Solenoid Valves with Differential Pressure - Miniature Solenoid Valves

Solenoid Valves with Differential Pressure

2/2-way valves DN 8 to DN 50

For neutral gases and liquids
Indirectly solenoid actuated
Diaphragm valves
Internal thread G 1/4 to G 2 or 1/4" NPT to 2" NPT
Operating pressure: 0.1 to 16 bar (see technical data)

Description

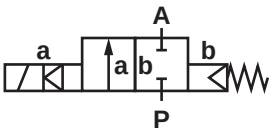
Solenoid valve for air, water, and other neutral fluids

Switching function:	normally closed
Flow direction:	determined
Differential pressure:	0.1 bar required (0.3 bar for EPDM)
Fluid temperature:	-10 °C up to max. +90 °C
Ambient temperature:	-10 °C up to max. +50 °C
Mounting position:	as required, preferably with solenoid vertical on top

Material

Body:	Brass
Seat seal:	NBR
Internal parts:	Stainless steel, PVDF

For contaminated fluids the use of a strainer upstream of the valve is recommended.



Features

- High flow rate
- Damped operation
- Functional compact design
- Solenoid interchangeable without tools (Click-on®)
- Particularly suitable as a water valve according to DIN EN 60730-2-8

Technical data

Connection size G	DN mm	kv-Value m³/h	Part number*	Operating pressure bar NBR 00	Normally open 01	Manual override 02	FPM 110 °C 03	EPDM 110 °C 14
1/4	8	1.9	82400**XX**.9101.**00000**	0.1 - 16	0.1 - 16	0.1 - 16	0.1 - 16	0.3 - 16
3/8	10	3.0	82401**XX**.9101.**00000**	0.1 - 16	0.1 - 16	0.1 - 16	0.1 - 16	0.3 - 16
1/2	12	3.8	82402**XX**.9101.**00000**	0.1 - 16	0.1 - 16	0.1 - 16	0.1 - 16	0.3 - 16
3/4	20	6.0	82403**XX**.9101.**00000**	0.1 - 16	0.1 - 16	0.1 - 16	0.1 - 16	0.3 - 16
1	25	9.5	82404**XX**.9101.**00000**	0.1 - 16	0.1 - 16	0.1 - 16	0.1 - 16	0.3 - 16
1 1/4	32	23.0	82405**XX**.9101.**00000**	0.1 - 10	-	0.1 - 10	0.1 - 10	0.3 - 10
1 1/4	32	23.0	82405**XX**.9151.**00000**	0.1 - 16	0.1 - 16	0.1 - 16	0.1 - 16	0.3 - 16
1 1/2	40	25.0	82406**XX**.9101.**00000**	0.1 - 10	-	0.1 - 10	0.1 - 10	0.3 - 10
1 1/2	40	25.0	82406**XX**.9151.**00000**	0.1 - 16	0.1 - 16	0.1 - 16	0.1 - 16	0.3 - 16
2	50	41.0	82407**XX**.9101.**00000**	0.1 - 10	-	0.1 - 10	0.1 - 10	0.3 - 10
2	50	41.0	82407**XX**.9151.**00000**	0.1 - 16	0.1 - 16	0.1 - 16	0.1 - 16	0.3 - 16

* For orders please state voltage and frequency, e.g.: 8240200.910**1.23050** for 230V 50Hz or 8240200.910**1.02400** for 24V DC

Solenoid 9101 / 9151 (standard voltages)

DC	AC 50Hz	AC 60Hz
24V	24V	-
-	110V	120V
	230V	220V

Design according to DIN VDE 0580
Voltage range +/-10%, duty cycle 100%
Protection class according to EN 60529: IP65

Power consumption

Solenoid	DC	AC Inrush	AC Holding
9101	8W	15VA	12VA
9151	18W	45VA	35VA

Electrical connector according to DIN EN 175301-803 (included)
The solenoids are UL listed and CSA approved

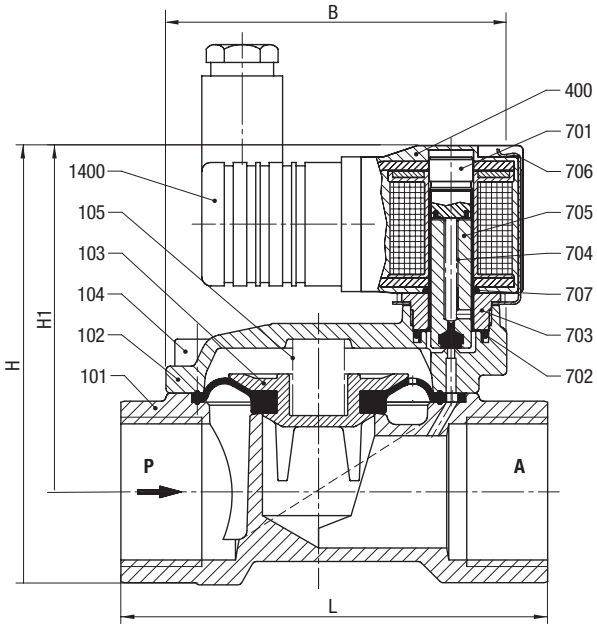
Mounting bracket

Connection size G	Part number
1/4, 3/8, 1/2	1258986
3/4	1258991
1	1258996
1 1/4, 1 1/2	1259005
2	1259007

Drawing legend

Index	Description
101	Valve body
102	Valve cover
*103	Diaphragm
104	Allen head screw
*105	Pressure spring
400	Solenoid
701	Core tube
*702	O-ring
703	Screw piece
*704	Pressure spring
*705	Plunger
706	Spring clip
*707	O-ring
1400	Electrical connector (enclosed)

* A service kit consists of these individual parts.



With solenoid 9101

Connection size G	L mm	B mm	H mm	H1 mm
1/4	60	44	78.5	67.0
3/8	60	44	78.5	67.0
1/2	67	44	81.0	67.0
3/4	80	50	88.0	71.5
1	95	62	97.5	77.0
1 1/4	132	92	124.5	95.5
1 1/2	132	92	124.5	95.5
2	160	109	142.5	108.0

With solenoid 9151

Connection size G	L mm	B mm	H mm	H1 mm
1 1/4	132	92	142	113
1 1/2	132	92	142	113
2	160	109	160	125.5

Service kits

For valves with solenoid 9101	Part number
8240000, 8240100, 8240200	1256274
8240300	1256275
8240400	1256276
8240500, 8240600	1259344
8241700	1259367
For valves with solenoid 9151	**Part number**
8240500, 8240600	1259373
8240700	1259382

Further options on request:

- Explosion protected version
- Flange connections
- Sealed core tube
- Pulse model in DC only
- Low power consumption 2W (only 24V DC)
- With NPT thread

Further options (solenoids)

XXXXXXX.**9136** Solenoid in protection class
⟨Ex⟩ II 2 GD EEx m II T4 T 130 °C,
with 3 m connection cable

Please turn to page 276 for technical information on our valves.

2/2-way valves DN 8 to DN 25

For hot water and steam
Indirectly solenoid actuated
Diaphragm valves
Internal thread G 1/4 to G 1
Operating pressure: 0.1 to 10 bar

Description (standard valve)

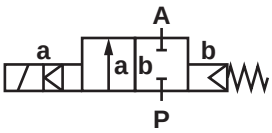
Solenoid valve for hot water and steam

Switching function:	normally closed
Flow direction:	determined
Differential pressure:	0.1 bar required
Fluid temperature:	max. +150 °C
Ambient temperature:	max. +60 °C
Mounting position:	as required, preferably with solenoid vertical on top

Material

Body:	Brass
Seat seal:	HNBR
Internal parts:	Stainless steel, Brass

For contaminated fluids the use of a strainer upstream of the valve is recommended.



Features

- High flow rate
- Damped operation
- Functional compact design
- Solenoid interchangeable without tools (Click-on®)
- Particularly suitable as a water valve according to DIN EN 60730-2-8

Technical data

Connection size G	DN mm	kv-Value m³/h	Part number*	Operating pressure bar HNBR 00	Normally open 01	Manual override 02
1/4	8	1.7	82470**XX**.9101.**00000**	0.1 - 10	0.1 - 10	0.1 - 10
3/8	10	2.7	82471**XX**.9101.**00000**	0.1 - 10	0.1 - 10	0.1 - 10
1/2	12	3.4	82472**XX**.9101.**00000**	0.1 - 10	0.1 - 10	0.1 - 10
3/4	20	5.5	82473**XX**.9101.**00000**	0.1 - 10	0.1 - 10	0.1 - 10
1	25	8.5	82474**XX**.9101.**00000**	0.1 - 10	0.1 - 10	0.1 - 10

* For orders please state voltage and frequency, e.g.: 8247200.910**1.23050** for 230V 50Hz or 8247200.910**1.02400** for 24V DC

Solenoid 9101 (standard voltages)

DC	AC 50Hz	AC 60Hz
24V	24V	-
-	110V	120V
	230V	220V

Power consumption

Solenoid	DC	AC Inrush	AC Holding
9101	8W	15VA	12VA

Design according to DIN VDE 0580
Voltage range +/-10%, duty cycle 100%
Protection class according to EN 60529: IP65
Electrical connector according to DIN EN 175301-803 (included)
The solenoids are UL listed and CSA approved

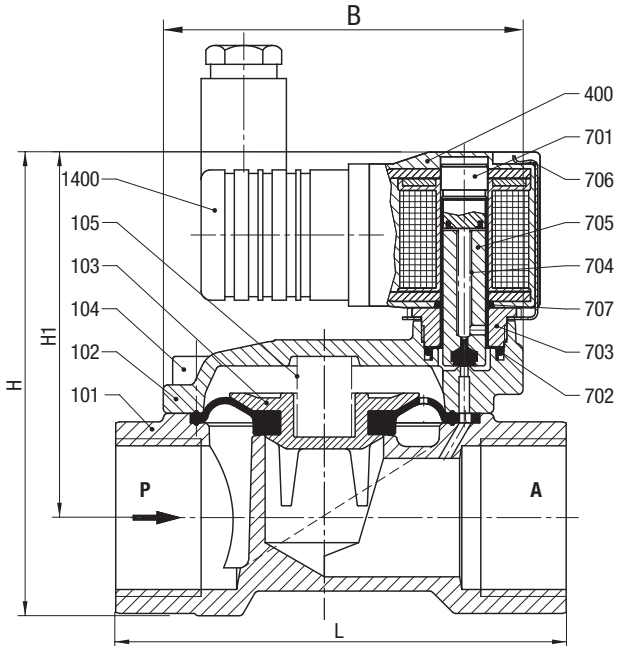
Mounting bracket

Connection size G	Part number
1/4, 3/8, 1/2	1258986
3/4	1258991
1	1258996

Drawing legend

Index	Description
101	Valve body
102	Valve cover
*103	Diaphragm
104	Allen head screw
*105	Pressure spring
400	Solenoid
701	Core tube
*702	O-ring
703	Screw piece
*704	Pressure spring
*705	Plunger
706	Spring clip
*707	O-ring
1400	Electrical connector

* A service kit consists of these individual parts.



Connection size G	L mm	B mm	H mm	H1 mm
1/4	60	44	78.5	67.0
3/8	60	44	78.5	67.0
1/2	67	44	81.0	67.0
3/4	80	50	88.0	71.5
1	95	62	97.5	77.0

Service kits

For valves with solenoid 9101	Part number
8247000	1257467
8247100	1257467
8247200	1257467
8247300	1257468
8247400	1257470

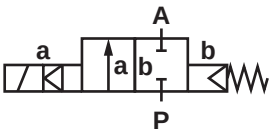
Further options on request

Please turn to page 276 for technical information on our valves.

2/2-way valves DN 8 to DN 50

For neutral gases and liquids
Indirectly solenoid actuated
Piston valves
Internal thread G 1/4 to G 2 or 1/4" NPT to 2" NPT
Operating pressure: 0.5 to 40 bar (see technical data)

Click-on®
Solenoid interchangeable without tools



Description (standard valve)

Solenoid valve for air, water, and other neutral fluids

Switching function:	normally closed
Flow direction:	determined
Differential pressure:	0.5 bar required
Fluid temperature:	-20 °C up to max. +90 °C
Ambient temperature:	-20 °C up to max. +50 °C
Mounting position:	as required, preferably with solenoid vertical on top

Material

Body:	Brass
Seat seal:	NBR
Internal parts:	Stainless steel, Brass, PTFE

For contaminated fluids the use of a strainer upstream of the valve is recommended.

Features

- Compact piston valve
- High flow rate
- Damped operation
- Functional compact design
- Solenoid in Click-on® design
- Stainless steel piston bushing

Technical data

Connection size G	DN mm	kv-Value m³/h	Part number*	Operating pressure bar NBR 00	Normally open 01	Manual override 02	FPM 110 °C 03	EPDM 110 °C 14	Sealed core tube 99**
1/4	8	2.2	85300**XX**.9151.**00000**	0.5 - 40	0.5 - 40	0.5 - 40	0.5 - 40	0.5 - 40	0.5 - 8
3/8	10	3.4	85301**XX**.9151.**00000**	0.5 - 40	0.5 - 40	0.5 - 40	0.5 - 40	0.5 - 40	0.5 - 8
1/2	12	4.4	85302**XX**.9151.**00000**	0.5 - 40	0.5 - 40	0.5 - 40	0.5 - 40	0.5 - 40	0.5 - 8
3/4	20	7.0	85303**XX**.9151.**00000**	0.5 - 40	0.5 - 40	0.5 - 40	0.5 - 40	0.5 - 40	0.5 - 8
1	25	10.5	85304**XX**.9151.**00000**	0.5 - 40	0.5 - 40	0.5 - 40	0.5 - 40	0.5 - 40	0.5 - 8
1 1/4	32	25.0	85305**XX**.9151.**00000**	0.5 - 40	0.5 - 30	0.5 - 40	0.5 - 40	0.5 - 40	0.5 - 8
1 1/2	40	27.0	85306**XX**.9151.**00000**	0.5 - 40	0.5 - 30	0.5 - 40	0.5 - 40	0.5 - 40	0.5 - 8
2	50	43.0	85307**XX**.9151.**00000**	0.5 - 40	0.5 - 30	0.5 - 40	0.5 - 40	0.5 - 40	0.5 - 8

* For orders please state voltage and frequency, e.g.: 8530000.915**1.23050** for 230V 50Hz or 8530000.915**1.02400** for 24V DC

** With solenoid DC 9152 / AC 9156

Solenoid 9151 (standard voltages)

DC	AC	
	50Hz	60Hz
24V	24V	-
-	110V	120V
	230V	220V

Design according to DIN VDE 0580
Voltage range +/-10%, duty cycle 100%
Protection class according to EN 60529: IP65

Power consumption

Solenoid	DC	AC	
		Inrush	Holding
9151	18W	45VA	35VA

Electrical connector according to DIN EN 175301-803 (included)
The solenoids are UL listed and CSA approved
AC with rectifier plug only

Mounting bracket*

Content: 1 stainless steel mounting bracket and 2 screws

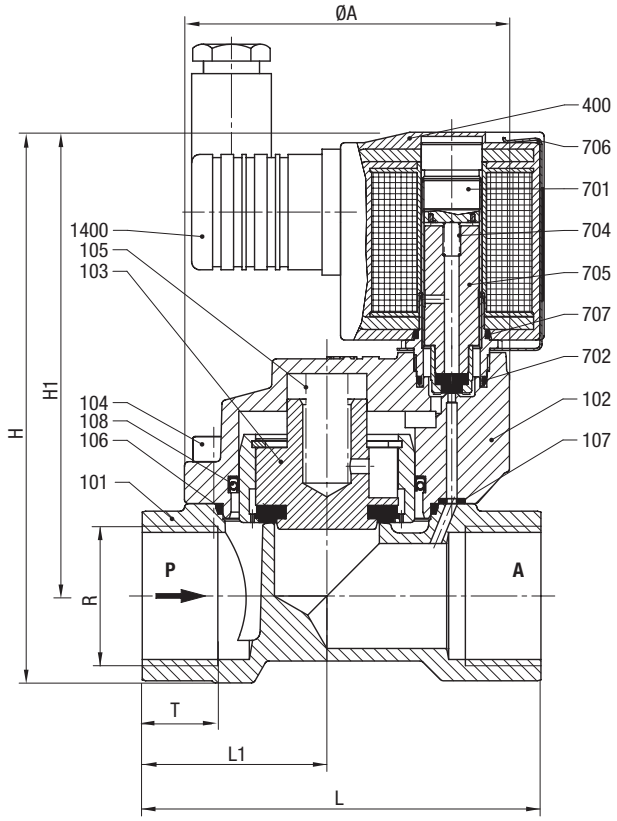
Connection size G	Part number
1/4, 3/8, 1/2	1258988
3/4	1258993
1	1258998
1 1/4, 1 1/2	1259006
2	1259008

* For image of valve with mounting bracket, see 82400 series (page 105)

Drawing legend

Index	Description
101	Valve body
102	Valve cover
*103	Valve plate
104	Allen head screw
*105	Pressure spring
*106	Gasket
*107	O-ring
*108	Lip seal
400	Solenoid
701	Core tube
*702	O-ring
*704	Pressure spring
*705	Plunger
706	Spring clip
707	O-ring
1400	Electrical connector

* A service kit consists of these individual parts.



Connection size G	øA mm	H mm	H1 mm	L mm	L1 mm	T mm
1/4	44	105.0	93.5	60	27.5	12.0
3/8	44	105.0	93.5	60	27.5	12.0
1/2	44	107.5	93.5	67	31.0	14.0
3/4	50	119.0	102.5	80	36.5	16.0
1	62	131.5	110.5	95	44.0	18.0
1 1/4	92	166.0	137.0	132	60.0	20.0
1 1/2	92	166.0	137.0	132	60.0	22.0
2	109	186.0	151.5	160	74.0	24.0

Service kits

For valves with solenoid 9151	Part number
8530000	1257998
8530100	1257998
8530200	1257998
8530300	1258002
8530400	1258006
8530500	1258589
8530600	1258589
8530700	1259152

Further options on request

Please turn to page 276 for technical information on our valves.

Flatsan 2/2-way valves

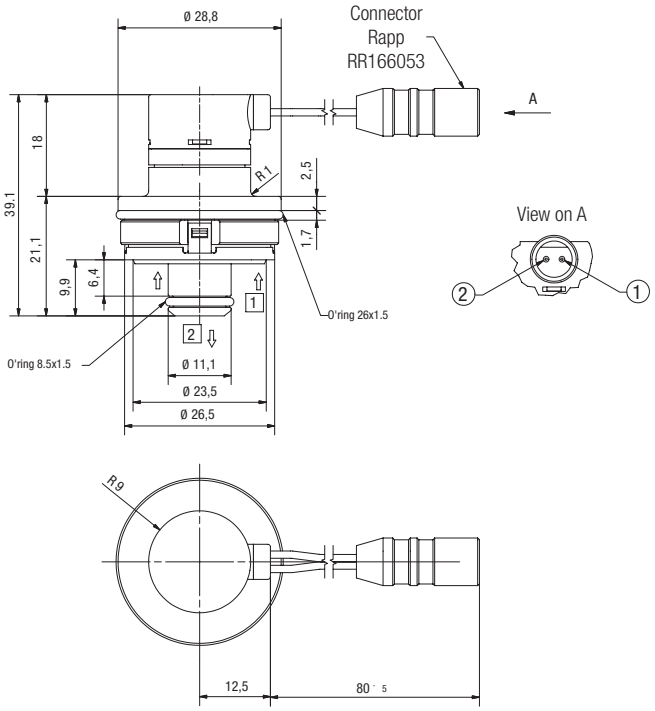
Description

Solenoid Valve for potable water

Switching function:	normally closed
Flow Direction:	determined
Fluid Temperature:	+5 °C up to +70 °C
Ambient Temperature:	+5 °C up to +50 °C
Mounting position:	as required

Material

Body in contact with media:	PPS
Seals in contact with media:	EPDM
Other wetted materials:	PPS, stainless steel



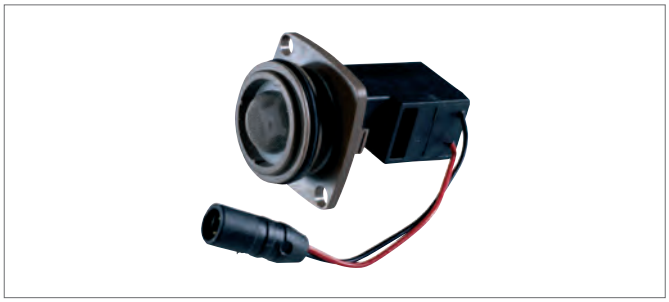
1 Compact build for easy integration.
2 Latching coils with 12W power consumption.
3 Wide range of voltages and connections.
4 High flow rates and pressures up to 10 bar.
5 Water tested for 300,000 cycles

Connection	Orifice mm	Kv Value l/min	Kv Value m³/h	Part number	Operating pressure bar	Function	Latching	Voltage	Power Consumption	Electrical connection
2/2-Way Solenoid Valve										
Cartridge	8	14	0.84	16-242C-10-H5+1111+AUP	0.5 - 10	NC	Yes	5 V DC	1.2W	Pins
Cartridge	8	14	0.84	16-242C-10-H5+1121+AUP	0.5 - 10	NC	Yes	5 V DC	1.2W	RAPP RR166053
Cartridge	8	14	0.84	16-242C-10-H5+1111+BFW	0.5 - 10	NC	Yes	9 V DC	1.2W	Pins
Cartridge	8	14	0.84	16-242C-10-H5+1121+BFW	0.5 - 10	NC	Yes	9 V DC	1.2W	RAPP RR166053

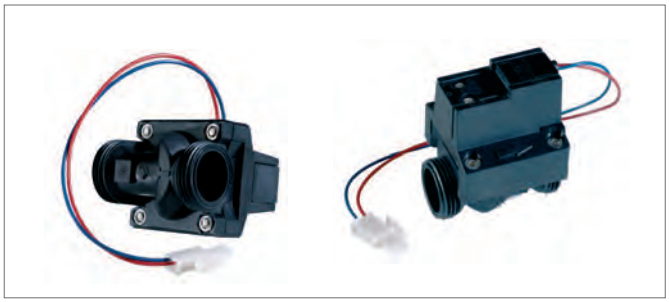
Additional Ranges

Catridge valves
FAS Flatsan valves were designed with the requirements of the sanitary automation industry in mind. Easily achieving 300,000 cycles without service, the low power consumption and compact build allow easy integration into OEM products.

Water pilots
Quick to integrate into existing systems, FAS water pilots were designed for minimal power and space usage. Customised interfaces are available.



High-flow diaphragm valves
These valves are ideal where higher flows are required but space and power consumption are at a premium. A wide range of connections and electrical options are available on request.



Direct acting solenoid valves
With integrated 15 mm compression fittings, these valves were designed for low water pressure, and function without a pressure differential. Latching versions are available. WRAS approved.

2/2-way valves DN 8 to DN 25

For neutral steam and liquids
Indirectly solenoid actuated
Piston valves
Internal thread G 1/4 to G 1 or 1/4" NPT to 1" NPT
Operating pressure: 1 to 25 bar

Click-on®
Solenoid interchangeable without tools

Description (standard valve)

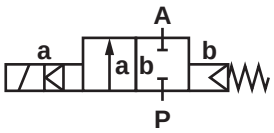
Solenoid valve for steam, hot water, and other neutral fluids

Switching function:	normally closed
Flow direction:	determined
Differential pressure:	1 bar required
Fluid temperature:	-10 °C up to max. +200 °C
Ambient temperature:	-10 °C up to max. +50 °C, with solenoid mounted vertical underneath, max. +60 °C
Mounting position:	as required, preferably with solenoid vertical on top

Material

Body:	Brass
Seat seal:	PTFE
Internal parts:	Stainless steel, FPM, PTFE

For contaminated fluids the use of a strainer upstream of the valve is recommended.



Features

- Compact piston valve
- High flow rate
- Damped operation
- Functional compact design
- Solenoid in Click-on® design
- Stainless steel piston bushing

Technical data

Connection size G	DN mm	kv-Value m³/h	Part number*	Operating pressure bar PTFE 00	Normally open 01	Manual override 02
1/4	8	2.2	85320**XX**.9152.**00000**	1 - 25	1 - 16	1 - 25
3/8	10	3.4	85321**XX**.9152.**00000**	1 - 25	1 - 16	1 - 25
1/2	12	4.4	85322**XX**.9152.**00000**	1 - 25	1 - 16	1 - 25
3/4	20	7.0	85323**XX**.9152.**00000**	1 - 25	1 - 16	1 - 25
1	25	10.5	85324**XX**.9152.**00000**	1 - 25	1 - 16	1 - 25

* For orders please state voltage and frequency, e.g.: 8532200.915**2.23050** for 230V 50Hz or 8532200.915**2.02400** for 24V DC

Solenoid 9152 (standard voltages)

DC	AC 50Hz	AC 60Hz
24V	24V	-
-	110V	120V
	230V	220V

Power consumption

Solenoid	DC	AC Inrush	AC Holding
9152	10W	15VA	10VA

Design according to DIN VDE 0580
Voltage range +/-10%, duty cycle 100%
Protection class according to EN 60529: IP65
Electrical connector according to DIN EN 175301-803 (included)
The solenoids are UL listed and CSA approved

Mounting bracket*

Content: 1 stainless steel mounting bracket and 2 screws

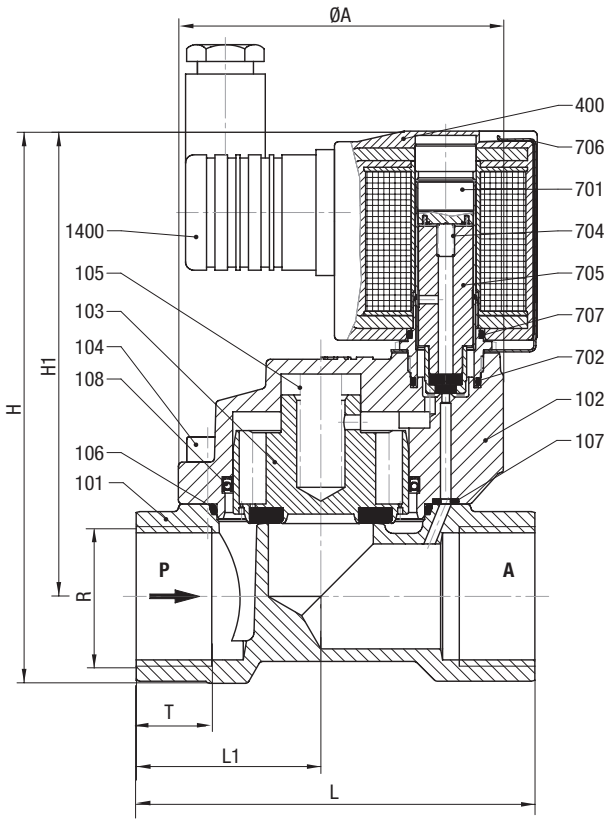
Connection size G	Part number
1/4, 3/8, 1/2	1258988
3/4	1258993
1	1258998

* For image of valve with mounting bracket, see 82400 series (page 105)

Drawing legend

Index	Description
101	Valve body
102	Valve cover
*103	Valve plate
104	Allen head screw
*105	Pressure spring
*106	Gasket
*107	O-ring
*108	Lip seal
400	Solenoid
701	Core tube
*702	O-ring
703	Screw piece
*704	Pressure spring
*705	Plunger
706	Spring clip
707	O-ring
1400	Electrical connector

* A service kit consists of these individual parts.



Connection size G	øA mm	H mm	H1 mm	L mm	L1 mm	T mm
1/4	44	105.0	93.5	60	27.5	12.0
3/8	44	105.0	93.5	60	27.5	12.0
1/2	44	107.5	93.5	67	31.0	14.0
3/4	50	119.0	102.5	80	36.5	16.0
1	62	131.5	110.5	95	44.0	18.0

Service kits

For valves with solenoid 9152	Part number
8532000	1261735
8532100	1261735
8532200	1261735
8532300	1261736
8532400	1261737

Further options on request

Please turn to page 276 for technical information on our valves.

2/2-way valves DN 12 to DN 20

For neutral gases and liquids
Indirectly solenoid actuated
Diaphragm valves
Internal threads G 1/2 and G 3/4 (84070)
or 1/2" NPT and 3/4" NPT (84080)
Operating pressure: 0.3 to 10.5 bar

Click-on®
Solenoid interchangeable without tools

Description (standard valve)

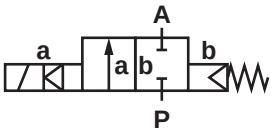
Solenoid valve for potable water and other neutral fluids

Switching function:	normally closed
Flow direction:	determined
Fluid temperature:	+5 °C to max. +50 °C
Ambient temperature:	0 °C to max. +50 °C
Mounting position:	as required, preferably solenoid vertical on top

Material

Body:	Polymer (PPO GF 30)
Seat seal:	EPDM
Internal parts:	Stainless steel, PVDF

For contaminated fluids the use of a strainer upstream of the valve is recommended.



Features

- High flow rate
- Damped operation
- Functional compact design
- Solenoid interchangeable without tools (Click-on®)
- International approvals

This valve is tested and certified as a component by NSF International against NSF/ANSI Standard 42 for materials and structural integrity requirements only and against NSF/ANSI Standard 61 for material requirements only.

Technical data valves

Connection size G	DN mm	kv-Value** m³/h	Part number* Solenoid in DC or AC	Pressure bar
1/2	12	3,0	8407214.9101.**00000**	0,3 - 10,5
3/4	20	5,0	8407314.9101.**00000**	0,3 - 10,5
1/2 NPT	12	3,0	8408214.9101.**00000**	0,3 - 10,5
3/4 NPT	20	5,0	8408314.9101.**00000**	0,3 - 10,5

* For orders please state voltage and frequency, e.g.: 8407214. 9101.**23050** for 230V 50Hz or 8407214.9152.**02400** for 24V DC

** With gases and liquids up to 25 mm²/s (cSt)

Solenoid 9101 (standard voltages)

DC	AC	
	50Hz	60Hz
24V	24V	-
-	110V	120V
205V	230V	220V

Power consumption

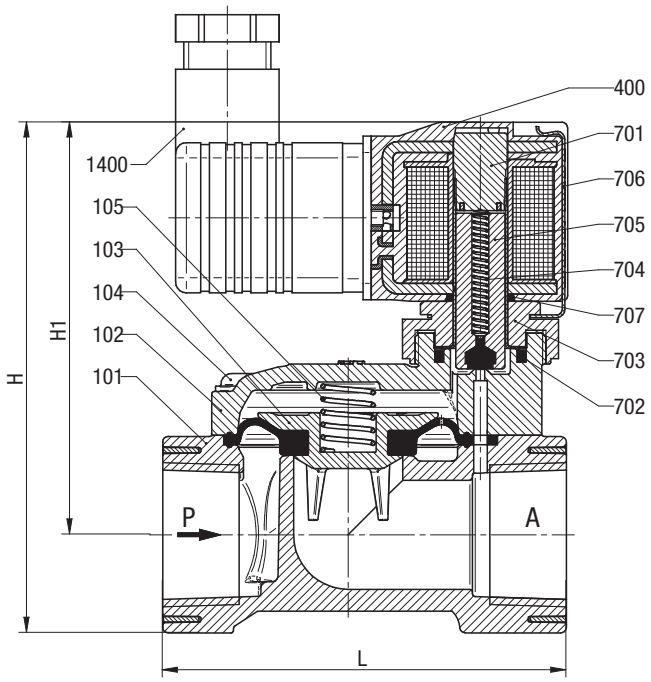
Solenoid	DC	AC	
		Inrush	Holding
9101	8W	15VA	12VA / 7W

Design according to DIN VDE 0580
Voltage range +/-10%, duty cycle 100%
Protection class according to EN 60529: IP65
Electrical connector according to DIN EN 175301-803 (included)
The solenoids are UL listed and CSA approved

Drawing legend

Index	Description
101	Valve body
102	Valve cover
*103	Diaphragm
104	Hex head screw
*105	Pressure spring
400	Solenoid
701	Core tube
*702	O-ring
703	Screw piece
*704	Pressure spring
*705	Plunger
706	Spring clip
707	O-ring
1400	Electrical connector (enclosed)

* A service kit consists of these individual parts.



Connection size G	B mm	H mm	H1 mm	L mm
1/2	51	86	71	67
3/4	62	94	76	74
1/2" NPT	51	86	71	67
3/4" NPT	62	94	76	74

Further options (valves)

XXXXX**54**.XXXX Latching system (only in DC)
XXXXX**67**.XXXX Normally open (NO)

Further options on request

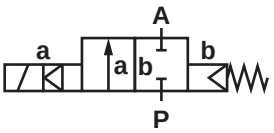
Please turn to page 276 for technical information on our valves.

Specific NSF listed voltages for this valve can be found on:
www.nsf.org.

2/2-way valves DN 8 to DN 50

For slightly aggressive gases and liquids
Indirectly solenoid actuated
Diaphragm valves
Internal thread G 1/4 to G 2 or 1/4" NPT to 2" NPT
Operating pressure: 0.1 to 16 bar (see technical data)

Click-on®
Solenoid interchangeable without tools



Description (standard valve)

Solenoid valve for slightly aggressive gases and liquids

Switching function:	normally closed
Flow direction:	determined
Differential pressure:	0.1 bar required (0.3 bar for EPDM)
Fluid temperature:	-10 °C up to max. +90 °C
Ambient temperature:	-10 °C up to max. +50 °C
Mounting position:	as required, preferably with solenoid vertical on top

Material

Body:	Stainless steel 1.4408
Seat seal:	NBR
Internal parts:	Stainless steel, PVDF

For contaminated fluids the use of a strainer upstream of the valve is recommended.

Features

- High flow rate
- Damped operation
- Functional compact design
- Solenoid interchangeable without tools (Click-on®)

Technical data

Connection size G	DN mm	kv-Value m³/h	Part number*	Operating pressure bar NBR 00	Normally open 01	Manual override 02	FPM 110 °C 03	EPDM 110 °C 14
1/4	8	1.9	82730**XX**.9101.**00000**	0.1 - 16	0.1 - 16	0.1 - 16	0.1 - 16	0.3 - 16
3/8	10	3.0	82731**XX**.9101.**00000**	0.1 - 16	0.1 - 16	0.1 - 16	0.1 - 16	0.3 - 16
1/2	12	3.8	82732**XX**.9101.**00000**	0.1 - 16	0.1 - 16	0.1 - 16	0.1 - 16	0.3 - 16
3/4	20	6.0	82733**XX**.9101.**00000**	0.1 - 16	0.1 - 16	0.1 - 16	0.1 - 16	0.3 - 16
1	25	9.5	82734**XX**.9101.**00000**	0.1 - 16	0.1 - 16	0.1 - 16	0.1 - 16	0.3 - 16
1 1/4	32	23.0	82735**XX**.9101.**00000**	0.1 - 10	-	0.1 - 10	0.1 - 10	0.3 - 10
1 1/4	32	23.0	82735**XX**.9151.**00000**	0.1 - 16	0.1 - 16	0.1 - 16	0.1 - 16	0.3 - 16
1 1/2	40	25.0	82736**XX**.9101.**00000**	0.1 - 10	-	0.1 - 10	0.1 - 10	0.3 - 10
1 1/2	40	25.0	82736**XX**.9151.**00000**	0.1 - 16	0.1 - 16	0.1 - 16	0.1 - 16	0.3 - 16
2	50	41.0	82737**XX**.9101.**00000**	0.1 - 10	-	0.1 - 10	0.1 - 10	0.3 - 10
2	50	41.0	82737**XX**.9151.**00000**	0.1 - 16	0.1 - 16	0.1 - 16	0.1 - 16	0.3 - 16

* For orders please state voltage and frequency, e.g.: 8273200.910**1.23050** for 230V 50Hz or 8273200.910**1.02400** for 24V DC

Solenoid 9101 / 9151 (standard voltages)

DC	AC	
	50Hz	60Hz
24V	24V	-
-	110V	120V
	230V	220V

Power consumption

Solenoid	DC	AC	
		Inrush	Holding
9101	8W	15VA	12VA
9151	18W	45VA	35VA

Design according to DIN VDE 0580
Voltage range +/-10%, duty cycle 100%
Protection class according to EN 60529: IP65
Electrical connector according to DIN EN 175301-803 (included)
The solenoids are UL listed and CSA approved

Mounting bracket*

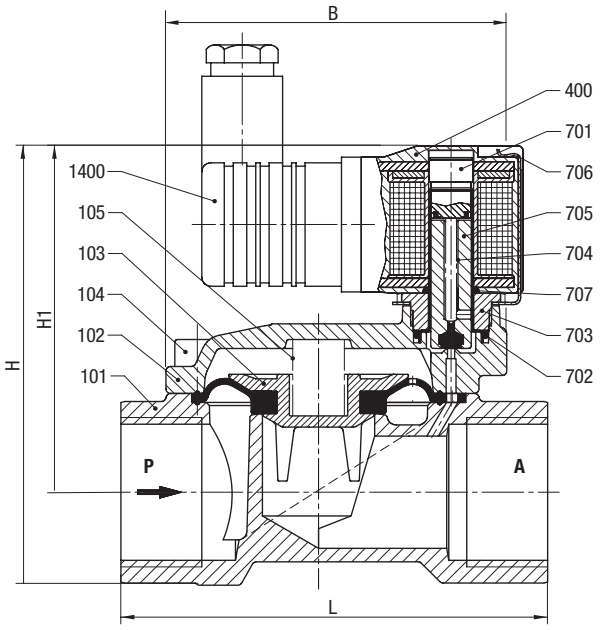
Connection size G	Part number
1/4, 3/8, 1/2	1258986
3/4	1258991
1	1258996
1 1/4, 1 1/2	1259005
2	1259007

* For image of valve with mounting bracket, see 82400 series (page 105)

Drawing legend

Index	Description
101	Valve body
102	Valve cover
*103	Diaphragm
104	Allen head screw
*105	Pressure spring
400	Solenoid
701	Core tube
*702	O-ring
703	Screw piece
*704	Pressure spring
*705	Plunger
706	Spring clip
*707	O-ring
1400	Electrical connector (enclosed)

* A service kit consists of these individual parts.



With solenoid 9101

Connection size G	L mm	B mm	H mm	H1 mm
1/4	60	44	78.5	67.0
3/8	60	44	78.5	67.0
1/2	67	44	81.0	67.0
3/4	80	50	88.0	71.5
1	95	62	97.5	77.0
1 1/4	132	92	124.5	95.5
1 1/2	132	92	124.5	95.5
2	160	109	142.5	108.0

With solenoid 9151

Connection size G	L mm	B mm	H mm	H1 mm
1 1/4	132	92	142	113
1 1/2	132	92	142	113
2	160	109	160	125.5

Service kits

For valves with solenoid 9101	Part number
8273000, 8273100, 8273200	1256274
8273300	1256275
8273400	1256276
8273500, 8273600	1259344
8273700	1259367
For valves with solenoid 9151	**Part number**
8273500, 8273600	1269065
8273700	1269066

Further options (valves)

- Explosion protected version
- Flange connections
- Sealed core tube
- Latching version in DC only
- Low power consumption 2W (only 24VDC)
- With NPT thread

Further options (solenoids)

XXXXXXX.**9136** Solenoid in protection class Ⓔx II 2 GD EEx m II T4 T 130 °C, with 3 m connection cable

Further options on request

Please turn to page 276 for technical information on our valves.

2/2-way valves DN 20 to 50

For neutral gases and liquids
Indirectly solenoid actuated
Diaphragm valves
Flange connection: PN 16
Operating pressure: 1 to 16 bar

Description (standard valve)

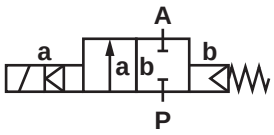
Solenoid valve for air, water, oil and other neutral fluids

Switching function:	normally closed
Flow direction:	determined
Fluid temperature:	max. +80 °C
Differential pressure:	1 bar required
Ambient temperature:	max. +55 °C
Mounting position:	as required, preferably solenoid vertical

Material

Body:	Grey cast iron
Seat seal:	NBR
Internal parts:	Brass, Stainless steel

For contaminated fluids the use of a strainer upstream of the valve is recommended.



Features

- Damped operation
- Easily interchangeable solenoid

Technical data

Connection size DN mm	kv-Value m³/h	Part number*	Operating pressure bar NBR 00	Normally open 01	FPM 110 °C 03	EPDM 110 °C 14
20	8.0	83053**XX**.0201.**00000**	1 - 16	1 - 16	1 - 16	1 - 16
25	10.0	83054**XX**.0201.**00000**	1 - 16	1 - 16	1 - 16	1 - 16
32	22.0	83055**XX**.0201.**00000**	1 - 16	1 - 16	1 - 16	1 - 16
40	25.0	83056**XX**.0201.**00000**	1 - 16	1 - 16	1 - 16	1 - 16
50	43.0	83057**XX**.0201.**00000**	1 - 16	1 - 16	1 - 16	1 - 16

* For orders please state voltage and frequency, e.g.: 8305300.020**1.23050** for 230V 50Hz or 8305300.020**1.02400** for 24V DC

Solenoid 0201 (standard voltages)

DC	AC 50Hz	AC 60Hz
24V	24V	-
-	110V	120V
	230V	220V

Design according to DIN VDE 0580
Voltage range +/-10%, duty cycle 100%
Protection class according to EN 60529: IP65
Electrical connector according to DIN EN 175301-803 (included)

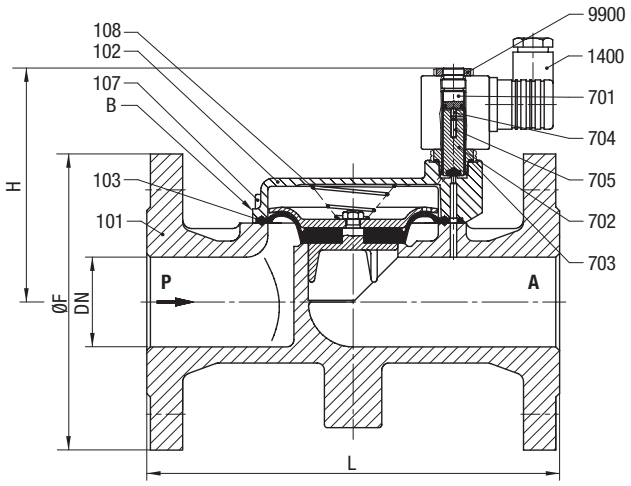
Power consumption

Solenoid	DC	AC Inrush	AC Holding
0201	11W	22VA	15VA

Drawing legend

Index	Description
101	Valve body
102	Valve cover
*103	Diaphragm
107	Allen head screw
*108	Pressure spring
400	Solenoid
701	Core tube
*702	Plunger
*703	O-ring
*704	Guiding pin
705	Pressure spring
1400	Electrical connector
9999	Nut

* A service kit consists of these individual parts.



Connection size DN	L mm	B* mm	H mm	øF mm
20	150	105	105	105
25	160	115	105	115
32	180	140	118	140
40	200	150	122	150
50	230	165	132	165

* B = maximum width

Further options (valves)

XXXXX**02**.XXXX Manual override
XXXXX**17**.XXXX Normally open; seat seal: FPM**
XXXXX**20**.XXXX Manual override; seat seal: FPM**

Further options (solenoids)

XXXXXXX.**4001** Solenoid for higher temperature, up to max. +130 °C
XXXXXXX.**9336** Solenoid in protection class Ⓔx II 2 GD EEx me II T4 T 140 °C
XXXXXXX.**9341** Solenoid in protection class Ⓔx II 2 GD EEx me II T3 T 140 °C

Further options on request

Marine version

** Up to max. +130 °C: only in combination with solenoid for higher temperatures.

Please turn to page 276 for technical information on our valves.

Water treatment and purification

Drinking water is one of the most valuable resources on Earth.

Keenly aware of its limited supply, Norgren turned its attention to the water treatment and purification market years ago.

Our range of products and solutions are suited for a range of demanding applications, ranging from sea water desalination through to water sample analysis.

Diaphragm solenoid valves

Buschjost's brass, stainless steel and plastic diaphragm valves are developed specifically for handling water and are ideal for controlling both the intake and treatment process flow.

Direct acting solenoid valves

Norgren's range of direct acting solenoid valves are ideal for applications with low operating pressure differential. Quick connectors such as integrated push-in or compression fittings allow easy installation into the fluid circuit.

Media separated solenoid valves

Well suited for chemical dosing applications or for handling low flows of high-grade deionised water, these valves are well established in the water purification industry.

Valve islands and pneumatic pilots

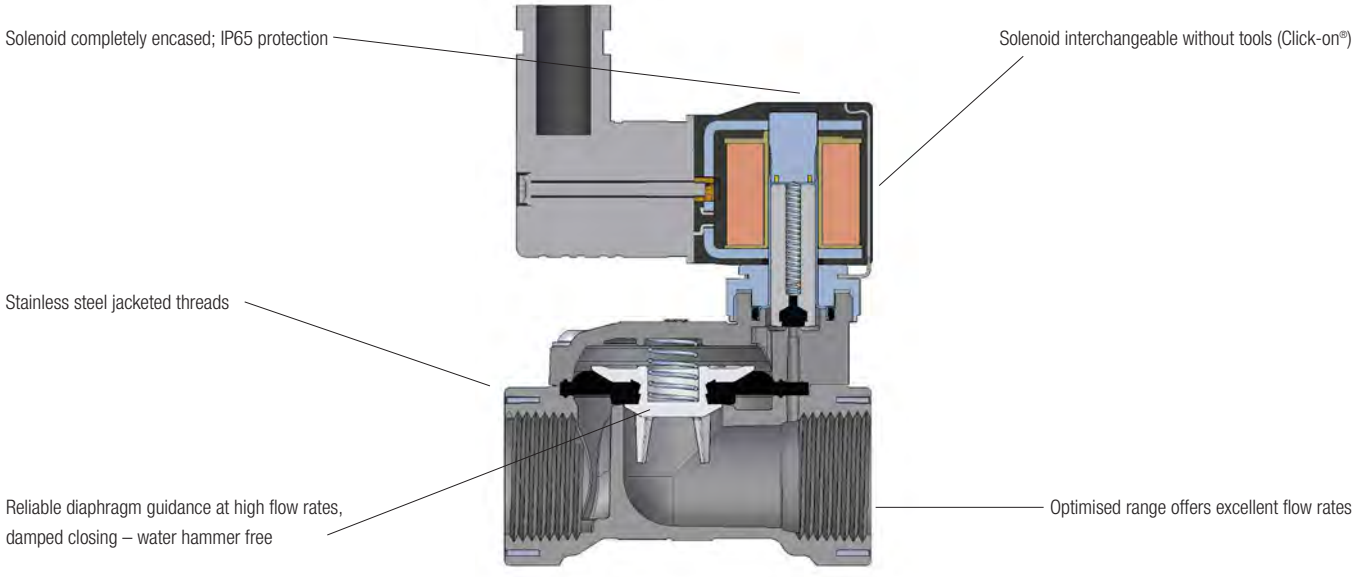
Where flows or impurities are higher and pneumatically operated valves are used, Norgren's compact valve islands and range of pneumatic pilots can save critical assembly time and increase performance of the system.

Air preparation

Norgren's established range of air preparation equipment includes filters, regulators, and lubricators as well as pneumatic tubing and fittings.

Water Treatment and Purification

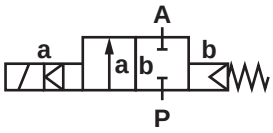
Buschjost's new Series 84080 – designed for the demanding needs of the water purification market.



This valve is tested and certified as a component by NSF International against NSF/ANSI Standard 42 for materials and structural integrity requirements only and against NSF/ANSI Standard 61 for material requirements only.

2/2-way valves DN 65 to DN 150

For neutral gases and liquids
Indirectly solenoid actuated
Diaphragm valves
Flange connection: PN 16
Operating pressure: 0.5 to 10 bar



Description (standard valve)

Solenoid valve for air, water, oil and other neutral fluids

Switching function:	normally closed
Flow direction:	determined
Differential pressure:	0.5 bar required
Fluid temperature:	-10 °C up to max. +90 °C
Ambient temperature:	-10 °C up to max. +50 °C
Mounting position:	as required, preferably with solenoid vertical on top

Material

Body:	Grey cast iron
Seat seal:	NBR
Internal parts:	Stainless steel, Brass, Gun metal

For contaminated fluids the use of a strainer upstream of the valve is recommended.

Features

- Continuously adjustable closing time
- Easily interchangeable solenoid
- Resistant to scaling
- Low power consumption

Technical data

DN mm	kv-Value m³/h	Part number* →	Operating pressure bar NBR 00	Operating pressure bar Normally open 01
65	56.0	83588**XX**.9366.**00000**	0.5 - 10	0.5 - 10
80	90.0	83589**XX**.9366.**00000**	0.5 - 10	0.5 - 10
100	150.0	83590**XX**.9366.**00000**	0.5 - 10	0.5 - 10
125	191.0	83591**XX**.9366.**00000**	0.5 - 10	0.5 - 10
150	277.0	83592**XX**.9366.**00000**	0.5 - 10	0.5 - 10

* For orders please state voltage and frequency, e.g.: 8358800.936**6.23050** for 230V 50Hz or 8358800.936**6.02400** for 24V DC

Solenoid 9366 (standard voltages)

DC	AC 50Hz	AC 60Hz
24V	24V	-
-	110V	120V
	230V	220V

Power consumption

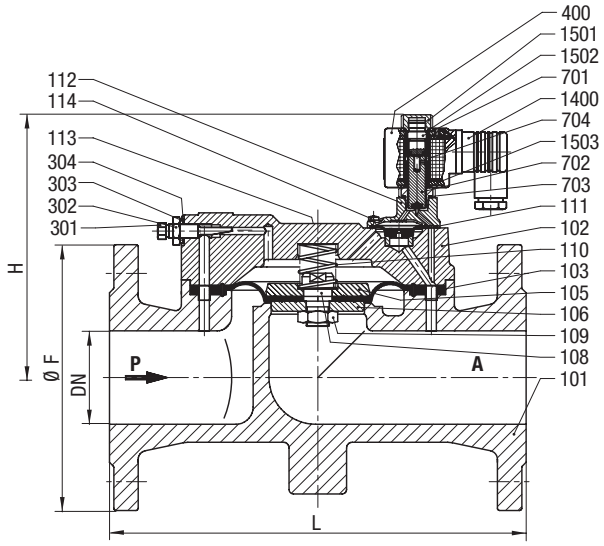
Solenoid	DC	AC Inrush	AC Holding
9366	18W	106VA	35VA

Design according to DIN VDE 0580
Voltage range +/-10%, duty cycle 100%
Protection class according to EN 60529: IP65
Electrical connector according to DIN EN 175301-803 (included)

Drawing legend

Index	Description
101	Valve body
102	Valve cover
*103	Diaphragm
105	Round plate
106	Round plate
107	Bushing
108	Screw piece
109	Hexagon nut
*110	Pressure spring
*111	Diaphragm
112	Valve cover
113	Allen head screw
114	Oval head cap screw
301	Hexagon nut
302	Hexagon nut
303	Round plate
*304	O-ring
400	Solenoid
701	Core tube
*702	Plunger
*703	O-ring
*704	Pressure spring
1400	Electrical connector
1501	Hexagon nut
1502	O-ring
1503	Gasket

* A service kit consists of these individual parts.



Connection size DN	L mm	B* mm	H mm	øF mm
65	290	190	185	185
80	310	220	195	200
100	350	250	220	220
125	400	285	235	250
150	480	330	265	285

* B = maximum width

Further options (solenoids)

XXXXXXX.**9336** Solenoid protection class
Ⓔx II 2 GD EEx me II T4 T 140 °C

Further options on request

Please turn to page 276 for technical information on our valves.

2/2-way valves DN 15 to DN 100

For neutral gases and liquids
Indirectly solenoid actuated
Piston seat valves
Flange connection: PN 16
Operating pressure: 0.5 to 16 bar

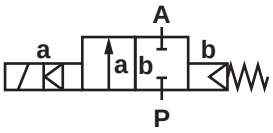
Description (standard valve)

Solenoid valve for air, water, oil and other neutral fluids

Switching function:	normally closed
Flow direction:	determined
Differential pressure:	0.5 bar required
Fluid temperature:	max. +90 °C
Ambient temperature:	max. +50 °C
Mounting position:	as required, preferably with solenoid vertical on top, from DN 65 vertical on top only

Material

Body:	Grey cast iron
Seat seal:	NBR
Internal parts:	Brass, Stainless steel – up to DN 50 Gun metal, Stainless steel – from DN 65



For contaminated fluids the use of a strainer upstream of the valve is recommended.

Features

- Flat-piston valve
- High flow rate
- Damped operation

Technical data

Connection size DN mm	kv-Value m³/h	Part number for DC voltage*	Operating pressure bar**		
			NBR	Normally open	FPM 110 °C
		→	**00**	**01**	**03**
15	5.5	84322**XX**.8301.**00000**	0.5 - 16	0.5 - 16	0.5 - 16
20	10.0	84323**XX**.8301.**00000**	0.5 - 16	0.5 - 16	0.5 - 16
25	12.5	84324**XX**.8301.**00000**	0.5 - 16	0.5 - 16	0.5 - 16
32	27.0	84325**XX**.8301.**00000**	0.5 - 16	0.5 - 16	0.5 - 16
40	31.0	84326**XX**.8301.**00000**	0.5 - 16	0.5 - 16	0.5 - 16
50	46.0	84327**XX**.8301.**00000**	0.5 - 16	0.5 - 16	0.5 - 16
65	70.0	84328**XX**.8401.**00000**	0.5 - 16	0.5 - 16	0.5 - 16
80	98.0	84329**XX**.8401.**00000**	0.5 - 16	0.5 - 16	0.5 - 16
100	157.0	84330**XX**.8401.**00000**	0.5 - 16	0.5 - 16	0.5 - 16

* For orders please state voltage and frequency, e.g.: 8432200.830**4.23049** for 230V 40-60Hz (AC with rectifier plug only; included) or 8432200.830**1.02400** for 24V DC

** With gases or liquids up to 40 mm²/s (cSt)

Solenoid 8301 / 8304; 8401 / 8404 (standard voltages)

DC	AC 40-60Hz	
24V	24V	-
-	110V	120V
	230V	220V

Design according to DIN VDE 0580
Voltage range +/-10%, duty cycle 100%
Protection class according to EN 60529: IP65
Electrical connector according to DIN EN 175301-803 (included)
AC with rectifier plug only

Power consumption

Solenoid	DC	AC	
		Inrush	Holding
8301	22W	-	-
8304	-	25VA	25VA
8401	40W	-	-
8404	-	45VA	45VA

Drawing legend

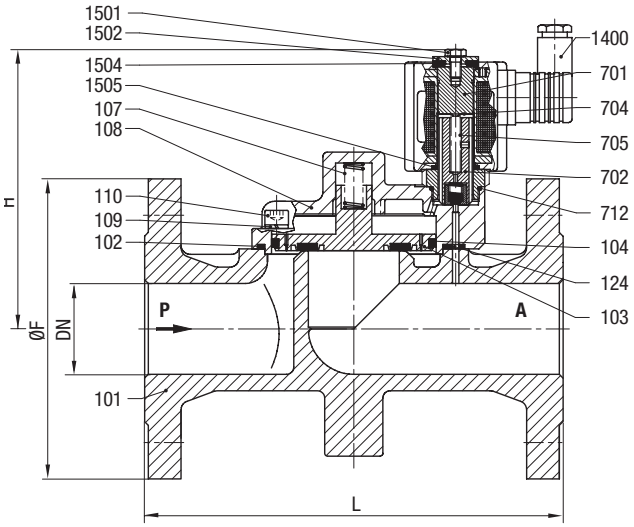
Index	Description
101	Valve body
*102	Gasket
*103	Valve plate
*104	Lip seal
*107	Pressure spring
108	Valve cover
109	Spring washer
110	Allen head screw
124	Bushing
400	Solenoid
701	Core tube
*702	Plunger
*705	Pressure spring
1400	Electrical connector
1501	Oval head cap screw
*1505	O-ring

* A service kit consists of these individual parts.

Connection size DN	L mm	B* mm	H mm	øF mm
15	130	95	110	95
20	150	105	121	105
25	160	115	121	115
32	180	140	125	140
40	200	150	125	150
50	230	165	130	165

* B = maximum width

DN 15 - DN 50



Drawing legend

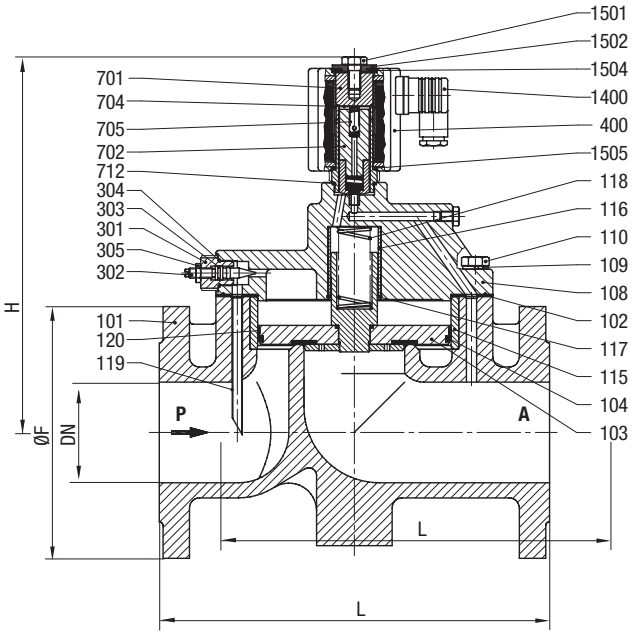
Index	Description
101	Valve body
*102	Gasket
*103	Valve plate
*104	Llp seal
108	Valve cover
109	Spring washer
110	Hexagon screw
115	Bushing
116	Bushing
117	Snap ring
*118	Pressure spring
119	Tube
*120	Guide foil
301	Screw piece
302	Valve spindle
*303	O-ring
*304	O-ring
305	Hexagon nut
400	Solenoid
701	Core tube
*702	Plunger
704	Round plate
*705	Pressure spring
*712	O-ring
1400	Electrical connector
1501	Hexagon screw
1502	Round plate
1504	Gasket
1505	O-ring

* A service kit consists of these individual parts.

Connection size DN	L mm	B* mm	H mm	øF mm
65	290	195	280	185
80	310	220	300	200
100	350	260	330	220

* B = maximum width

DN 65 - DN 100



Further options (valves)

XXXXX**01.**XX Normally open

XXXXX**02.84**XX Manual override, from DN 65

XXXXX**06.**XXXX Material of seat and soft seal: PTFE, maximum fluid temperature +110 °C, maximum operating pressure 16 bar, leak rate E according to EN 12266-1

Further options (solenoids)

XXXXXXX.**8341** DN 15: Solenoid protection class
Ex II 2 GD EEx me II T3 T 140 °C

XXXXXXX.**8436** DN 20 to DN 100: Solenoid protection class
Ex II 2 GD EEx me II T4 T 140 °C

XXXXXXX.**8900** DN 15 to DN 100: Solenoid protection class
Ex II 2 GD EEx de II C T4 and T5 T 130 °C / 95 °C

XXXXXXX.**8920** DN 15 to DN 100: Solenoid protection class
Ex II 2 GD EEx d II C T4 and T5 T 130 °C / 95 °C

Further options on request

Please turn to page 276 for technical information on our valves.

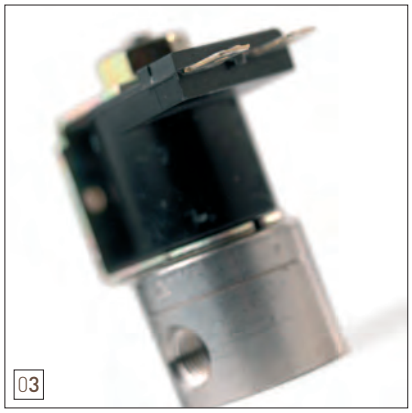
VALVE INTEGRATION

01 FLATPROP

With a frictionless design and up to 200 l/min flow rate (@4 bar / 58 psi), Flatprop sets new standards in the field of proportional fluid control.

02 CLICK-ON® VALVES

Click-on® is the latest and most varied design within the range of solenoid valves. Due to its modular system, high flexibility and fast availability is guaranteed.



03 DIRECT OPERATED SOLENOID VALVE

With a wide variety of coil, orifice and mounting options, KIP can provide a solution meeting many demanding requirements. With a wide range of materials and pressure ratings, we can design the correct valve to fit your application.

2/2-way valves DN 15 to 100

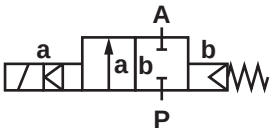
For neutral gases and liquids
Indirectly solenoid actuated
Piston seat valves
Flange connection: PN 40
Operating pressure: 0.5 to 40 bar (see technical data)

Description (standard valve)

Solenoid valve for air, water, oil and other neutral fluids

Switching function:	normally closed
Flow direction:	determined
Fluid temperature:	max. +90 °C*
Differential pressure:	0.5 bar required
Ambient temperature:	max. +50 °C*
Mounting position:	as required, preferably with solenoid vertical on top, from DN 65 vertical on top only

* Sum of fluid and ambient temperature not to exceed +130 °C



Material

Body:	Cast Steel
Seat seal:	NBR
Internal parts:	Brass, Stainless steel – up to DN 50 Gun metal, Stainless steel – from DN 65

For contaminated fluids the use of a strainer upstream of the valve is recommended.

Features

- Flat-piston valve
- High flow rate
- Damped operation
- Easily interchangeable solenoid

Technical data

Connection size DN mm	kv-Value m³/h	Part number for DC voltage* →	Operating pressure bar** NBR 00	Normally open 01	FPM 110 °C 03
15	5.5	84342**XX**.8301.**00000**	0.5 - 40	0.5 - 35	0.5 - 40
20	10.0	84343**XX**.8301.**00000**	0.5 - 40	0.5 - 35	0.5 - 40
25	12.5	84344**XX**.8301.**00000**	0.5 - 40	0.5 - 35	0.5 - 40
32	27.0	84345**XX**.8301.**00000**	0.5 - 40	0.5 - 35	0.5 - 40
40	31.0	84346**XX**.8301.**00000**	0.5 - 40	0.5 - 35	0.5 - 40
50	46.0	84347**XX**.8301.**00000**	0.5 - 40	0.5 - 35	0.5 - 40
65	70.0	84348**XX**.8401.**00000**	0.5 - 40	0.5 - 25	0.5 - 40
80	98.0	84349**XX**.8401.**00000**	0.5 - 40	0.5 - 25	0.5 - 40
100	157.0	84350**XX**.8401.**00000**	0.5 - 40	0.5 - 25	0.5 - 40

* For orders please state voltage and frequency, e.g.: 8434200.830**4.23049** for 230V 40-60Hz (AC with rectifier plug only; included) or 8434200.830**1.02400** for 24V DC

** With gases or liquids up to 40 mm²/s (cSt)

Solenoid 8301 / 8304; 8401 / 8404 (standard voltages)

DC	AC 40-60Hz	
24V	24V	-
-	110V	120V
	230V	220V

Design according to DIN VDE 0580
Voltage range +/-10%, duty cycle 100%
Protection class according to EN 60529: IP65

Power consumption

Solenoid	DC	AC	
		Inrush	Holding
8301	22W	-	-
8304	-	25VA	25VA
8401	40W	-	-
8404	-	45VA	45VA

Electrical connector according to DIN EN 175301-803 (included)
AC with rectifier plug only

Drawing legend

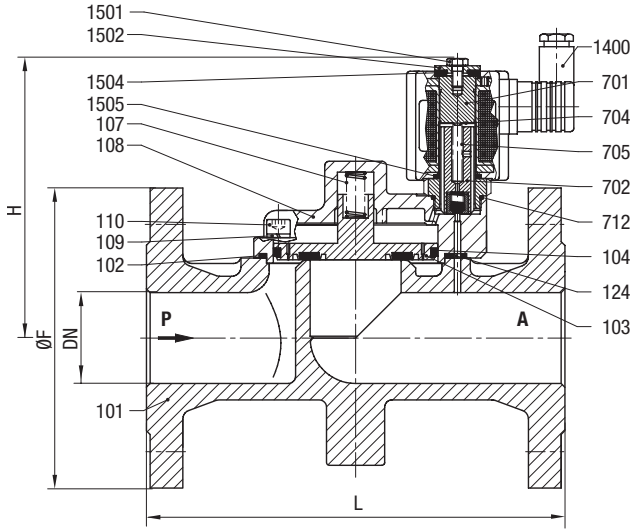
Index	Description
101	Valve body
*102	Gasket
*103	Valve plate
*104	Lip seal
*107	Pressure spring
108	Valve cover
109	Spring washer
110	Allen head screw
124	Bushing
400	Solenoid
701	Core tube
*702	Plunger assembly
*705	Pressure spring
*712	O-ring
1400	Electrical connector
1501	Hexagon screw
1502	Round plate
1504	Gasket
1505	O-ring

* A service kit consists of these individual parts.

Connection size DN	L mm	B* mm	H mm	øF mm
15	130	95	135	95
20	150	105	146	105
25	160	115	146	115
32	180	140	146	140
40	200	150	150	150
50	230	165	155	165

* B = maximum width

DN 15 - DN 50



Drawing legend

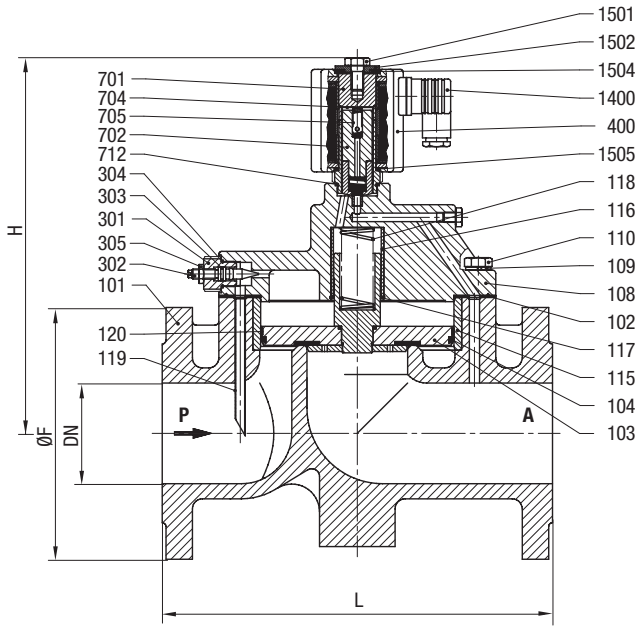
Index	Description
101	Valve body
*102	Gasket
*103	Valve plate
*104	Lip seal
108	Valve cover
109	Spring washer
110	Hexagon screw
115	Bushing
116	Bushing
117	Snap ring
*118	Pressure spring
119	Tube
*120	Guide foil
301	Screw piece
302	Valve spindle
*303	O-ring
*304	O-ring
305	Hexagon nut
400	Solenoid
701	Core tube
*702	Plunger
704	Round plate
*705	Pressure spring
*712	O-ring
1400	Electrical connector
1501	Hexagon screw
1502	Round plate
1504	Gasket
1505	O-ring

* A service kit consists of these individual parts.

Connection size DN	L mm	B* mm	H mm	øF mm
65	290	195	280	185
80	310	220	300	200
100	350	260	330	235

* B = maximum width

DN 65 - DN 100



Service kits

For valves with solenoid 8301(4)	Part number
8434200	1239508
8434300	1232746
8434400	1232746
8434500	1246878
8434600	1246878
8434700	1232219
For valves with solenoid 8401(4)	**Part number**
8434800	1230893
8434900	1235727
8435000	1249917

Further options (valves)

XXXXX**02.**XXXX Manual override, from DN 65
XXXXX**06**.XXXX Seat seal: PTFE, up to DN 50,
maximum operating pressure 16 bar,
maximum fluid temperature +110 °C
leak rate E according to EN 12266-1

Further options (solenoids)

XXXXXXX.**8336** Solenoid in protection class
Ex II 2 GD EEx me II T4 T 140 °C
XXXXXXX.**8436** Solenoid protection class
Ex II 2 GD EEx me II T4 T 140 °C
XXXXXXX.**8900** Solenoid protection class
Ex II 2 GD EEx de II C T4 and T5 T 130 °C / 95 °C
XXXXXXX.**8920** Solenoid protection class
Ex II 2 GD EEx d II C T4 and T5 T 130 °C / 95 °C

Further options on request

Please turn to page 276 for technical information on our valves.