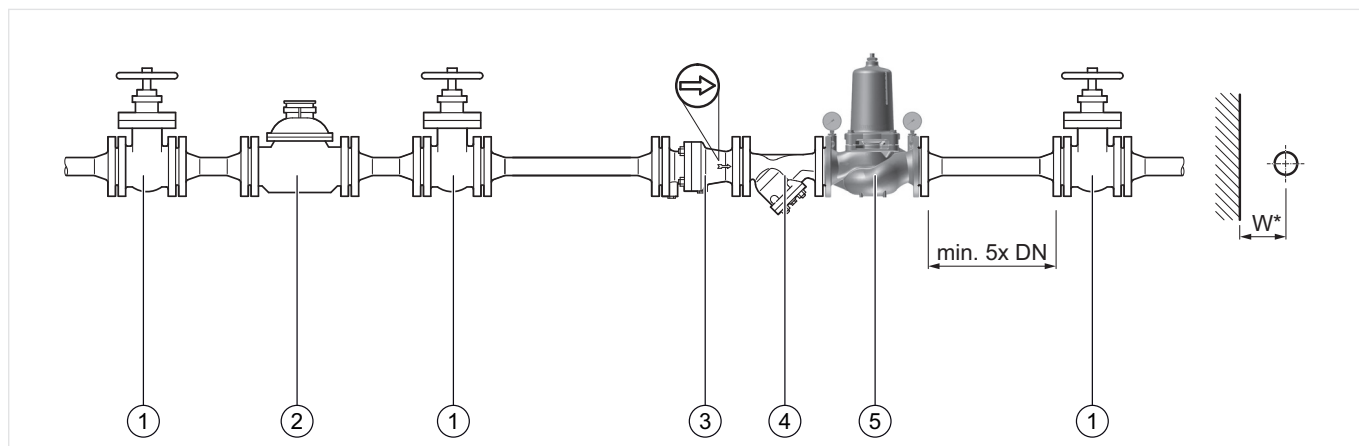


Fig. 1 Standard installation example for the pressure reducing valve

- 1 Shut-off valve
- 2 Water meter
- 3 Non return valve
- 4 Strainer
- 5 Pressure reducing valve

Connection sizes

DN	50	65	80	100	150	200
inch	2"	2 1/2"	3"	4"	6"	8"
Distance in mm (W*)	110	120	130	145	200	230

* Required installation distances between the centerline of the pipework and the surrounding in dependency of the connection size.

TECHNICAL CHARACTERISTICS

kvs-Values

Connection sizes						
DN	50	65	80	100	150	200
Inch	2"	2 1/2"	3"	4"	6"	8"
DVGW registration number	requested	P-NW-6330CN0112			n.a.	
k _{v5} -value (m ³ /h)	18	49	51	56	230	255

Pressure drop characteristics

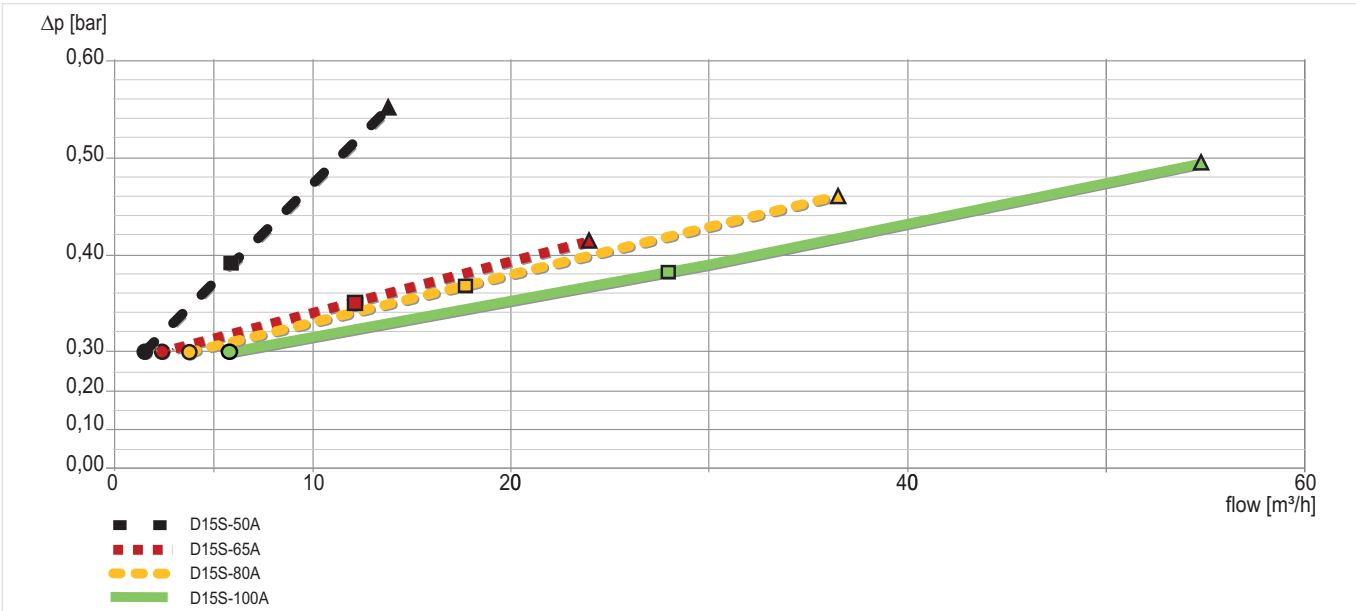


Fig. 2 Pressure drop within the valve in dependency of the flow rate and the used connection size (Sizes 50-100)
Pressure setting: P1: 8bar, P2: 3bar

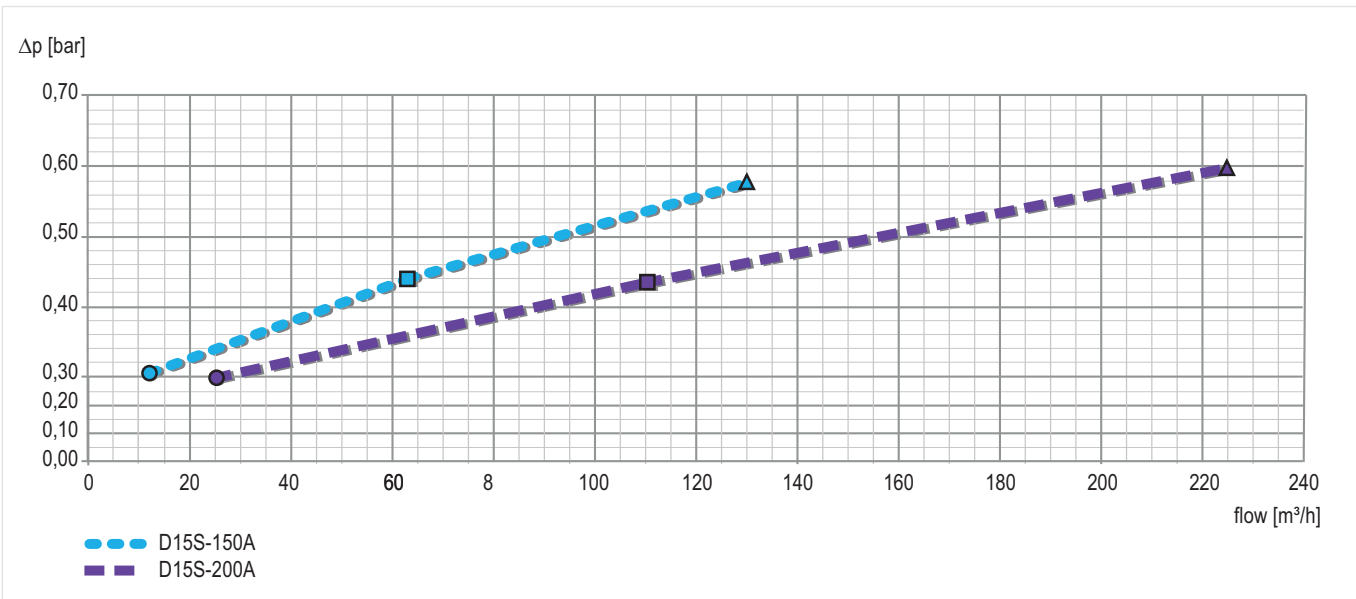
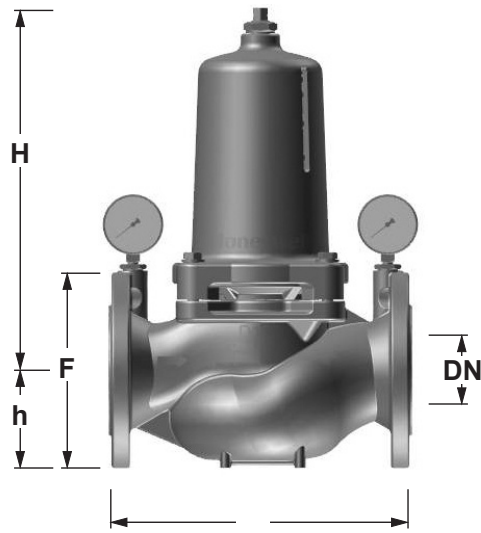


Fig. 3 Pressure drop within the valve in dependency of the flow rate and the used connection size (Sizes 150-200)
Pressure setting: P1: 8bar, P2: 3bar

	DN50	DN65	DN80	DN100	DN150	DN200
● \triangleq 10% of standard flow	1.4 m ³ /h	2.4 m ³ /h	3.6 m ³ /h	5.6 m ³ /h	12.7 m ³ /h	22.6 m ³ /h
■ \triangleq 1m/s flow rate	7 m ³ /h	12 m ³ /h	18 m ³ /h	28 m ³ /h	63 m ³ /h	113 m ³ /h
▲ \triangleq 2m/s flow rate = QN	14 m ³ /h	24 m ³ /h	36 m ³ /h	56 m ³ /h	127 m ³ /h	226 m ³ /h
Flow rate 4m/s flow velocity	28 m ³ /h	48 m ³ /h	72 m ³ /h	112 m ³ /h	254 m ³ /h	452 m ³ /h

DIMENSIONS



Overview

Parameter		Values					
Connection sizes	Inch	2"	2 1/2"	3"	4"	6"	8"
Nominal sizes	DN	50	65	80	100	150	200
Weight	kg	14	30.5	32	34.5	110	135
Dimensions	L	230	290	310	350	480	600
	H	296	370	370	370	541	534
	h	83	93	100	110	143	170
	F	165	185	200	220	285	340

Note: All dimensions in mm unless stated otherwise.

ORDERING INFORMATION

The following tables contain all the information you need to make an order of an item of your choice. When ordering, please always state the type, the ordering or the part number.

Options

The valve is available in the following sizes: 2", 2 1/2", 3", 4", 6" and 8".

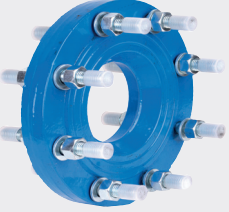
- Standard
- not available

		D15S-...A
Flanges	PN 16, ISO 7005-2, EN 1092-2, face to face length acc. EN558-1	•
Housing	Ductile cast iron (EN-GJS-400-15 EN 1563), coated with PA (polyamide)	•

Note: ... = space holder for connection size

Note: Ordering number example for 2 1/2" and type A valve: D15S-65A

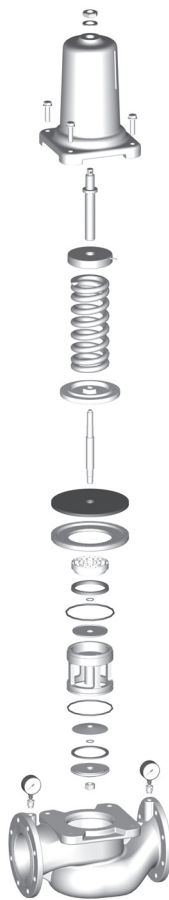
Accessories

Parameter	Description	Dimension	Part No.
	EXF125-A Extension flange DN125 Adapter flanges DN100 to DN125 Ductile iron, PN16 acc. ISO 7005-2 and EN1092-2. Overall length with adapter flanges (without bolts) DN125 L=416mm, DVGW approved, including bolts and nuts.		
			EXF125-A

Spare Parts

Pressure Reducing Valve D06F, from 1997 onwards

Overview



Technical Specification

	Description	Dimension	Part No.
1	Valve insert complete	DN50	0904175
		DN65 - DN100	0904120
		DN150 - DN200	0904139
2	Set of seals complete	DN50	0904176
		DN65 - DN100	0904121
		DN150 - DN200	0904140
3	Pressure gauge	0 - 10 bar	M39M-A10
4	Pressure gauge	0 - 16 bar	M39M-A16

For more information,

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D15S
PRESSURE REDUCING
VALVE

Honeywell



TAKE THE PRESSURE OFF YOUR UTILITY BILL

Enhance the water flow and pressure control in your building with the Honeywell VPI Series Pressure Independent Control Valves and Actuators.

PICV Brochure

Honeywell

ONE SOLUTION FOR FULL WATER FLOW CONTROL

It's only natural to always be on the lookout for new ways to achieve stable room temperature, superior comfort, less maintenance, and easier installations – along with improved energy efficiency and costs for your business. The new Honeywell VPI Pressure Independent Control Valves and Actuators integrate the flow, pressure, and temperature control functions in one single valve – all while ensuring that each valve-controlled, thermal unit is always supplied with its required flow.

The Pressure Independent Control Valves and Actuators come with an innovative, self-adjustment feature that allows continuous self-balancing in all valve positions. Honeywell VPI series combines an externally adjustable automatic balancing valve, a differential pressure control valve and a full authority modulating control valve and makes it simple to have full control of the water flow in your building.

Selecting, installing, and commissioning Honeywell VPI Pressure Independent Control Valves and Actuators means a quick and cost-effective process. The valves feature an integrated flow regulator with a rolling diaphragm that delivers flow balancing and control functions in one package. And there are no CV calculations required – just pick the valve that matches your flow requirements and we take care of the rest.

3 IN 1

The Honeywell VPI series combines three functions into one valve body

 **CONTROL VALVE**
Temperature control

 **DIFFERENTIAL PRESSURE CONTROLLER**
Protects against pressure fluctuations

 **MAX. FLOW LIMITATION**
Avoids chilled/ hot water wastage



BENEFITS



COST AND ENERGY-EFFICIENT

- Enhances energy savings thanks to optimal control, lower flow, and pump pressure
- Speeds up response times and increases system stability
- Internal parts can be accessed without removing the valve housing from the piping lines
- Maintains system balance perfectly, under all conditions, increasing energy efficiency



ACCURATE FLOW CONTROL

- Ensures the correct water flow for each unit automatically
- Regulates flow with precision and empowers optimum sizing of chillers, boilers, and pumps
- Automatic balancing eliminates overflows, regardless of fluctuating pressure conditions in the system



EASY TO INSTALL AND USE

- Simple, field-adjustable settings that accommodate any design flow in the flow range
- 'Sealed' setting means the actuator covers the setting and protects against tampering
- Two-way, modulating solution that accepts either digital or analog input signals



FLEXIBLE PERFORMANCE

- Compact, one-unit solution that includes the modulating control valve, the dynamic flow limiter, and the differential pressure control valve
- Full range of sizes from 15 mm (1/2") to 250 mm (10")
- High flows with minimal required differential pressure
- Available electrical actuators with selectable control modes, 'Linear' or 'Equal' percentage
- No balancing is required when further stages are added to the system, or if the dimensioned capacity is changed.

The Honeywell pressure independent control valve (PICV) is used in **heating and cooling systems for air handling units, fan coil units, chilled ceilings, zone control or other terminal unit applications** – helping you fully and precisely control the water flow in your building.



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PICV SB | Rev 01 | 01/21
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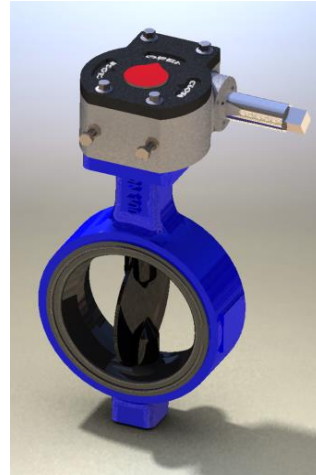
**THE
FUTURE
IS
WHAT
WE
MAKE IT**

Honeywell

BUTTERFLY VALVE

WAFER TYPE MANUAL BUTTERFLY VALVES

- Wide Size range (DN50...DN900)
- Operated by Lever/Gear Box
- 90 deg opening/closing operation
- Cast Iron Body with powder coating.
- S.S. Disc.
- Wafer type Connection



GENERAL

The BS-HWC4 Manual Butterfly Valves is designed for Chilled & Hot Water to be operated by Hand lever or Gear Box

Technical Specification

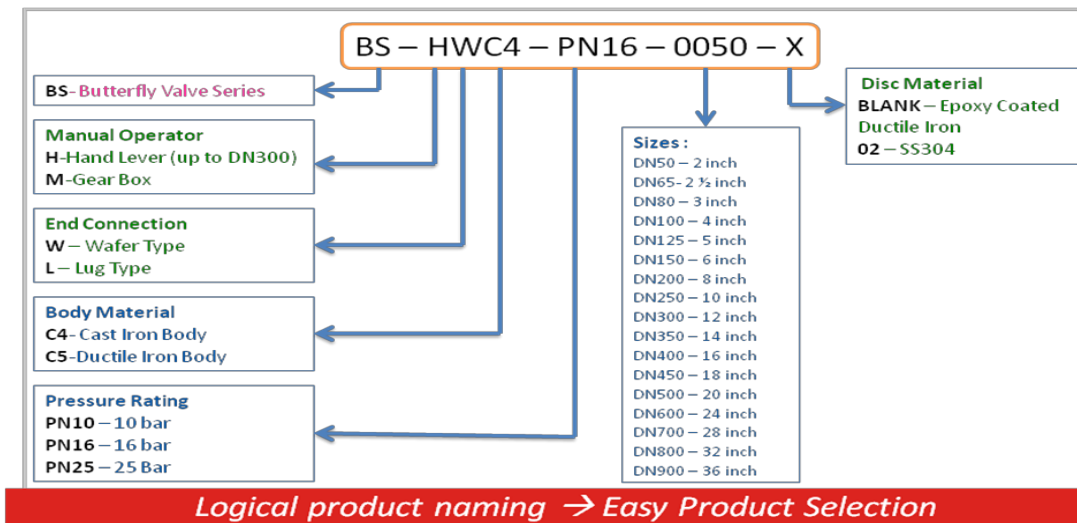
Sizes	DN50-DN900
Nominal pressure	PN16
Medium Temperature	-10°C ~ +110°C Maximum
Body Material	IS:210, FG 200 C.I - up to DN250 DUCTILE IRON D.I - DN30
Stem Material	ASTM A276,GR SS 410
Disc Material	S.S. Disc
Lever	CRCA SHEET
Leakage Rate	No visible leakage
Medium Type	Water
Flange standard	IS 1538
Shell Test pressure	24 bar
Seal Test pressure	17bar

DIMENSIONS (mm)

Size	Model Number	Max. Kvs	Manual Operator	Operator	Total Weight
DN50	BS-MWC4-PN16-0050	115	Gear Box	4.5	6.8
DN65	BS-MWC4-PN16-0065	196	Gear Box	4.5	7.3
DN80	BS-MWC4-PN16-0080	302	Gear Box	4.5	7.8
DN100	BS-MWC4-PN16-0100	600	Gear Box	4.5	9.4
DN125	BS-MWC4-PN16-0125	1,022	Gear Box	4.5	10.9
DN150	BS-MWC4-PN16-0150	1,579	Gear Box	4.5	12.2
DN200	BS-MWC4-PN16-0200	3,136	Gear Box	13	25.9
DN250	BS-MWC4-PN16-0250	5,340	Gear Box	13	32.2
DN300	BS-MWC4-PN16-0300	8,250	Gear Box	15	47.5
DN350	BS-MWC4-PN16-0350	11,917	Gear Box	15	56.3
DN400	BS-MWC4-PN16-0400	16,388	Gear Box	57	118
DN450	BS-MWC4-PN16-0450	21,705	Gear Box	57	136
DN500	BS-MWC4-PN16-0500	27,908	Gear Box	57	185
DN600	BS-MWC4-PN16-0600	43,116	Gear Box	72	260
DN700	BS-MWC4-PN16-0700	58,696	Gear Box	85	361
DN800	BS-MWC4-PN16-0800	68,250	Gear Box	85	445
DN900	BS-MWC4-PN16-0900	83,375	Gear Box	124	830.8

*More Models please refers to the labeling method in figure.

The labeling system for manual butterfly valves is as follows:

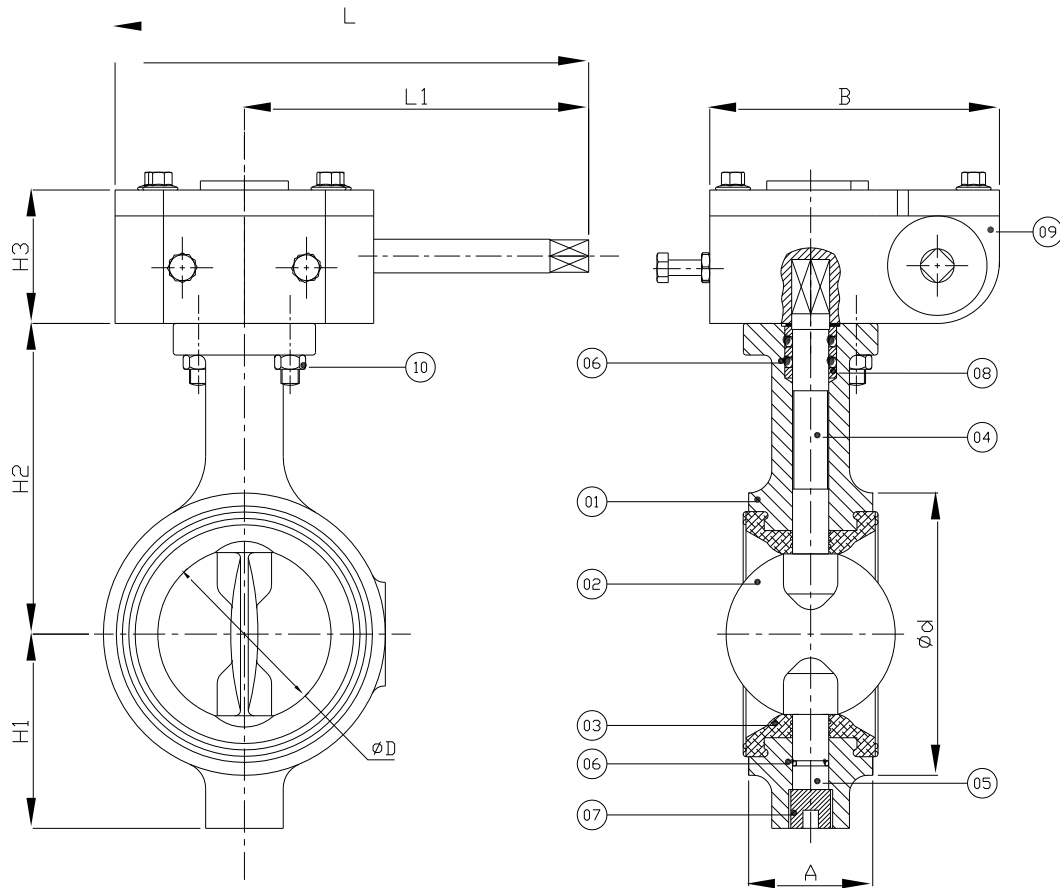


e.g. BS-HWC4-PN16-0050: Butterfly Valve Series, Hand lever Operator, End connection Wafer Type, Cast Iron Body, Nominal Pressure 16 bar, Size DN50-2 inch., Epoxy Coated Ductile Iron Disc.

e.g. BS-MWC5-PN25-0100-02: Butterfly Valve Series, Gear Box Operator, End connection Wafer Type, Cast Iron Body, Nominal Pressure 25 bar, Size DN80-4 inch., SS304 Disc.

Part Description & Outside Dimension (mm)

a. Valve Size DN50...200 with Gear Box Operator (PN16)



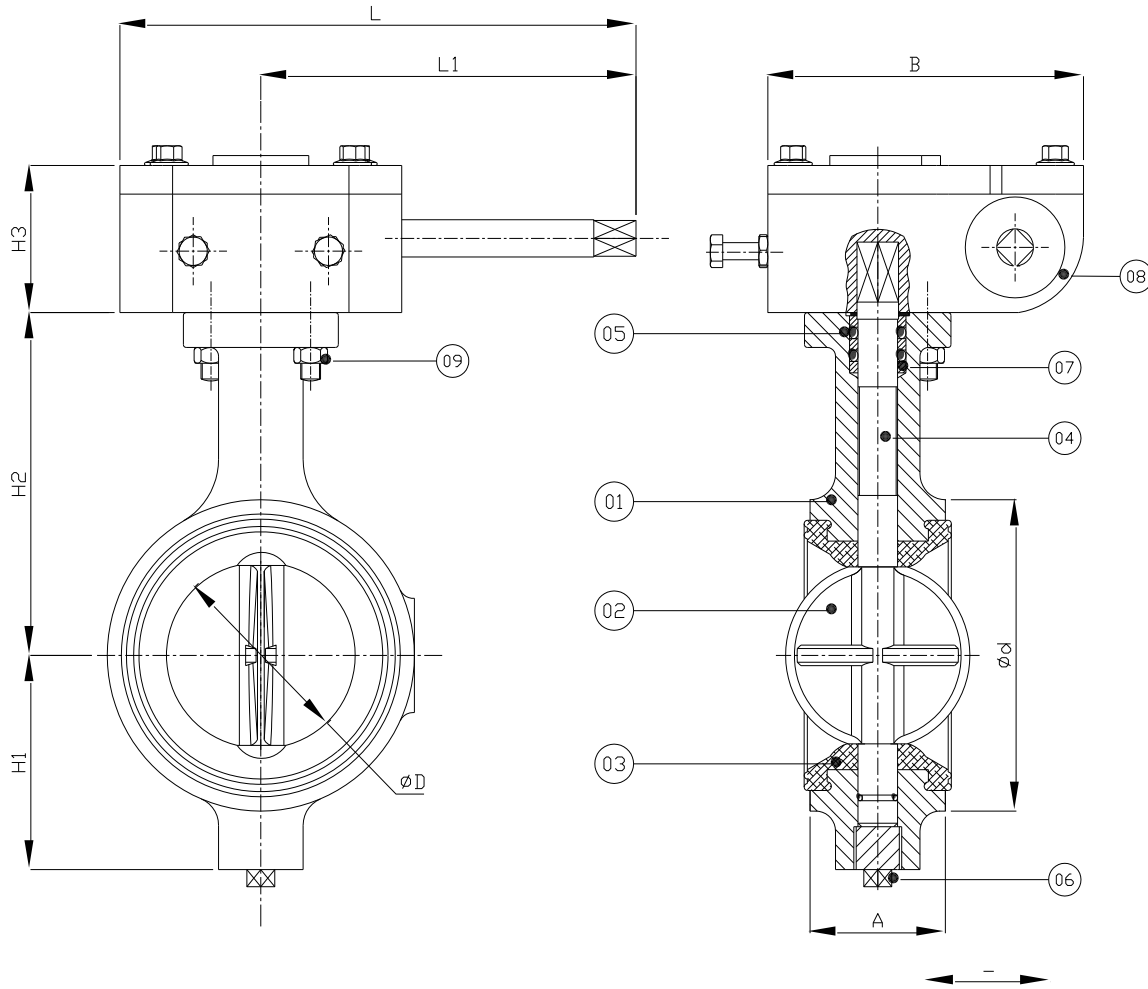
Part Descriptions

PT No.	01	02	03	04	05	06	07	08	09	10
Parts	Body	Disc	Liner	Upper Stem	Lower Stem	O-Ring	Plug	Bush	Gear Box	Fastener
Material	IS:210 Gr FG200	S.S.	EPDM	ASTM A 276, Gr SS410	ASTM A 276, Gr SS410	EPDM	M. S (Chrome Plated)	PTFE	Cast Iron	S. S

Outside Dimension (mm)

SIZE	A	H1	H2	H3	L	L1	B	ØD	Ød
DN50	43	67	110	60	182	115	112	50.5	94
DN65	46	75	118	60	182	115	112	65	110
DN80	46	82	130	60	182	115	112	80	127
DN100	52	100	145	60	182	115	112	100	150
DN125	56	114	156	60	182	115	112	123	175
DN150	56	135	176	60	182	115	112	148.5	205
DN200	60	161	220	60	182	115	112	197	265

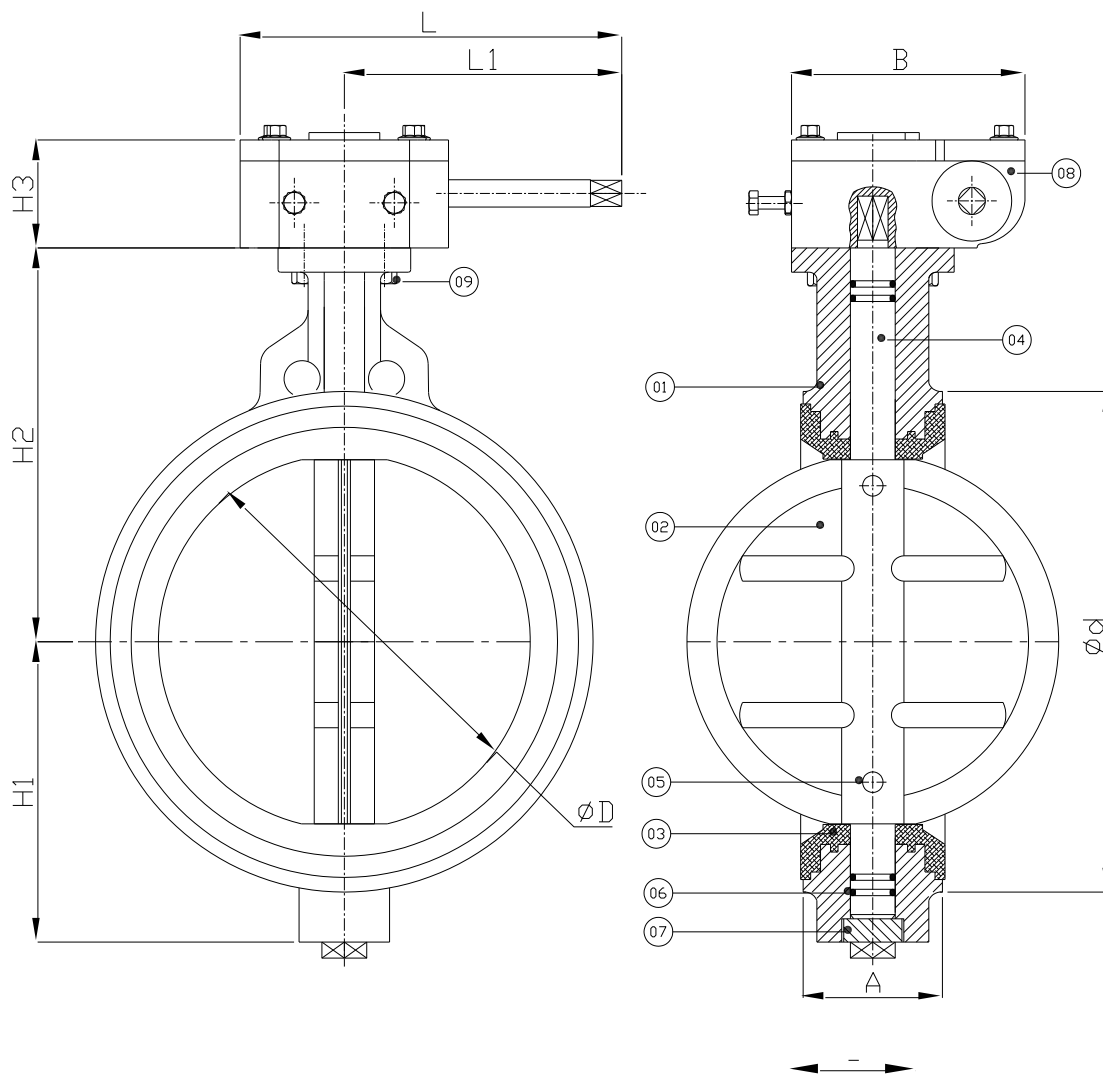
b. Valve Size DN250...300 with Gear Box Operator (PN16)



Part Descriptions										
PT No.	01	02	03	04	05	06	07	08	09	10
Parts	Body	Disc	Liner	Upper Stem	Lower Stem	O-Ring	Plug	Bush	Gear Box	Fastener
Material	IS:210 Gr FG200	S.S.	EPDM	ASTM A 276, Gr SS410	ASTM A 276, Gr SS410	EPDM	M. S (Chrome Plated)	PTFE	Cast Iron	S. S

Outside Dimension (mm)									
SIZE	A	H1	H2	H3	L	L1	B	ØD	Ød
DN250	68	220	280	60	180	130	110	250.5	325
DN300	78	230	305	60	180	130	110	299.5	376

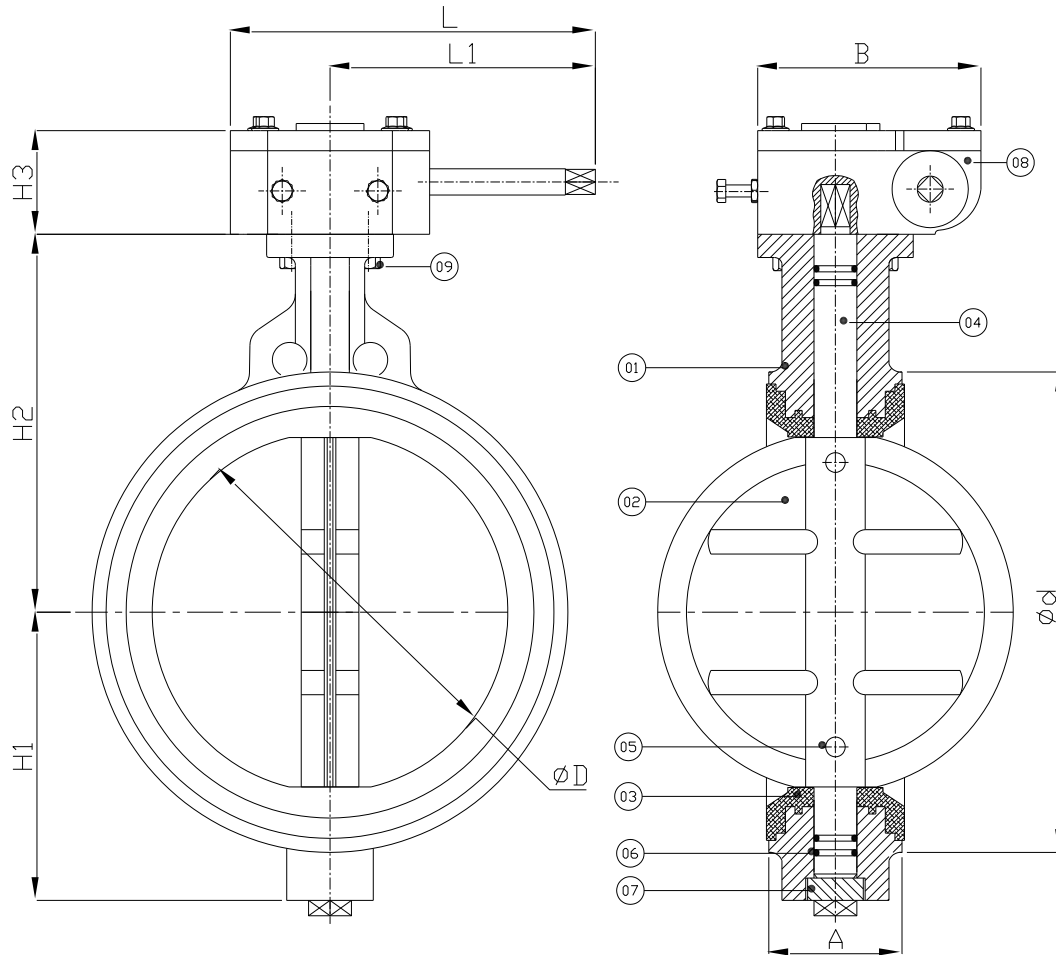
c. Valve Size DN350...600 with Gear Box Operator (PN16)



Part Descriptions										
PT No.	01	02	03	04	05	06	07	08	09	10
Parts	Body	Disc	Liner	Stem	Pin	O-Ring	Plug	Bush	Gear Box	Fastener
Material	IS:210 Gr FG200	S.S.	EPDM	ASTMA 276, Gr SS410	SS 410	EPDM	M.S (Chrome Plated)	PTFE	Cast Iron	S. S

Outside Dimension (mm)										
SIZE	A	H1	H2	H3	L	L1	B	ØD	Ød	Wheel Diameter
DN350	92	280	370	72	308	195	155	351	445	360
DN400	102	315	412	72	308	195	155	403	495	360
DN450	114	348	425	72	308	195	155	453	550	360
DN500	127	380	470	72	308	195	155	503	610	360
DN600	154	445	550	72	308	195	155	603	705	360

d. Valve Size DN700...900 with Gear Box Operator (PN16)



Part Descriptions

PT No.	01	02	03	04	05	06	07	08	09	10
Parts	Body	Disc	Liner	Stem	Pin	O-Ring	Plug	Bush	Gear Box	Fastener
Material	IS:210 Gr FG200	S.S.	EPDM	ASTMA 276, Gr SS410	SS 410	EPDM	M. S (Chrome Plated)	PTFE	Cast Iron	S. S

Outside Dimension (mm)

SIZE	A	H1	H2	H3	L	L1	B	ØD	Ød	Wheel Diameter
DN700	229	520	625	72	308	195	155	703	805	360
DN800	221	590	670	72	308	195	155	403	914	360
DN800	221	655	720	72	308	195	155	901	1012	360

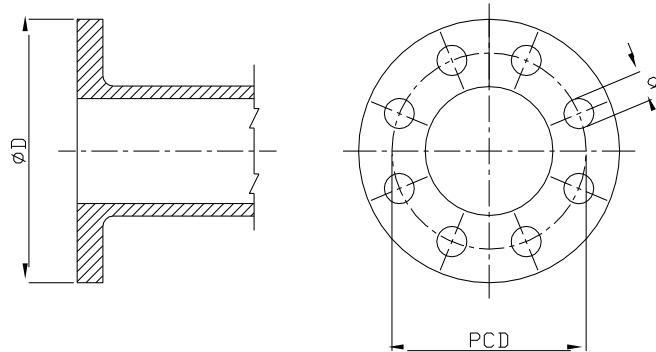
- Piping Connection Flange meets IS:1538
- It can be operated by lever or Gear Box.

Table (2) Hydraulic Characteristics

The below table shows the Kvs at different opening angles:

DIMENSIONS (mm)									
Size	Kvs at Disk Opening Angle								
	10°	20°	30°	40°	50°	60°	70°	80°	90°
50	0.1	5	12	24	45	64	90	125	115
65	0.2	8	20	37	65	98	144	204	196
80	0.3	12	22	39	70	116	183	275	302
100	0.5	17	36	78	139	230	364	546	600
125	0.8	29	61	133	237	392	620	930	1,022
150	2	45	95	205	366	605	958	1,437	1,579
200	3	89	188	408	727	1,202	1,903	2,854	3,136
250	4	151	320	694	1,237	2,047	3,240	4,859	5,340
300	5	324	495	1,072	1,911	3,162	5,005	7,507	8,250
350	6	338	715	1,549	2,761	4,568	7,230	10,844	11,917
400	8	464	983	2,130	3,797	6,282	9,942	14,913	16,388
450	11	615	1,302	2,822	5,028	8,320	13,168	19,752	21,705
500	14	791	1,674	3,628	6,465	10,698	16,931	25,396	27,908
600	22	1,222	2,587	5,605	9,989	16,528	26,175	39,236	43,116
700	30	1,663	3,522	7,630	12,599	20,036	30,482	46,899	58,696
800	45	2,387	4,791	8,736	13,788	20,613	31,395	48,117	68,250
900	60	3,021	6,063	11,055	17,449	26,086	39,731	60,895	83,375

Table (3) Flange Dimensions (As per IS: 1538)



Outside Dimension (mm)				
SIZE	Flange ØD	PCD	Hole Dia (d)	No. Of Holes
50	165	125	19	4
65	185	145	19	4
80	200	160	19	4
100	220	180	19	8
125	250	210	19	8
150	285	240	23	8
200	395	295	23	8
250	395	350	23	12
300	445	400	23	12
350	315	450	23	16
400	565	515	28	16
450	615	565	28	20
500	670	620	28	20
600	780	725	31	20
700	895	840	31	24
800	1015	950	34	24
900	1115	1050	34	28

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BUTTERFLY VALVE

WAFER TYPE MANUAL

BUTTERFLY VALVES

- Wide Size range (DN40...DN300)
- Operated by Lever/Gear Box
- 90 deg opening/closing operation
- Cast iron Body
- Epoxy Coated Ductile Iron disc
- Wafer type Connection



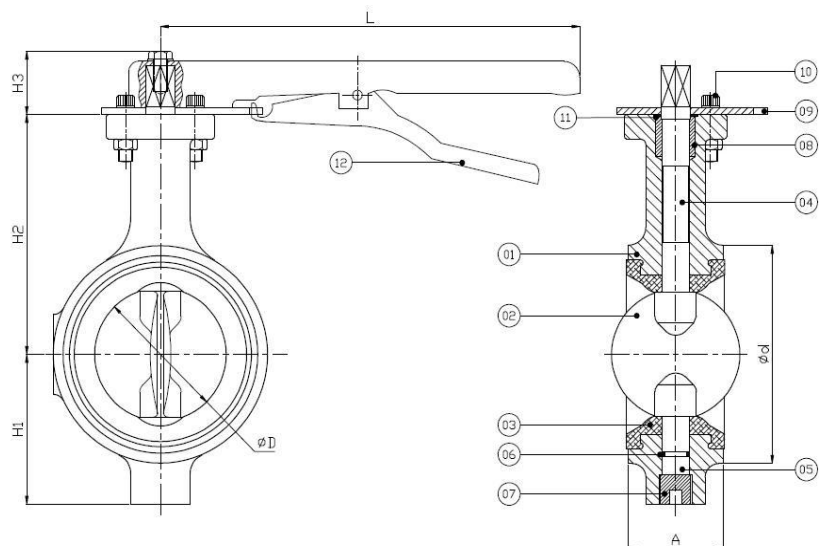
GENERAL

The BS-HWC4 Manual Butterfly Valves is designed for Chilled & Hot Water to be operated by Hand lever or Gear Box

Technical Specification

Sizes	DN40-DN300
Nominal pressure	PN16
Medium Temperature	-10°C ~ +110°C Maximum
Body Material	IS:210, FG 200 C.I - up to DN250 DUCTILE IRON D.I - DN30
Stem Material	ASTM A276,GR SS 410
Disc Material	Epoxy Coated Ductile Iron Disc
Lever	Mild Steel
Leakage Rate	No visible leakage
Medium Type	Water
Flange standard	ISO7005-1 (GB/T 9113) / IS:1538
Shell Test pressure	24 bar
Seal Test pressure	17.6 bar

DIMENSIONS (mm)



MATERIAL LIST

PT No.	PART NAME	MATERIAL
01	BODY	IS:210,Gr. FG200
02	DISC	D.(EPOXY COATED)
03	SEAT	EPDM
04	UPPER STREAM	ASTM A276, GR. SS410
05	LOWER STREAM	ASTM A276, GR. SS410
06	O-RINGS	NITRILE / EPDM
07	PLUG	M.S. (CROME PLATED)
08	BUSH	PTFE
09	NOTCH PLATE	M.S. (POWDER COATING)
10, 11	FASTNER	STAINLESS STEEL
12	HAND LEVER	M.S. (POWDER COATING)

DIMENSIONS (mm)

Size	40	50	65	80	100	125	150
A	34.5	41.5	44.5	116	50.5	54.5	54.5
H1	61	67	74	160	100	119	132
H2	106	110	118	64	145	161	174
H3	28	28	34	34	39	39	39
L	175	175	216	216	267	267	267
ϕD	39	52	65.5	80.5	100	122.5	146.5
ϕd	83	97	91	116	160	192	213
PCD	110	125	130	160	180	210	240
QTY.	1	1	1	1	1	1	1
WEIGHT	1.7	2.4	3	3.3	5.2	8	8.6

Model Table

Size	Model Number	Description
DN50	BS-HWC4-PN 16-0050	DN50 Manual Butterfly valve, Hand Lever, Wafer, CI valve body and Epoxy Coated DI disc, PN16
DN65	BS-HWC4-PN 16-0065	DN65 Manual Butterfly valve, Hand Lever, Wafer, CI valve body and Epoxy Coated DI, PN16
DN80	BS-HWC4-PN 16-0080	DN80 Manual Butterfly valve, Hand Lever, Wafer, CI valve body and Epoxy Coated DI, PN16
DN100	BS-HWC4-PN 16-0100	DN100 Manual Butterfly valve, Hand Lever, Wafer, CI valve body and Epoxy Coated DI, PN16
DN125	BS-HWC4-PN 16-0125	DN125 Manual Butterfly valve, Hand Lever, Wafer, CI valve body and Epoxy Coated DI, PN16
DN150	BS-HWC4-PN 16-0150	DN150 Manual Butterfly valve, Hand Lever, Wafer, CI valve body and Epoxy Coated DI, PN16
DN200	BS-HWC4-PN 16-0200	DN200 Manual Butterfly valve, Hand Lever, Wafer, CI valve body and Epoxy Coated DI, PN16
DN250	BS-HWC4-PN 16-0250	DN250 Manual Butterfly valve, Hand Lever, Wafer, CI valve body and Epoxy Coated DI, PN16
DN300	BS-HWC4-PN 16-0300	DN300 Manual Butterfly valve, Hand Lever, Wafer, CI valve body and Epoxy Coated DI, PN16

Note: valve sizes up to DN600 are also available. Please contact local sales for details.

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**BUTTERFLY VALVE
WAFER TYPE MANUAL
BUTTERFLY VALVES**

Honeywell

BUTTERFLY VALVE

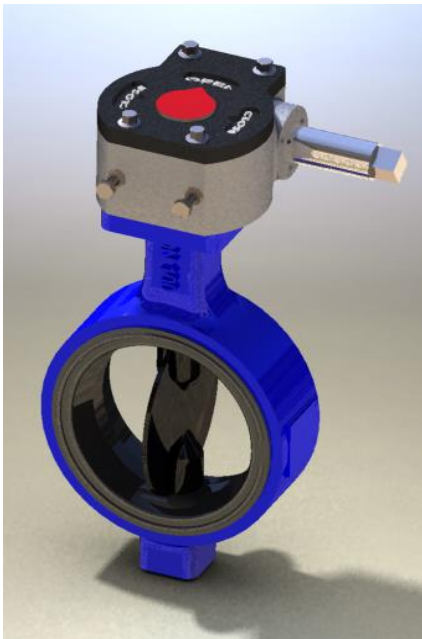
WAFER TYPE MANUAL BUTTERFLY VALVES

- Wide Size range (DN50-DN900)
- Operated by Lever/Gear Box
- 90 deg opening/closing operation
- Ductile Iron Body with powder coating.
- Stainless Steel Disc.
- Wafer type Connection



GENERAL

The BS-HWC4 Manual Butterfly Valves is designed for Chilled & Hot Water to be operated by Hand lever or Gear Box



Technical Specification

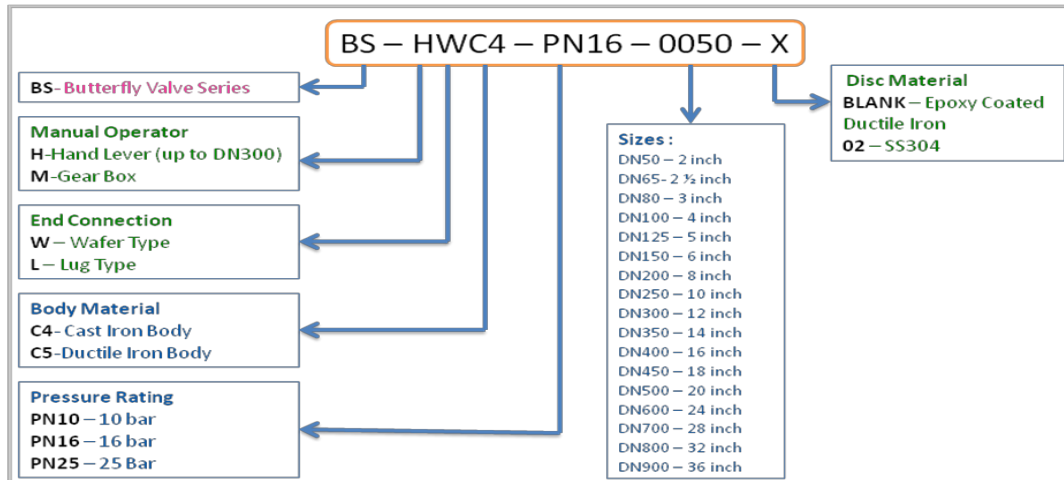
Sizes	DN50-DN900
Nominal pressure	Nominal pressure PN25
Medium Temperature	-10°C ~ +110°C Maximum
Body Material	D.I.
Stem Material	ASTM A276,GR SS 410
Disc Material	S.S.
Lever	CRCA SHEET
Leakage Rate	No visible leakage
Medium Type	Water
Flange standard	IS 1538
Shell Test pressure	37.5bar
Seal Test pressure	27.5bar

DIMENSIONS (mm)

Size	Model Number	Max. Kvs	Manual Operator	Operator	Total Weight
DN50	BS-HWC4-PN25-0050	115	Gear Box	0.270	2.6
DN65	BS-HWC4-PN25-0065	196	Gear Box	0.270	3.1
DN80	BS-HWC4-PN25-0080	302	Gear Box	0.460	3.8
DN100	BS-HWC4-PN25-0100	600	Gear Box	0.460	5.4
DN125	BS-HWC4-PN25-0125	1,022	Gear Box	0.630	7.1
DN150	BS-HWC4-PN25-0150	1,579	Gear Box	0.630	8.3
DN200	BS-HWC4-PN25-0200	3,136	Gear Box	0.630	14.7

*More Models please refers to the labeling method in figure.

The labeling system for manual butterfly valves is as follows:



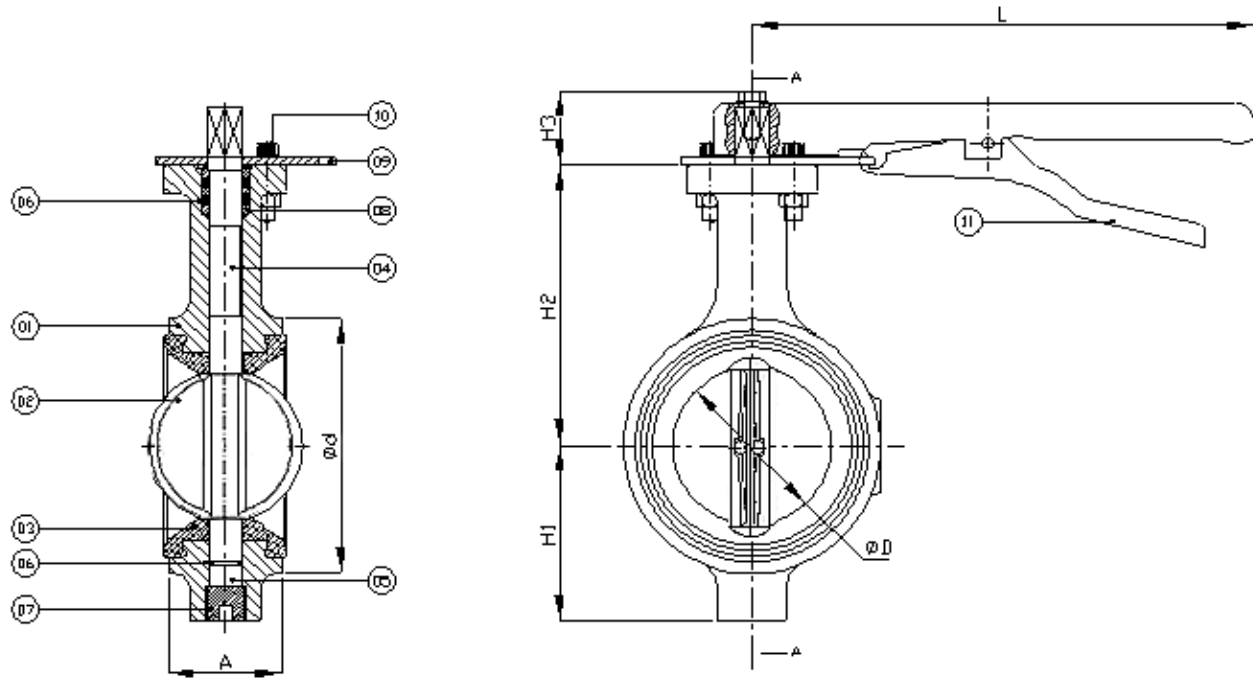
Logical product naming → Easy Product Selection

e.g. BS-HWC4-PN16-0050: Butterfly Valve Series, Hand lever Operator, End connection Wafer Type, Cast Iron Body, Nominal Pressure 16 bar, Size DN50-2 inch., Epoxy Coated Ductile Iron Disc.

e.g. BS-MWC5-PN25-0100-02: Butterfly Valve Series, Gear Box Operator, End connection Wafer Type, Cast Iron Body, Nominal Pressure 25 bar, Size DN80-4 inch., SS304 Disc.

Part Description & Outside Dimension (mm)

a. Valve Size DN50...200 with Gear Box Operator (PN16)



Part Descriptions

PT No.	01	02	03	04	05	06	07	08	09	10
Parts	Body	Disc	Liner	Stem	O-Ring	Plug	Bush	Notch Plate	Fastener	Hand Lever
Material	D.I.	S.S.	EPDM	ASTM A 276, Gr SS410	EPDM	M. S (Chrome Plated)	PTFE	M. S. (Powder Coating)	S.S.	M. S. (Powder Coating)

Outside Dimension (mm)

SIZE	A	H1	H2	H3	L	L1	ØD	Ød
DN50	43	67	110	28	175	115	50.5	94
DN65	46	75	118	34	216	115	65	110
DN80	46	82	130	34	216	115	80	127
DN100	52	100	145	39	267	115	100	150
DN125	56	114	156	39	267	115	123	175
DN150	56	135	176	39	267	115	148.5	205
DN200	60	161	220	45	350	115	197	265

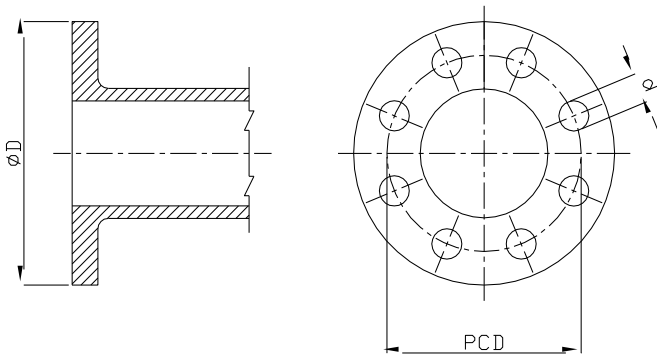
- Piping Connection Flange meets IS:1538
- It can be operated by lever or Gear Box.

Table (2) Hydraulic Characteristics

The below table shows the Kvs at different opening angles:

DIMENSIONS (mm)									
Size	Kvs at Disk Opening Angle								
	10°	20°	30°	40°	50°	60°	70°	80°	90°
50	0.1	5	12	24	45	64	90	125	115
65	0.2	8	20	37	65	98	144	204	196
80	0.3	12	22	39	70	116	183	275	302
100	0.5	17	36	78	139	230	364	546	600
125	0.8	29	61	133	237	392	620	930	1,022
150	2	45	95	205	366	605	958	1,437	1,579
200	3	89	188	408	727	1,202	1,903	2,854	3,136

Table (3) Flange Dimensions (As per IS: 1538)



Outside Dimension (mm)

SIZE	Flange ØD	PCD	Hole Dia (d)	No. Of Holes
50	165	125	19	4
65	185	145	19	4
80	200	160	19	4
100	220	180	19	8
125	250	210	19	8
150	285	240	23	8
200	395	295	23	8
250	395	350	23	12
300	445	400	23	12
350	315	450	23	16
400	565	515	28	16
450	615	565	28	20
500	670	620	28	20
600	780	725	31	20
700	895	840	31	24
800	1015	950	34	24
900	1115	1050	34	28

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BUTTERFLY VALVE

WAFER TYPE MANUAL

BUTTERFLY VALVES

- Wide Size range (DN50...DN200)
- Operated by Lever/Gear Box
- 90 deg opening/closing operation
- Cast iron Body
- Epoxy Coated Ductile Iron disc
- Wafer type Connection



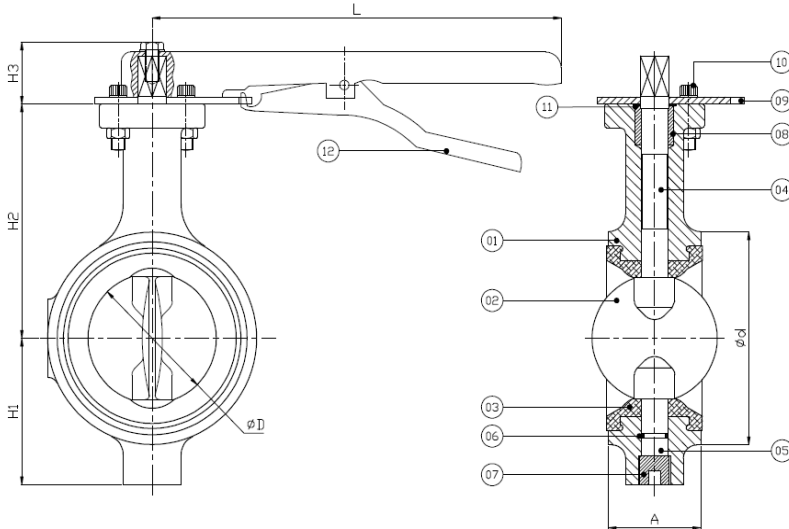
GENERAL

The BS-HWC4 Manual Butterfly Valves is designed for Chilled & Hot Water to be operated by Hand lever or Gear Box

Technical Specification

Sizes	DN50-DN200
Nominal pressure	PN25
Medium Temperature	-10°C ~ +110°C Maximum
Body Material	IS:210, FG 220 CI
Stem Material	ASTM A276,GR SS 410
Disc Material	Epoxy Coated Ductile Iron Disc
Lever	Mild Steel
Leakage Rate	No visible leakage
Medium Type	Water
Flange standard	ISO7005-1 (GB/T 9113)
Shell Test pressure	37.5bar
Seal Test pressure	25bar

DIMENSIONS (mm)



MATERIAL LIST

PT No.	PART NAME	MATERIAL
01	BODY	IS:210,Gr. FG200
02	DISC	D.(EPOXY COATED)
03	SEAT	EPDM
04	UPPER STREAM	ASTM A276, GR. SS410
05	LOWER STREAM	ASTM A276, GR. SS410
06	O-RINGS	NITRILE / EPDM
07	PLUG	M.S. (CROME PLATED)
08	BUSH	PTFE
09	NOTCH PLATE	M.S. (POWDER COATING)
10, 11	FASTNER	STAINLESS STEEL
12	HAND LEVER	M.S. (POWDER COATING)

DIMENSIONS (mm)

Size	40	65	80	100	125	150
A	43.00	46	46	52	54.5	56
H1	67.00	75	82	100	119	135
H2	110.00	118	130	145	161	176
H3	28	34	34	39	39	39
L	175	216	216	267	267	267
ϕD	50.50	65	80	100	122.5	148.5
ϕd	94.00	110	127	150	192	205
PCD	125	145	160	180	210	240
QTY.	1	1	1	1	1	1
WEIGHT	2.3	2.8	3.250	4.9	6.4	7.7

Model Table

Size	Model Number	Description
DN50	BS-HWC4-PN 25-0050	DN50 Manual Butterfly valve, Hand Lever, Wafer, CI valve body and Epoxy Coated DI disc, PN25
DN65	BS-HWC4-PN 25-0065	DN65 Manual Butterfly valve, Hand Lever, Wafer, CI valve body and Epoxy Coated DI, PN25
DN80	BS-HWC4-PN 25-0080	DN80 Manual Butterfly valve, Hand Lever, Wafer, CI valve body and Epoxy Coated DI, PN25
DN100	BS-HWC4-PN 25-0100	DN100 Manual Butterfly valve, Hand Lever, Wafer, CI valve body and Epoxy Coated DI, PN25
DN125	BS-HWC4-PN 25-0125	DN125 Manual Butterfly valve, Hand Lever, Wafer, CI valve body and Epoxy Coated DI, PN25
DN150	BS-HWC4-PN 25-0150	DN150 Manual Butterfly valve, Hand Lever, Wafer, CI valve body and Epoxy Coated DI, PN25
DN200	BS-HWC4-PN 25-0200	DN200 Manual Butterfly valve, Hand Lever, Wafer, CI valve body and Epoxy Coated DI, PN25

Note: valve sizes up to DN600 are also available. Please contact local sales for details.

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**BUTTERFLY VALVE
WAFER TYPE MANUAL
BUTTERFLY VALVES**

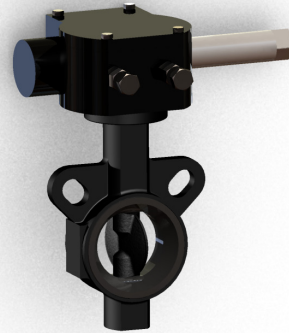
Honeywell

BUTTERFLY VALVE

WAFER TYPE MANUAL

BUTTERFLY VALVES

- Wide Size range (DN50-DN300)
- Operated by Lever/Gear Box
- 90 deg opening/closing operation
- Cast iron Body
- Epoxy Coated Ductile Iron disc
- Wafer type Connection



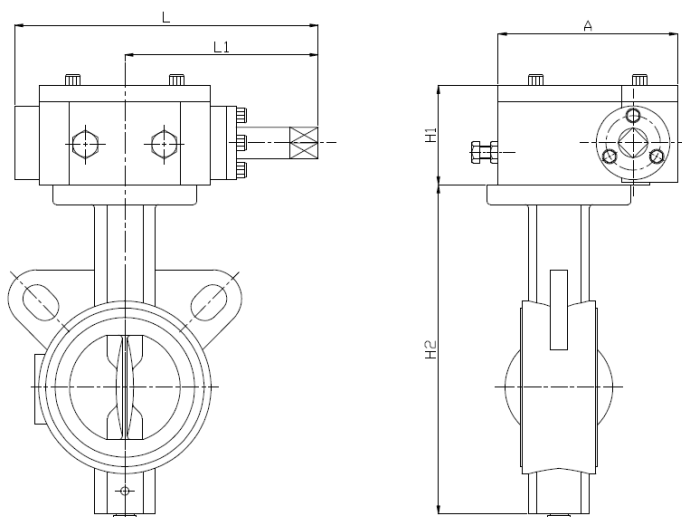
GENERAL

The BS-HWC4 Manual Butterfly Valves is designed for Chilled & Hot Water to be operated by Hand lever or Gear Box

Technical Specification

Sizes	DN50-DN300
Nominal pressure	PN16
Medium Temperature	-10°C ~ +110°C Maximum
Body Material	IS:210, FG 220 CI
Stem Material	ASTM A276,GR SS 410
Disc Material	Epoxy Coated Ductile Iron Disc
Gear Box	D.I.
Leakage Rate	No visible leakage
Medium Type	Water
Flange standard	ISO7005-1 (GB/T 9113)
Shell Test pressure	24 bar
Seal Test pressure	17bar

DIMENSIONS (mm)



DIMENSIONS (mm)

Size	50	65	80	100	125	150	200	250	300	350	400	450	500	600
A	110	110	110	110	110	110	110	110	110	155	155	155	155	155
H1	60	60	60	60	60	60	60	60	60	72	72	72	72	72
H2	176	200	217	251	275	315	420	470	515	631	702	761	829	919
L	182	182	182	182	182	182	182	182	182	308	308	308	308	308
L1	115	115	115	115	115	115	115	115	115	195	195	195	195	195
WHEEL	183	183	183	183	183	183	183	183	183	360	360	360	360	360

Model Table

Size	Model Number	Description
DN50	BS-MWC4-PN 16-0050	DN50 Manual Butterfly valve, Gear Box, Wafer, CI valve body and Epoxy Coated DI disc, PN16
DN65	BS-MWC4-PN 16-0065	DN65 Manual Butterfly valve, Gear Box, Wafer, CI valve body and Epoxy Coated DI, PN16
DN80	BS-MWC4-PN 16-0080	DN80 Manual Butterfly valve, Gear Box, Wafer, CI valve body and Epoxy Coated DI, PN16
DN100	BS-MWC4-PN 16-0100	DN100 Manual Butterfly valve, Gear Box, Wafer, CI valve body and Epoxy Coated DI, PN16
DN125	BS-MWC4-PN 16-0125	DN125 Manual Butterfly valve, Gear Box, Wafer, CI valve body and Epoxy Coated DI, PN16
DN150	BS-MWC4-PN 16-0150	DN150 Manual Butterfly valve, Gear Box, Wafer, CI valve body and Epoxy Coated DI, PN16
DN200	BS-MWC4-PN 16-0200	DN200 Manual Butterfly valve, Gear Box, Wafer, CI valve body and Epoxy Coated DI, PN16
DN250	BS-MWC4-PN 16-0250	DN250 Manual Butterfly valve, Gear Box, Wafer, CI valve body and Epoxy Coated DI, PN16
DN300	BS-MWC4-PN 16-0300	DN300 Manual Butterfly valve, Gear Box, Wafer, CI valve body and Epoxy Coated DI, PN16

Note: valve sizes up to DN600 are also available. Please contact local sales for details.

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**BUTTERFLY VALVE
WAFFER TYPE MANUAL
BUTTERFLY VALVES**

Honeywell

MOTORIZED BUTTERFLY VALVE

ACTUATED BUTTERFLY VALVES



- Wide size range (DN 50...DN500) for PN16 type
- For On-Off Control
- Manual override non-clutch design. Manual operation can be operated without any lever, clutch or brake upon power voltage.
- Irreversible worm gear.
- Visual mechanical position indicator for accurate visual reference of valve position..
- Anti-condensation heater and 2 aux. limit switches on standard model
- Enclosure IP67

General

The BSBFW Actuated Wafer Type Butterfly Valves are suitable for heating and cooling applications.

The BSBFW series is equipped with standard On-Off control quarter-turn electric actuator.

The BSBFW series can also provide feedback output signal: Dry contact for On-Off version;

Technical Specification

Valve

Sizes	DN50...DN500 (Wafer Type)
Nominal pressure	PN16
Medium Temperature	-10i ~ +110i Maximum
Body Material	IS: 210, FG 220 CI
Tightness	Bubble tight
Stem Material	ASTM A276, GR SS 410
Disc Material	Epoxy coated ductile iron Disc
Liner Material	EPDM
Medium Type	Chilled and Hot water
Pipe Connection	ISO7005-2

Actuator

Power Supply	220Vac, 50/60 Hz
Running time	See table (1)
Travel Angle	90°± 5o
Feedback	2 Aux Switches
Ambient Temperature	4~20mA or 0(2)~10V select by DIP-switch
Enclosure	IP67 Waterproof
Indicator	Continuous Position Indicator
Manual Override	Non-clutch design
Worm Gear	Permanently lubricated and self locking
Space Heater	15W 220V Anti-condensation
Material	Aluminum Alloy
External Coating	Dry powder coating
Stall Protection	Built-in thermal protection Cut off at 125 ± 5 Reset at 95 ± 5

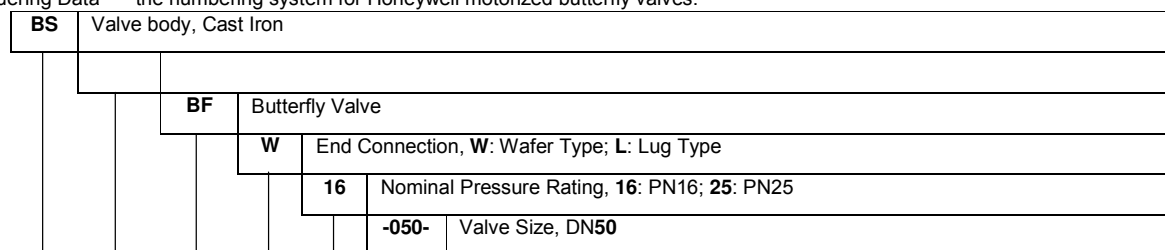
Table (1) Control Type and Valve Size Data

Valve Size	Actuator OS#	Valve OS#	Max Torque (Nm)	Run Time at 60Hz (sec)	Kvs (m³/h)
DN50	EM-0050	BSBFW16-050U	50	18	109
DN65	EM-0050	BSBFW16-065U	50	18	177
DN80	EM-0050	BSBFW16-080U	50	18	243
DN100	EM-0050	BSBFW16-100U	50	18	483
DN125	EM-0090	BSBFW16-125U	90	17.5	822
DN150	EM-0090	BSBFW16-150U	90	17.5	1,270
DN200	EM-0150	BSBFW16-200U	150	20	2,550
DN250	EM-0400	BSBFW16-250U	400	26	4,342
DN300	EM-0400	BSBFW16-300U	400	26	6,708
DN350	EM-1000	BSBFW16-350U	1,000	26	9,793
DN400	EM-1500	BSBFW16-400U	1,500	90	13,467
DN450	EM-2000	BSBFW16-450U	2,000	90	17,836
DN500	EM-2500	BSBFW16-500U	2,500	90	22,933

Note: More OS# Please refer to Figure (1) or contact Honeywell.

Figure (1) Product Identification System

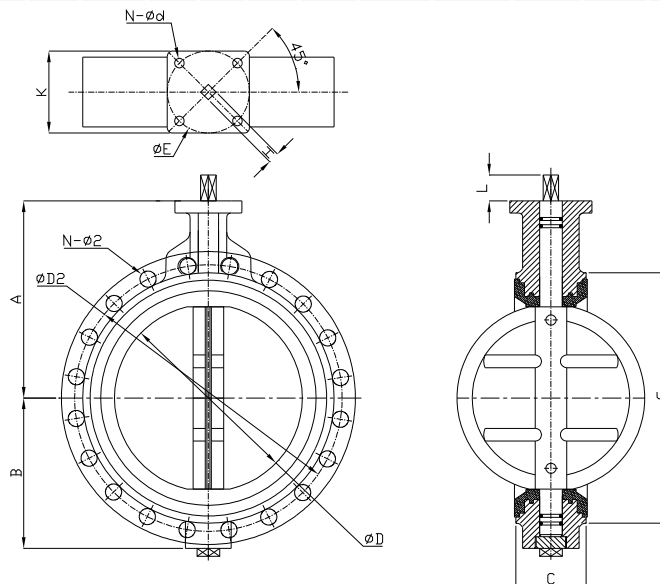
Ordering Data — the numbering system for Honeywell motorized butterfly valves:



BS		BF	W	16	-050-			
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Table (2) Valve Dimensions (mm) and Weight

PN	Size		A	B	C	Ø D	L	H	Ø K	Ø E	n-Ød	G		ØD2	N-Ø2		Weight (Kg)	
	DN	Inch										Wafer	Lug		Wafer	Lug	Wafer	Lug
16	50	2"	110	67	43	50.5	15	11	65	50	4-7	94	159	125	4-Ø18	4-M16	2.5	3.8
	65	2.5"	118	75	46	65	15	11	65	50	4-7	110	184	145	4-Ø18	4-M16	3.2	4.2
	80	3"	130	82	46	80	15	11	65	50	4-7	127	197	160	8-Ø18	8-M16	3.6	4.7
	100	4"	145	100	52	100	15	11	65	50	4-7	150	222	180	8-Ø18	8-M16	4.9	9
	125	5"	156	114	56	123	29	14	90	70	4-10	175	254	210	8-Ø18	8-M16	7	10.9
	150	6"	176	135	56	148.5	29	14	90	70	4-10	205	292	240	8-Ø22	8-M20	7.8	14.2
	200	8"	220	161	60	197	29	17	90	70	4-10	265	349	295	12-Ø22	12-M20	13.2	18.2
	250	10"	280	220	68	250.5	39	22	125	102	4-12	325	413	355	12-Ø26	12-M24	19.2	26.8
	300	12"	305	230	78	299.5	39	22	125	102	4-12	376	483	410	12-Ø26	12-M24	32.5	40
	350	14"	370	280	92	351	45	22	175	140	4-18	445	527	470	16-Ø26	16-M24	41.3	56
	400	16"	412	315	102	403	45	27	175	140	4-18	495	584	525	16-Ø30	16-M27	61	96
	450	18"	425	348	114	453	45	27	210	165	4-22	550	635	585	20-Ø30	20-M27	79	122
	500	20"	470	380	127	503	45	36	210	165	4-22	610	705	650	20-Ø33	20-M30	128	202
	600	24"	550	445	154	603	45	36	210	165	4-22	705	832	770	20-Ø36	20-M33	188	270
25	50	2"	110	67	43	50.5	15	11	90	70	4-10	94	-	125	4-Ø18	4-M16	3.5	-
	65	2.5"	118	75	46	65	15	11	90	70	4-10	110	-	145	8-Ø18	8-M16	4.5	-
	80	3"	130	82	46	80	15	14	90	70	4-10	127	-	160	8-Ø18	8-M16	5.1	-
	100	4"	145	100	52	100	15	14	90	70	4-10	150	-	190	8-Ø23	8-M20	6.8	-
	125	5"	156	114	56	123	29	17	90	70	4-10	175	-	220	8-Ø27	8-M24	9.8	-
	150	6"	176	135	56	148.5	29	17	90	70	4-10	205	-	250	8-Ø27	8-M24	10.9	-
	200	8"	220	161	60	197	29	22	125	102	4-12	265	-	310	12-Ø27	12-M24	18.5	-
	250	10"	280	205	68	250.5	39	22	125	102	4-12	325	-	370	12-Ø30	12-M27	26.9	-
300	12"	305	230	78	299.5	39	27	150	125	4-14	376	-	430	16-Ø30	16-M27	45.5	-	



The below table shows the Kvs at different opening angles:

Table (3) Hydraulic Characteristics

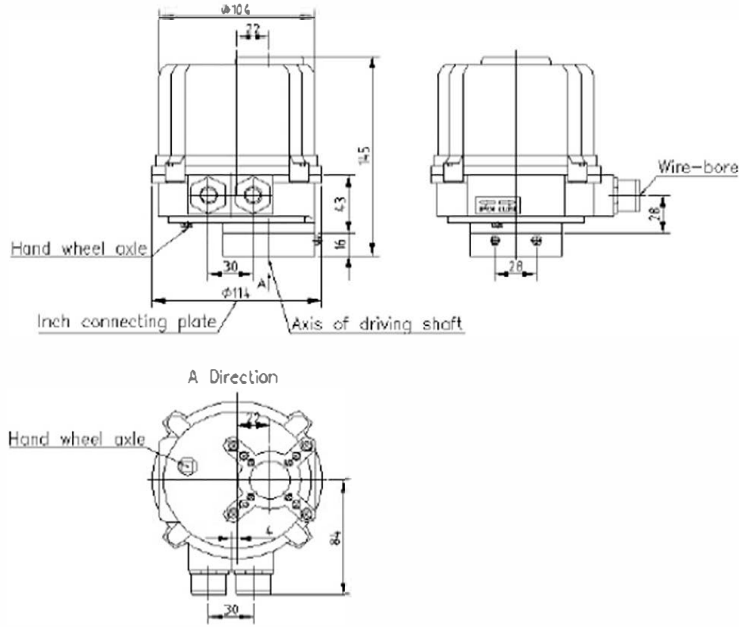
Size	Kvs at Disk Opening Angle								
	10°	20°	30°	40°	50°	60°	70°	80°	90°
50	0.08	4.0	10	19	36	51	72	101	109
65	0.16	6.4	16	19	52	79	116	164	177
80	0.24	9.7	18	31	56	93	147	221	243
100	0.40	14	29	63	112	185	293	439	483
125	0.64	23	49	107	191	315	499	748	822
150	1.6	36	76	165	294	487	771	1,156	1,270
200	2.4	72	153	332	591	977	1,547	2,321	2,550
250	3.3	123	260	564	1,006	1,664	2,634	3,951	4,342
300	4.1	190	402	872	1,554	2,571	4,070	6,104	6,708
350	4.7	278	588	1,273	2,269	3,754	4,070	8,911	9,793
400	6.2	381	808	1,750	3,120	5,162	8,170	12,255	13,467
450	8.6	505	1,070	2,319	4,132	6,837	10,821	16,231	17,836
500	11	650	1,376	2,981	5,313	8,791	13,913	20,869	22,933
600	17	1,004	2,126	4,606	8,209	13,582	21,495	32,242	35,431

Table (4) Actuator Data

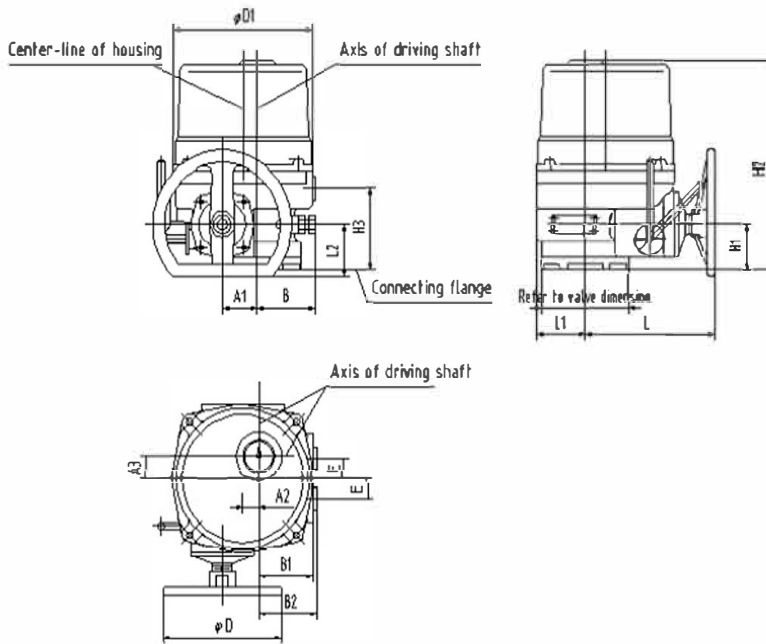
OS# On-Off	Max Torque Nm)	Speed (r/min)	Run Time at 60Hz sec)	Power Consumption Watts)	Manual Override	Weight Kg)
EM-0050	50	0.8	18	10		2
EM-0090	90	0.86	17.5	25	Hand-wheel	10
EM-00150	150	0.73	20	40	Hand-wheel	12
EM-0400	400	0.57	26	60	Hand-wheel	18
EM-1000	1000	0.57	26	200	Hand-wheel	25
EM-1500	1500	0.17	90	90	Hand-wheel	48
EM-2000	2000	0.17	90	180	Hand-wheel	50
EM-2500	2500	0.17	90	200	Hand-wheel	50

Table (5) Actuator Dimensions (mm)

EM-0050



EM-0090 - EM-2500



Model	A1	A2	A3	B	B1	B2	D	D1	E	H1	H2	L	L1	L2
EM-0090	44	17	36	75	68	0	200	170	27.5	62	257	181	62	50
EM-0150	49.5	22.5	30	85	77.5		200	200		64	263	190	85	76
EM-0400	60	33	35	100	77		200	220		70	304	205	88	76
EM-1000	70	43	38	115	92		250	260		78	342	228	106	110
EM-1500 EM-2000 EM-2500	70	43	38	165	92		250	260		185	450	228	106	110

INSTALLATION

WARNING!

Remove power before the cover is dismantled!
The actuator must be handled with the utmost care when the cover is removed and the power connected!

MOUNTING ON VALVE

Operate the valve manually to fully open or fully closed position before the actuator is mounted.

Operate the actuator and valve stem to fully opened or fully closed position.

Check that the actuator and valve stem are in correct position. Please note, valve and actuator must be in the same mode (fully opened/fully closed) prior to the assembly.

Mount the actuator on the valve and check that the actuator and valve stem are centered and aligned.

Operate the valve manually with the aid of the actuator hand-wheel and check that the valve moves with normal resistance.

Check that all screws are correctly tightened.

ELECTRIC WIRING

Note:

Electric wiring must be carried out by qualified personnel only!

Wiring diagram is also shown on the label of top cover.

Loosen the screws on the cover and lift it off.

Check the voltage marked on the actuator label.

Connect according to the enclosed wiring diagram. The wiring diagram is drawn in unaffected position (inside of the actuator cover in the intermediate position).

Test run the actuator from intermediate position checking that the actuator turns in the correct direction.

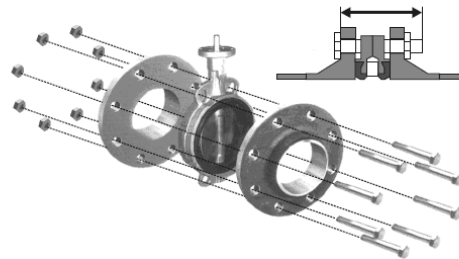
Test run the actuator and check that the limit switches work correctly.

Check that the cable entries and possible blind plug are sealed.

Mount the cover.

Bolting

Number of bolts and nuts depends on nominal pressure PN. Please refer to Table (2) for more



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**MOTORIZED BUTTERFLY VALVE
ACTAUTED BUTTERFLY VALVES**

Honeywell

MOTORIZED BUTTERFLY VALVE

ACTUATED BUTTERFLY VALVES



- Wide size range (DN 50...DN500) for PN16 type
- For On-Off Control
- Manual override non-clutch design. Manual operation can be operated without any lever, clutch or brake upon power voltage.
- Irreversible worm gear.
- Visual mechanical position indicator for accurate visual reference of valve position..
- Anti-condensation heater and 2 aux. limit switches on standard model
- Enclosure IP67

General

The BSBFW Actuated Wafer Type Butterfly Valves are suitable for heating and cooling applications.

The BSBFW series is equipped with standard On-Off control quarter-turn electric actuator.

The BSBFW series can also provide feedback output signal: Dry contact for On-Off version;

Technical Specification

Valve

Sizes	DN50...DN500 (Wafer Type)
Nominal pressure	PN16
Medium Temperature	-10i ~ +110i Maximum
Body Material	IS: 210, FG 220 CI
Tightness	Bubble tight
Stem Material	ASTM A276, GR SS 410
Disc Material	Epoxy coated ductile iron Disc
Liner Material	EPDM
Medium Type	Chilled and Hot water
Pipe Connection	ISO7005-2

Actuator

Power Supply	220Vac, 50/60 Hz
Running time	See table (1)
Travel Angle	90°± 5o
Feedback	2 Aux Switches
Ambient Temperature	4~20mA or 0(2)~10V select by DIP-switch
Enclosure	IP67 Waterproof
Indicator	Continuous Position Indicator
Manual Override	Non-clutch design
Worm Gear	Permanently lubricated and self locking
Space Heater	15W 220V Anti-condensation
Material	Aluminum Alloy
External Coating	Dry powder coating
Stall Protection	Built-in thermal protection Cut off at 125 ± 5 Reset at 95 ± 5

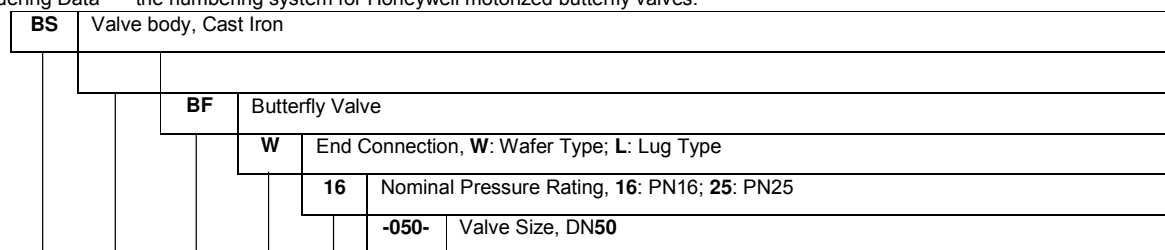
Table (1) Control Type and Valve Size Data

Valve Size	Actuator OS#	Valve OS#	Max Torque (Nm)	Run Time at 60Hz (sec)	Kvs (m³/h)
DN50	EM-0050	BSBFW16-050U	50	18	109
DN65	EM-0050	BSBFW16-065U	50	18	177
DN80	EM-0050	BSBFW16-080U	50	18	243
DN100	EM-0050	BSBFW16-100U	50	18	483
DN125	EM-0090	BSBFW16-125U	90	17.5	822
DN150	EM-0090	BSBFW16-150U	90	17.5	1,270
DN200	EM-0150	BSBFW16-200U	150	20	2,550
DN250	EM-0400	BSBFW16-250U	400	26	4,342
DN300	EM-0400	BSBFW16-300U	400	26	6,708
DN350	EM-1000	BSBFW16-350U	1,000	26	9,793
DN400	EM-1500	BSBFW16-400U	1,500	90	13,467
DN450	EM-2000	BSBFW16-450U	2,000	90	17,836
DN500	EM-2500	BSBFW16-500U	2,500	90	22,933

Note: More OS# Please refer to Figure (1) or contact Honeywell.

Figure (1) Product Identification System

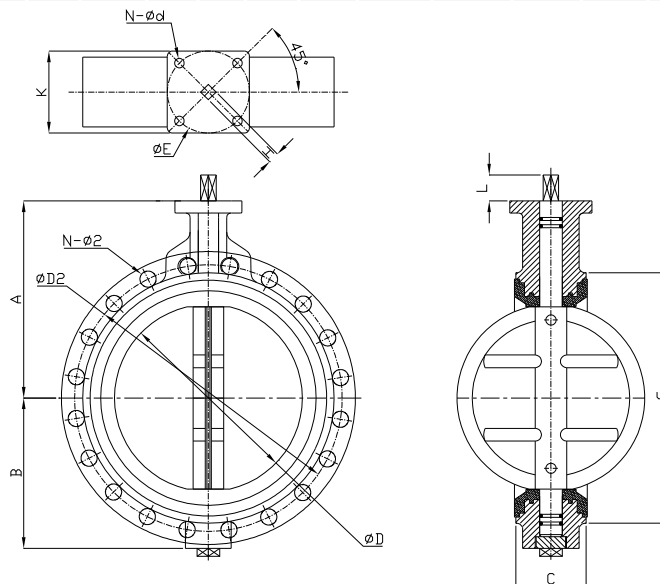
Ordering Data — the numbering system for Honeywell motorized butterfly valves:



BS		BF	W	16	-050-			
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Table (2) Valve Dimensions (mm) and Weight

PN	Size		A	B	C	Ø D	L	H	Ø K	Ø E	n-Ød	G		ØD2	N-Ø2		Weight (Kg)	
	DN	Inch										Wafer	Lug		Wafer	Lug	Wafer	Lug
16	50	2"	110	67	43	50.5	15	11	65	50	4-7	94	159	125	4-Ø18	4-M16	2.5	3.8
	65	2.5"	118	75	46	65	15	11	65	50	4-7	110	184	145	4-Ø18	4-M16	3.2	4.2
	80	3"	130	82	46	80	15	11	65	50	4-7	127	197	160	8-Ø18	8-M16	3.6	4.7
	100	4"	145	100	52	100	15	11	65	50	4-7	150	222	180	8-Ø18	8-M16	4.9	9
	125	5"	156	114	56	123	29	14	90	70	4-10	175	254	210	8-Ø18	8-M16	7	10.9
	150	6"	176	135	56	148.5	29	14	90	70	4-10	205	292	240	8-Ø22	8-M20	7.8	14.2
	200	8"	220	161	60	197	29	17	90	70	4-10	265	349	295	12-Ø22	12-M20	13.2	18.2
	250	10"	280	220	68	250.5	39	22	125	102	4-12	325	413	355	12-Ø26	12-M24	19.2	26.8
	300	12"	305	230	78	299.5	39	22	125	102	4-12	376	483	410	12-Ø26	12-M24	32.5	40
	350	14"	370	280	92	351	45	22	175	140	4-18	445	527	470	16-Ø26	16-M24	41.3	56
	400	16"	412	315	102	403	45	27	175	140	4-18	495	584	525	16-Ø30	16-M27	61	96
	450	18"	425	348	114	453	45	27	210	165	4-22	550	635	585	20-Ø30	20-M27	79	122
	500	20"	470	380	127	503	45	36	210	165	4-22	610	705	650	20-Ø33	20-M30	128	202
	600	24"	550	445	154	603	45	36	210	165	4-22	705	832	770	20-Ø36	20-M33	188	270
25	50	2"	110	67	43	50.5	15	11	90	70	4-10	94	-	125	4-Ø18	4-M16	3.5	-
	65	2.5"	118	75	46	65	15	11	90	70	4-10	110	-	145	8-Ø18	8-M16	4.5	-
	80	3"	130	82	46	80	15	14	90	70	4-10	127	-	160	8-Ø18	8-M16	5.1	-
	100	4"	145	100	52	100	15	14	90	70	4-10	150	-	190	8-Ø23	8-M20	6.8	-
	125	5"	156	114	56	123	29	17	90	70	4-10	175	-	220	8-Ø27	8-M24	9.8	-
	150	6"	176	135	56	148.5	29	17	90	70	4-10	205	-	250	8-Ø27	8-M24	10.9	-
	200	8"	220	161	60	197	29	22	125	102	4-12	265	-	310	12-Ø27	12-M24	18.5	-
	250	10"	280	205	68	250.5	39	22	125	102	4-12	325	-	370	12-Ø30	12-M27	26.9	-
300	12"	305	230	78	299.5	39	27	150	125	4-14	376	-	430	16-Ø30	16-M27	45.5	-	



The below table shows the Kvs at different opening angles:

Table (3) Hydraulic Characteristics

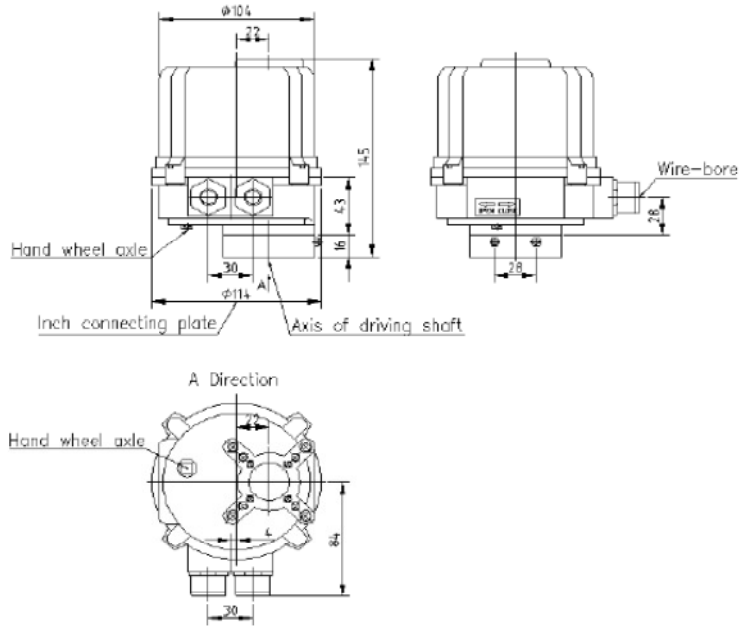
Size	Kvs at Disk Opening Angle								
	10°	20°	30°	40°	50°	60°	70°	80°	90°
50	0.08	4.0	10	19	36	51	72	101	109
65	0.16	6.4	16	19	52	79	116	164	177
80	0.24	9.7	18	31	56	93	147	221	243
100	0.40	14	29	63	112	185	293	439	483
125	0.64	23	49	107	191	315	499	748	822
150	1.6	36	76	165	294	487	771	1,156	1,270
200	2.4	72	153	332	591	977	1,547	2,321	2,550
250	3.3	123	260	564	1,006	1,664	2,634	3,951	4,342
300	4.1	190	402	872	1,554	2,571	4,070	6,104	6,708
350	4.7	278	588	1,273	2,269	3,754	4,070	8,911	9,793
400	6.2	381	808	1,750	3,120	5,162	8,170	12,255	13,467
450	8.6	505	1,070	2,319	4,132	6,837	10,821	16,231	17,836
500	11	650	1,376	2,981	5,313	8,791	13,913	20,869	22,933
600	17	1,004	2,126	4,606	8,209	13,582	21,495	32,242	35,431

Table (4) Actuator Data

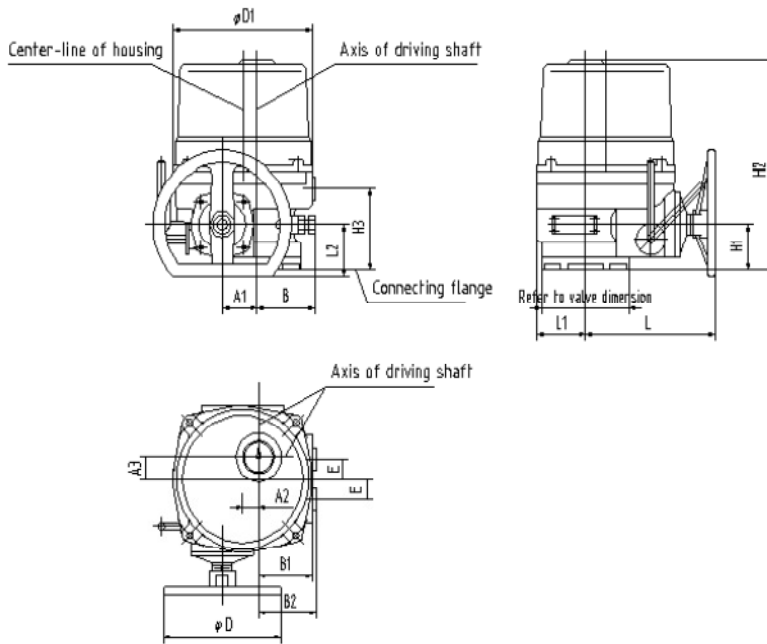
OS# On-Off	Max Torque Nm)	Speed (r/min)	Run Time at 60Hz sec)	Power Consumption Watts)	Manual Override	Weight Kg)
EM-0050	50	0.8	18	10		2
EM-0090	90	0.86	17.5	25	Hand-wheel	10
EM-00150	150	0.73	20	40	Hand-wheel	12
EM-0400	400	0.57	26	60	Hand-wheel	18
EM-1000	1000	0.57	26	200	Hand-wheel	25
EM-1500	1500	0.17	90	90	Hand-wheel	48
EM-2000	2000	0.17	90	180	Hand-wheel	50
EM-2500	2500	0.17	90	200	Hand-wheel	50

Table (5) Actuator Dimensions (mm)

EM-0050



EM-0090 ~ EM-2500



Model	A1	A2	A3	B	B1	B2	D	D1	E	H1	H2	L	L1	L2
EM-0090	44	17	36	75	68	0	200	170	27.5	62	257	181	62	50
EM-0150	49.5	22.5	30	85	77.5		200	200		64	263	190	85	76
EM-0400	60	33	35	100	77		200	220		70	304	205	88	76
EM-1000	70	43	38	115	92		250	260		78	342	228	106	110
EM-1500 EM-2000 EM-2500	70	43	38	165	92		250	260		185	450	228	106	110

INSTALLATION

WARNING!

Remove power before the cover is dismantled!
The actuator must be handled with the utmost care when the cover is removed and the power connected!

MOUNTING ON VALVE

Operate the valve manually to fully open or fully closed position before the actuator is mounted.

Operate the actuator and valve stem to fully opened or fully closed position.

Check that the actuator and valve stem are in correct position. Please note, valve and actuator must be in the same mode (fully opened/fully closed) prior to the assembly.

Mount the actuator on the valve and check that the actuator and valve stem are centered and aligned.

Operate the valve manually with the aid of the actuator hand-wheel and check that the valve moves with normal resistance.

Check that all screws are correctly tightened.

ELECTRIC WIRING

Note:

Electric wiring must be carried out by qualified personnel only!

Wiring diagram is also shown on the label of top cover.

Loosen the screws on the cover and lift it off.

Check the voltage marked on the actuator label.

Connect according to the enclosed wiring diagram. The wiring diagram is drawn in unaffected position (inside of the actuator cover in the intermediate position).

Test run the actuator from intermediate position checking that the actuator turns in the correct direction.

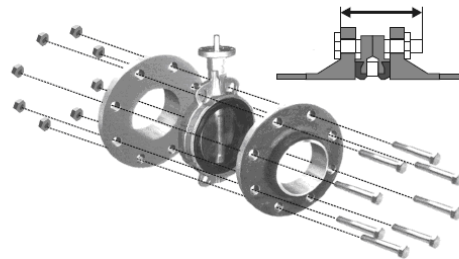
Test run the actuator and check that the limit switches work correctly.

Check that the cable entries and possible blind plug are sealed.

Mount the cover.

Bolting

Number of bolts and nuts depends on nominal pressure PN. Please refer to Table (2) for more (



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MOTORIZED BUTTERFLY VALVE
ACTAUTED BUTTERFLY VALVES

Honeywell

DO6F PRESSURE REDUCING VALVE

WITH BALANCED SEAT AND SET POINT SCALE

- Inlet pressure balancing – no influence on outlet pressure by fluctuating inlet pressure
- Up to size 1 1/4" approved by LGA for low noise, Group 1 without limitations
- The valve insert is of high quality synthetic material and can be fully exchanged
- The outlet pressure is set by turning the adjustment knob
- The set pressure is directly indicated on the set point scale
- The adjustment spring is not in contact with the drinking water
- Integral fine filter
- Also available without fittings
- Conforms to BSEN 1567
- All materials are UBA conform
- All materials are ACS approved

APPROVALS

- DVGW
- WRAS (up to 23°C)



APPLICATION

According to EN 806-2 pressure reducing valves of this type protect household water installations against excessive pressure from the supply. They can also be used for industrial or commercial applications within the range of their specification.

By installing a pressure reducing valve, pressurisation damage is avoided and water consumption is reduced. The set pressure is also maintained constant, even when there is wide inlet pressure fluctuation.

Reduction of the operating pressure and maintaining it at a constant level minimizes flow noise in the installation.

Technical Specification

Media

Medium: Drinking water

Connections/Sizes

Connection sizes: 1/2" - 2"

Nominal sizes: DN15 - DN50

Operating temperatures

Max. operating temperature medium with clear filter bowl: 40 °C

Max. operating temperature medium with brass filter bowl: 70 °C *

Pressure values

Max. inlet pressure with clear filter bowl: 16 bar

Max. inlet pressure with brass filter bowl: 25 bar

Outlet pressure: 1.5 - 6 bar

Preset outlet pressure: 3 bar

Min. pressure drop: 1 bar

* max. operating pressure 10 bar

Note: Use the SM06T brass filter bowl, if the valve can be exposed to UV radiation or solvent vapors.

CONSTRUCTION

Overview



	Components	Materials
1	Spring bonnet with adjustment knob and setting scale	High-quality synthetic material
2	Housing with pressure gauge connections on both sides	Dezincification-resistant brass
3	Threaded male connections (options A & B)	Brass
4	Pressure gauge connection	-
5	Filter bowl	Clear synthetic or brass
Not depicted components		
	Adjustment spring	Spring steel
	Valve insert complete with diaphragm and valve seat	High-quality synthetic material, EPDM diaphragm
	Fine filter with 0.16 mm mesh	Stainless steel
	Pressure gauge (see accessories)	High-quality synthetic material
	Seals	EPDM

METHOD OF OPERATION

Spring loaded pressure reducing valves operate by means of a force equalising system. The force of a diaphragm operates against the force of an adjustment spring. If the outlet pressure and therefore diaphragm force fall because water is drawn, the then greater force of the spring causes the valve to open. The outlet pressure then increases until the forces between the diaphragm and the spring are equal again.

The inlet pressure has no influence in either opening or closing of the valve. Because of this, inlet pressure fluctuation does not influence the outlet pressure, thus providing inlet pressure balancing.

INSTALLATION GUIDELINES

Setup requirements

- Install in horizontal pipework with filter bowl downwards
- Install shut-off valves
- The device downstream should be protected by means of a safety valve (installed downstream of the pressure reducing valve). In these cases the delivery pressure of the pressure reducing valve shall be set to at least 20% below the response pressure of the pressure relief-valve according to EN 806-2
 - Pressure gauge can be read off easily
 - With clear filter bowl, degree of contamination can be easily seen
 - Simplified maintenance and cleaning
- Install downstream of the filter or strainer
- Provide a straight section of pipework of at least five times the nominal valve size after the pressure reducing valve (in accordance with EN 806-2)

TRANSPORTATION AND STORAGE

Keep parts in their original packaging and unpack them shortly before use.

The following parameters apply during transportation and storage:

Parameter	Value
Environment:	clean, dry and dust free
Min. ambient temperature:	5 °C
Max. ambient temperature:	55 °C
Min. ambient relative humidity:	25 % *
Max. ambient relative humidity:	85 % *

*non condensing

Installation Example

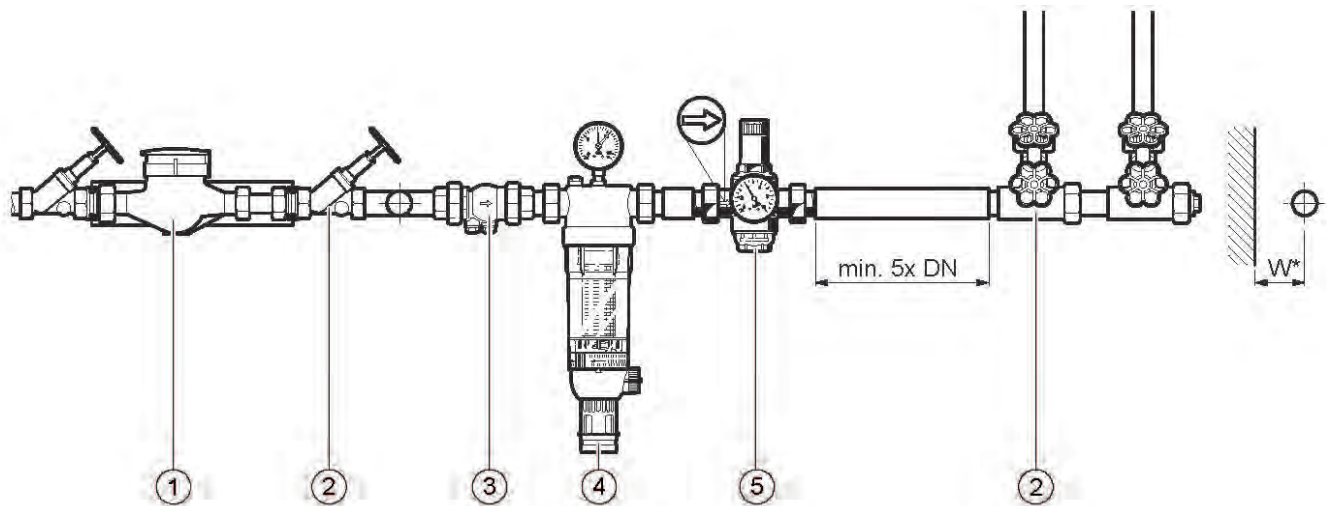


Fig. 1 Standard installation example for the pressure reducing valve

- 1 Water meter
- 2 Shut-off valve
- 3 Check valve
- 4 Filtering unit
- 5 Pressure reducing valve

Connection sizes

DN	15	20	25	32	40	50
inch	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
Distance in mm (W*)	55	60	60	60	70	70

* Required installation distances between the centerline of the pipework and the surrounding in dependency of the connection size.

TECHNICAL CHARACTERISTICS

kvs-Values

Connection sizes	15	20	25	32	40	50
kvs-value (m ³ /h)	2.4	3.1	5.8	5.9	12.6	12.0
IfBt designation	P-IX 1582/I	P-IX 1582/I	P-IX 1582/I	P-IX 1582/I	- *	- *
DVGW registration number	DW-6330 AT 2314					

* Compulsory testing in sizes R 1 1/2" to R 1 1/4"

Pressure drop characteristics

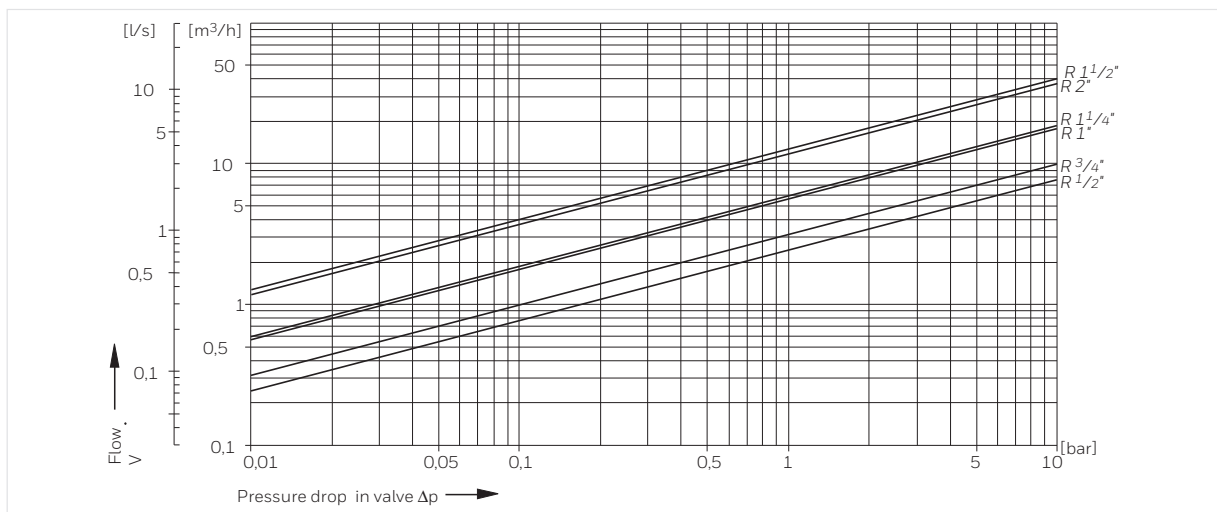
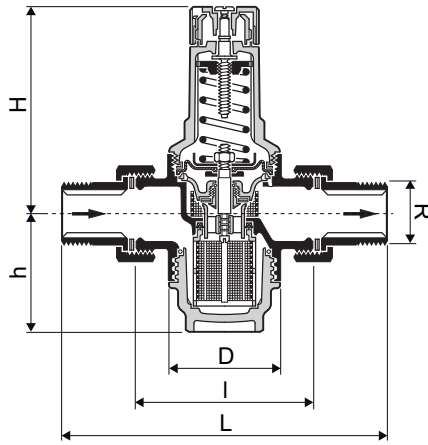


Fig. 2 Pressure drop within the valve in dependency of the flow rate and the used connection size

DIMENSIONS



Connection sizes

Parameter		Values					
Connection sizes	R	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
Weight	DN	15	20	25	32	40	50
Dimensions	kg	0.8	1.0	1.4	2.0	3.3	4.5
	L	140	160	180	200	225	255
	I	80	90	100	105	130	140
	H	89	89	111	111	173	173
	h	58	58	64	64	126	126
	D	54	54	61	61	82	82

Note: All dimensions in mm unless stated otherwise.

ORDERING INFORMATION

The following tables contain all the information you need to make an order of an item of your choice. When ordering, please always state the type, the ordering or the part number.

Options

The valve is available in the following sizes: 1/2", 3/4", 1", 1 1/4", 1 1/2" and 2".



- Standar
- not available

		D06F-...A	D06F-...B	D06F-...E
Max. operating temperature medium	40 °C	•	-	•
	70 °C	-	•	-
Filter bowl	clear	•	-	•
	brass	-	•	-
Connection type	external threaded connection set on inand outlet	•	•	-
	external thread on inand outlet	-	-	•

Note: ... = space holder for connection size

Note: Ordering number example for 1 1/4" and type A valve: D06F-11/4A

Accessories

Parameter	Description	Dimension	Part No.	
	M07M	M07M		
		Housing diameter 63 mm, rear connection thread G 1/4"		
		Range: 0 - 4 bar		M07M-A4
		Range: 0 - 10 bar		M07M-A10
		Range: 0 - 16 bar		M07M-A16
		Range: 0 - 25 bar		M07M-A25
	ZR06K	Double ring wrench		
		For removal of spring bonnet and filter bowl		ZR06K
	VST06A	Connection set		
		Threaded connections		
			1/2"	VST06-1/2A
			3/4"	VST06-1/2A
			1"	VST06-1A
			1 1/4"	VST06-11/4A
			1 1/2"	VST06-11/2A
		2"	VST06-2A	
	VST06A	Connection set		
		Threaded connections		
			1/2"	VST06-1/2B
			3/4"	VST06-3/4B
			1"	VST06-1B
			1 1/4"	VST06-11/4B
			1 1/2"	VST06-11/2B
		2"	VST06-2B	

Spare Parts

Pressure Reducing Valve D06F, from 1997 onwards

Overview	Description	Dimension	Part No.
	1 Spring bonnet complete		
		1/2" - 1"	0901515
		1" + 1 1/4"	0901516
		1 1/2" + 2"	0901518
	2 Valve insert complete (without filter)		
		1/2" + 3/4"	D06FA-1/2
		1" + 1/4"	D06FA-1B
		1 1/2" + 2"	D06FA-11/2
	3 Union seal washer (10 pcs.)		
		1/2"	0901443
		3/4"	0901444
		1"	0901445
		1 1/4"	0901446
		1 1/2"	0901447
		2"	0901448
	4 O-ring set (10 pcs.)		
		1/2" + 3/4"	0901246
		1" + 1 1/4"	0901499
		1 1/2" + 2"	0901248
	5 Clear filter bowl with O-ring		
		1/2" + 3/4"	SK06T-1/2
		1" + 1 1/4"	SK06T-1B
		1 1/2" + 2"	SK06T-11/2
	6 Brass filter bowl with O-ring		
		1/2" + 3/4"	SM06T-1/2
		1" + 1 1/4"	SM06T-1B
		1 1/2" + 2"	SM06T-11/2
	7 Replacement filter insert		
	1/2" + 3/4"	ES06F-1/2A	
	1" + 1 1/4"	ES06F-1B	
	1 1/2" + 2"	ES06F-11/2A	
8 Blanking plug with O-ring R1/4" (5 pcs.)			
	1/2" - 2"	S06K-1/4	

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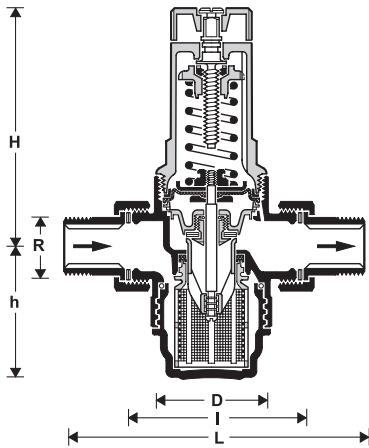
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D06F
3PRESSURE REDUCING
VALVE

Honeywell

Method of Operation



Spring loaded pressure reducing valves operate by means of a force equalising system. The force of a diaphragm operates against the force of an adjustment spring. If the outlet pressure and therefore diaphragm force fall because water is drawn, the then greater force of the spring causes the valve to open. The outlet pressure then increases until the forces between the diaphragm and the spring are equal again.

The inlet pressure has no influence in either opening or closing of the valve. Because of this, inlet pressure fluctuation does not influence the outlet pressure, thus providing inlet pressure balancing.

Materials

- Dezincification resistant brass housing
- Brass threaded connections
- High-quality synthetic material valve insert
- Stainless steel fine filter mesh
- High-quality synthetic material spring bonnet with adjustment knob and setting scale
- Brass filter bowl
- Spring steel adjustment spring
- Fibre-reinforced NBR diaphragm
- NBR and EPDM seals

Options

D06FH-... B = External threaded connection set on in- and outlet

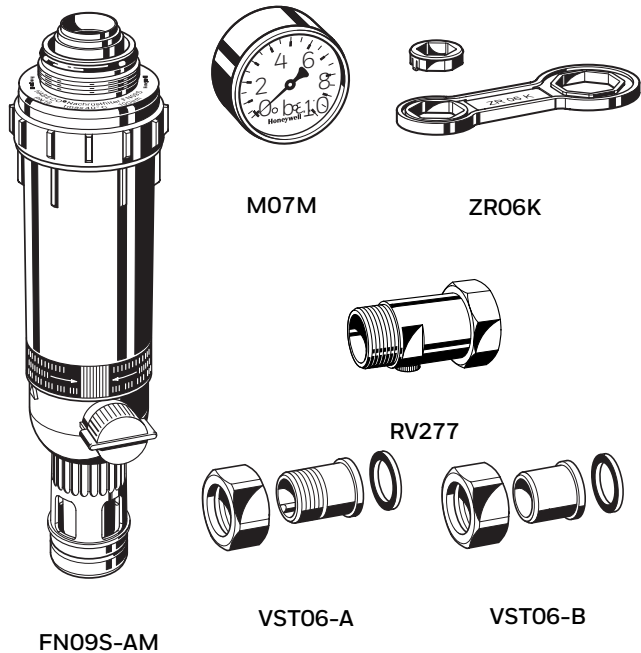


Brass filter bowl up to 70 °C

Special Versions available on request Connection size

Connection size	R	1/2"	3/4"	1"	1 1/4"	40	2"
Nominal size diameter	DN	15	20	25	32	40	50
Weight	ca. kg	0.8	1.0	2.2	2.4	3.4	5.1
Dimensions	mm						
	L	140	160	180	200	225	255
	l	80	90	100	105	130	140
	H	96	96	140	140	172	172
	h	56	56	77	77	113	113
	D	54	54	72	72	82	82
kvs-value		2.4	3.1	7.6	9.1	12.6	12.0

Accessories



FN09S-AM HABEDO® Retrofit filter

Reverse-rinsing filter with red bronze filter cup for retro-conversion of a pressure reducing valves to a filter combination unit

M07M Pressure gauge

Housing diameter 63 mm, rear connection thread

G¹/₄". Ranges: 0 - 4, 0 - 10, 0 - 16 or 0 - 25 bar. Please indicate upper value of pressure range when ordering

ZR06K Double ring wrench

For removal of spring bonnet and filter bowl

RV277 Inlet check valve

Available in sizes R¹/₂" - 2"

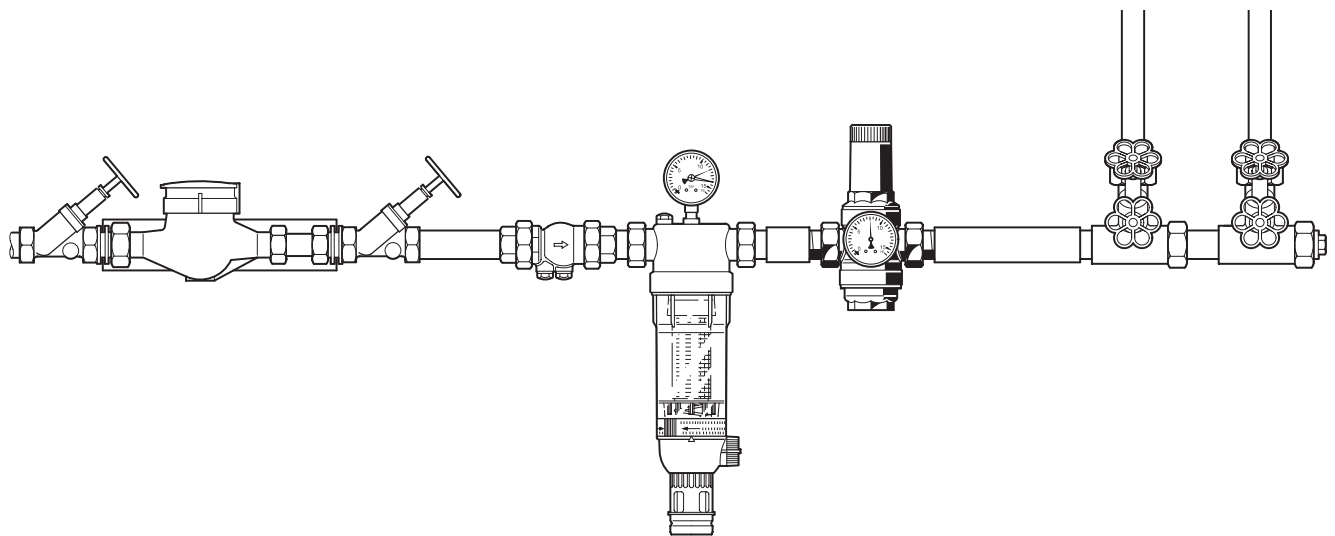
VST06-A Connection set

Threaded connections

VST06-B Connection set

Solder connections

Accessories



Connection size	R	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
	DN	15	20	25	32	40	50
W*	mm	55	55	60	60	70	70

* Minimum distance from wall to centre line of pipework

Installation Guidelines

- Install in horizontal pipework with filter bowl downwards.
- Install shutoff valves
- The installation location should be protected against frost and be easily accessible
 - Pressure gauge can be read off easily
 - Simplified maintenance and cleaning
- Install downstream of the filter or strainer
 - This position ensures optimum protection for the pressure reducing valve against dirt

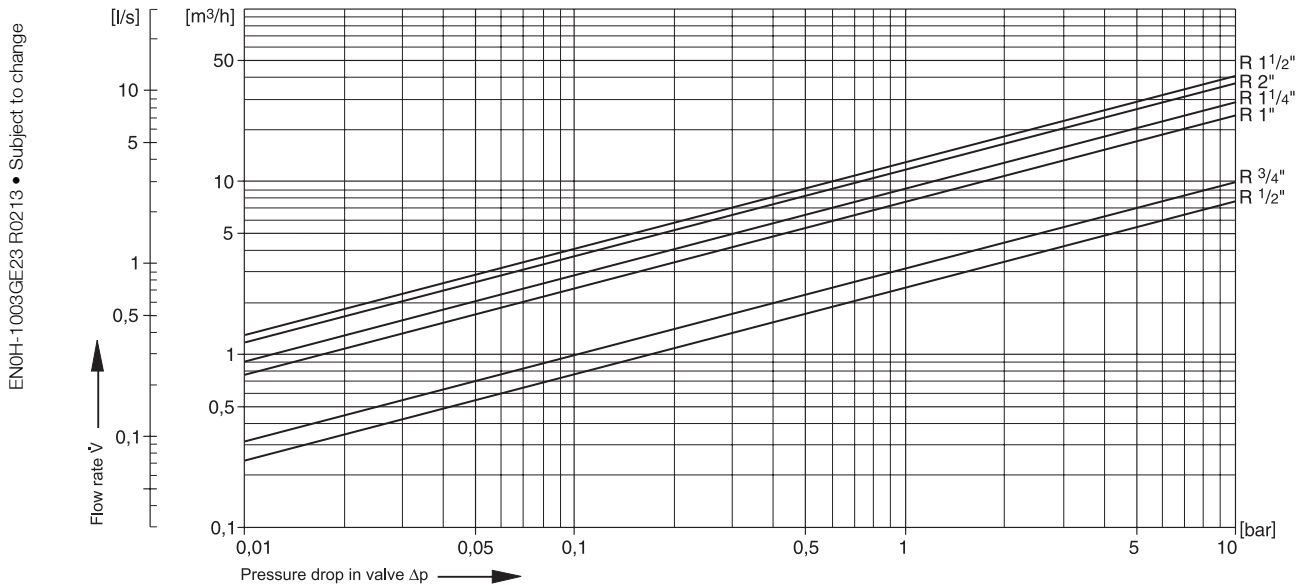
Typical Applications

Pressure reducing valves of this type are suitable for household, industrial and commercial applications within the range of their specifications.

Pressure reducing valves should be installed:

- If the static pressure exceeds the maximum permissible value for the system
- If several pressure zones are required when a pressurisation system is used (pressure reducers on each storey of a building)
- If pressure fluctuations in the downstream system must be avoided

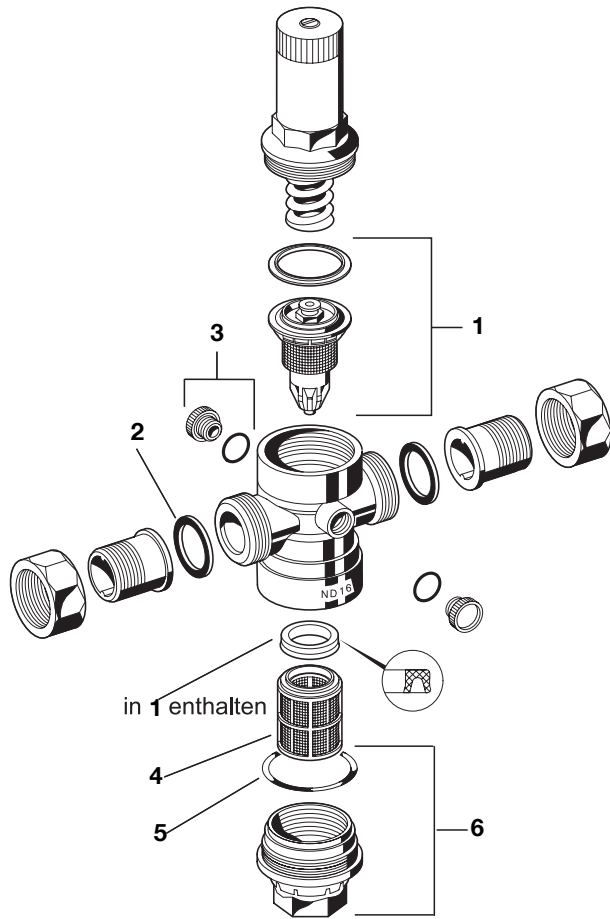
Flow Diagram



<http://ecc.emea.honeywell.com>

Spare Parts

Pressure Reducing Valve D06FH, from 1997 onwards



No.	Description	Dimension	Part No.
1	Valve insert complete (without filter)	1/2" + 3/4"	D06FA-1/2
		1" + 1 1/4"	D06FA-1A
		1 1/2" + 2"	D06FA-11/2
2	Union seal washer (10 pcs.)	1/2"	0901443
		3/4"	0901444
		1"	0901445
		1 1/4"	0901446
		1 1/2"	0901447
		2"	0901448
3	Blanking plug with O-ring R1/4" (5 pcs.)		S06K-1/4
4	Replacement filter insert	1/2" + 3/4"	ES06F-1/2A
		1" + 1 1/4"	ES06F-1A
		1 1/2" + 2"	ES06F-11/2A
5	O-ring (10 pcs.)	1/2" + 3/4"	0901246
		1" + 1 1/4"	0901247
		1 1/2" + 2"	0901248
6	Brass filter bowl with O-ring	1/2" + 3/4"	SM06T-1/2
		1" + 1 1/4"	SM06T-1A
		1 1/2" + 2"	SM06T-11/2

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D06F
PRESSURE REDUCING
VALVE
Honeywell

D06FN PRESSURE REDUCING VALVE

WITH BALANCED SEAT LOW PRESSURE PATTERN

- The outlet pressure is set by turning the adjustment knob
- The adjustment spring is not in contact with the potable water
- The valve insert is of high quality synthetic material and can be fully exchanged
- Integral fine filter
- Also available without fittings
- Easily retrofittable to convert valve to a reverse-rinsing filter combination
- Can be retrofitted with an inlet non-return valve
- Inlet pressure balancing - fluctuating inlet pressure does not influence outlet pressure
- Light weight

APPLICATION

Pressure reducing valves of this type protect installations against excessive pressure from the supply. They can be used for household, industrial or commercial applications within the range of their specification.

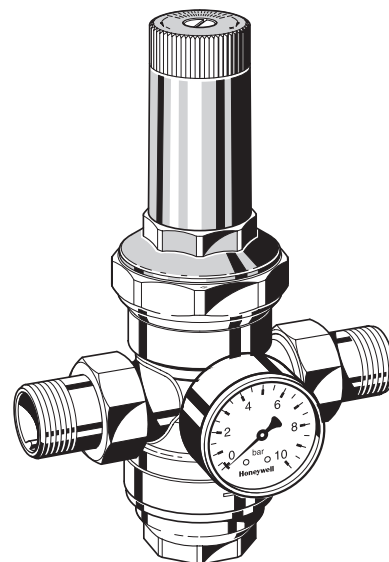
By installing a pressure reducing valve, pressurisation damage is avoided and water consumption is reduced. The set pressure is also maintained constant, even when there is wide inlet pressure fluctuation.

Reduction of the operating pressure and maintaining it at a constant level minimizes flow noise in the installation.

Construction

The pressure reducing valve comprises:

- Housing with G1/4" pressure gauge connections on both sides
- Threaded male connections (option B)
- Valve insert complete with diaphragm and valve seat
- Fine filter with 0.16 mm mesh
- Spring bonnet with adjustment knob
- Filter bowl
- Adjustment spring
- Pressure gauge not included (see accessories)



Technical Specification

Range of Application

Medium	Water, compressed air* and nitrogen* in consideration of valid standards (e.g. DIN EN 12502)
Inlet pressure	max. 25 bar
Outlet pressure	0.5-2 bar

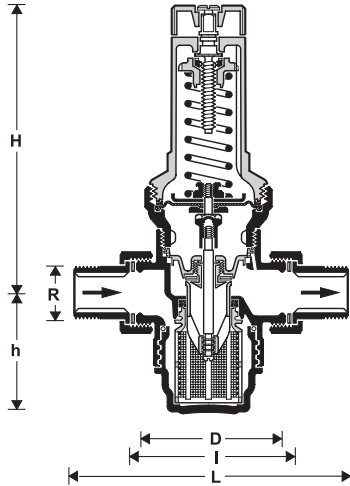
Technical Data

Operating temperature	max. 70°C
Minimum pressure drop	0.5 bar
Connection size	1/2" bis 2"

* As part of an installation being approved according to PED requirements, this product must also be certified.

Honeywell

Method of Operation



Spring loaded pressure reducing valves operate by means of a force equalising system. The force of a diaphragm operates against the force of an adjustment spring. If the outlet pressure and therefore diaphragm force fall because water is drawn, the then greater force of the spring causes the valve to open. The outlet pressure then increases until the forces between the diaphragm and the spring are equal again.

The inlet pressure has no influence in either opening or closing of the valve. Because of this, inlet pressure fluctuation does not influence the outlet pressure, thus providing inlet pressure balancing.

Materials

- Dezincification resistant brass housing
- Brass intermediate ring
- Brass threaded connections
- High-quality synthetic material valve insert
- Stainless steel fine filter mesh
- High-quality synthetic material spring bonnet
- Brass filter bowl
- Spring steel adjustment spring
- Fibre-reinforced NBR diaphragm
- NBR and EPDM seals

Options

D06FH-... B = With threaded male connections, brass filter bowl

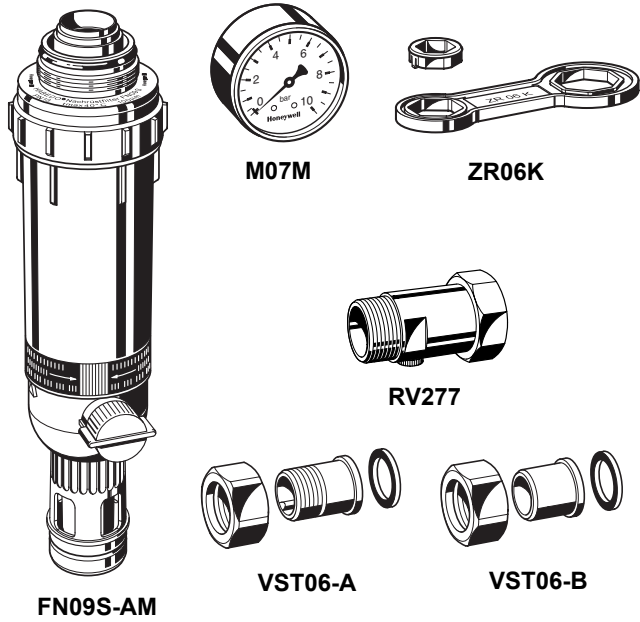


-up to 70 °C

Special Versions available on request Connection size

Connection size	R	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
Nominal size dia-meter	DN	15	20	25	32	40	50
Weight	kg	1.4	1.6	2.4	2.8	4.4	5.6
Dimensions	mm						
	L	140	160	180	200	225	255
	l	80	90	100	105	130	140
	H	148	148	185	185	210	210
	h	56	56	77	77	113	113
	D	73	73	83	83	102	102
k _{vs} -value	m ³ /h	2.4	3.1	7.6	9.1	12.6	12.0

Accessories



Accessories

FN09S-AM HABEDO ® Retrofit filter

Reverse-rinsing filter with red bronze filter cup for retro-conversion of a pressure reducing valves to a filter combination unit

M07M Pressure gauge

Housing diameter 63 mm, rear connection thread G¹/₄". Ranges: 0 - 4, 0 - 10, 0 - 16 or 0 - 25 bar. Please indicate upper value of pressure range when ordering

ZR06K Double ring wrench

For removal of spring bonnet and filter bowl

RV277 Inlet check valve

Available in sizes R¹/₂" - 2" **VST06-A**

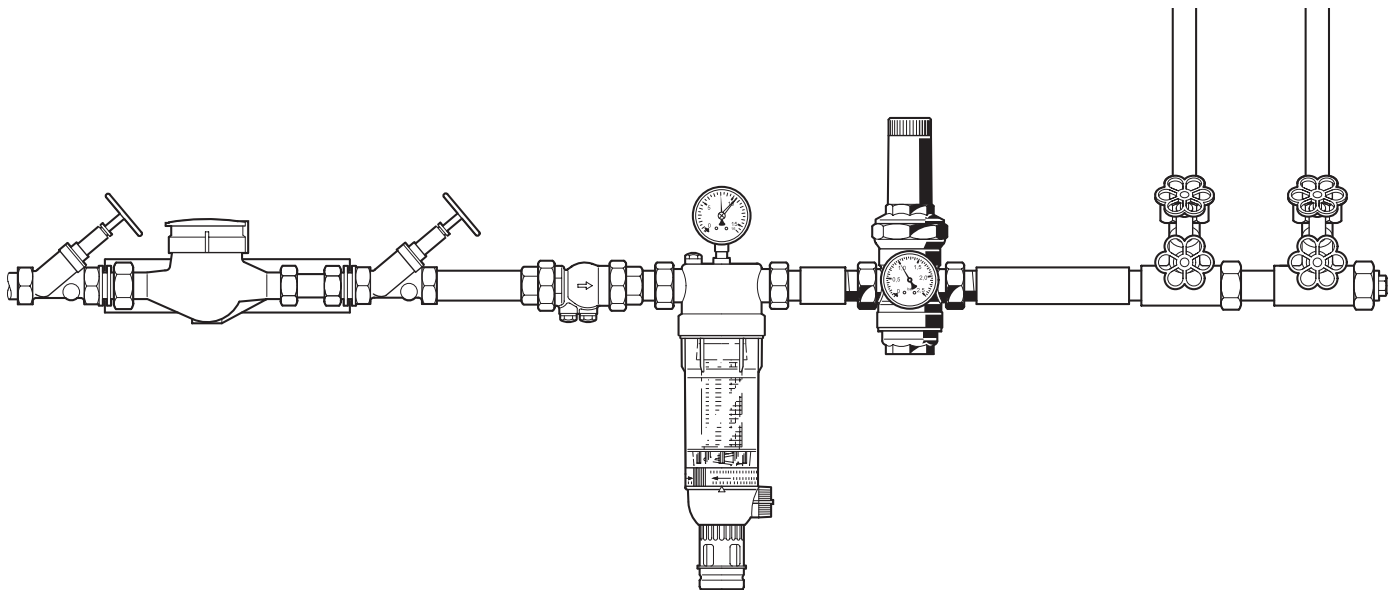
Connection set

Threaded connections

VST06-B Connection set

Solder connections

Installation Example



Connection size	R	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
	DN	15	20	25	32	40	50
W*	mm	55	55	60	60	70	70

* Minimum distance from wall to centre line of pipework

Installation Guidelines

- Install in horizontal pipework with filter bowl downwards.
- Install shutoff valves
- The installation location should be protected against frost and be easily accessible
 - Pressure gauge can be read off easily
 - Simplified maintenance and cleaning
- Install downstream of the filter or strainer
 - This position ensures optimum protection for the pressure reducing valve against dirt

Typical Applications

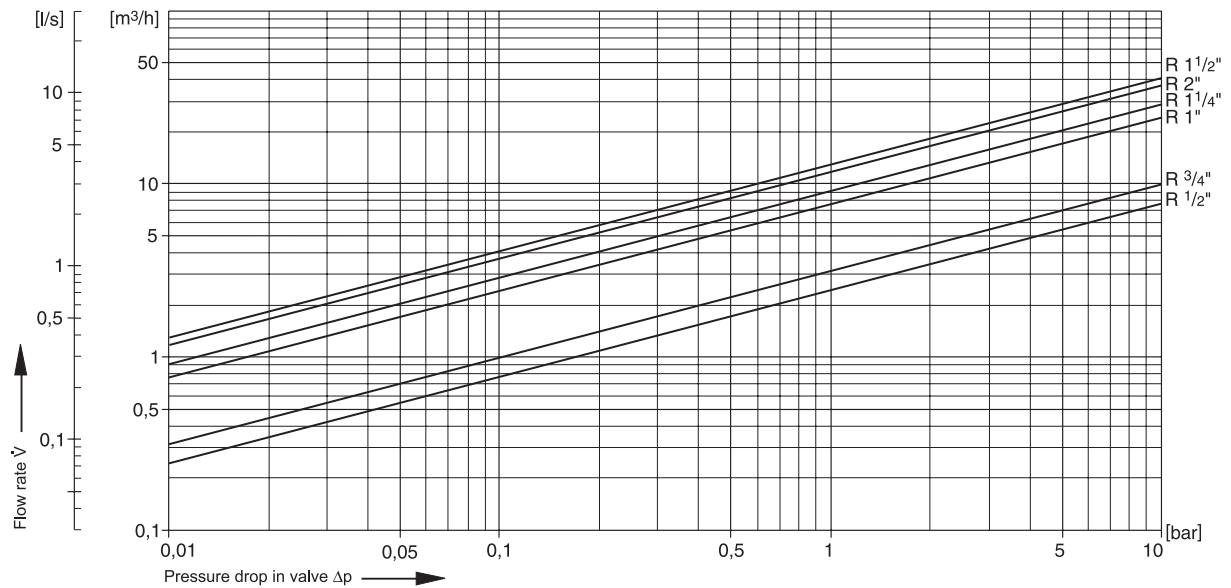
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- If pressure fluctuations in the downstream system must be avoided

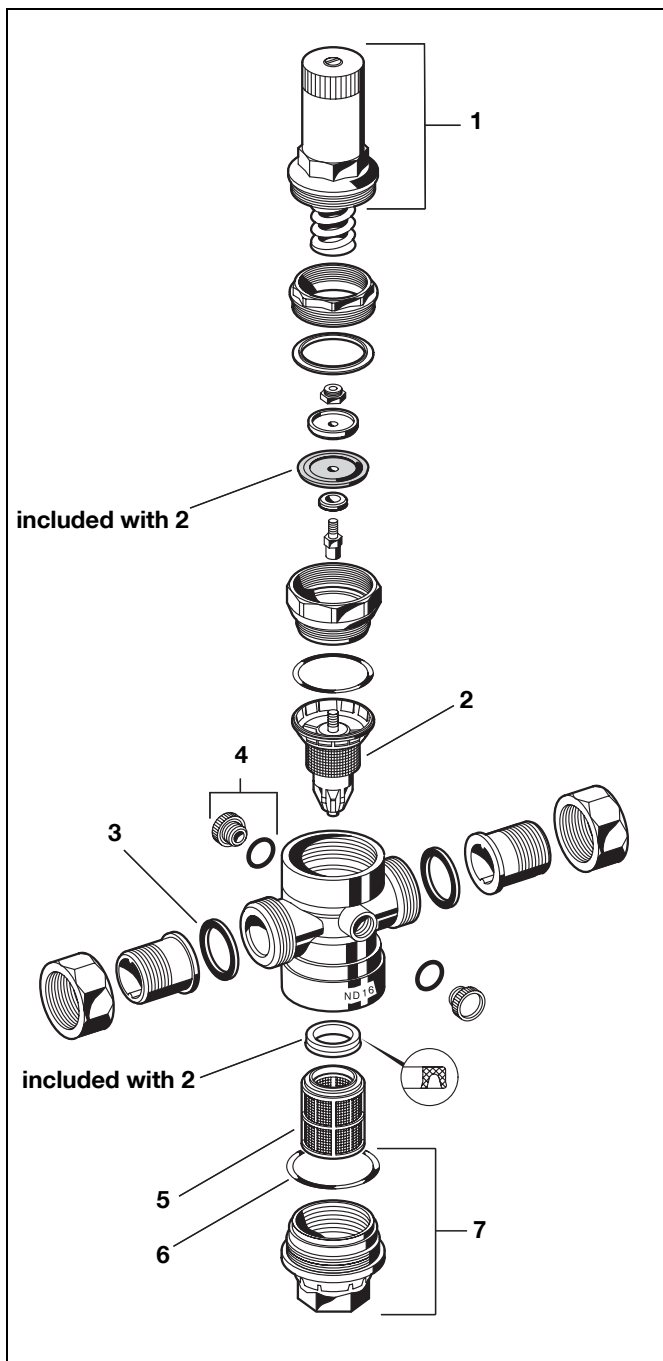
Flow Diagram

ENDH-1004GE23 R0307 • Subject to change without notice



Spare Parts

Pressure Reducing Valve D06FN, from 1997 onwards



No.	Description 1	Dimension	Part No.
	Spring bonnet for D06FN	1/2" + 3/4"	0900153
		1" + 1 1/4"	0900154
		1 1/2" + 2"	0900229
2	Valve insert complete for D06FN (without filter)	1/2" + 3/4" 1" + 1 1/4" 1 1/2" + 2"	D06FNA-1/2 D06FNA-1A D06FNA-11/2
3	Union seal washer (10 pcs.)	1/2"	0901443
		3/4"	0901444
		1"	0901445
		1 1/4"	0901446
		1 1/2"	0901447
4	Blanking plug with O-ring R 1/4" (5 pcs.)	2"	0901448
		all	S06K-1/4
5	Replacement filter insert	1/2" + 3/4"	ES06F-1/2A
		1" + 1 1/4"	ES06F-1A
		1 1/2" + 2"	ES06F-11/2A
6	O-ring (10 pcs.)	1/2" + 3/4"	0901246
		1" + 1 1/4"	0901247
		1 1/2" + 2"	0901248
7	Brass filter bowl with O-ring	1/2" + 3/4"	SM06T-1/2
		1" + 1 1/4"	SM06T-1A
		1 1/2" + 2"	SM06T-11/2

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D06FN
PRESSURE REDUCING
VALVE

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DIFFERENTIAL PRESSURE SWITCHES DPS SERIES

FOR AIR CONDITIONING / VENTILATION, USER-ADJUSTABLE CURRENT OUTPUT

- Switching-point easily adjustable with scale in Pascal
- Direction of M20x1.5 conduit entry can be rotated in steps of 120°;
- Only one screw needed for housing cover.




Technical Specification

Max. operating pressure	10 kPa
Pressure media	air, non-flammable gases, and non-aggressive gases
Pressure connections	two plastic tubes, outside diameter: 6.0 mm
Switching capacity	1.5 A, (0.4) /250 Vac
Electrical connections	AMP connectors, 6.3 x 0.8, DIN 46244 or screw terminals
Conduit entry	M20x1.5
Protection class	IP 54
Mounting lugs	integrated in bottom housing (alternative: mounting angles)
Medium/ambient temp.	-20...+85 °C
Storage temperature	-40...+85 °C
Membrane material	Silicone

APPLICATION

Differential pressure switches e.g. for monitoring filter, fan, fire damper, or air flow status of air handling systems.

APPROVALS

- CE according to 2006/95/EC.
- Switch according to VDE 0630.
- EC Gas Appliance Directive 2009/142/EC according to DIN EN 1854: 2010.
- ROHS 2011/65/EC.
-  (Eurasian Conformity)

DIMENSIONS

See "Mounting/Einbau/Montage" on page 4.

OPERATING RANGES

Type	Adjustment range for upper trip pressure*	Switching difference (Hysteresis)	Tolerance at adjusted switch-point
DPS 200	20...200 (Pa)	10 (Pa)	±20%
DPS 400	40...400 (Pa)	20 (Pa)	±15%
DPS 500	50...500 (Pa)	20 (Pa)	
DPS 1000	200...1000 (Pa)	100 (Pa)	
DPS 2500	500...2500 (Pa)	150 (Pa)	

*The trip pressure refers to vertical mounting. In case of horizontal mounting (with the cover pointing upwards), the range values increase by 20 Pa.

CONTENTS OF DELIVERY

The delivery includes (in the case of individual packages) the following parts:

- **1 DPS Differential Pressure Switch**
- **1 Data Sheet with installation information**
- **1 DPSA duct kit, consisting of:**
 - 2 m of silicone hosing
 - 2 joining pipes with four screws
 - 2 self-tapping screws for mounting the housing
 - 3 terminal screws for electrical installation

Bulk packages available, upon request.

ACCESSORIES / DELIVERY OPTION

- DPST: Set of three screw terminals
- DPSJ: Joining pipe (part of DPSA duct kit)
- DPS...B in bulk pack (45 pc. per box), without accessories, but with 1 set of Mounting Instructions

For more information,

<https://honeywellbuildings.in>

Call: 1-800-103-0339

Email: HBT-Indiabuildings@honeywell.com

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DIFFERENTIAL PRESSURE SWITCHES DPS SERIES
FOR AIR CONDITIONING / VENTILATION, USER-ADJUSTABLE CURRENT OUTPUT

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DIFFERENZDRUCKSCHALTER DPS FÜR KLIMA- UND LUFTUNGSANWENDUNGEN

- Leicht verstellbare Schalterpunkte, mit Skala in Pa;
- Ausrichtung der M20x1.5 Kabeldurchführung in Schritten von 120° leicht verstellbar
- Gehäusedeckel benötigt nur eine Schraube.



TECHNISCHE DATEN

Max. Betriebsdruck	10 kPa
Druckmedien	Luft, nichtbrennbare Gase sowie nichtaggressive Gase
Druckanschlüsse	zwei Kunststoffstutzen mit 6,0 mm Außendurchmesser
Schaltleistung	1.5 A, (0.4) /250 Vac
Elektrische	AMP-Flachstecker, 6.3 x 0.8,
Anschlüsse	DIN 46244 oder Schraubklemmen
Kabeldurchführung	M20x1.5
Schutzart	IP 54
Befestigungsstutzen	im Gehäuse integriert, alternativ Befestigungswinkel
Umgebungs-/Mediumstemperatur	-20...+85 °C
Lagertemperatur	-40...+85 °C
Membranmaterial	Silikon

ANWENDUNGEN

Differenzdruckschalter für Filter-, Ventilator- oder Luftströmungsüberwachung bei Klima- und Lüftungsanlagen.

ZULASSUNGEN

- CE-Zulassung gemäß 2006/95/EG.
- Schalter gebaut nach VDE 0630.
- EG-Gasgeräte Richtlinie 2009/142/EG nach DIN EN 1854: 2010.
- ROHS 2011/65/EG.

-  (Eurasian Conformity)

ABMESSUNGEN

Siehe "Mounting/Einbau/Montage" auf Seite 4.

BETRIEBSBEREICHE

Type	Einstellbereich für oberen Schalldruck*	Konstante Schaltdifferenz	Toleranz bei eingestelltem Schaltpunkt
DPS 200	20...200 (Pa)	10 (Pa)	±20%
DPS 400	40...400 (Pa)	20 (Pa)	±15%
DPS 500	50...500 (Pa)	20 (Pa)	
DPS 1000	200...1000 (Pa)	100 (Pa)	
DPS 2500	500...2500 (Pa)	150 (Pa)	

*Die Schalldruckangaben beziehen sich auf eine vertikale Einbaulage. Bei waagrechter Montage erhöhen sich die Werte um 20 Pa.

LIEFERUMFANG

Die Lieferung beinhaltet (bei Einzelverpackung) Folgendes:

- **1 DPS Differenzdruckschalter**
- **1 Datenblatt mit Montagehinweisen**
- **1 DPSA Zubehörkit, bestehend aus:**
 - 2 m Silikonschlauch
 - 2 Anschlußstutzen mit vier Befestigungsschrauben
 - 2 selbstschneidende Schrauben zur Befestigung des Gehäuses
 - 3 Schraubklemmen für den elektrischen Anschluß

Mengenpackungen auf Anfrage erhältlich.

ZUBEHÖRTEILE / LIEFEROPTION

- DPST: Satz dreier Schraubklemmen
- DPSJ: Druckanschlußstutzen (gehört zum DPSA Zubehörkit)
- DPS...B in der Sammelverpackung (à 45 Stück), ohne Zubehör, jedoch mit 1 Stück Montageanleitung

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<https://honeywellbuildings.in>

Call: 1-800-103-0339

Email: HBT-Indiabuildings@honeywell.com

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**DIFFERENZDRUCKSCHALTER DPS
FÜR KLIMA- UND LÜFTUNGSANWENDUNGEN**

Honeywell

PRESSOSTAT DIFFERENTIEL DPS POUR LE CONDITIONNEMENT DE L'AIR ET LA VENTILATION

- Points de comm. facilement ajustable, avec échelle en Pa;
- Le conn. M20x1.5 est orientable dans un rayon de 120°
- Le couvercle du boîtier ne nécessite qu'une seule vis de fixation.

SPECIFICATIONS TECHNIQUES


Pression Max.	10 kPa
Média de pression	Air, gas non-inflammables et gas non-agressifs
Contacts de pression	Deux tubes avec 6,0 mm de diamètre extérieur
Capacité commutateur	1.5 A, (0.4) / 250 Vac
Raccordement électriques	AMP, 6.3 x 0.8, DIN 46244 ou connecteurs à vis
Entrée de cables	M20x1.5
Classe de protection	IP 54
Kit de fixation	intégré dans le boîtier, Option: equerre de fixation
Température d'environnement	-20...+85 °C
Température de stockage	-40...+85 °C
Matériel de membrane	Silicone



APPLICATION

Pressostat différentiel e.g. pour la surveillance de filtres, ventilateurs ou clapet coupe feu dans des systèmes de traitement de l'air ou de conditionnement.

CERTIFICATION

- Certification CE selon 2006/95/EC.
- Commutateur construit selon VDE 0630.
- ENorme Européenne appareil gaz 2009/142/EC suivant DIN EN 1854: 2010.
- ROHS 20/65/EC.
-  (Eurasian Conformity)

DIMENSIONS

Voir "Mounting/Einbau/Montage" page 4.

PLAGE D'UTILISATION

Type	Plage de réglage pour pression supérieure*	Plage fixe de comm.	Tolerance de point de comm.
DPS 200	20...200 (Pa)	10 (Pa)	±20%
DPS 400	40...400 (Pa)	20 (Pa)	±15%
DPS 500	50...500 (Pa)	20 (Pa)	
DPS 1000	200...1000 (Pa)	100 (Pa)	
DPS 2500	500...2500 (Pa)	150 (Pa)	

*Valeurs données pour un montage vertical. Pour montage horizontal augmenter les valeurs de 20 Pa.

CONTENU DE L'EMBALLAGE

L'emballage contient:

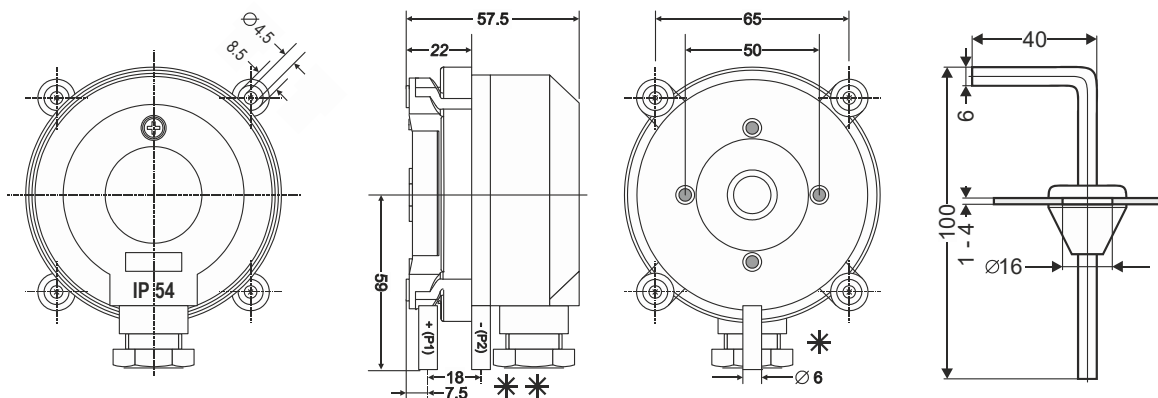
- **1 Pressostat différentiel DPS**
- **1 notice technique avec instruction du montage**
- **1 kit d'accessoires DPSA contenant:**
 - 2 m de tuyaux en silicone
 - 2 supports de connection avec 4 vis
 - 2 vis auto-forantes pour la fixation du boîtier
 - 3 connecteurs à vis pour le raccordement électrique

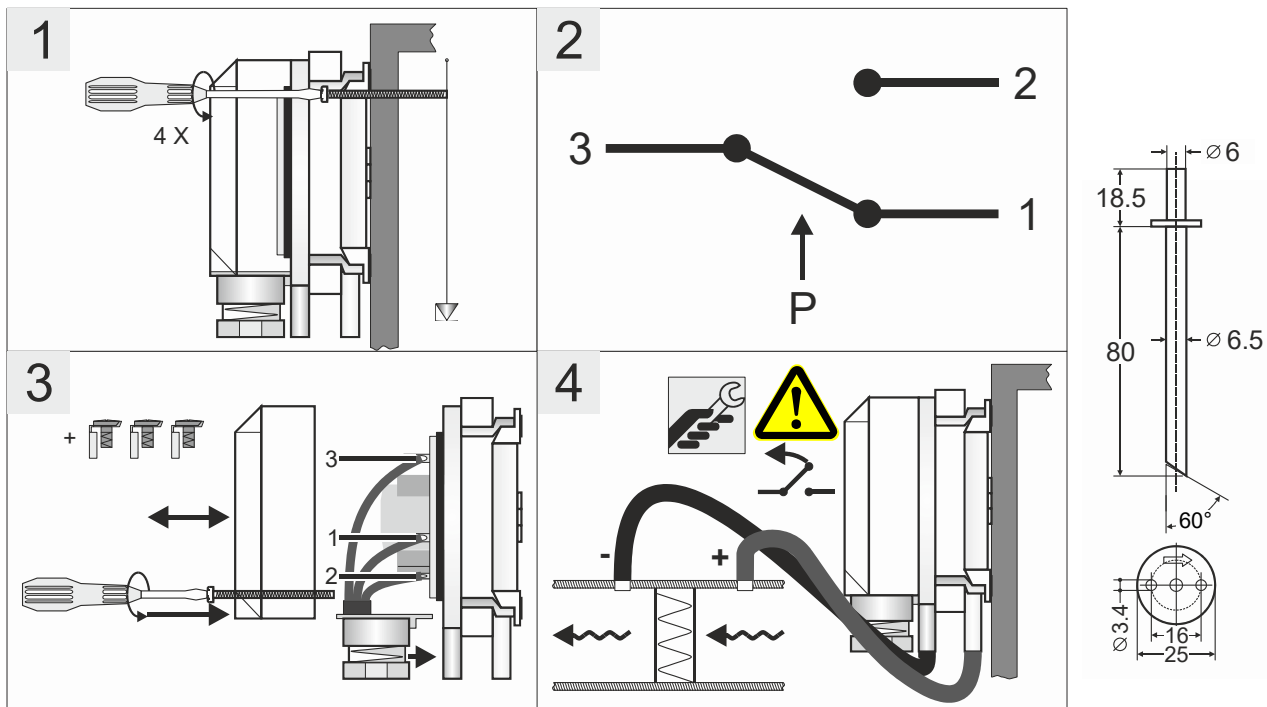
Emballage par 25 pieces possible sur demande.

ACCESSOIRES / OPTIONS DE LIVRAISON

- Kit de trois cosses à vis DPST
- tuyau de connection DPSJ (fait partie du kit d'accessoires DPSA)
- DPS...B emballage groupé (45 pièces) sans accessoires, mais fourni avec un mode d'emploi

MOUNTING/EINBAU/MONTAGE





P1 = higher pressure = höherer Druck = pression haute
P2 = lower pressure = niedrigerer Druck = pression basse

- *Use two screws, only, for mounting lugs!
- *Zur Befestigung nur zwei Schrauben verwenden!
- *N'utiliser que deux vis pour le montage.
- ** Remove transport protection from P2!
- ** Transportkappe von P2 entfernen!
- ** Enlever le couvercle de transport de P2.

NOTE: Do not install upside down with trip pressures of less than 50 Pa!

HINWEIS: Bei einem Schaltdruck von weniger als 50 Pa darf das Gerät nicht über Kopf montiert werden!

NOTICE: Ne pas installer à l'envers si la pression de commutation!

For more information,
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PRESSOSTAT DIFFÉRENTIEL DPS
POUR LE CONDITIONNEMENT DE L'AIR ET LA VENTILATION

Honeywell

DPTExxxxS / DPTExxxx

3-WIRE DIFFERENTIAL PRESSURE TRANSMITTERS WITH CURRENT AND VOLTAGE OUTPUT

- Monitoring gaseous, non-aggressive media
- Piezo-resistive pressure transducer
- Up to 20 kPa (60 kPa) overload capacity
- Easy installation and wiring connection
- Measurement range adjustable by jumper
- Response time adjustable by jumper
- Output signal adjustable by jumper
- Red digital display
- Display of values > +1000 Pa in kPa
- Re-zeroing possible by pushbutton

Technical Specification

Supply voltage	18...30 Vac/dc, 50/60 Hz
Output signal	0...10 Vdc (default) / 4...20 mA
Pressure medium	Air + non-aggressive gases
Working temperature	0...50 °C
Linearity and hysteresis error	$\pm \leq 1.0\%$ of FS
Temperature error	see "Model"
Storage temperature	-10... 70 °C
Humidity	0...95% rh, non-condensing
Repetition accuracy	$\pm \leq 0.2\%$ of FS
Response time	1 s (switchable to 100 ms)
Process connection	6 mm hose pipe
Electrical connection	Screw terminal block for wire up to 1.5 mm ²
Housing material	ABS and PO
Cable entry	M20x1.5 (polyamide)
Protection class	IP54 as per EN60529
EMV	EN60770, EN61326
Weight	Approx. 130 g



GENERAL

The differential pressure transmitters of the DPTEx series are used for measuring differential pressure, positive pressure, and vacuum. The transmitters are suitable for:

- air-conditioning,
- building automation,
- environmental protection,
- valve and flap control,
- filter and blower monitoring,
- fluid and level monitoring, and
- control of air flows.

NOTE:

These sensors are not suitable for use in installations under periodic inspection by the U.S. Food and Drug Administration.

Models

Order no.	Measuring Range		Overload Capacity	Burst Pressure
	1 (default)	2		
DPTE50S	-50...0...+50 Pa ¹⁾	NA	20 kPa	40 kPa
DPTE100S	-100...0...+100 Pa ¹⁾	NA	20 kPa	40 kPa
DPTE500S	-500...0...+500 Pa ¹⁾	NA	20 kPa	40 kPa
DPTE1000S	-1 kPa...0...+1 kPa ²⁾	NA	40 kPa	70 kPa
DPTE100	0...100 Pa ¹⁾	0...250 Pa ¹⁾	20 kPa	40 kPa
DPTE250	0...250 Pa ¹⁾	0...500 Pa ¹⁾	20 kPa	40 kPa
DPTE500	0...500 Pa ¹⁾	0...1 kPa ¹⁾	20 kPa	70 kPa
DPTE1000	0...1 kPa ²⁾	0...2.5 kPa ²⁾	40 kPa	70 kPa
DPTE5000	0...5 kPa ³⁾	0...10 kPa ³⁾	60 kPa	120 kPa

- 1) Temperature error at 0...50 °C $\pm \leq 5\%$ of FS
 2) Temperature error at 0...50 °C $\pm \leq 2.5\%$ of FS
 3) Temperature error at 0...50 °C $\pm \leq 1\%$ of FS

FUNCTION

DPTExxxxSD / DPTExxxxD Differential Pressure Transmitters are equipped with an integrated piezo-resistive pressure transducer. The pressure to be measured is applied to and thus deflects a thin membrane made of mono-silicon. The membrane's semiconductor resistors (arranged to simultaneously compensate for the temperature response) detect this deflection and generate an electrical output signal. The output signal is converted into a 0...10 V or 4...20 mA analog signal which changes (within the specified error limits) in proportion to the applied pressure, while the corresponding pressure value is then displayed (in Pa/kPa) in the LED.

NOTE: The devices are factory pre-set to an output signal of 0...10 V. This can be changed to 4...20 mA by removing the corresponding jumper (see Fig. 3).

NOTE: The devices are factory pre-set to measuring range 1. This can be changed (except for +/- models) to measuring range 2 by removing the corresponding jumper (see Fig. 3).

NOTE: The devices are factory pre-set to a response time of 1 second. This can be changed to 100 ms by removing the corresponding jumper (see Fig. 3).

WIRING

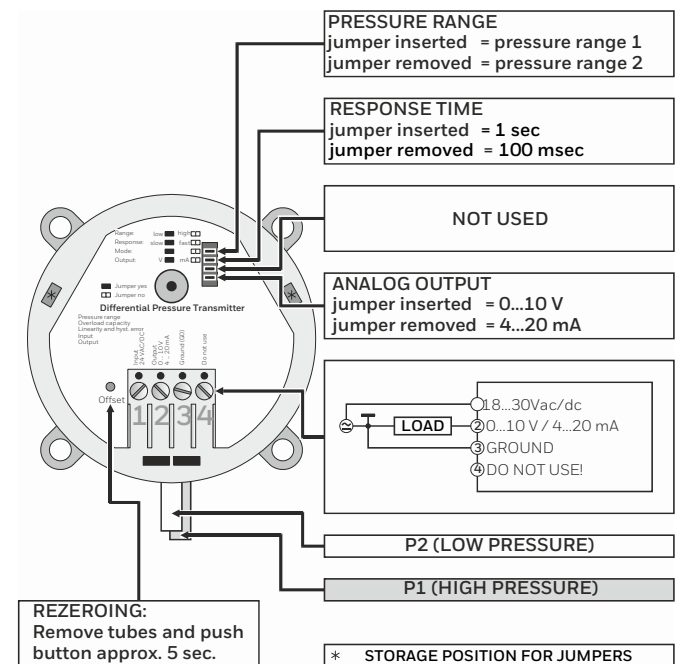


Fig. 3. Wiring details

ACCESSORIES

DPSK: Included in delivery. Duct Kit, incl. 2 m of silicone hose and two joining pipes

DPSL: Ordered separately. L-shaped mounting brackets with screws.

WIRING

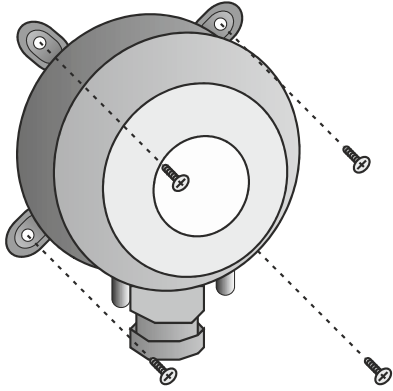


Fig. 2. Mounting

DIMENSIONS

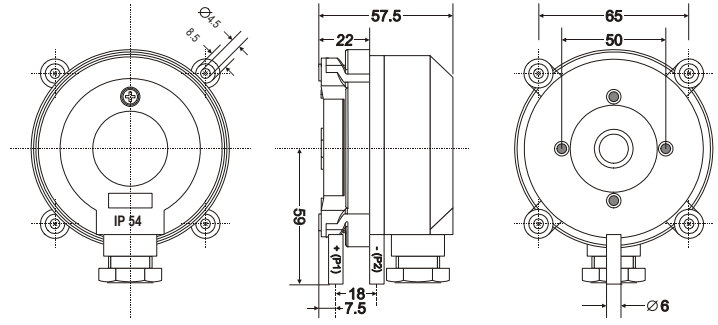


Fig. 1. Dimensions (in mm)

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DPTExxxxS / DPTExxxx
3-WIRE DIFFERENTIAL PRESSURE TRANSMITTERS
WITH CURRENT AND VOLTAGE OUTPUT

Honeywell

DPTExx2S / DPTExxx2

2-LEITER DIFFERENZDRUCKTRA NSMITTER, STROMAUSGANG

- Überwachung gasförmiger Medien
- Piezoresistiver Meßaufnehmer
- Bis 20 kPa (60 kPa) überdruckfest
- Einfache Montage und Verdrahtung
- Meßbereich mit Steckbrücke anpaßbar
- Ansprechzeit mit Steckbrücke anpaßbar
- Nullpunkt Korrektur möglich per Tastendruck



TECHNISCHE DATEN

Versorgungsspannung	18...30 Vdc
Ausgangssignal	4...20 mA, Zweileiter
Ansprechzeit	1 s (Werkeinstellung) / 100 ms
Einsatztemperatur	0...50 °C
Lagertemperatur	-10... +70°C
Luftfeuchtigkeit	0...95% rF., nicht-kondensierend
Maximale Stromaufnahme	< 21 mA
Linearität + Hysteresefehler	$\pm \leq 1.0\%$ v om Endwert
Langzeitstabilität, typisch	$\pm \leq 0.5\%$ b is 2.5% v om Endwert p.a., je nach Meßbereich
Wiederholgenauigkeit	$\pm \leq 0.2\%$ v om Endwert
Lageabhängigkeit	$\pm \leq 0.02\%$ v om Endwert
Meßmedium	Luft, nicht-aggressive Gase
Druckanschluß	6 mm Schlauchanschluß
Elektrischer Anschluß	Schraubklemmen bis 1,5 mm ²
Befestigung Gerät	mit Kerbschrauben
Gehäusewerkstoff	ABS und POM
Kabelverschraubung	M20x1.5 aus Polyamid
Schutzart	IP54 (mit Haube), IP00 (ohne Haube) gemäß EN60529
EMV	EN60770, EN61326
Gewicht	120 g

ALLGEMEIN

Differenzdrucktransmitter der DPTEx-Serie werden eingesetzt zur Messung von Differenzdrücken, Überdrücken und Vakuum. Die Geräte sind einsetzbar in den Bereichen:

- Klimatechnik
- Gebäudeautomation
- Umwelttechnik
- Klappenüberwachung
- Filter- und Gebläseüberwachung
- Füllstandsüberwachung
- Allgemeine Überwachung von Luftströmen

HINWEIS:

Diese Geräte eignen sich nicht zum Einsatz in Anlagen, die ständig wiederkehrend von der "U.S. Food and Drug Administration" überwacht werden.

Models

Bestell-Nr.	Meßbereiche		Überdruck-fest bis	Berst-druck
	1 (Standard)	2		
DPTE52S	-50...0...+50 Pa ¹⁾	NA	20 kPa	40 kPa
DPTE102S	-100...0...+100 Pa ¹⁾	NA	20 kPa	40 kPa
DPTE102	0...100 Pa ¹⁾	0...250 Pa ¹⁾	20 kPa	40 kPa
DPTE252	0...250 Pa ¹⁾	0...500 Pa ¹⁾	20 kPa	40 kPa
DPTE502	0...500 Pa ¹⁾	0...1 kPa ¹⁾	40 kPa	70 kPa
DPTE1002	0...1 kPa ²⁾	0...2.5 kPa ²⁾	40 kPa	70 kPa
DPTE5002	0...5 kPa ³⁾	0...10 kPa ³⁾	60 kPa	120 kPa

1) Temperaturfehler bei 0...50 °C 5% vom Skalenumfang
 2) Temperaturfehler bei 0...50 °C 2,5% vom Skalenumfang
 3) Temperaturfehler bei 0...50 °C 1% vom Skalenumfang

FUNKTION

DPTExx2S / DPTExxx2 Zweileiter Differenzdrucktransmitter sind mit einem integrierten piezoresistiven Druckaufnehmer ausgerüstet. Eine dünne Monosiliconschicht dient als Meßelement. Bei Druckbeaufschlagung wird diese ausgelenkt und generiert eine Meßspannung, welche verstärkt und temperaturkompensiert wird. Dieses Ausgangssignal wird entsprechend dem Meßbereich innerhalb der angegebenen Fehlergrenzen in ein standardisiertes 4...20 mA Analogsignal umgesetzt.

HINWEIS: Die Geräte sind werkseitig voreingestellt auf den Meßbereich "1". Dies läßt sich (außer bei +/- Modellen) durch Entfernen der entsprechenden Steckbrücke auf Meßbereich "2" verändern (siehe Abb. 3).

HINWEIS: Die Geräte sind werkseitig voreingestellt auf eine Ansprechzeit von 1 sec. Dies läßt sich durch Entfernen der entsprechenden Steckbrücke auf 100 ms verändern (siehe Abb. 3).

ZUBEHÖR

DPSK: Beiliegend in jeder Packung. Schlauch Set, inkl. 2 m Silikonschlauch, 2 Anschlußstutzen mit Schrauben.

DPSL: Gesondert zu bestellen. Montagewinkel mit Schrauben.

ELEKTRISCHE VERDRÄHTUNG

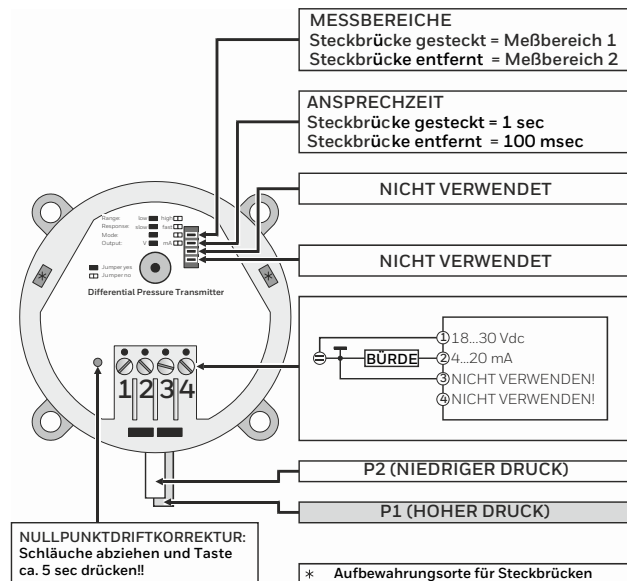


Abb. 3. Elektrischer Anschluß

ABMESSUNGEN

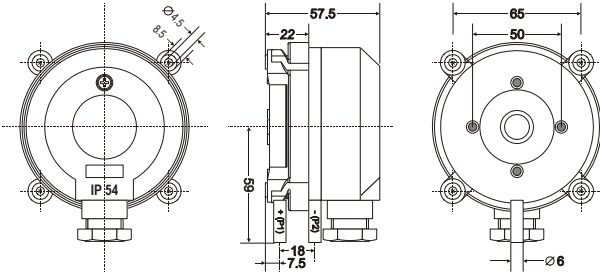


Abb. 1. Abmessungen in mm

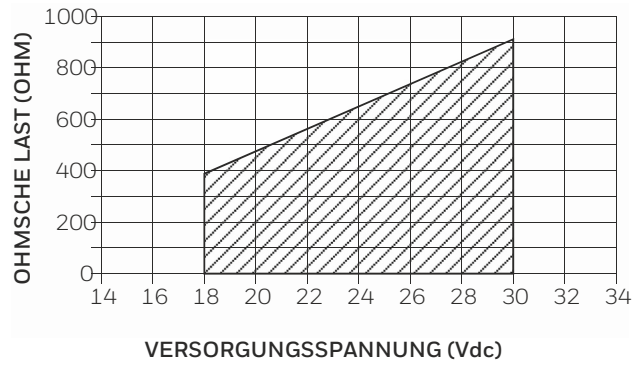


Fig. 5. Zulässige Last in Abhängigkeit von der Versorgungsspannung

MONTAGE

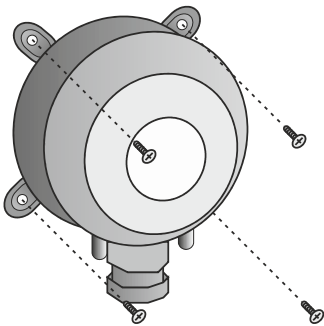



Abb. 2. Montage

ZULASSUNGEN

- CE gemäß 2004/108/EG
-  (Eurasian Conformity)

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DPTE_{xx}2S / DPTE_{xxx}2
2-LEITER DIFFERENZDRUCKTRANSMITTER, STROMAUSGANG

Honeywell

DPTExx2S / DPTExxx2

2-WIRE DIFFERENTIAL PRESSURE TRANSMITTERS, CURRENT OUTPUT

- Monitoring gaseous, non-aggressive media
- Piezo-resistive pressure transducer
- Up to 20 kPa (60 kPa) overload capacity
- Easy installation and wiring connection
- Measurement range adjustable by jumper
- Response time adjustable by jumper
- Re-zeroing possible by pushbutton



Technical Specification

Supply voltage	18...30 Vdc
Output signal	4...20 mA, two-wire
Response time	1 s (default) / 100 ms
Working temperature	0...50 °C
Storage temperature	-10... 70°C
Humidity	0...95% rh, non-condensing
Max. current consumption	< 21 mA
Linearity + hysteresis error	$\pm \leq 1.0\%$ of FS
Long-term stability, typical	$\pm \leq 0.5\%$ to 2.5% of FS p.a., depending upon meas. range
Repetition accuracy	$\pm \leq 0.2\%$ of FS
Orientation dependence	$\pm \leq 0.02\%$ of FS
Pressure medium	Air + non-aggressive gases
Process connection	6 mm hose pipe
Electrical connection	Screw terminal block for wire up to 1.5 mm ²
Fixation of device	With serrated screws
Housing material	ABS and PO
Cable entry	M20x1.5 (polyamide)
Protection class	IP54 (with hood), IP00 (without hood) as per EN60529
EMV	EN60770, EN61326
Weight	120 g

GENERAL

The differential pressure transmitters of the DPTEx series are used for measuring differential pressure, positive pressure, and vacuum. The transmitters are suitable for:

- air-conditioning,
- building automation,
- environmental protection,
- valve and flap control,
- filter and blower monitoring,
- fluid and level monitoring, and
- control of air flows.

NOTE:

These sensors are not suitable for use in installations under periodic inspection by the U.S. Food and Drug Administration.

Models

Order no.	Measuring Range		Overload Capacity	Burst Pressure
	1 (default)	2		
DPTE52S	-50...0...+50 Pa ¹⁾	NA	20 kPa	40 kPa
DPTE102S	-100...0...+100 Pa ¹⁾	NA	20 kPa	40 kPa
DPTE102	0...100 Pa ¹⁾	0...250 Pa ¹⁾	20 kPa	40 kPa
DPTE252	0...250 Pa ¹⁾	0...500 Pa ¹⁾	20 kPa	40 kPa
DPTE502	0...500 Pa ¹⁾	0...1 kPa ¹⁾	40 kPa	70 kPa
DPTE1002	0...1 kPa ²⁾	0...2.5 kPa ²⁾	40 kPa	70 kPa
DPTE5002	0...5 kPa ³⁾	0...10 kPa ³⁾	60 kPa	120 kPa

- 1) Temperature error at 0...50 °C $\pm \leq 5\%$ of FS
 2) Temperature error at 0...50 °C $\pm \leq 2.5\%$ of FS
 3) Temperature error at 0...50 °C $\pm \leq 1\%$ of FS

FUNKTION

DPTExx2S / DPTExxx2 Zweileiter Differenzdrucktransmitter sind mit einem integrierten piezoresistiven Druckaufnehmer ausgerüstet. Eine dünne Monosilikonschicht dient als Meßelement. Bei Druckbeaufschlagung wird diese ausgelenkt und generiert eine Meßspannung, welche verstärkt und temperaturkompensiert wird. Dieses Ausgangssignal wird entsprechend dem Meßbereich innerhalb der angegebenen Fehlergrenzen in ein standardisiertes 4...20 mA Analogsignal umgesetzt.

NOTE: The devices are factory pre-set to measuring range 1. This can be changed (except for +/- models) to measuring range 2 by removing the corresponding jumper (see Fig. 3).

NOTE: The devices are factory pre-set to a response time of 1 second. This can be changed to 100 ms by removing the corresponding jumper (see Fig. 3).

ACCESSORIES

DPSK: Included in delivery. Duct Kit, incl. 2 m of silicone hose and two joining pipes

DPSL: Ordered separately. L-shaped mounting brackets with screws.

WIRING

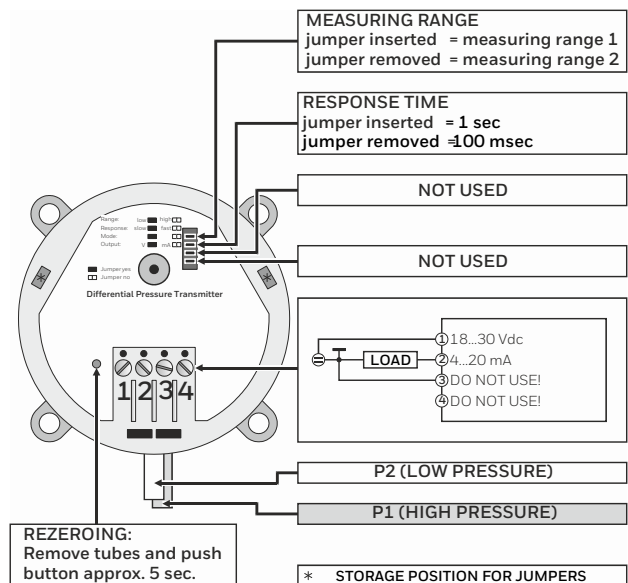


Fig. 3. Wiring details

DIMENSIONS

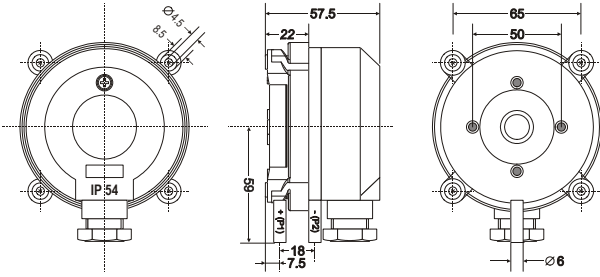


Fig. 1. Dimensions (in mm)

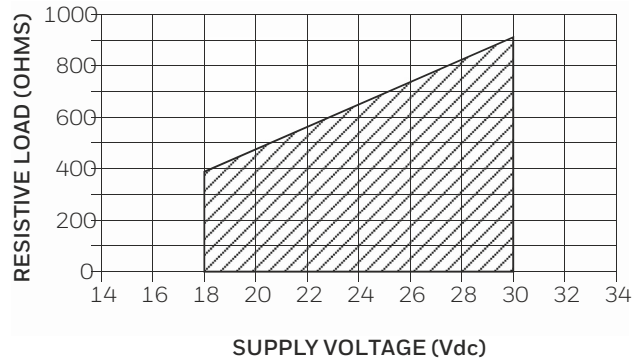


Fig. 4. Permissible load vs. supply voltage

MOUNTING

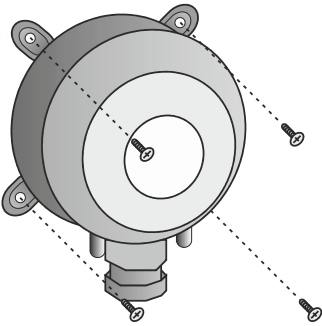



Fig. 2. Mounting

APPROVALS

- CE according to 2004/108/EC
-  (Eurasian Conformity)

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DPTE_{xx}2S / DPTE_{xxx}2
2-WIRE DIFFERENTIAL PRESSURE TRANSMITTERS,
CURRENT OUTPUT

Honeywell

DPTExxxxSD / DPTExxxxD

3-LEITER DIFFERENZDRUCKTRANSMITTE R MIT DIGITALANZEIGE, STROM- UND SPANNUNGSAusGANG

- Überwachung gasförmiger Medien
- Piezoresistiver Meßaufnehmer
- Bis 20 kPa (60 kPa) überdruckfest
- Einfache Montage und Verdrahtung
- Meßbereich mit Steckbrücke anpaßbar
- Ansprechzeit mit Steckbrücke anpaßbar
- Ausgangssignal mit Steckbrücke anpaßbar
- Rote Digitalanzeige
- Anzeigen von Werten > +1000 Pa in kPa
- Nullpunkt Korrektur möglich per Tastendruck



TECHNISCHE DATEN

Versorgungsspannung	18...30 Vac/dc, 50/60 Hz
Ausgangssignal	0...10 Vdc (Werkeinstellung) / 4...20 mA
Ansprechzeit	1 s (Werkeinstellung) / 100 ms
Einsatztemperatur	0...50 °C
Lagertemperatur	-10... +70°C
Luftfeuchtigkeit	0...95% rF., nicht-kondensierend
Maximale Stromaufnahme	< 21 mA
Linearität + Hysteresefehler	$\pm \leq 1.0\%$ v om Endwert
Langzeitstabilität, typisch	$\pm \leq 0.5\%$ b is 2.5% v om Endwert p.a., je nach Meßbereich
Wiederholgenauigkeit	$\pm \leq 0.2\%$ v om Endwert
Lageabhängigkeit	$\pm \leq 0.02\%$ v om Endwert
Meßmedium	Luft, nicht-aggressive Gase
Druckanschluß	6 mm Schlauchanschluß
Elektrischer Anschluß	Schraubklemmen bis 1,5 mm ²
Befestigung Gerät	mit Kerbschrauben
Gehäusewerkstoff	ABS und POM
Kabelverschraubung	M20x1.5 aus Polyamid
Schutzart	IP54 (mit Haube), IP00 (ohne Haube) gemäß EN60529
EMV	EN60770, EN61326
Gewicht	130 g

ALLGEMEIN

Differenzdrucktransmitter der DPTEx-Serie werden eingesetzt zur Messung von Differenzdrücken, Überdrücken und Vakuum. Die Geräte sind einsetzbar in den Bereichen:

- Klimatechnik
- Gebäudeautomation
- Umwelttechnik
- Klappenüberwachung
- Filter- und Gebläseüberwachung
- Füllstandsüberwachung
- Allgemeine Überwachung von Luftströmen

HINWEIS:

Diese Geräte eignen sich nicht zum Einsatz in Anlagen, die ständig wiederkehrend von der "U.S. Food and Drug Administration" überwacht werden.

Honeywell

Models

Bestell Nr.	Meßbereiche		Überdruckfest bis	Berst druck
	1 (Standard)	2		
DPTE50SD	-50...0...+50 Pa ¹⁾	NA	20 kPa	40 kPa
DPTE100SD	-100...0...+100 Pa ¹⁾	NA	20 kPa	40 kPa
DPTE500SD	-500...0...+500 Pa ¹⁾	NA	20 kPa	40 kPa
DPTE1000SD	-1 kPa...0...+1 kPa ²⁾	NA	40 kPa	70 kPa
DPTE100D	0...100 Pa ¹⁾	0...250 Pa ¹⁾	20 kPa	40 kPa
DPTE250D	0...250 Pa ¹⁾	0...500 Pa ¹⁾	20 kPa	40 kPa
DPTE500D	0...500 Pa ¹⁾	0...1 kPa ¹⁾	40 kPa	70 kPa
DPTE1000D	0...1 kPa ²⁾	0...2.5 kPa ²⁾	40 kPa	70 kPa
DPTE5000D	0...5 kPa ³⁾	0...10 kPa ³⁾	60 kPa	120 kPa

1) Temperaturfehler bei 0...50 °C 5% vom Skalenumfang
 2) Temperaturfehler bei 0...50 °C 2,5% vom Skalenumfang
 3) Temperaturfehler bei 0...50 °C 1% vom Skalenumfang

FUNKTION

DPTExxxxSD / DPTExxxxD Dreileiter Differenzdrucktransmitter sind mit einem integrierten piezoresistiven Druckaufnehmer ausgerüstet. Eine dünne Monosiliconschicht dient als Meßelement. Bei Druckbeaufschlagung wird diese ausgelenkt und generiert eine Meßspannung, welche verstärkt und temperaturkompensiert wird. Dieses Ausgangssignal wird entsprechend dem Meßbereich innerhalb der angegebenen Fehlergrenzen in ein standardisiertes Analogsignal umgesetzt und der Druckwert im LED-Display in Pa/kPa angezeigt.

HINWEIS: Die Geräte sind werkseitig auf ein Ausgangssignal von 0...10 V eingestellt und können bei Bedarf durch Entfernen der entsprechenden Steckbrücke auf 4...20 mA Ausgangssignal umgestellt werden (siehe Abb. 3).

HINWEIS: Die Geräte sind werkseitig voreingestellt auf den Meßbereich "1". Dies läßt sich (außer bei +/- Modellen) durch Entfernen der entsprechenden Steckbrücke auf Meßbereich "2" verändern (siehe Abb. 3).

HINWEIS: Die Geräte sind werkseitig voreingestellt auf eine Ansprechzeit von 1 sec. Dies läßt sich durch Entfernen der entsprechenden Steckbrücke auf 100 ms verändern (siehe Abb. 3).

ZUBEHÖR

DPSK: Beiliegend in jeder Packung. Schlauch Set, inkl. 2 m Silikonschlauch, 2 Anschlußstutzen mit Schrauben.

DPSL: Gesondert zu bestellen. Montagewinkel mit Schrauben.

ELEKTRISCHE VERDRAHTUNG

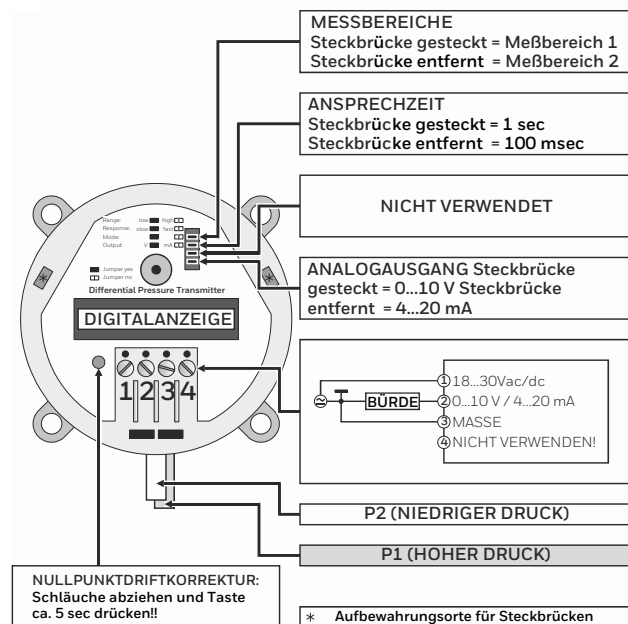


Abb. 3. Elektrischer Anschluß

MONTAGE

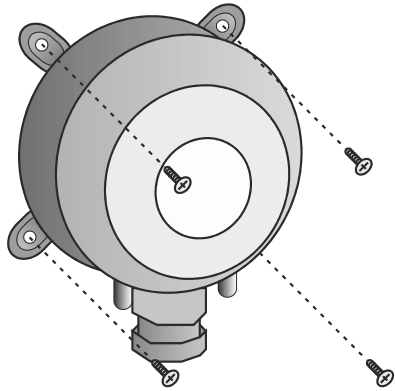


Abb. 2. Montage

ABMESSUNGEN

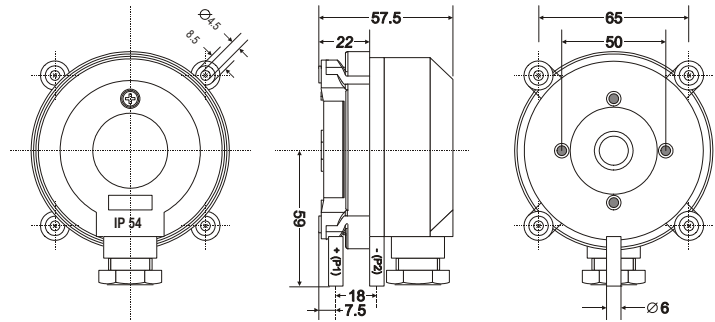



Abb. 1. Abmessungen in mm

ZULASSUNG

- CE gemäß 2004/108/EG
-  (Eurasian Conformity)

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DPTExxxxSD / DPTExxxxD
3-LEITER DIFFERENZDRUCKTRANSMITTER MIT
DIGITALANZEIGE, STROM- UND SPANNUNGS-AUSGANG

Honeywell

DPTExxxxSD / DPTExxxxD

3-WIRE DIFFERENTIAL PRESSURE TRANSMITTERS WITH DIGITAL DISPLAY AND CURRENT/VOLTAGE OUTPUT

- Monitoring gaseous, non-aggressive media
- Piezo-resistive pressure transducer
- Up to 20 kPa (60 kPa) overload capacity
- Easy installation and wiring connection
- Measurement range adjustable by jumper
- Response time adjustable by jumper
- Output signal adjustable by jumper
- Red digital display
- Display of values > +1000 Pa in kPa
- Re-zeroing possible by pushbutton



Technical Specification

Supply voltage	18...30 Vac/dc, 50/60 Hz
Output signal	0...10 Vdc (default) / 4...20 mA
Response time	1 s (default) / 100 ms
Working temperature	0...50 °C
Storage temperature	-10... 70°C
Humidity	0...95% rh, non-condensing
Max. current consumption	< 110 mA
Linearity + hysteresis error	$\pm \leq 1.0\%$ of FS
Long-term stability, typical	$\pm \leq 0.5\%$ to 2.5% of FS p.a., depending upon meas. range
Repetition accuracy	$\pm \leq 0.2\%$ of FS
Orientation dependence	$\pm \leq 0.02\%$ of FS
Pressure medium	Air + non-aggressive gases
Process connection	6 mm hose pipe
Electrical connection	Screw terminal block for wire up to 1.5 mm ²
Fixation of device	With serrated screws
Housing material	ABS and PO
Cable entry	M20x1.5 (polyamide)
Protection class	IP54 (with hood), IP00 (without hood) as per EN60529
EMV	EN60770, EN61326
Weight	130 g

GENERAL

The differential pressure transmitters of the DPTExxxx series are used for measuring differential pressure, positive pressure, and vacuum. The transmitters are suitable for:

- air-conditioning,
- building automation,
- environmental protection,
- valve and flap control,
- filter and blower monitoring,
- fluid and level monitoring, and
- control of air flows.

NOTE:

These sensors are not suitable for use in installations under periodic inspection by the U.S. Food and Drug Administration.

Models

Order no.	Measuring Range		Overload Capacity	Burst Pressure
	1 (default)	2		
DPTE50SD	-50...0...+50 Pa ¹⁾	NA	20 kPa	40 kPa
DPTE100SD	-100...0...+100 Pa ¹⁾	NA	20 kPa	40 kPa
DPTE500SD	-500...0...+500 Pa ¹⁾	NA	20 kPa	40 kPa
DPTE1000SD	-1 kPa...0...+1 kPa ²⁾	NA	40 kPa	70 kPa
DPTE100D	0...100 Pa ¹⁾	0...250 Pa ¹⁾	20 kPa	40 kPa
DPTE250D	0...250 Pa ¹⁾	0...500 Pa ¹⁾	20 kPa	40 kPa
DPTE500D	0...500 Pa ¹⁾	0...1 kPa ¹⁾	40 kPa	70 kPa
DPTE1000D	0...1 kPa ²⁾	0...2.5 kPa ²⁾	40 kPa	70 kPa
DPTE5000D	0...5 kPa ³⁾	0...10 kPa ³⁾	60 kPa	120 kPa

- 1) Temperature error at 0...50 °C $\pm \leq 5\%$ of FS
 2) Temperature error at 0...50 °C $\pm \leq 2.5\%$ of FS
 3) Temperature error at 0...50 °C $\pm \leq 1\%$ of FS

FUNCTION

DPTExxxxSD / DPTExxxxD Differential Pressure Transmitters are equipped with an integrated piezo-resistive pressure transducer. The pressure to be measured is applied to and thus deflects a thin membrane made of mono-silicon. The membrane's semiconductor resistors (arranged to simultaneously compensate for the temperature response) detect this deflection and generate an electrical output signal. The output signal is converted into a 0...10 V or 4...20 mA analog signal which changes (within the specified error limits) in proportion to the applied pressure, while the corresponding pressure value is then displayed (in Pa/kPa) in the LED.

NOTE: The devices are factory pre-set to an output signal of 0...10 V. This can be changed to 4...20 mA by removing the corresponding jumper (see Fig. 3).

NOTE: The devices are factory pre-set to measuring range 1. This can be changed (except for +/- models) to measuring range 2 by removing the corresponding jumper (see Fig. 3).

NOTE: The devices are factory pre-set to a response time of 1 second. This can be changed to 100 ms by removing the corresponding jumper (see Fig. 3).

Wiring

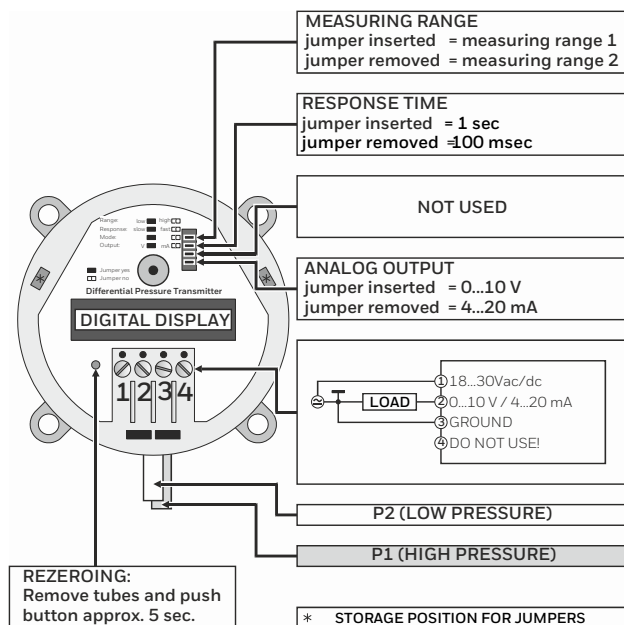


Fig. 3. Wiring details

ACCESSORIES

DPSK: Included in delivery. Duct Kit, incl. 2 m of silicone hose and two joining pipes

DPSL: Ordered separately. L-shaped mounting brackets with screws.

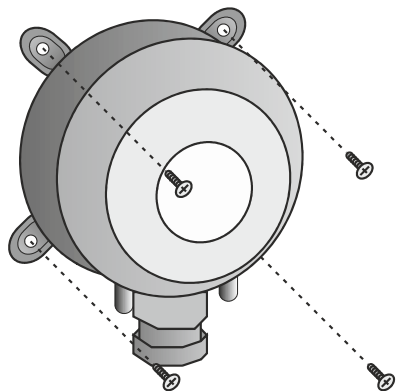


Fig. 2. Mounting

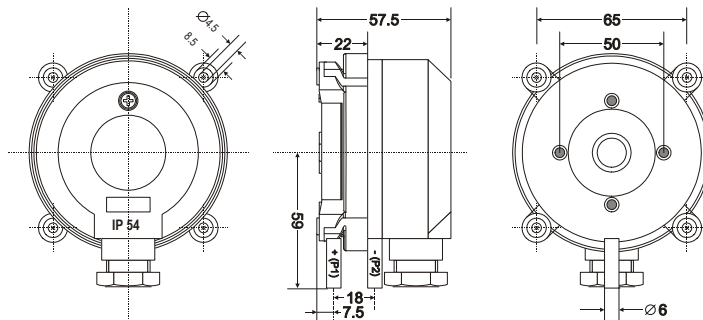


Fig. 1. Dimensions (in mm)

APPROVALS

- CE according to 2004/108/EC
- (Eurasian Conformity)

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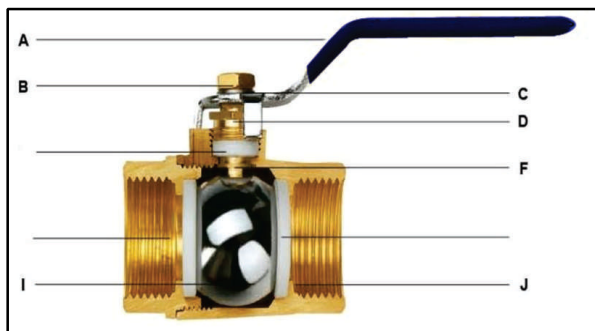
BA-HIPL SERIES MANUAL BALL VALVE

- Forged Brass Body
- Chrome Plated Ball
- Standard Port and Full Port Design



Technical Specification

Valve sizes Threads	1/2 inch to 3 inch BSP Internal
Nominal pressure	PN16, PN25



DIMENSIONS IN (MM)

MATERIAL LIST

NO.	DESCRIPTION	MATERIAL
A	Handle	Chrome Plated Iron
B	Nut	Brass Plated Iron
C	Spring Lock Washer	Plastic
D	Gland Nut	Brass
F	Stem	Brass plated Iron
I	Ball	Chrome Plated Brass
J	Body	Forged Brass

PN16

Size	Part No.	Bore Size	Weight(gms)
1/2 inch	BA-HIPL-PN16-015	13 mm	166
3/4 inch	BA-HIPL-PN16-020	18 mm	221
1 inch	BA-HIPL-PN16-025	22.5 mm	342
1 1/4 inch	BA-HIPL-PN16-032	28 mm	594
1 1/2 inch	BA-HIPL-PN16-040	35 mm	826
2 inch	BA-HIPL-PN16-050	44 mm	1250
2 1/2 inch	BA-HIPL-PN16-065	60 mm	2420
3 Inch	BA-HIPL-PN16-080	75 mm	3340

PN25

Size	Part No.	Bore Size	Weight(gms)
1/2 inch	BA-HIPL-PN25-015	13 mm	182
3/4 inch	BA-HIPL-PN25-020	18 mm	265
1 inch	BA-HIPL-PN25-025	22.5 mm	410
1 1/4 inch	BA-HIPL-PN25-032	28 mm	641
1 1/2 inch	BA-HIPL-PN25-040	35 mm	859
2 inch	BA-HIPL-PN25-050	44 mm	1404
2 1/2 inch	BA-HIPL-PN25-065	60 mm	2680
3 Inch	BA-HIPL-PN25-080	75 mm	3560

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**BA-HIPL SERIES
MANUAL BALL
VALVE**

Honeywell

MOTORIZED BUTTERFLY VALVE ACTUATOR

ON/OFF CONTROL & MODULATING CONTROL

- Wide size range (50-3500Nm)
- For On-Off or Modulating Control
- Manual override non-clutch design. Manual operation can be operated without any lever, clutch or brake.
- Mechanical position indicator for accurate visual reference of valve position.
- Anti-condensation heater and 2 aux. limit switches on standard model
- Enclosure IP67



General

OM-E series motorized actuators are developed for heating or cooling application in building water system, or other systems with similar requirements.

The OM-E modulating models can accept 4-20mA/1-5V/2-10V input signals (by setting jumper in field).

The OM-E series can also provide feedback signals: 2 dry-contacts outputs for On/Off version; and 4-20mA/2-10V for modulating version.

Technical Specification

Power Supply	220Vac, 50/60 Hz
Running time	See table (1)
Stroke	90° ± 5°
Control (Modulating)	4~20mA/1~5V/2~10V
Feedback (Modulating)	4~20mA/1~5V/2~10V
Enclosure	IP66
Ambient Temperature	-30° C to +65° C
Indicator	Continuous Position Indicator
Manual Override	Non-clutch design
Space Heater	15W 220V Anti-condensation
Material	Aluminum
Housing Coating	anodized powder epoxy-coated
Stall Protection	built-in thermal protection, cut-off at 125.5, reset 95 ± 5

Table (1) Actuator Data

OS# On-Off	OS# Modulating	Max Torque (Nm)	Run Time at 50Hz (sec)	Power (Watts)	Manual Override	Weight (Kg)
OM-1-E	OM-P1-E	5	25	6	Hand-wheel	4
OM-2-E	OM-P2-E	90	35	25	Hand-wheel	11
OM-3-E	OM-P3-E	150	35	40	Hand-wheel	11
OM-4-E	OM-P4-E	400	45	60	Hand-wheel	19
OM-5-E	OM-P5-E	500	45	60	Hand-wheel	19
OM-6-E	OM-P6-E	650	45	60	Hand-wheel	19
OM-7-E	OM-P 7-E	1000	46	90	Hand-wheel	38
OM-8-E	OM-P8-E	1500	55	120	Hand-wheel	38
OM-9-E	OM-P9-E	2000	55	120	Hand-wheel	78
OM-10-E	OM-P10-E	2500	95	140	Hand-wheel	78
OM-12-E	OM-P12-E	3500	95	200	Hand-wheel	82

Note:

1. The manual operation by handlever for OM-1-E and OM-P1-E is located at the bottom of actuator.
2. The default input/output signals for modulating control models are set to 4-20mA.

Table (2a) Actuator Dimension (mm)

OM1/OM-P1

OS#	A	B	C	D	E	G	H	M	S	Flange Type
OM- (P)1-E	140	128	130	176	8	11	50	m6	M16 *1.5	F05

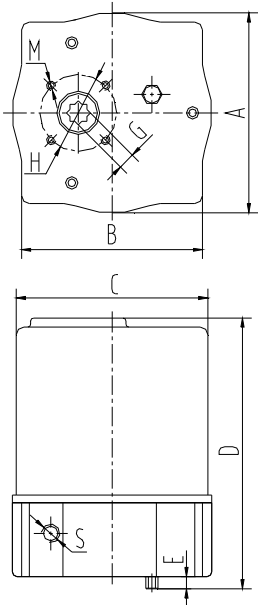


Table (2b) Actuator Dimensions (mm)

OM-2...6/OM-P2...P6

OS#	A	B	C	D	E	F	G Max	H	M	S	Flange Type
OM- (P)2&3-E	220	325	185	230	30	160	22	70	m8	M20*1.5	F07
OM- (P)4,5,6-E	270	350	205	300	42	200	27	102	m10	M20*1.5	F10

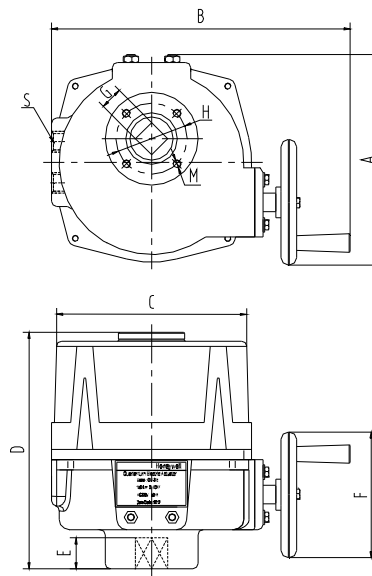


Table (2c) Actuator Dimension (mm)

OM-7...8/OM-P7...P8

OS#	A	B	C	D	E	F	G	H	M	S	Flange Type
OM-(P)7&8-E	345	360	245	365	42	250	27	140	m16	M20 *1.5	F10

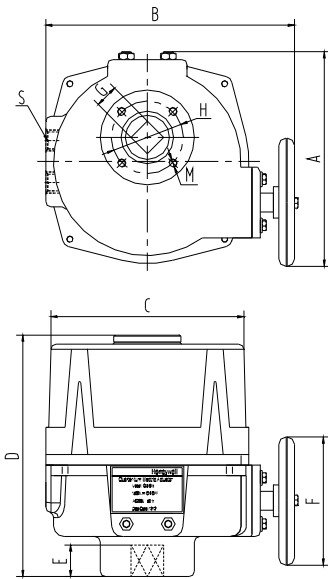
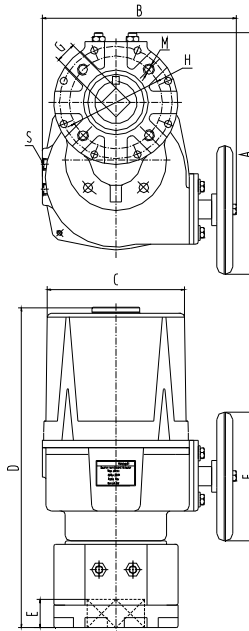


Table (2d) Actuator Dimension (mm)

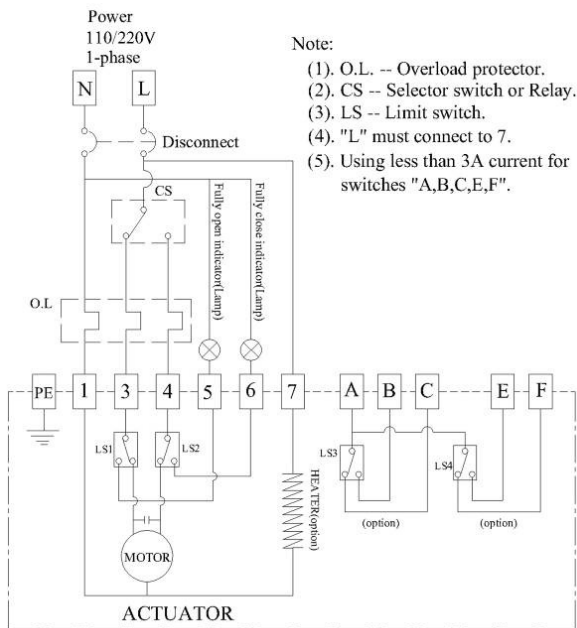
OM-9...12/OM-P9...P12

OS#	A	B	C	D	E	F	G	H	M	S	Flange Type
OM-(P)9 to 12-E	460	360	240	575	50	250	36	165	m20	M20 *1.5	F16



WIRING DIAGRAM FOR ON/OFF

[OM-1 & OM-A 110V / 220V AC 1-PH]



[BM-2,OM-2 ~ OM-12 110V / 220V AC 1-PH]

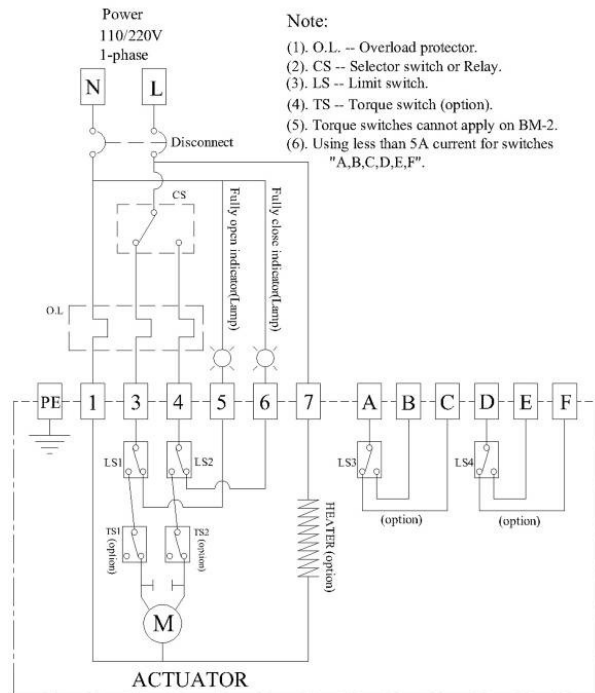
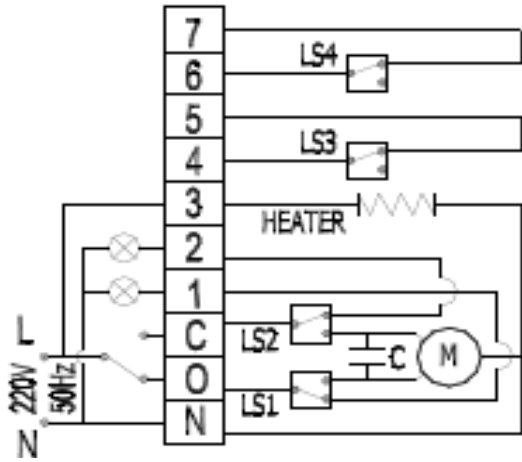


Table (3a) Wiring - On/Off Control

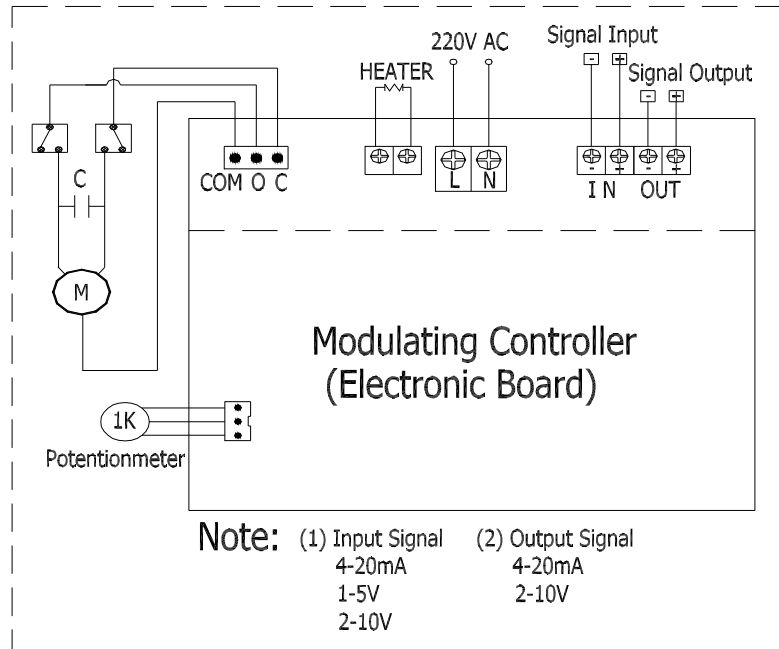
220V a.c. 30% duty cycle



Terminal #	Actuator
7	Full Close
6	Full Close
5	Full Open
4	Full Open
3	Heater
2	Lamp (Closed)
1	Lamp (Opened)
C	to Close
O	to Open
N	Neutral

Table (3a) Wiring - Modulating Control

220V AC, 30% duty cycle



Note:

The signal cables shall be of shield type, and the length less than 30m.

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ROTARY ACTUATOR

- For On-Off or Modulating Control
- Manual override non-clutch design. Manual operation can be operated without any lever, clutch or brake upon power voltage.
- Irreversible worm gear.
- Visual mechanical position indicator for accurate visual reference of valve position.
- Anti-condensation heater and 2 aux. limit switches on standard model
- Enclosure IP67



General

The OM series is equipped with standard On-Off or modulating (4~20mA, 1~5V, or 0(2)~10V select by DIP-switch) control quarter-turn electric actuator.

The OM series can also provide feedback output signal: Dry contact for On-Off version; 0~5V, 0~10V, 4~20mA (selected by DIP-switch) for modulating version, Auxiliary Switch is optional.

Technical Specification

Power Supply	220Vac, 50/60 Hz
Running time	See table (1)
Travel Angle	90°± 5°
Input (Modulating)	4~20mA, 1~5V, or 0(2)~10V select by DIP-switch
Feedback (Modulating)	4~20mA or 0(2)~10V select by DIP-switch
Electrical Ratings	67 Waterproof
Enclosure	7° nominal stroke, 85° nominal stroke. Ratings (maximum load):
Ambient Temperature	-30° C to +65° C
Indicator	Continuous Position Indicator
Manual Override	Non-clutch design
Worm Gear	Permanently lubricated and self locking
Space Heater	15W 220V Anti-condensation
Material	Aluminum Alloy
External Coating	Dry powder coating
Stall Protection	Built-in thermal protection Cut off at 125 ± 5 Reset at 95 ± 5

Table (1) Actuator Data

OS# On-Off	OS# Modulating	Max Torque (Nm)	Run Time at 60Hz (sec)	Power Consumption (Watts)	Manual Override	Weight (Kg)
OM-1	OM-P1	35	12	10	Hand-wheel	2
OM-2	OM-P2	90	16	40	Hand-wheel	11
OM-3	OM-P3	150	22	40	Hand-wheel	11
OM-4	OM-P4	400	16	120	Hand-wheel	22
OM-5	OM-P5	500	22	120	Hand-wheel	22
OM-6	OM-P6	650	28	120	Hand-wheel	22
OM-7	OM-P 7	1000	46	180	Hand-wheel	36
OM-8	OM-P8	1500	46	220	Hand-wheel	36
OM-9	OM-P9	2000	58	180	Hand-wheel	56
OM-10	OM-P10	2500	58	220	Hand-wheel	56
OM-11	OM-P11	3000	58	250	Hand-wheel	56
OM-12	OM-P12	3500	58	300	Hand-wheel	56

Table (1a) Actuator Dimensions (mm)

OS#	A	B	C	D	E	F	G	H	I	J	K	L max	M	N	S	Flange Type
OM-1	114	8	45°	155	15	36	m5	4	m6	6	50	14	19	2	½ PS	F03/ F05

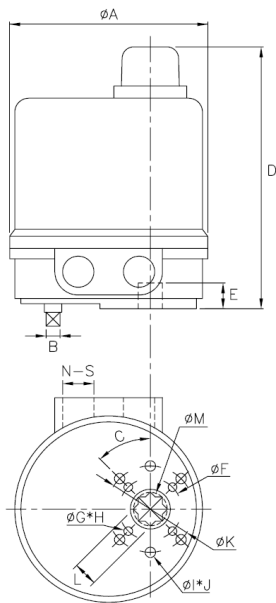


Table (1b) Actuator Dimensions (mm)

OS#	A	B	C	D	E	F	G Max	H	I	M	N	S	Flange Type
OM-2&3	203	326	180	255	30	123	22	70	m8	4	2	½ PS	F07
OM-4,5,6	290	394	217	317	40	194	35	102	m10	4	2	½ PS	F10

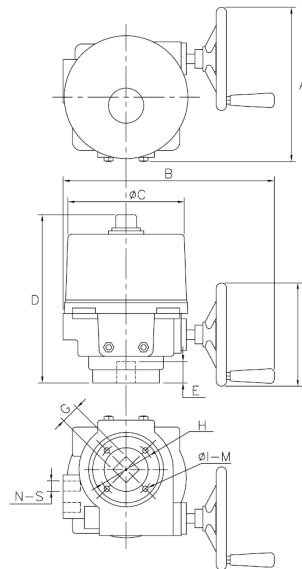


Table (1c) Actuator Dimensions (mm)

OM-7 to OM-8

OS#	A	B	C	D	E	F	G	H	I	J	K	L*2	M max	N	S	Flange Type
OM-7 OM-8	385	340	217	420	60	295	140	45°	m16	4	180	10	35	2	½ PS	F14

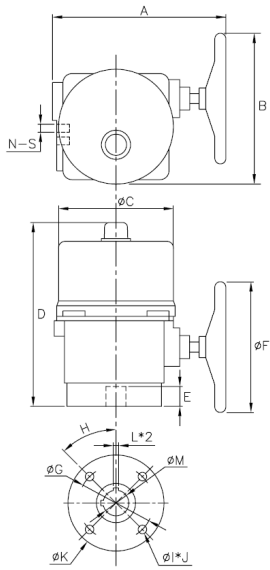
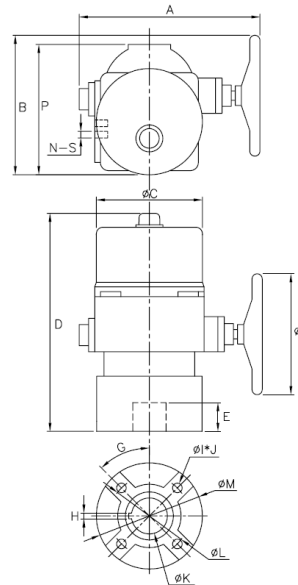


Table (1d) Actuator Dimensions (mm)

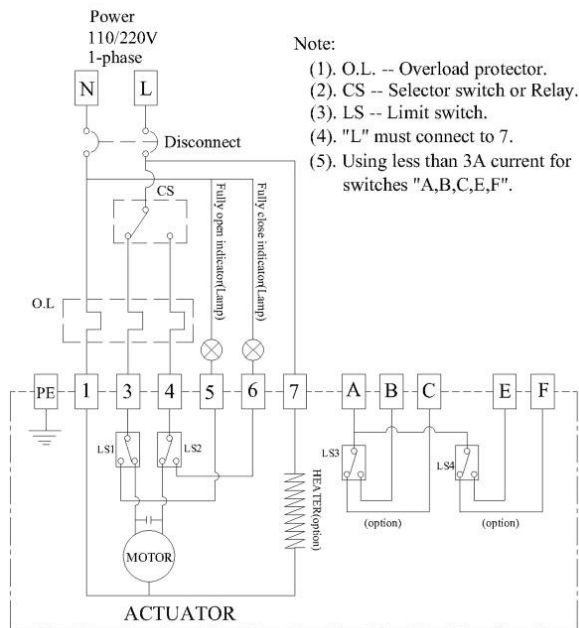
OM-9 to OM-12

OS#	A	B	C	D	E	F	G	H	I	J	K	L	M	P	N	S	Flange Type
OM-9 to OM-12	470	350	260	590	100	395	45°	12	m20	4	75	165	221	360	2	½ PS	F16

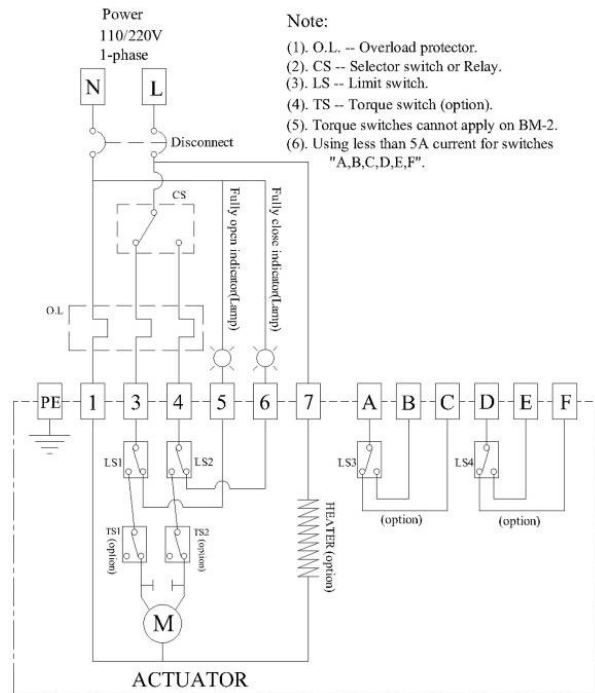


WIRING DIAGRAM FOR ON/OFF

[OM-1 & OM-A 110V / 220V AC 1-PH]



[BM-2,OM-2 ~ OM-12 110V / 220V AC 1-PH]



TROUBLE SHOOTING		
Conditions	Possibilities	Solution
Motor does not operate	1. Is the supplied power and voltage correct?	1. Check by meter.
	2. Any blisters on the capacitor?	2. If so, replace.
	3. Are the gear train free?	3. Remove motor and check.
Motor stops running	1. Is the power supply short circuited?	1. Check wiring.
	2. Any foreign objects in flow stream?	2. Check for obstructions.
Unable to fully open/close	1. Loose/Misalign cam?	1. Adjust/Tighten using spanner.
	2. Bent valve stem?	2. Replace valve stem.
	3. Mechanical stop adjustment incorrect?	3. Check position of stops.
Abnormal control for operating two or more actuators simultaneously.	Controlling circuit connects in tandem or parallel.	Refer to the wiring diagram.
Motor overheats	1. Is the voltage correct?	1. Check by meter.
	2. Is valve too tight to operate?	2. Replace valve.
	3. High duty working frequency?	3. Check duty cycle.
	4. Is motor stem bearing or blinding?	4. Replace the blinding parts.
Occasional on/off actuator failure.	Simultaneous input power on/off.	Check if the selectable switch is normal.

INSTALLATION

Remove power before the cover is dismantled!
The actuator must be handled with the utmost care when the cover is removed and the power connected!

ELECTRIC WIRING

Note:

Electric wiring must be carried out by qualified personnel only!

Wiring diagram is also shown on the label of top cover.

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WFS-1001-H WATER FLOW SWITCH

APPLICATION

The paddle type SPDT WFS series are designed to provide excellent performance where accuracy, reliability, and rugged construction (IP54) are required used in liquid flow lines carrying water or any fluid neither harmful to brass and phosphor bronze nor classified as a hazardous fluids.

They can be wired to close one circuit and open a second circuit when liquid flow either exceeds or drops below the adjusted flow rate. The WFS series are recommended for liquid pressure and temperature as mentioned below and must not be used on lines carrying liquids below 0 degree C.

These series may be used on liquids with high salt or chlorine content but is not for use in hazardous atmospheres. They may be also used outdoors but must be protected from weather or splashing water. All series WFS flow switches are designed for use only as operating controls. Where an operating control failure would result in personal injury and/or loss of property, it is the responsibility of user to add safety devices that protect against, or supervisory systems that warn of control failure.

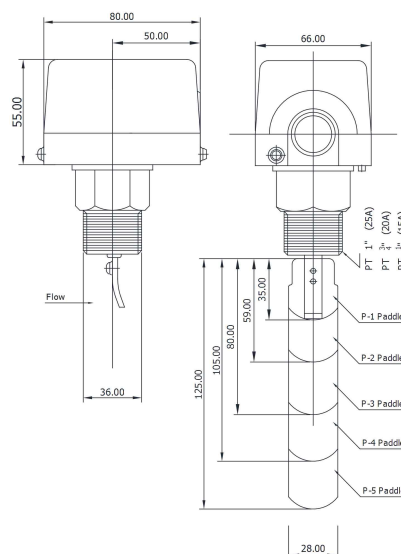


Red ABS Cover
Base Plate (Ni)

Technical Specification

Operating Pressure	10kgf/cm ² (1MPa)
Withstand Pressure	17.5Kgf/cm ² (1.75MPa)
Insulation Resistance	Over 100Ω DC500VM
Withstand Voltage	AC1500V/1minute
Contact Point Life	1000K Cycle
Bellows Life	500K Cycle
Temperature of Fluid	Max 100°C (212°F)

Dimensions



This product meets the requirements of **CE**

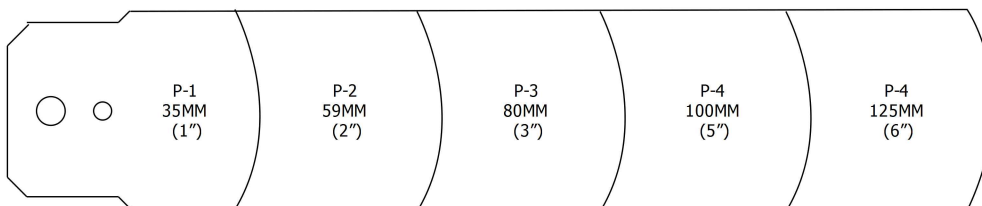
Electrical Ratings

Type	Voltage	Resistance Load	Lamp Load	Motor Load
AC (Standard)	AC 125 V AC 250 V	5A 2.5A	44A 22A	5A 2.5A
DC	DC 115 V DC 230 V	0.3A 0.15A		

Flow Rate in Liters per Minute(LPM)

Pipe Size	1"	1-1/4"	1-1/2"	2"	4"	6"	8"	10"	12"	14"	16"	18"	20"
Flow Qty	15	26	29	34.5	74.90	149.90	1013.47	1791.0	2776.0	3729.00	4869.0	5360.00	6687.00
Flow Qty	1PCS	1PCS	1PCS	1 OR 2 PCS	2PCS	3PCS	5PCS	5PCS	5PCS	5PCS	5PCS	5PCS	5PCS

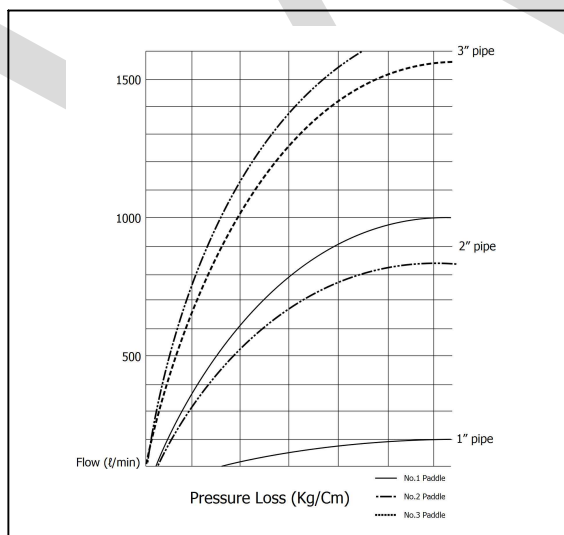
Flow rates averages which may vary ± from pipe. *Equipped with extended paddle trimmed to pipe size



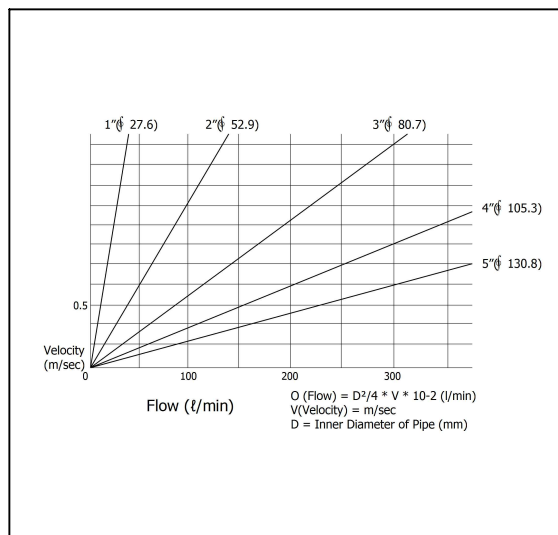
*NOTE

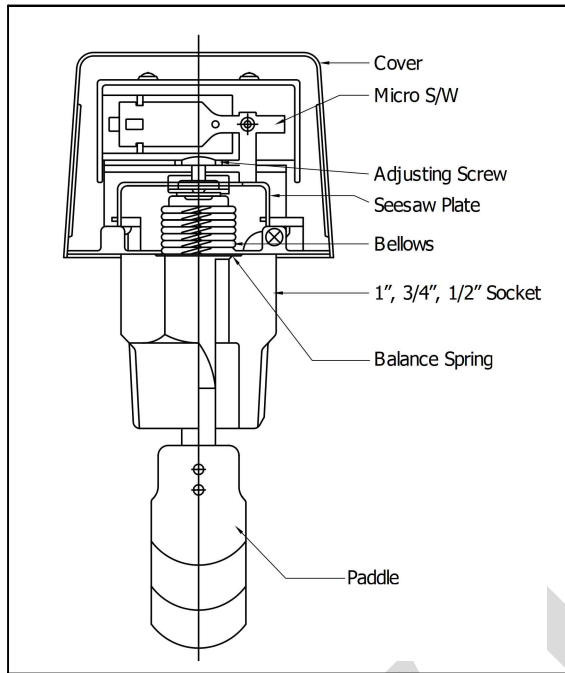
- Individual SUS Paddle are quickly adaptable for 1 inch to 3 inch (25 to 80mm) pipe.
- Standard model is 1 inch to 3 inch

Pressure Loss Rate

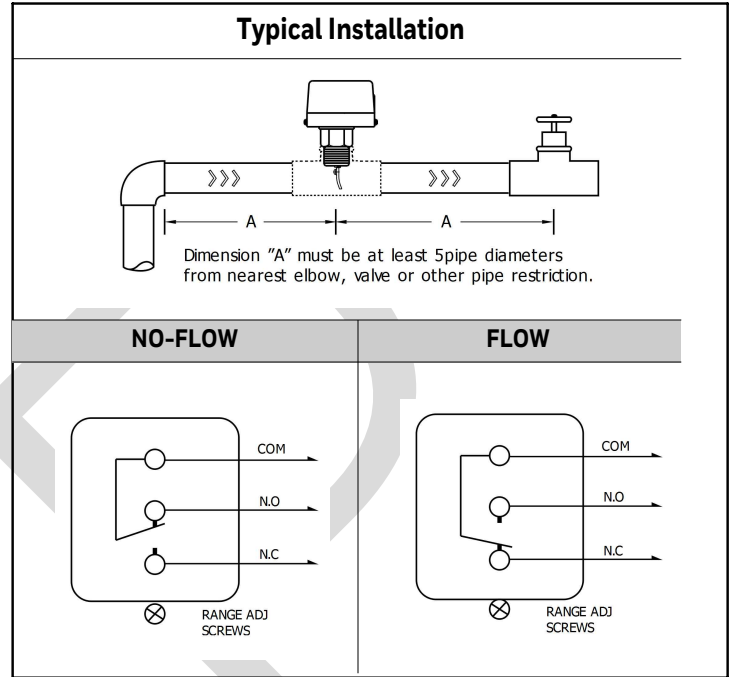


Flow-Velocity





Typical Installation



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WFS-1002-H WATER FLOW SWITCH

APPLICATION

The paddle type SPDT WFS series are designed to provide excellent performance where accuracy, reliability, and rugged construction (IP54) are required used in liquid flow lines carrying water or any fluid neither harmful to brass and phosphor bronze nor classified as a hazardous fluids.

They can be wired to close one circuit and open a second circuit when liquid flow either exceeds or drops below the adjusted flow rate.

The WFS series are recommended for liquid pressure and temperature as mentioned below and must not be used on lines carrying liquids below 0 degree C.

These series may be used on liquids with high salt or chlorine content but is not for use in hazardous atmospheres.

They may be also used outdoors but must be protected from weather or splashing water.

All series WFS flow switches are designed for use only as operating controls.

Where an operating control failure would result in personal injury and/or loss of property, it is the responsibility of user to add safety devices that protect against, or supervisory systems that warn of control failure.

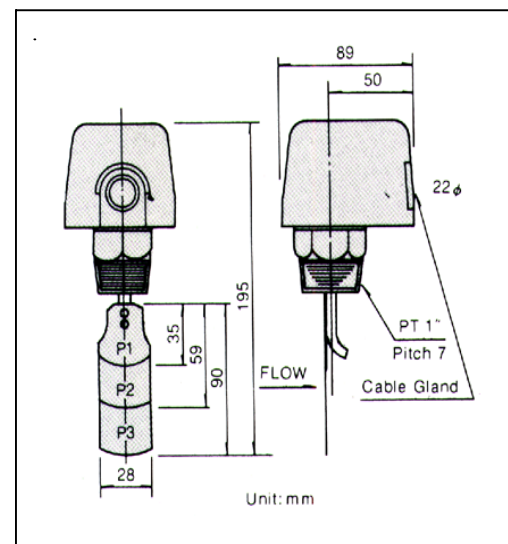


**Stainless Steel Cover
Stainless Steel Base
Plate**

Technical Specification

Operating Pressure	20kgf/cm ² (1962KPa)
Withstand Pressure	32Kgf/cm ² (3139KPa)
Insulation Resistance	Over 100Ω, DC500VM
Withstand Voltage	AC1500V/1minute
Contact Point Life	1000K Cycle
Bellows Life	500K Cycle
Temperature of Fluid	Max 100°C (212°F)

Dimensions



This product meets the requirements of **CE**

Electrical Ratings

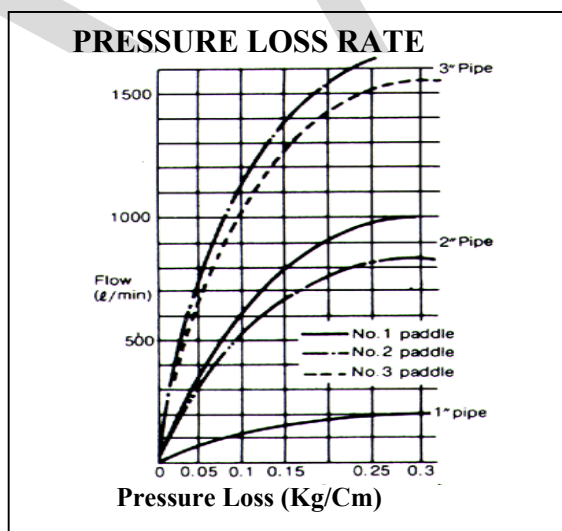
Type	Voltage	Resistance Load	Lamp Load	Motor Load
AC (Standard)	AC 125 V AC 250 V	5A 2.5A	44A 22A	5A 2.5A
DC	DC 115 V DC 230 V	0.3A 0.15A		

Part Descriptions

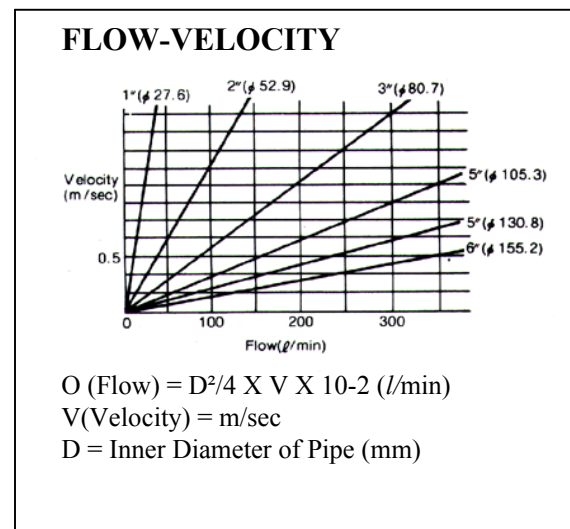
CLASSIFICATION		FLOW CONTROL RANGE		LPM (GPM)	
Pipe Diameter (inch)	Paddle	Minimum		Maximum	
		On-Flow	Off-Flow	On-Flow	Off-Flow
1	1	15 (4.0)	8 (2.0)	45 (12.0)	41 (11.0)
1-1/4		26 (6.9)	13 (3.4)	75 (20.0)	68 (18.0)
1-1/2		29 (7.0)	20 (5.3)	105 (28.0)	94 (25.0)
2	2	34 (9.0)	17 (4.5)	120 (32.0)	105 (28.0)
2-1/2		60 (16.0)	34 (9.0)	210 (55.0)	188 (50.0)
3	3	68 (18.0)	30 (8.0)	288 (76.0)	275 (73.0)
4		128 (34.0)	64 (17.0)	412 (109.0)	360 (95.0)
5		225 (59.0)	113 (30.0)	750 (198.0)	652 (172.0)
6		345 (91.0)	172 (45.0)	1125 (297.0)	975 (258.0)

This table illustrates the flow control range obtained from experimental data. A variation of up to 10% can be expected, depending on operating conditions. Final adjustments should be made on site using a flow meter.

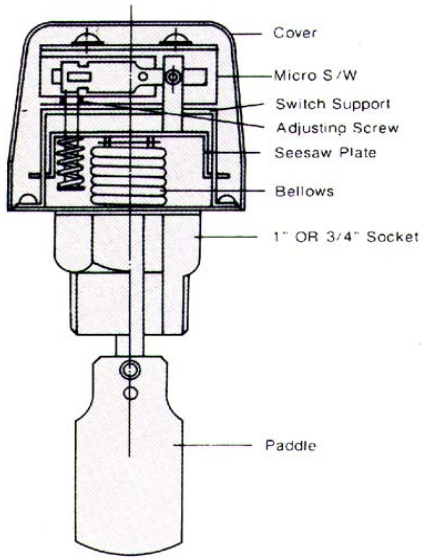
Pressure Loss Rate



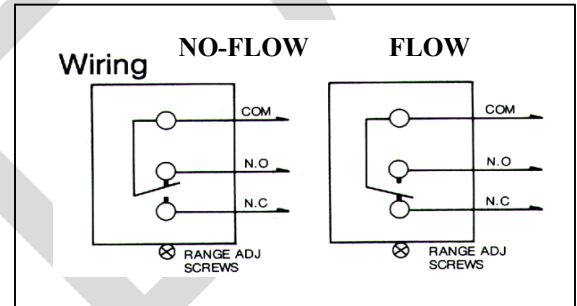
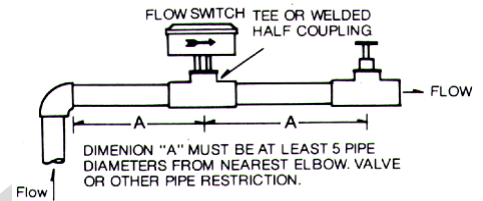
Flow-Velocity



Typical Installation



Typical Installation



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WFS-1002-H
WATER FLOW SWITCH

Honeywell

WFS-1003-H WATER FLOW SWITCH

APPLICATION

The paddle type SPDT WFS series are designed to provide excellent performance where accuracy, reliability, and rugged construction (IP54) are required used in liquid flow lines carrying water or any fluid neither harmful to brass and phosphor bronze nor classified as a hazardous fluids.

They can be wired to close one circuit and open a second circuit when liquid flow either exceeds or drops below the adjusted flow rate. The WFS series are recommended for liquid pressure and temperature as mentioned below and must not be used on lines carrying liquids below 0 degree C.

These series may be used on liquids with high salt or chlorine content but is not for use in hazardous atmospheres. They may be also used outdoors but must be protected from weather or splashing water. All series WFS flow switches are designed for use only as operating controls. Where an operating control failure would result in personal injury and/or loss of property, it is the responsibility of user to add safety devices that protect against, or supervisory systems that warn of control failure.

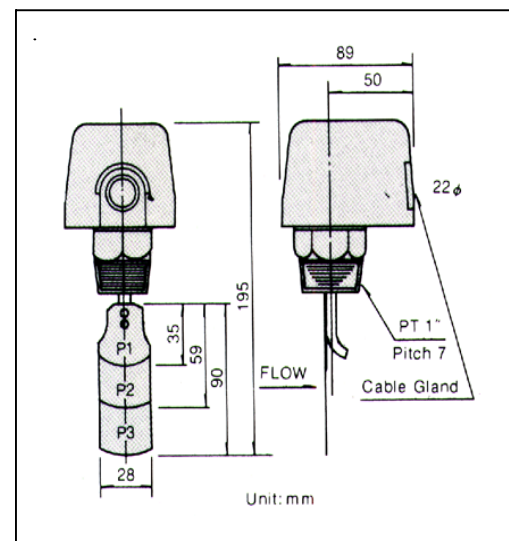


**Stainless Steel Cover
Stainless Steel Base
Plate**

Technical Specification

Operating Pressure	10kgf/cm ² (1000KPa)
Withstand Pressure	17.5Kgf/cm ² (91750KPa)
Insulation Resistance	Over 100Ω DC500VM
Withstand Voltage	AC1500V/1minute
Contact Point Life	1000K Cycle
Bellows Life	500K Cycle
Temperature of Fluid	Max 100°C (212°F)

Dimensions



This product meets the requirements of **CE**

Electrical Ratings

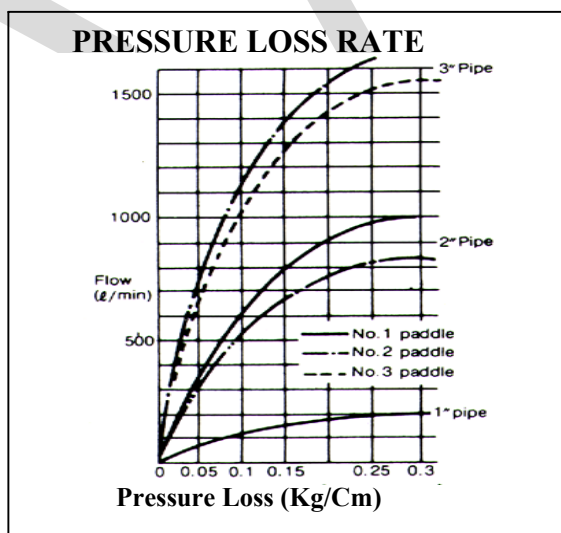
Type	Voltage	Resistance Load	Lamp Load	Motor Load
AC (Standard)	AC 125 V AC 250 V	5A 2.5A	44A 22A	5A 2.5A
DC	DC 115 V DC 230 V	0.3A 0.15A		

Part Descriptions

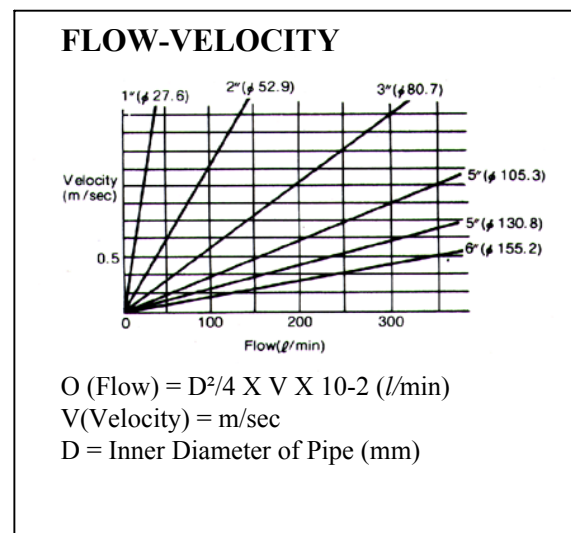
CLASSIFICATION		FLOW CONTROL RANGE		LPM (GPM)	
Pipe Diameter (inch)	Paddle	Minimum		Maximum	
		On-Flow	Off-Flow	On-Flow	Off-Flow
1	1	15 (4.0)	8 (2.0)	45 (12.0)	41 (11.0)
1-1/4		26 (6.9)	13 (3.4)	75 (20.0)	68 (18.0)
1-1/2		29 (7.0)	20 (5.3)	105 (28.0)	94 (25.0)
2	2	34 (9.0)	17 (4.5)	120 (32.0)	105 (28.0)
2-1/2		60 (16.0)	34 (9.0)	210 (55.0)	188 (50.0)
3	3	68 (18.0)	30 (8.0)	288 (76.0)	275 (73.0)
4		128 (34.0)	64 (17.0)	412 (109.0)	360 (95.0)
5		225 (59.0)	113 (30.0)	750 (198.0)	652 (172.0)
6		345 (91.0)	172 (45.0)	1125 (297.0)	975 (258.0)

This table illustrates the flow control range obtained from experimental data. A variation of up to 10% can be expected, depending on operating conditions. Final adjustments should be made on site using a flow meter.

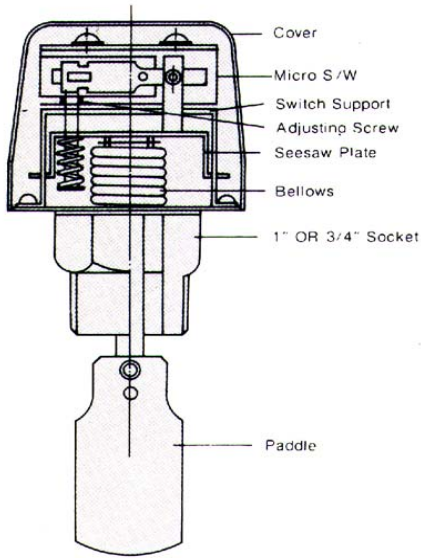
Pressure Loss Rate



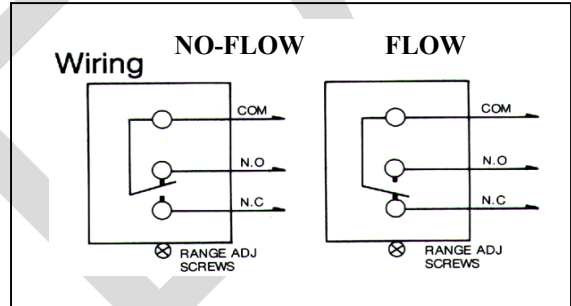
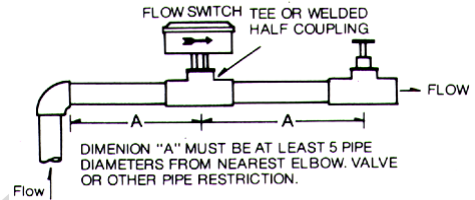
Flow-Velocity



Typical Installation



Typical Installation



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WFS-1003-H
WATER FLOW SWITCH

Honeywell

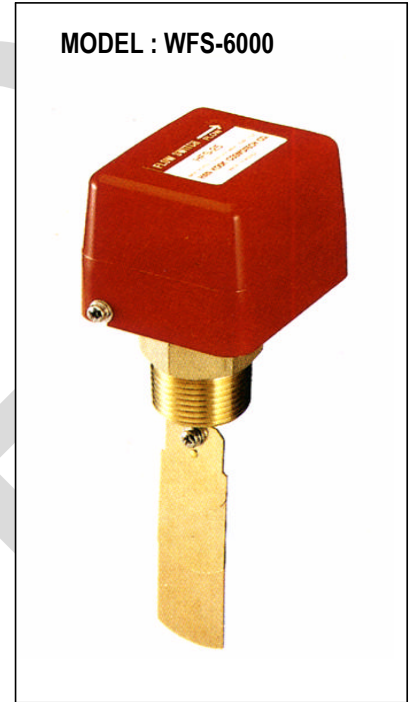
WFS-6000 WATER FLOW SWITCH

APPLICATION

The paddle type SPDT WFS series are designed to provide excellent performance where accuracy, reliability, and rugged construction are required used in liquid flow lines carrying water or any fluid neither harmful to brass and phosphor bronze nor classified as a hazardous fluids.

They can be wired to close one circuit and open a second circuit when liquid flow either exceeds or drops below the adjusted flow rate. The WFS series are recommended for liquid pressure and temperature as mentioned below and must not be used on lines carrying liquids below 0 oC.

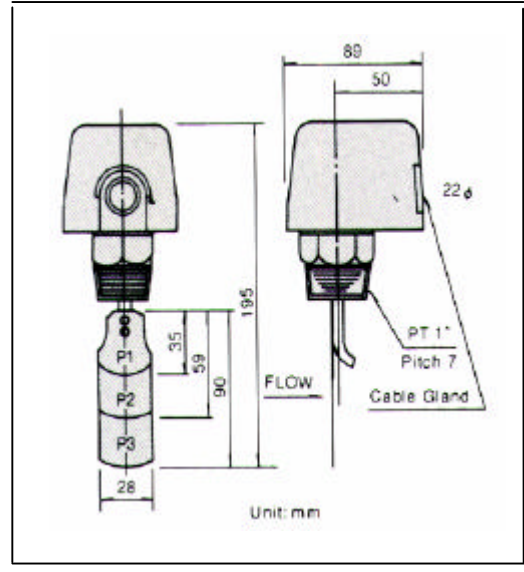
These series may be used on liquids with high salt or chlorine content but is not for use in hazardous atmospheres. They may be also used outdoors but must be protected from weather or splashing water. All series WFS flow switches are designed for use only as operating controls. Where an operating control failure would result in personal injury and/or loss of property, it is the responsibility of user to add safety devices that protect against, or supervisory systems that warn of control failure.



Technical Specification

Operating Pressure	10kgf/cm ² (1000KPa)
Withstand Pressure	17.5Kgf/cm ² (91750KPa)
Insulation Resistance	Over 100 ohm , DC500VM
Withstand Voltage	AC1500V/1minute
Contact Point Life	PAL/NTSC
Bellows Life	500K Cycle
Temperature of Fluid	Max 100°C (212°F)

Dimensions



Electrical Ratings

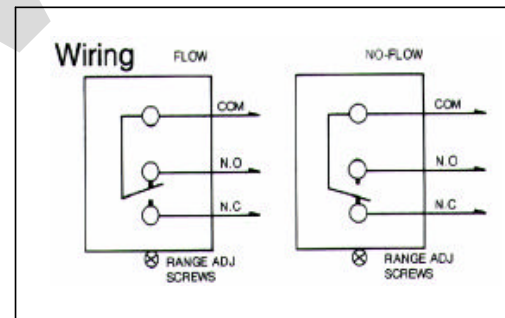
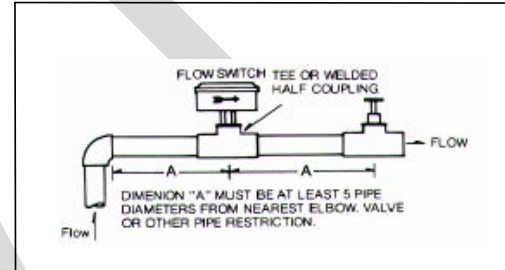
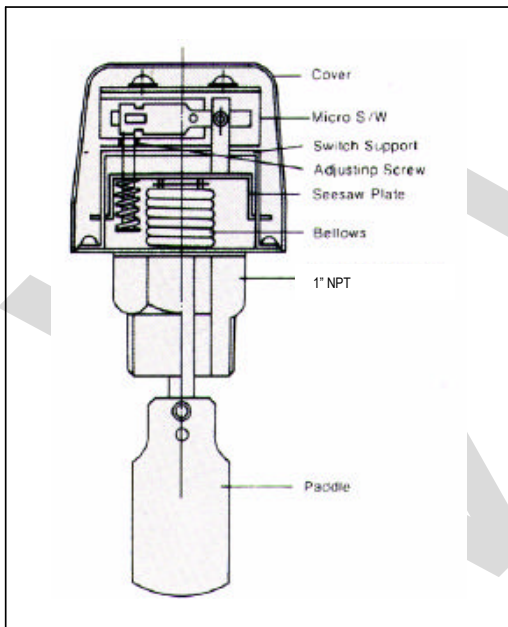
Type	Voltage	Resistance Load	Lamp Load	Motor Load
AC (Standard)	AC 125 V AC 250 V	5A 2.5A	44A 22A	5A 2.5A
DC	DC 115 V DC 230 V	0.3A 0.15A		

Part Descriptions

CLASSIFICATION		FLOW CONTROL RANGE		LPM (GPM)	
Pipe Diameter (inch)	Paddle	Minimum		Maximum	
		On-Flow	Off-Flow	On-Flow	Off-Flow
1	1	15 (4.0)	8 (2.0)	45 (12.0)	41 (11.0)
1-1/4		26 (6.9)	13 (3.4)	75 (20.0)	68 (18.0)
1-1/2		29 (7.0)	20 (5.3)	105 (28.0)	94 (25.0)
2	2	34 (9.0)	17 (4.5)	120 (32.0)	105 (28.0)
2-1/2		60 (16.0)	34 (9.0)	210 (55.0)	188 (50.0)
3	3	68 (18.0)	30 (8.0)	288 (76.0)	275 (73.0)
4		128 (34.0)	64 (17.0)	412 (109.0)	360 (95.0)
5		225 (59.0)	113 (30.0)	750 (198.0)	652 (172.0)
6		345 (91.0)	172 (45.0)	1125 (297.0)	975 (258.0)

This table illustrates the flow control range obtained from experimental data. A variation of up to 10% can be expected, depending on operating conditions. Final adjustments should be made on site using a flow meter.

TYPICAL INSTALLATION



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WFS-6000
WATER FLOW SWITCH

Honeywell

YS-SLF4 SERIES Y-STRAINER

- Cast iron body with Powder coated
- Stainless steel filter screen



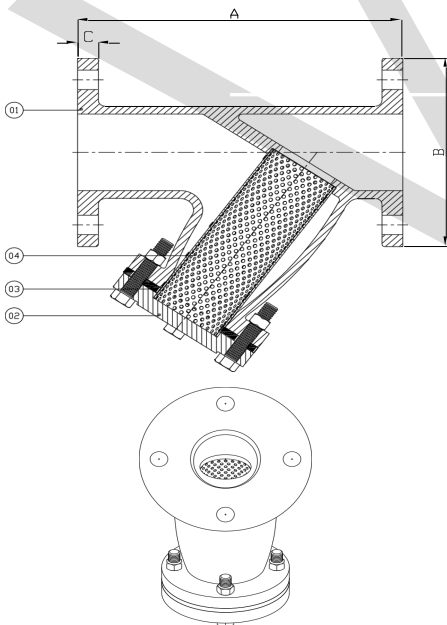
SYSTEM OVERVIEW

Honeywell Y-type strainer is widely used in water application and is used for protecting valve and other equipments from scrap and impurities in the system.

Technical Specification

Nominal pressure	PN16
Size Range	DN20-DN600
Medium	Chilled and hot water 50% glycol solution
Medium Temp.	-10°C to 120°C
End Connection	Flanged (ISO7005-2)

DIMENSIONS (mm)



Part Descriptions

PT No.	PART NAME	MATERIAL
01	Body	IS: 210 Gr FG 200
02	Cover	IS: 210 Gr FG 200
03	Gasket	EPDM
04	Filter Screen	S.S

Outside Dimension (mm)

DN Size	Face to face (A)	Flange diameter (B)	Flange thickness (C)	Mesh Hole size	No. of holes per Sq. inch
20	165	105	18	φ1/16"	67
25	170	115	18	φ1/16"	67
32	185	140	19	φ1/16"	67
40	205	135	16	φ1/16"	67
50	205	154	16	φ1/16"	67
65	220	160	16	φ1/16"	67
80	265	186	17	φ1/8"	27
100	330	215	20	φ1/8"	27
125	418	255	20	φ1/8"	27
150	440	285	22	φ1/8"	27
200	525	340	23	φ1/8"	27
250	725	405	25	φ1/8"	27
300	750	480	25	φ1/8"	27
350	845	535	30	φ1/8"	27

Model Table

Size	Model Number	Description
DN20	YS-SLF4-PN16-0020	DN20 Y-Strainer, Self action, CI valve body, PN16
DN25	YS-SLF4-PN16-0025	DN25 Y-Strainer, Self action, CI valve body, PN16
DN32	YS-SLF4-PN16-0032	DN32 Y-Strainer, Self action, CI valve body, PN16
DN40	YS-SLF4-PN16-0040	DN40 Y-Strainer, Self action, CI valve body, PN16
DN50	YS-SLF4-PN16-0050	DN50 Y-Strainer, Self action, CI valve body, PN16
DN65	YS-SLF4-PN16-0065	DN65 Y-Strainer, Self action, CI valve body, PN16
DN80	YS-SLF4-PN16-0080	DN80 Y-Strainer, Self action, CI valve body, PN16
DN100	YS-SLF4-PN16-0100	DN100 Y-Strainer, Self action, CI valve body, PN16
DN125	YS-SLF4-PN16-0125	DN125 Y-Strainer, Self action, CI valve body, PN16
DN150	YS-SLF4-PN16-0150	DN150 Y-Strainer, Self action, CI valve body, PN16
DN200	YS-SLF4-PN16-0200	DN200 Y-Strainer, Self action, CI valve body, PN16
DN250	YS-SLF4-PN16-0250	DN250 Y-Strainer, Self action, CI valve body, PN16
DN300	YS-SLF4-PN16-0300	DN300 Y-Strainer, Self action, CI valve body, PN16
DN350	YS-SLF4-PN16-0350	DN350 Y-Strainer, Self action, CI valve body, PN16

Note: valve sizes up to DN600 are also available. Please contact local sales for details.

For more information*

<https://honeywellbuildings.in>

Call: 1-800-103-0339

Email: HBT-Indiabuildings@honeywell.com

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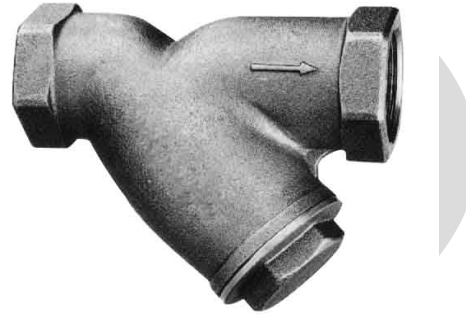
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**YS-SLF SERIES
Y-STRAINER**

Honeywell

YS-SLS4 SERIES Y-STRAINER (SCREWED)

- Cast iron body with Powder coated
- Stainless steel filter screen



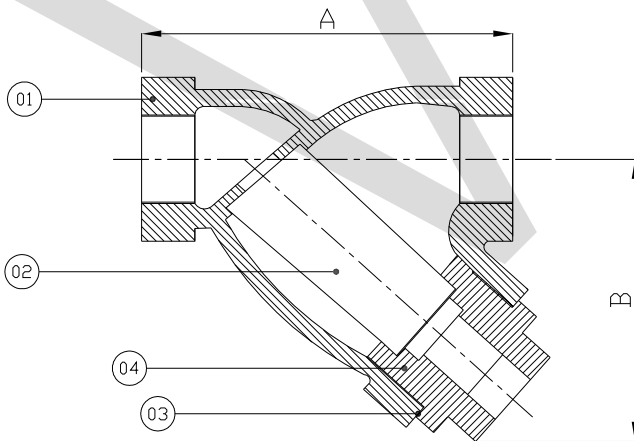
SYSTEM OVERVIEW

Honeywell Y-type strainer Screwed is widely used in water application and is used for protecting valve and other equipments from scrap and impurities in the system.

Technical Specification

Nominal pressure	PN16
Size Range	DN15-DN80
Medium	Chilled and hot water
Medium Temp.	-10°C to 120°C
End Connection	Screwed Type

DIMENSIONS (mm)



Part Descriptions

PT No.	PART NAME	MATERIAL
01	Body	Cast Iron
02	Cover	Cast Iron
03	Gasket	EPDM
04	Filter Screen	SS-304

Outside Dimension (mm)

DN Size	Face to face (A)	Height (B)	Mesh Hole size	No. of holes per Sq. inch
15	75	61	φ1/16"	67
20	92	71	φ1/16"	67
25	108	80	φ1/16"	67
32	133	108	φ1/16"	67
40	156	152	φ1/16"	67
50	190	155	φ1/16"	67
65	246	166	φ1/16"	67
80	275	202	φ1/8"	27



For more information*

<https://honeywellbuildings.in>

Call: 1-800-103-0339

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YS-SLS4 SERIES
Y-STRAINER (SCREWED)

Honeywell