

Angle body valve

For compressed air

Indirectly solenoid actuated

Diaphragm Valve

Female threads G 1 1/2 DIN ISO 228/1

Operating pressure 0,4 to 8 bar

Cat.-No.: **8296600.8176.02400**

Origin Series 82960

02.19

Description

Suitable for compressed air purity classes ISO 8573-1 3 3 3

Switching Function: Normally closed

Flow Direction: Determined

Fluid Temperature: - 40 °C - + 85 °C

Ambient Temperature: - 20 °C - + 85 °C

Mounting Position: Optional, solenoid preferably mounted vertical on top

For contaminated fluids insertion of a strainer is recommended. (see accessories)

Material

Body: EN AC-44400

Cover: EN AC-44400

Pilot Seal: TPU

Seat seal: TPE

Features

- Solenoid replaceable without tools (Twist-on®)

Characteristic Data

ND [mm]	Con- nection	Operating Pressure with Fluids up to 1 mm ² /s (cSt) [bar]		Kv-Value Base: m ³ /h	Weight [kg]
		min.	max.		
40	G 1 1/2	0,4	8	59	1,2

Solenoid

Solenoid-Cat.-No.: **8176.02400**

Design: ATEX Category 3
Zone 2/22 acc.to 2014/34/EU

Supply Voltage: 024 V ± 10 %

Power Consumption: Inrush: 12 W / Hold: 12 W

Duty Cycle: 100 %

Protection Class: IP 65 (EN 60529)

Equipment: Socket acc. to EN 175301-803 A

Terminal: max. 1.5 mm²
cable diameter 4.5 to 7 mm

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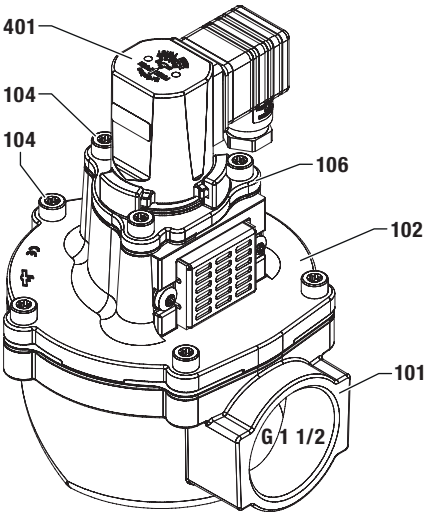
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Item	Pcs	Part -----	Class	Ident-No.
101	1	VALVE BODY	6-105	1259568
102	1	BODY COVER	6-203	1259566
103	1	DIAPHRAGM	1) 6-835	1258603
104	8	SCREW	8-146	1258073
105	1	DIAPHRAGM	1) 6-858	1258332
106	1	BODY COVER	6-202	1259471
107	1	SILENCER	1) 6-051	1260322
108	1	SILENCER COVER	6-198	1263495
109	2	SCREW	8-146	1260321
401	1	SOLENOID 8170	2) 4-550	8170.02400
702	1	CORE	2) 5-831	1258380
705	1	COMPRESSION SPRING	2) 6-821	1258272
706	1	COMPRESSION SPRING	2) 6-814	1258273
707	1	SILENCER	2) 6-024	1258086
1400	1	ATEX PLUG CONNECTOR	4-001	1268884
1)		= SPARE PART		

Keep documentation for future use!



- 401 Twist-on® solenoid
- 101 Valve body
- 102 Valve cover
- 104 Fixing screws 8 x
- 106 Cover attachment

 II 3G Ex ec IIC T4 Gc
II 3D Ex tc IIIC T130°C Dc

1 About this documentation

This operation manual guides you to the valve safely, to maintain and to replace the valve independently.

1.1 Documentation validity

This operation manual applies to valve 8296600.8176.02400 for operation in filter cleaning systems.

This operation manual is intended for: distributor/operator, installers and service technicians.

1.2 Structure of safety instructions

Safety instructions warn against dangerous situations and must be observed in particular. Safety instructions are structured as follows:


SIGNAL WORD

Type of hazard


Consequences of non-observance

→ Precautions necessary to avoid the hazard


1.3 Hazard classes (ANSI Z535.6)

 **DANGER**

Safety information indicates a hazardous situation with high risk which, if not avoided, will certainly result in death or (serious) injury.

 **WARNING**

Safety information indicates a hazardous situation with moderate risk which, if not avoided, can cause death or severe injury.

 **CAUTION**

Information indicates a hazardous situation which, if not avoided, could result damage to property.

NOTICE

Information indicates a hazardous situation which, if not avoided, could result damage to property.

1.4 Styles and symbols

This documentation uses the following styles and symbols:

•	list
→	instruction
1. 2.	preset order of instructions
701	part number (according to parts list)
1	flexible part number (section)

 + DANGER / WARNING / CAUTION;
NOTICE: embedded safety message

given limits or fixed value

1.5 Intended use

The valve is solely intended to clean a dust vessel by impulses of pressurized air within approved operating limits.

Only operate the valve with fluids of group 2 that are not explosive, flammable, toxic or oxidizing. The valve must not be operated with fluids that chemically attack or mechanically damage its constituent materials.

The valve applies to Article 4 Par. 3 of the Pressure Equipment Directive 2014/68/EU.

1.6 Improper use

In the following cases it is prohibited to operate the valve:

- The valve is used beyond the permitted operating limits. The permitted temperature and pressure ranges are exceeded.
- Damages to the valve – e.g. cracks, deformation – were detected but the valve remains in operation.
- Malfunctions were detected but the valve remains in operation.
- The valve has been modified without authorization of the manufacturer.
- The safety instructions of this documentation are not observed.

→ Consult our applications engineers if you have doubts whether the valve is suitable for the intended purpose for long-term use.

We do not accept any liability for damages caused by improper use.

Our guarantee expires in the following cases:

- Undue intervention and altering are done to the valve.
- This documentation or the operating limits as shown in the data sheet are not observed.

1.7 Obligations of distributor/operator

→ As distributor you are responsible that the valve is mounted according to this operation manual. You are responsible that the operating limits are considered in designing the filter cleaning system.

→ Ensure compliance with applicable laws, directives, regulations.


→ Ensure compliance with the following demands before persons mount, maintain or replace the valve:

- This documentation must be fully read and understood.
- This documentation must be available at any time.
- Regulations about occupational safety and safety engineering must be known.

2 General safety instructions


These safety instructions are only related to the single valve. In combination with other system components there may be other potential dangers, which must be taken into account by carrying out a risk analysis for the overall system.

→ Compare the details on the rating plate and the operating limits as shown in the data sheet to the operating data. The limits for the particular application must not be exceeded.


 **CAUTION**

Risk of burns at the solenoid
Solenoid is heating up during operation. Touching of heated parts leads to risk of burns.

→ Leave the solenoid to cool down before working at the valve.

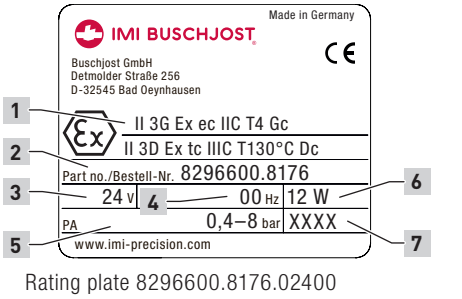


Residual risks

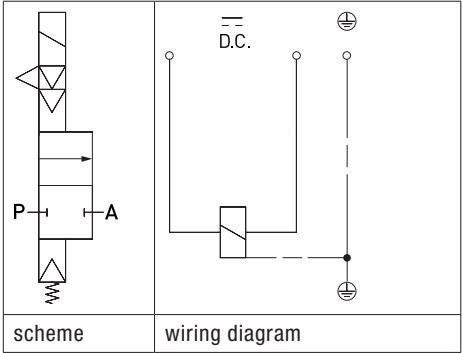
	Weight of the valve Phases: transport, storage, assembly, maintenance, disposal Risk: falling off, tipping over Personal protection equipment (PPE): Protective footwear
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4 Identifying the valve

The rating plate is situated on the solenoid body.



- 1 EX marking
- 2 Order number
- 3 Operating voltage
- 4 Frequency of voltage
- 5 Operating pressure range
- 6 Power consumption inrush/hold
- 7 Date of manufacturing (week/year)



5 Transport and storage

→ Only transport and store valve in its delivery packaging.

Avoid during transport:

mechanical loads: falling off, tipping over
damages to the electrical terminal elements
Prolonged storage at –10°C to +20°C

Avoid during storage:

thermal stress: permanently increased storage temperatures; distance to heat sources < 1 m
mechanical loads: pressure on diaphragm; deformation of the diaphragm
chemical load: at the storing site through solvents, chemicals, acids, fuels and similar
weather conditions: at construction sites strong, watertight containers are necessary

Unfavourable storing conditions may reduce the service life of the sealing materials

6 Principle of Operation

The valve is designed as diaphragm valve with pilot fluid vented to the atmosphere. The valve is electromagnetic indirectly-controlled.

The valve contains a second pilot system with a diaphragm directly beneath the cover attachment. The main valve seat is part of the filter cleaning system.

6.1 Switching functions of the valve

The valve is normally closed

Normal position: closed

Due to the effect of the compression spring inside the core the pilot seat **6** is closed. Due to its shaping the pilot diaphragm **5** is sealingly pressed to the second pilot seat **4**.

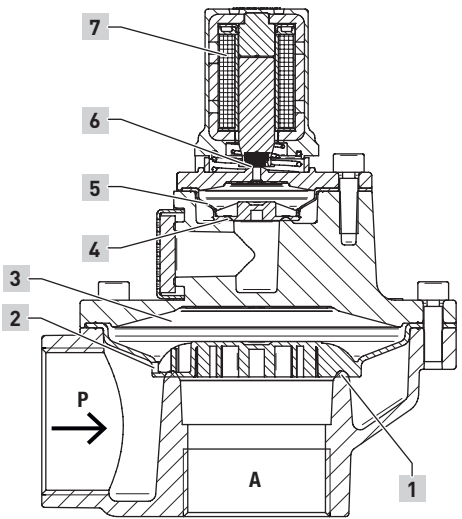
The operating fluid flows through the control bore **2** in the diaphragm to the chamber **3** above the diaphragm and increases the closing force. The diaphragm is sealingly pressed to the main valve seat.

Switching position: open

The magnetic force lifts the core towards the magnet face of core tube **7** when the solenoid is energized. The fluid pressure in the chamber **3** is relieved to the atmosphere through the opening second pilot seat **4**.

More fluid is flowing off via the second pilot seat **4** to the chamber than the amount flowing in via the control bore **2**. The differential pressure rapidly lifts up the diaphragm and opens the main valve seat **1**.

6.2 Overview



- Sectional view
- 1 Main valve seat
- 2 Control bore in diaphragm
- 3 Control space
- 4 Second pilot seat
- 5 Pilot diaphragm
- 6 Pilot seat
- 7 Magnet face of core tube

7 Mounting

NOTICE

Damages through mechanical loads
There must be no mechanical loads applied to the solenoid.

→ Do not use solenoid as a lever during mounting.

The valve may get damaged by external loads at the operating site.

→ Protect valve from objects falling down.
→ Protect valve from direct weather influences.

7.1 Mounting position

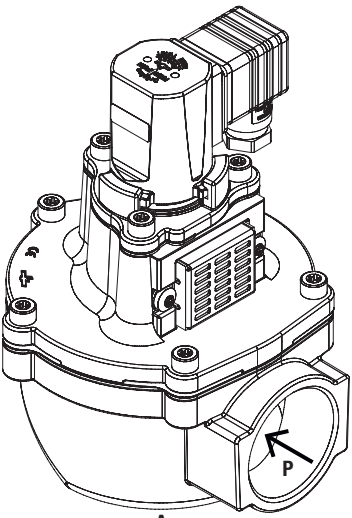
The mounting position is **not determined**. preferably: solenoid vertical on top

→ Make sure that there is enough free space for dismantling the solenoid or the whole valve in case of maintenance.

7.2 Prepare mounting

1. Depressurize the filter cleaning system and switch off power supply.
2. Take valve out of the packaging.

7.3 Mounting valve



Mount valve 8296600.8176.02400

1. Connect the valve outlet **A** (G1 1/2 thread) to the filter cleaning system.
2. Connect the compressed air supply to the valve inlet **P** (G1 1/2 thread).
3. Check whether the connected pipes are seated and sealed properly.

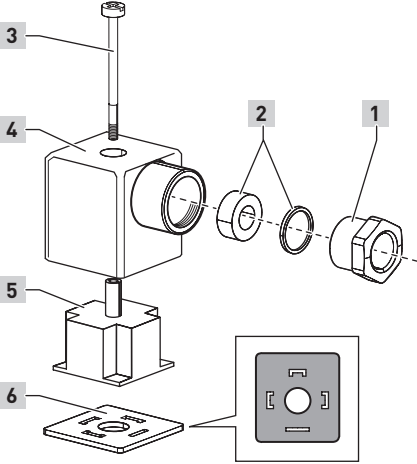
8 Connect solenoid electrically

DANGER

Hazardous electrical voltage (>25V AC; >60V DC)
The electrical connection must be carried out professionally to ensure safe operation.

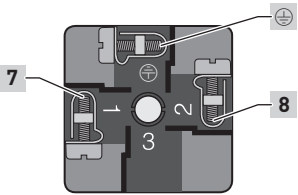
- You may only plug the device socket in de-energized state.
- To secure IP65 protection after connecting: Carefully close the device socket. Check whether the flat seal between solenoid and device socket is properly seated. Check whether cable gland is properly sealed.

- Connect solenoid in accordance with the electrical regulations.
- Use a **round** cable with diameters from 4.5 to 7 mm. The wire cross section must not exceed 1.5 mm².



Overview: Device socket

- 1 Pressure screw
- 2 Washers
- 3 Middle screw
- 4 Housing of the device socket
- 5 Socket insert
- 6 Flat gasket

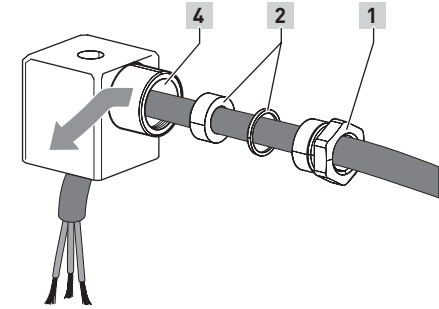


Configuration of the socket insert

- ⊕ Protective earth
- 7 Terminal 1
- 8 Terminal 2

- Make sure that the flat gasket **6** and socket insert **5** are mounted congruently with the connecting lugs of the solenoid.

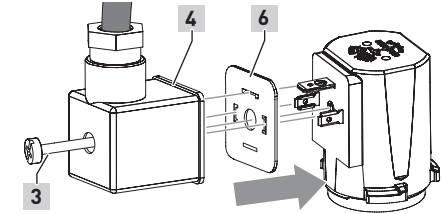
- 1. Slide pressure screw **1**, washers **2** and the housing of the device socket **4** on the cable.
- 2. Slide pressure screw **1**, washers **2** and the housing of the device socket **4** on the cable.



Feed cable through device socket

- 3. Attach the protective conductor at first (insulation: yellow/green) to the terminal marked with the grounding symbol ⊕.
- 4. Attach the other wires to the terminals **7** and **8** of the socket insert **5**.
⚠ WARNING Ensure the correct polarity of terminals marked „+“ and „-“.
- 5. Put the housing of the device socket **4** in the chosen position (9 o'clock, 12 o'clock, 3 o'clock, 6 o'clock) onto socket insert **5**.
- 6. Tighten compression fitting **1** of cable gland. **NOTICE** Cable gland must firmly seal.
- 7. Pull protective cap from the plug contacts of the solenoid.

- 8. Attach flat gasket **6** and housing **4** with socket insert to the solenoid.
⚠ WARNING Make sure that the seal is evenly positioned on the entire surface between solenoid and device socket.



Attach device socket

- 9. Tighten middle screw **3** with 40 Ncm.
NOTICE Avoid visible distortion of the housing of the device socket.

Tightening torque 40 Ncm ±10 Ncm

9 Checking valve

- 1. Switch on the power supply of the solenoid.
- 2. It is advisable to carry out an **operating** test without compressed air before pressurizing. The clicking (impact) of the core must be audible during switching.
- 3. Slowly pressurize the filter cleaning system for **tightness check**.
- 4. Check external tightness of valve cover **102** and cover attachment **106**.
- 5. Check tightness of the valve seats while valve is closed.

10 Commissioning

- Make sure that the complete filter cleaning system is ready for operation.

Operating conditions

Pressure range	0.4 to 8 bar
Fluid-temperature	from -40°C to +85°C
Ambient temperature	from -20°C to +85°C

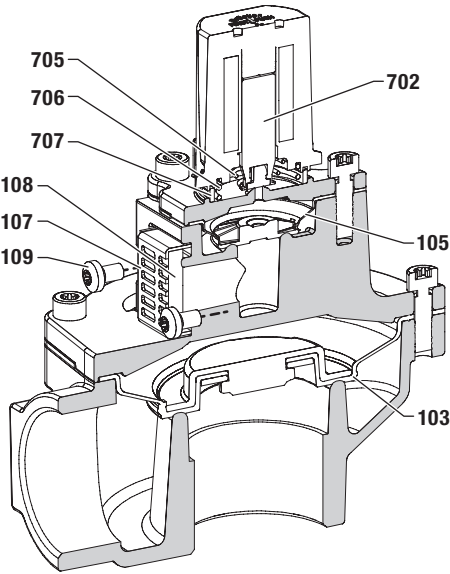
Operating fluid

compressed air with purity class ISO 8573-1 3 3 3

11 Maintenance

Aged or worn out diaphragms may lead to malfunctions. Therefore a periodically maintenance is necessary. The operator is responsible to specify test and service intervals appropriate to the service conditions of the valve.

11.1 Components of the valve



Further components of the valve

- 702 Core
- 705 Compression spring
- 706 Compression spring
- 707 Silencer (ring)
- 105 Pilot diaphragm
- 107 Silencer
- 108 Silencer housing
- 109 M5 screws (silencer housing)
- 103 Diaphragm

11.2 Preparing maintenance

- 1. **⚠ DANGER** Disconnect the solenoid from power supply.
- 2. **⚠ WARNING** Make sure that the compressed air poses no potential hazard. Depressurize the filter cleaning system.
- 3. **⚠ CAUTION** Risk of burns at the solenoid. Leave the solenoid to cool down before working on the valve.

11.3 Dismantling solenoid system

- 1. Push solenoid **401** towards the body of the valve against compression spring **706**.
- 2. Then twist solenoid 60° to release the bayonet connection and remove the solenoid.
- 3. **NOTICE** Pay attention to loose components: core **702** with compression spring **705**.

11.4 Dismantling valve parts

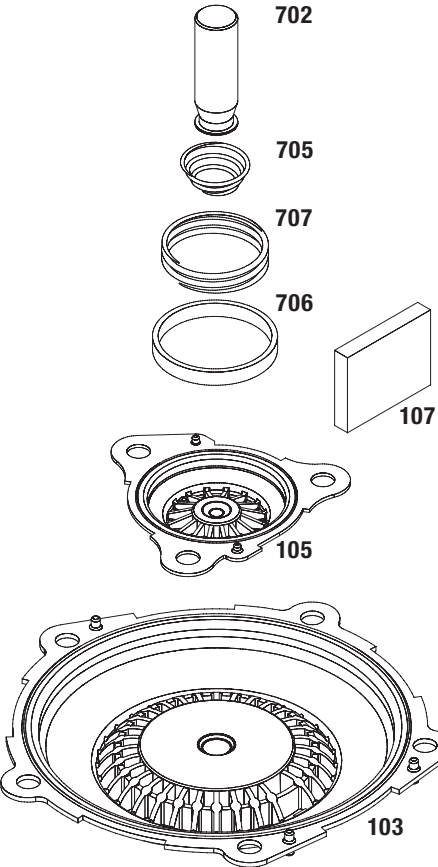
- 1. **NOTICE** Pay attention to loose components: core **702** with compression spring **705**.
- 2. Loosen two screws **109** and take off silencer housing **108** and silencer **107**.
- 3. Loosen three screws **104** and lift cover attachment **106**.
- 4. Take off pilot diaphragm **105**.
- 5. Loosen five screws **104** from valve cover **102**. Take off valve cover **102**.
- 6. Take off diaphragm **103**.

11.5 Checking dismantled valve parts

- Check dismantled valve parts for damages and aging phenomena.

11.6 Replacing spare parts

- Buschjost recommends to replace all contained spare parts at the same time.
⚠ CAUTION Ensure that only original spare parts are installed.
NOTICE Protect all components from dirt.



Spare parts overview

- Replace core **702**. X
- Replace compression spring **705**. X
- Replace compression spring **706**. X
- Replace silencer **707**. X
- Replace pilot diaphragm **105**. X
- Replace silencer **107**. X
- Replace diaphragm **103**. X

11.7 Reassembling valve parts

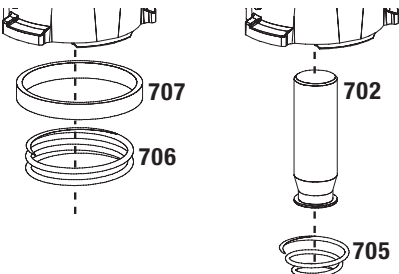
- 1. Place the diaphragm **103** correctly positioned on the valve body **101**. Observe the shape and cutouts of the diaphragm.
- 2. Put valve cover **102**.
- 3. Insert five fixing screws **104**. Tighten the fixing screws crosswise.
- 4. Place the pilot diaphragm **105** correctly positioned on the valve cover **102**. Observe the shape and two pins of the pilot diaphragm.
- 5. Put the cover attachment **106** and fix with three fixing screws **104**. Tighten the fixing screws crosswise.

Tightening torque: 8 Nm ±10%

- 6. Place silencer **107** inside silencer housing **108**. Fix the silencer housing **108** with two screws **109** to valve cover **102**.

11.8 Reassembling solenoid system

- 1. Place silencer **707** into the outer groove underneath the solenoid body.
- 2. Place compression spring **706** into the inner groove underneath the solenoid body.
- 3. Put compression spring **705** on the collar of core **702**. Turn core **702** into the small spiral of compression spring **705** until it fits behind the collar.



Reassembling – solenoid system

- 4. Lead both parts from underneath into the solenoid body. The compression spring **705** must point towards the valve attachment.
- 5. Put the solenoid **401** with the core pressed inside on the cover attachment **106**.
- 6. Press the solenoid **401** against the power of compression spring **706** towards cover attachment **106**. Twist the solenoid 60° to lock it into the bayonet connection.

11.9 Re-commissioning

- Switch on the power supply of the solenoid.
- Observe chapters **9** and **10**.

12 Trouble shooting

Error table

Cleaning off is to weak	Valve does not open
Possible cause: Pulse time to short Remedy: Prolong pulse time of filter control	Possible cause: Solenoid faulty, no continuity Remedy: Replace defective solenoid
Valve does not open	Valve does not close
Possible cause: Core is locked in travel area Remedy: Replace solenoid system	Possible cause: Crack in diaphragm Remedy: Replace defective diaphragm

13 Decommissioning

- Comply with applicable safety precautions. Strictly observe the local safety regulations of the overall plant during decommissioning irrespective of the instructions below.

- 1. **⚠ DANGER** Disconnect the solenoid from power supply.
- 2. **⚠ WARNING** Make sure that the compressed air poses no potential hazard. Depressurize the filter cleaning system prior to decommissioning the valve.
- 3. **⚠ CAUTION** Leave the solenoid to cool down before working on the valve.
- 4. Unmount the valve from filter cleaning system.

14 Disposal

- Dispose valve after decommissioning. Follow the ideas of recycling and environmental sustainability.
- Observe the applicable regulatory requirements.

- 1. Unmount the valve as described in chapter **13** “Decommissioning”.
- 2. Dismantle valve and lead recyclable materials to proper recycling:

Material	Way of disposal
Valve body, valve cover, cover attachment	Solid metal scrap
Core, springs, screws	Metal recycling
Diaphragms	Industrial waste (similar category to domestic refuse)
Solenoid (copper wire)	Electrical waste



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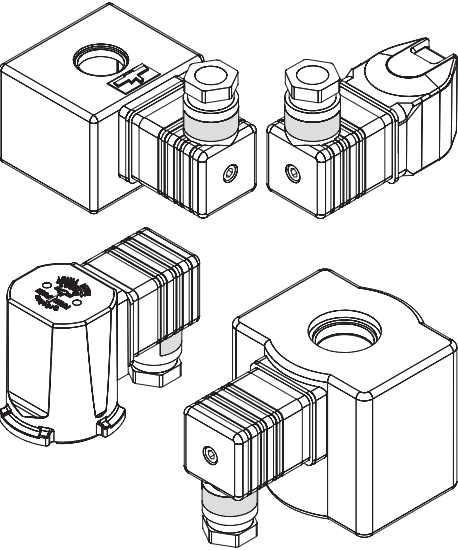
Operating instructions
for valve solenoids

EN

valid for solenoids with ATEX connector and
ATEX connector retrofitting kit 1262560

Table with 5 columns: 8026, 8176, 8326, 8426, 9106; 9116, 9176, 9326, 9426, 9526

Keep documentation for future use!



These operating instructions include the
EU declaration of conformity.

These operating instructions applies to any voltage
alternatives* of the valve solenoids between 12 and
250 V DC or AC.

* Exception: valve solenoid 9526 24 V to 250 V

1 Permitted area of application

The solenoids mentioned above equipped with ATEX
connector (at delivery status or via retrofitting kit
1262560) are electrical apparatus for use as inten-
ded in potentially explosive areas of Group II. They
are marked according to Directive 2014/34/EU:

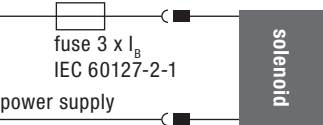
- II 3G Ex ec IIC T4 Gc
II 3D Ex tc IIIC T130°C Dc

The category 3 solenoids may be used in areas
where potentially explosive mixtures of gases and/
or vapours and/or air (zone 2), or of dust and air
(zone 22), are present.

The protection class is IP65.

2 Special conditions

Each solenoid must be protected with a line fuse of
the appropriate rating (max. 3 x I rated current ac-
cording to IEC 60127-2-1) (short circuit protection).



Provide fuse 3 x I_n

The rated voltage of the fuse must be equal to or
greater than the maximum rated voltage of the sole-
noids. The shut-down capacity of the fuse insert
must be equal to or greater than the maximum
possible short-circuit current at the location of
installation.

Valve solenoids are electrical components. Valve
solenoids are only ready for operation with the
associated valves.

3 General safety instructions

You must always comply with the limits given on
the rating plate to ensure safe operation. The
designated operating conditions must not exceed
the operating limits.

Undue intervention of the valve solenoid and addi-
tional installations are prohibited.

You must not mount or operate obviously damaged
solenoids. You must replace damaged solenoids
immediately.

WARNING
Danger of explosion
Used tools may lead to the formation
of ignition sparks.
- Proceed mounting and maintenance works preferably in non-Ex atmosphere.
- Use non-sparking type tools.
- Otherwise it is mandatory to observe the applicable Industrial Safety Regulation.
- Never unplug the socket while it is energized.

CAUTION
Risk of burns at the solenoid
The solenoid will heat up during con-
tinuous duty. Touching the solenoid
leads to risk of burns.
- Leave the solenoid to cool down before wor-
king at the valve.

4 Marking
The solenoids are marked in accordance with Annex
II, 1.0.5, of Directive 2014/34/EU.
The four digits of the series num-
ber indicate the date of manufac-
ture as week and year (WWYY).

5 Installation details
Carry out installation, maintenance and repair
in accordance with the relevant explosion pro-
tection regulations – particularly EN 60079-14
(VDE 016 part 1). Any electrical installation also
has to be carried out by or under the super vision
of a skilled electrician and in accordance with
national regulations (in Germany, VDE 0100).

6 Mounting
NOTICE
Damages through mechanical loads
- Do not use the solenoid as a grip or lever
during mounting.
Damages through external loads
- Protect valve from potential impact stress and
certain mechanical stresses.
- Protect valve from direct weather influences
(UV radiation, thermal radiation, unprotected
weathering...) and a corrosive environment.
Damages through accumulation of heat
- You must not cover the valve solenoids with
paint.
- You must not encase the valve solenoids in
a tight housing or thermal isolation.

Mounting position
The mounting position is not determined.
Where appropriate the valve documentation may
demand a defined mounting position.

Installation situation
- Make sure that there is enough free space for
dismantling the solenoid or the whole valve
subassembly in case of maintenance.

7 Electrical connection
DANGER
Hazardous electrical voltage
(>25V AC; >60V DC)
There are high risks from electrical
voltage during assembly works.
- Work on electrical installations may be carried
out by a qualified and authorized electrician
only.
- Make sure to disconnect all power cables and
supplies prior to start working.
Faulty connection causes risks.
- To secure IP65 protection after connecting:
Carefully close the device socket. Check
whether the flat seal between solenoid and
device socket is properly seated. Check
whether the cable gland is properly sealed.

Assembly diagram showing components 1-7:
1 Pressure screw (250-375 Ncm)
2 Pressure ring (metall)
3 Seal ring
4 Middle screw (50-60 Ncm)
5 Housing
6 Socket insert (contact screws 40-50 Ncm)
7 Flat gasket

To connect the valve solenoids you must use a
heat-resistant cable according to table:
Table: Series (80xx...94xx, 95xx) vs Continuous ser-
vice temperature (at least 90°C, 120°C)
Wiring diagram showing A.C. and D.C. connections.

8 Operation
WARNING
Risk of electrostatic charge
It should be ensured that the plastic surface of
the magnet can not become electrostatically
charged.
- Avoid
- unintended rubbing,
- cleaning with a dry cloth,
- to expose the solenoid to particle streams.

The solenoids are designed for continuous duty.
- Ensure that neither the maximum permissible
ambient and fluid temperature nor the rating
(maximum 10% over-voltage) are exceeded.

9 Maintenance
Inspection interval
Buschjost recommends to per form a visual inspec-
tion every twelve months.
- Examine the valve solenoids for visible external
alterations (dust and dirt accumulations).

Visual inspection according to check-list
Table with 2 columns: Component, Correct condition *

* WARNING If those conditions cannot be met,
the solenoid must no longer be operated.

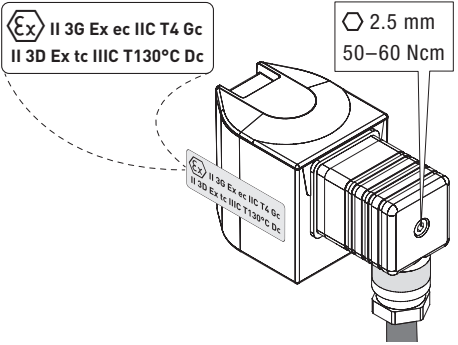
Cleaning
- Remove dust and dirt accumulations on the
valve solenoids at an early stage to ensure safe
operation.
info These accumulations change the thermal
properties of the valve solenoid. They lead to heat
buildup. If accumulations of dust are stirred up they
may lead to the formation of potentially explosive
atmosphere.
- Clean the solenoid with a damp cloth – do not
rub.
WARNING If you intend to use electrically
operated tools for cleaning these tools must be
approved to be used in Ex-zones.

ATEX connector retrofitting kit
Only Buschjost solenoids of the series 80xx, 81xx,
83xx, 84xx, 91xx, 93xx, 94xx, 95xx may get
equipped with the ATEX connector retrofitting kit
1262560.

Scope of delivery
- ATEX connector with banderole
- self-adhesive ATEX label

Note at the banderole
- Only disconnect the Ex device
socket from the solenoid in
de-energized state.

Note regarding installation
The self-adhesive ATEX label must be affixed in a
prominent, clearly visible place:



Affix ATEX marking (example)

Conditions
Conditions to meet the requirements of Directive
2014/34/EU:
- the ATEX connector supplied with retrofitting kit
1262560 has been mounted;
- the ATEX label (self-adhesive) has been
affixed

EU-declaration of conformity
to directive 2014/34/EU

We hereby declare, that the delivered solenoid valves *)
- in combination with valve solenoids of series
80xx, 81xx, 83xx, 84xx, 91xx, 93xx, 94xx, 95xx
in combination with the mounted socket 1262390 or with the ATEX retrofit kit
1262560 marked:
II 3G Ex ec IIC T4 Gc
II 3D Ex tc IIIC T130 °C Dc
conform to the requirements of directive 2014/34/EU for use as intended in po-
tentially explosive atmospheres.
The solenoids have been developed and designed to the following harmonised
standards:
- EN 60079-0:2012+A11:2013 — Explosive atmospheres –
Part 0: Equipment – General requirements
- EN 60079-7:2015 – Explosive atmospheres –
Part 7: Equipment protection by increased safety “e”
- EN 60079-31:2014 — Explosive atmospheres –
Part 31: Equipment dust ignition protection by enclosure “t”
- EN 60529:2014 — Degrees of protection provided by enclosures (IP Code)
*) Caution
Valves from DN 65 and up additionally require secure connection between valve
casing and the unit’s equipotential bonding! The maximum surface temperature of
the body depends on the fluid and the ambient temperatures and must be below
the ignition temperature.
Signatures: Oliver Wehking (Managing Director), Christian Stahlhut (Representative)
Date: Bad Oeynhausen, 27 June 2018

- IMI NORGRN
IMI BUSCHJOST
IMI FAS
IMI HERION
IMI MAXSEAL

Certificate of Compliance

Certificate: 1310991
Project: 1310991

Master Contract: 173926
Date Issued: July 19, 2002

Issued to: IMI Norgren Buschjost GmbH + Co. KG
Detmolder Strasse 256
Bad Oeynhausen, 32502
GERMANY

*The products listed below are eligible to bear the CSA Mark shown
with adjacent indicators 'C' and 'US'*



Issued by: E. Giusti

Signature:

A handwritten signature in blue ink, appearing to read 'E. Giusti', is written over a horizontal line.

PRODUCTS

CLASS 3221 01 - VALVES

CLASS 3221 81 - VALVES - CERTIFIED TO U.S. STANDARDS

Electrically operated valve coils for general purpose component type, for use with Buschjost/IMI Norgren valves.
Medium: air, Types 8170.xxxxx to 8199.xxxxx, continuous duty, max ambient temperature -25/65°C, 12-250V ac, 50/60Hz, max 8W/16VA or 6-250V dc, max 12W.

Notes:

1. The coils are Certified as component part of equipment where the suitability of the combination (including the combination coil/valve) is to be determined by CSA International.
2. No valves have been tested/evaluated in this Report.
3. Type reference may be preceded by 7 characters indicating the valve body and type of membrane. This is always a Buschjost/IMI Norgren valve body with a maximum stroke of 1mm. (No valves evaluated in this Report).
4. Character 8 and 9 indicate the coil designation, always 81.
5. Character 12 to 14 indicate supply voltage.
6. Character 15 and 16 indicate the frequency (00 for DC, 50 or 60 for AC).

APPLICABLE REQUIREMENTS

CSA Std C22.2 No. 139-1982	-	Electrically Operated Valves
UL Std No. 429	-	Electrically Operated Valves

Supplement to Certificate of Compliance

Certificate: 1310991

Master Contract: 173926

*The products listed, including the latest revision described below,
are eligible to be marked in accordance with the referenced Certificate.*

Product Certification History

Project	Date	Description
1310991	July 19, 2002	cCSAus Original Certification of valve coils 8170.xxxxx to 8199.xxxxx series.

EU-declaration of conformity

to directive 2014/34/EU

We hereby declare, that the delivered solenoid valves *)

- ➔ in combination with valve solenoids of series
80xx, 81xx, 83xx, 84xx, 91xx, 93xx, 94xx, 95xx
in combination with the mounted socket 1262390 or with the ATEX retrofit kit
1262560 marked:

 II 3G Ex ec IIC T4 Gc

 II 3D Ex tc IIIC T130 °C Dc

conform to the requirements of directive 2014/34/EU for use as intended in potentially explosive atmospheres.

The solenoids have been developed and designed to the following harmonised standards:

- ➔ EN 60079-0:2012+A11:2013 — Explosive atmospheres –
Part 0: Equipment – General requirements
- ➔ EN 60079-7:2015 – Explosive atmospheres –
Part 7: Equipment protection by increased safety “e”
- ➔ EN 60079-31:2014 — Explosive atmospheres –
Part 31: Equipment dust ignition protection by enclosure “t”
- ➔ EN 60529:2014 — Degrees of protection provided by enclosures (IP Code)

*) Caution

Valves from DN 65 and up additionally require secure connection between valve casing and the unit's equipotential bonding! The maximum surface temperature of the body depends on the fluid and the ambient temperatures and must be below the ignition temperature.


Oliver Wehking
Managing Director


Christian Stahlhut
Representative

Bad Oeynhausen, 27 June 2018

IMI
Precision Engineering

Engineering
GREAT
Solutions

 **IMI NORGREN**

 **IMI BUSCHJOST**

 **IMI FAS**

 **IMI HERION**

 **IMI MAXSEAL**

EU-declaration of conformity

to directive 2014/68/EU

We hereby declare under our sole responsibility that the

- solenoid actuated dustfilter valves of the series:
8286xxx, 8296xxx, 8297xxx, 8332xxx, 8367xxx, 8392xxx
and the additional models and special designs 849XXXX / 859XXXX
derived from these

are in conformity with directive 2014/68/EU clause 4, para 3 and are designed for gases of group 2.

The CE-making is not applicable to the directive.

This declaration has been subjected to the following procedure for assessing conformity:

- Comprehensive quality assurance (Module H)

Other applicable directives

- 2014/30/EU – Electromagnetic compatibility
- 2014/35/EU – Low voltage directive

Note

The existing CE marking relates to the relevant applicable directives. The application limits for the pressure device are stated on the type plate and in the associated operating instructions.



Oliver Wehking
Managing Director



Friedrich-Karl Böker
Representative

Bad Oeynhausen, 25 October 2018



Engineering
GREAT
Solutions

 IMI NORGREN

 IMI BUSCHJOST

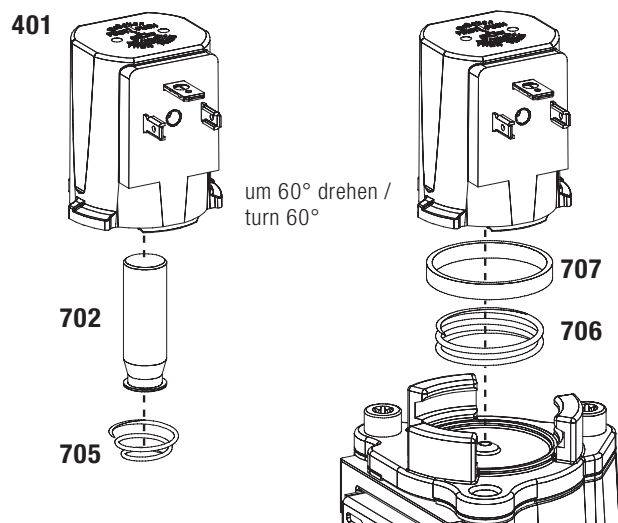
 IMI FAS

 IMI HERION

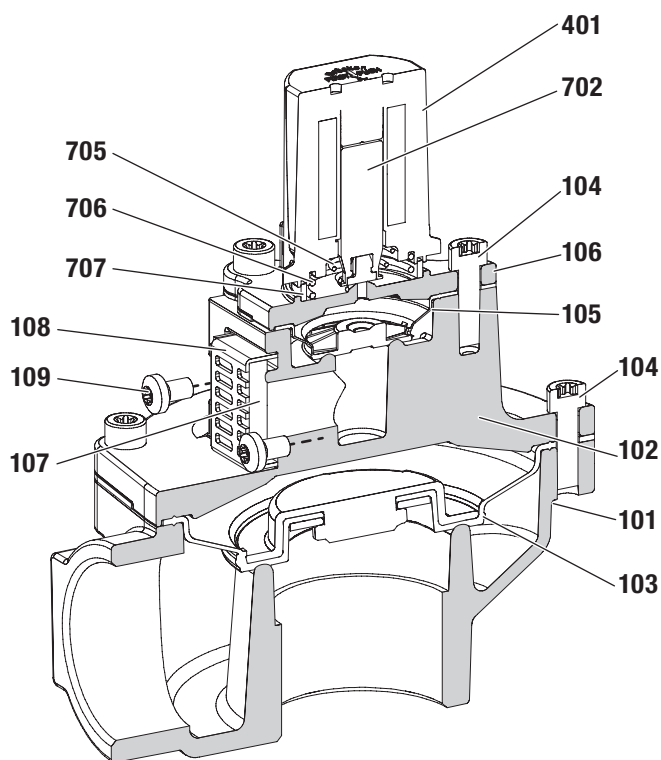
 IMI MAXSEAL

Twist-on® Magnet / Twist-on® Solenoid

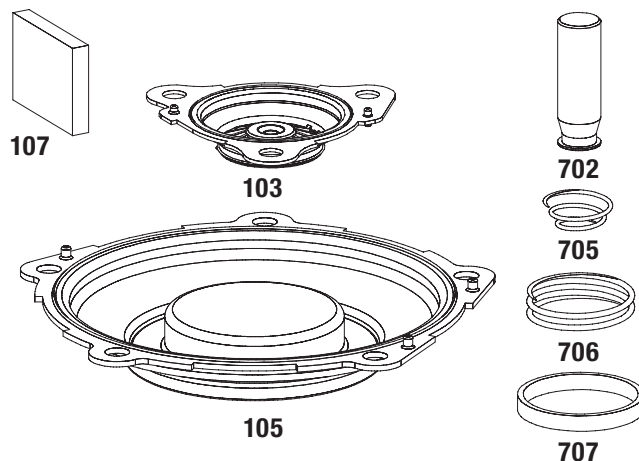
Magnetkörper um 3x120° drehbar
Solenoid may be rotated 3x120°



Übersicht / Overview



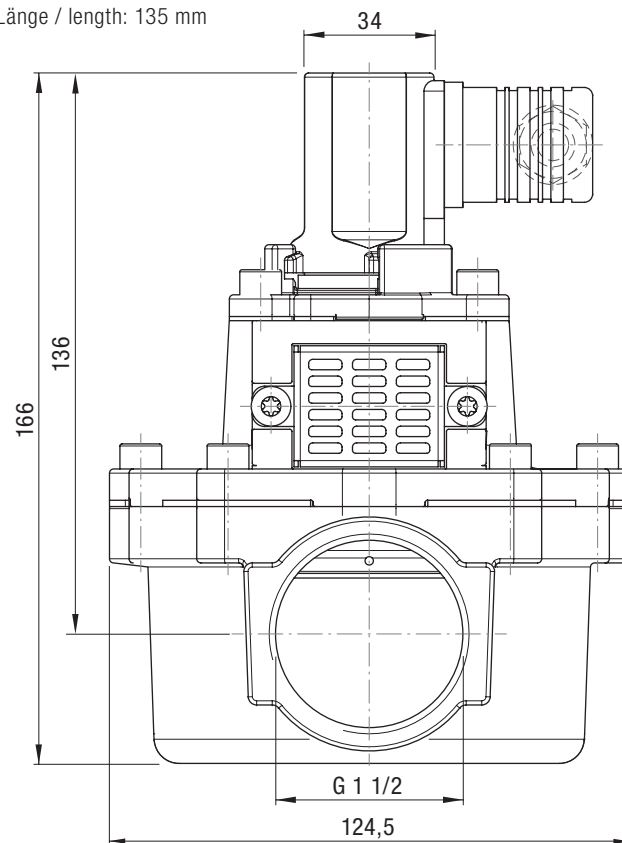
Ersatzteile / Spare parts



107, 707 – Schalldämpfer / Silencer
103, 105 – Membran / Diaphragm
702 – Anker / Core
705, 706 – Druckfeder / Compression spring

Abmessungen / Dimensions

Länge / length: 135 mm



Elektrisches Anschlussbild / Wiring Diagram

Symbol

