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Machine Safety: Product Sheets

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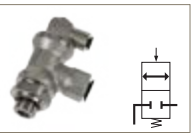
Machine Safety Product Sheet

Blocking Fittings

Blocking fittings include a pneumatic monostable 2/2 normally closed (NC) function.

These fittings are directly installed onto the pneumatic cylinder supply and exhaust chamber.

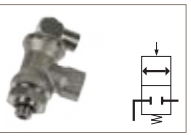
7880



Blocking Fitting, Male BSPP Thread

ØD	C	
6	G1/8	7880 06 10
	G1/4	7880 06 13
8	G1/4	7880 08 13
	G3/8	7880 08 17
10	G3/8	7880 10 17

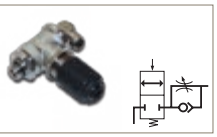
7881



Blocking Fitting, Male/Female BSPP Thread

C1	C2	
G1/8	G1/4	7881 13 10
G1/4	G1/4	7881 13 13
G3/8	G3/8	7881 17 17
G1/2	G1/2	7881 21 21

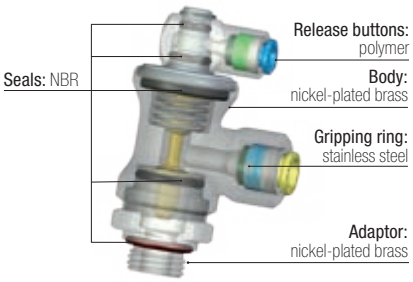
7883



Blocker/Flow Regulator, Male BSPP Thread

ØD	C	
4	G1/8	7883 04 10
6	G1/8	7883 06 10
	G1/4	7883 06 13
8	G1/4	7883 08 13
	G3/8	7883 08 17

Component Materials



Silicone-free

Machinery Directive DI 2006/42/EC

ISO 13849: Reliatiblity (related to MTTFd of safety function)

B10d = 100 000 000 cycles , according to ISO 19973 tests with a frequency of 1Hz.

The failure criteria is determined by the safety function (valve) according to standard ISO 19973.

Conditions of use Safety Coefficient (related to CCF)

Fluids: compressed air

Working pressure: 1 to 10 bar

Working temperature:
-20°C to +70°C
-25°C to +70°C (metal version)

Working pressure is dependant upon the cracking pressure with a safety coefficient of 3.

Endurance (related to CCF)

The number of pressure cycles of the instant connection function of the fitting connected to polymer semi-rigid tubing at 1Hz from 1 to 6 bar : 63 000 000

Diagnostic coverage (related to DC avg and to safety function)

Sources of failure related to pneumatic components, taken from the DIN EN ISO 13849-2 standard.

Impossible to eliminate the failure:

- Change of response time
- No commutation/no return commutation
- Change of leakage over a long period of use
- Pressure drop

Reference Directives and Standards for Design

ISO 12238

Commutation switch: 5 ms

Commutation time is determined according to the standard test methodology.

ISO 14743

Instant connection complies with the ISO14743 tests.

EN 10204

With the order reference, we can provide types 2.2 ou 2.1 certificates, upon request.

Pressure equipment directive 2014/68/EC

Meet the requirements of § 4.3 article and test pressure equivalent to 1.5 times the recommended working pressure.

Complementary Ranges

- Polyamide tubing
- Polyurethane tubing
- Polyethylene tubing

Machine Safety Product Sheet

Piloted Non-Return Valves (PNRV)

These fittings include a normally closed (NC) monostable valve with a flow control regulation function and quick exhaust (model 7894).

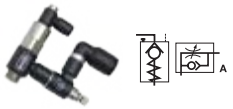
These fittings are directly installed onto the pneumatic cylinder supply and exhaust chamber.

7892

Piloted Non-Return Valve, Male BSPP Thread

ØD	C	
6	G1/8	7892 06 10
	G1/4	7892 06 13
8	G1/8	7892 08 10
	G1/4	7892 08 13
	G3/8	7892 08 17
10	G3/8	7892 10 17
	G1/2	7892 10 21
12	G1/2	7892 12 21

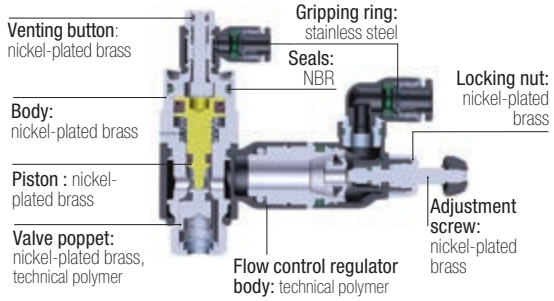
7894



Piloted Non-Return Valve with Flow Regulator and Exhaust, Male BSPP Thread

ØD	C	
6	G1/8	7894 06 10
	G1/4	7894 06 13
8	G1/8	7894 08 10
	G1/4	7894 08 13
	G3/8	7894 08 17
10	G3/8	7894 10 17
	G1/2	7894 10 21
12	G1/2	7894 12 21

Component materials



Silicone-free

Machinery Directive DI 2006/42/EC

ISO 13849 : reliability (related to MTTFd of safety function)

Not applicable

Conditions of use Safety coefficient (related to CCF)

Fluids: compressed air

Working pressure: 1 to 10 bar

Working temperature: -5°C to +60°C

Endurance (related to CCF)

The number of pressure cycles of the instant connection function of the fitting connected to polymer semi-rigid tubing at 1Hz from 1 to 6 bar: 63 000 000

Diagnostic coverage (related to DC avg and to safety function)

Sources of failure related to pneumatic components, taken from the DIN EN ISO 13849-2 standard.

Impossible to eliminate failure:

- Change of response time
- No commutation/no return commutation
- Change of leakage over a long period of use
- Pressure drop

Reference Directives and Standards for Design

ISO 12238

Commutation switch: < 5 ms

Commutation time is determined according to the standard test methodology.

ISO 14743

Instant connection comply with the ISO14743 tests.

EN 10204

With the order reference, we can provide types 2.2 ou 2.1 certificates, upon request.

Pressure equipment directive 2014/68/EC

Meet the requirements of § 4.3 article and test pressure equivalent to 1.5 times the recommended working pressure.

Complementary Products

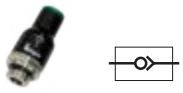
- Polyamide tubing
- Polyurethane tubing
- Polyethylene tubing

Machine Safety Product Sheet

Non-Return Valves

Non-return valves include a monostable normally closed (NC) valve with a cracking threshold of 0,3 bar.

7984



In-Line Non-Return Valve, Supply, Male BSPP and Metric Thread

ØD	C	
4	M5x0.8	7984 04 19
	G1/8	7984 04 10
6	G1/8	7984 06 10
	G1/4	7984 06 13
8	G1/8	7984 08 10
	G1/4	7984 08 13

7994

In-Line Non-Return Valve, Exhaust, Male BSPP and Metric Thread

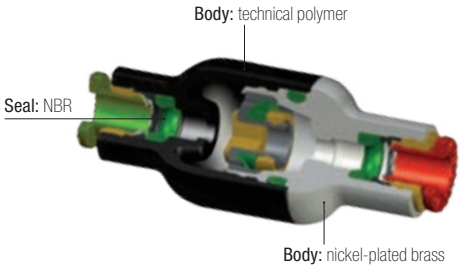
ØD	C	
4	M5x0.8	7994 04 19
	G1/8	7994 04 10
6	G1/8	7994 06 10
	G1/4	7994 06 13
8	G1/8	7994 08 10
	G1/4	7994 08 13

7996

In-Line Equal Non-Return Valve

ØD	
4	7996 04 00
6	7996 06 00
8	7996 08 00
10	7996 10 00
12	7996 12 00

Component Materials



Silicone-free

Machinery Directive DI 2006/42/EC

ISO 13849 : reliability (related to MTTFd of safety function)

B10d = 26 000 000 cycles , according to ISO 19973 tests with a frequency of 1Hz.

The failure criteria is determined by the safety function (valve) according to standard ISO 19973.

Conditions of use Safety coefficient (related to CCF)

Fluids: compressed air

Working pressure: 1 to 10 bar

Working temperature: 0°C to +70°C

Endurance (related to CCF)

The number of pressure cycles of the instant connection function of the fitting connected to polymer semi-rigid tubing at 1Hz from 1 to 6 bar : 63 000 000

Diagnostic coverage (related to DC avg and safety function)

Sources of failure related to pneumatic components, taken from the DIN EN ISO 13849-2 standard.

Impossible to eliminate failure:

- Change of response time
- No commutation/no return commutation
- Change of leakage over a long period of use
- Pressure drop

Reference Directives and Standards for Design

ISO 12238

Commutation switch: < 5ms

Commutation time is determined according to the standard test methodology.

ISO 14743

Instant connection comply with the ISO14743 tests.

EN 10204

With the order reference, we can provide types 2.2 ou 2.1 certificates, upon request.

Pressure equipment directive 2014/68/EC

Meet the requirements of § 4.3 article and test pressure equivalent to 1.5 times the recommended working pressure.

Complementary Products

- Polyamide tubing
- Polyurethane tubing
- Polyethylene tubing

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Machine Safety Product Sheet

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Nickel-Plated Brass Adjustable Non-Return Valves

Adjustable non-return valves include a monostable normally closed (NC) valve with a cracking threshold that is adjustable from 0,10 to 1 bar.

7930

Adjustable Check Valve, Double Female BSPP and Metric Thread

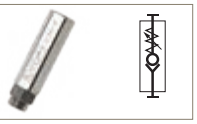
C	
M5x0.8	7930 19 19
G1/8	7930 10 10
G1/4	7930 13 13
G3/8	7930 17 17
G1/2	7930 21 21

7931

Adjustable Check Valve Supply, Male/Female BSPP Thread

C	
G1/8	7931 10 10
G1/4	7931 13 13
G3/8	7931 17 17
G1/2	7931 21 21

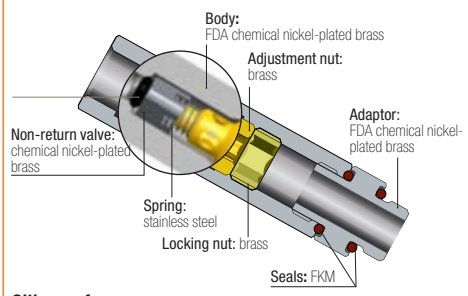
7932



Adjustable Check Valve Exhaust, Male/Female BSPP Thread

C	
G1/8	7932 10 10
G1/4	7932 13 13
G3/8	7932 17 17
G1/2	7932 21 21

Component Materials



Silicone-free

Directive machine DI 2006/42/CE

ISO 13849: Reliability
(related to MTTFd of safety function)

Not applicable

Conditions of use Safety coefficient
(related to CCF)

Fluids: compressed air

Working pressure: 1 to 12 bar

Working temperature: -20°C to +80°C

Endurance
(related to CCF)

10 million cycles.

Endurance corresponds to the valve opening function at 7 bar with control of flow accuracy.

Diagnostic coverage
(related to DC avg and to safety function)

Sources of failure related to pneumatic components, taken from the DIN EN ISO 13849-2 standard.

Impossible to eliminate failure:

- Change of response time
- No commutation/no return commutation
- Change of leakage over a long period of use
- Pressure drop

Reference Directives and Standards for Design

ISO 4414

Designed to avoid dangerous significant phenomena related to the use of pneumatic transmission in a machine, listed in appendix A, chart A1, A7 (food compatibility), A12.6

Technical specifications Cracking pressure

Threads	0 to 4 tours (values given as an example only)
M5x0.8 - G1/8 - G1/4	1 to 0,10 bar
G3/8	1 to 0,15 bar
G1/2	1 to 0,20 bar

EN 10204

With the order reference, we can provide types 2.2 ou 2.1 certificates, upon request.

Pressure equipment directive 2014/68/EC

Meet the requirements of § 4.3 article and test pressure equivalent to 1.5 times the recommended working pressure.

Complementary Ranges

- Polyamide tubing
- Polyurethane tubing
- Polyethylene tubing

Machine Safety Product Sheet

Quick Exhaust Valve

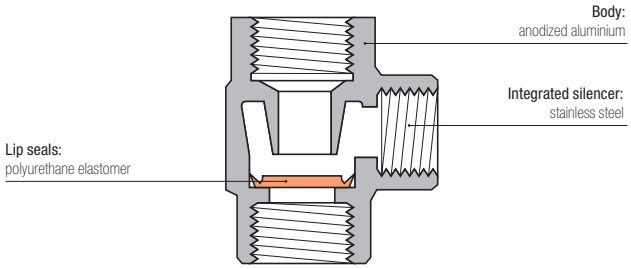
The metal quick exhaust valve includes a normally closed (NC) single shut-off function.
Installed on the venting circuit, this valve increases the return speed of the cylinder.

7971

Elbow Quick Exhaust Valve, Male BSPT/Female BSPP Thread

C	C1	
G1/8	R1/8	7971 10 10
G1/4	R1/4	7971 13 13
G3/8	R3/8	7971 17 17
G1/2	R1/2	7971 21 21

Constituant Materials



Silicone-free

Machinery Directive DI 2006/42/EC

ISO 13849: reliability (related to MTTFd of safety function)

Not applicable

Conditions of use Safety coefficient (related to CCF)

Fluids: compresed

Working pressure: 0,7 to 10 bar

Working temperature: -20°C to +70°C

Endurance (related to CCF)

Not applicable

Diagnostic coverage (related to DC avg and to safety function)

Sources of failure related to pneumatic components, taken from the DIN EN ISO 13849-2 standard.

Impossible to eliminate failure:

- Change of response time
- No commutation/no return commutation
- Change of leakage over a long period of use
- Pressure drop

Reference Directives and Standards for Design

ISO 4414

Designed to avoid dangerous significant phenomena related to the use of pneumatic transmission in a machine, listed in appendix A, tableau A1 : A12.1

ISO 14743

Minimum cracking pressure: 0,3 bar at room temperature

EN 10204

With the order reference, we can provide types 2.2 ou 2.1 certificates, upon request.

Pressure equipment directive 2014/68/EC

Meet the requirements of § 4.3 article and test pressure equivalent to 1.5 times the recommended working pressure.

Complementary Ranges

- Polyamide tubing
- Polyurethane tubing
- Polyethylene tubing

Machine Safety Product Sheet

Silencers

Silencers include a sound propagation filter equipped with an exhaust flow control regulator (models 0672 and 0676).
They are designed for installation on exhaust circuits.

0674

Polymer Silencer, Male BSPP and Metric Thread

0673

Compact Silencer, Male BSPP and Metric Thread

0670

Threaded Silencer, Male BSPP Thread

0676

Flow Control Polymer Silencer, Male BSPP and Metric Thread

0671

Push-In Silencer

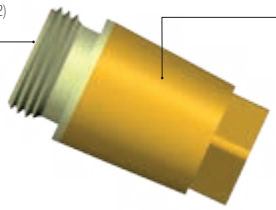
0672

Flow Control Silencer, Male BSPP Thread

Component Materials

Body:
brass (0670-0673-0671-0672)
polymer (0676)

Silencer:
Sintered bronze (0670-0673-0671-0672)
polymer (0674-0676)



Silicone-free

Machinery Directive DI 2006/42/EC

ISO 13849: reliability
(related to MTTFd of safety function)

Not applicable

Conditions of use Safety coefficient
(related to CCF)

Fluids: compressed air

Working pressure:
Polyethylene : 0 to 10 bar
Sintered bronze: 0 to 12 bar

Working temperature:
Polyethylene : -10°C à +80°C
Sintered bronze: -20°C à +150°C

Endurance
(related to CCF)

Not applicable

Diagnostic coverage
(related to DC avg and to safety function)

Sources of failure related to pneumatic components, taken from the DIN EN ISO 13849-2 standard.

Impossible to eliminate failure:
- Pressure drop

Reference Directives and Standards for Design

ISO 4414

Designed to avoid dangerous significant phenomena related to the use of pneumatic transmission in a machine, listed in appendix A, chart A1, A.4

OSHA 1910.95 (b) DI 2003/11/EC

Noise level measured for 8 hours'exposure and risks involved for operators:

- 90 dBA max.
- for noise levels > 80 dBA: requirement to use ear protection if exposure > 8 hours

EN 10204

With the order reference, we can provide types 2.2 ou 2.1 certificates, upon request.

Pressure equipment directive 2014/68/EC

Meet the requirements of § 4.3 article and test pressure equivalent to 1.5 times the recommended working pressure.

Complementary Products

- Compression fittings

Machine Safety Product Sheet

Tamper-Proof Safety Clip

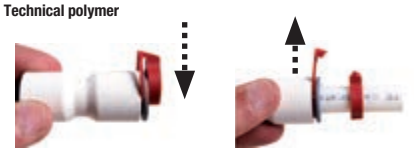
This product is directly installed on the push-in fitting. It is designed to block the release button. For disconnection, the tamper-evident safety clip must be broken with a tool to unblock the release button.

Tamper-Proof Safety Clip

3130	ØD						
	4	3130 04 01	3130 04 02	3130 04 03	3130 04 04	3130 04 05	
	6	3130 06 01	3130 06 02	3130 06 03	3130 06 04	3130 06 05	3130 06 10
	8	3130 08 01	3130 08 02	3130 08 03	3130 08 04	3130 08 05	3130 08 10
	10	3130 10 01	3130 10 02	3130 10 03	3130 10 04	3130 10 05	3130 10 10
	12	3130 12 01		3130 12 03		3130 12 05	3130 12 10

Component Material and Installation Process

Technical polymer



Machinery Directive DI 2006/42/EC

ISO 13849: reliability (related to MTTFd of safety function)

Not applicable

Conditions of use Safety coefficient (related to CCF)

Compatible ranges : LF 3000®, LIQUIfit®

Working temperature:

-20°C to +95°C

Endurance (related to CCF)

Not applicable

Diagnostic coverage (related to DC avg and to safety function)

Sources of failure related to pneumatic components, taken from the DIN EN ISO 13849-2 standard

Impossible to eliminate failure:

- Obstruction (blockage)
- Error of connection

Reference Directives and Standards for Design

ISO 4414

Design to avoid dangerous significant phenomena related to the use of pneumatic transmission in a machine, listed in appendix A, chart A1 : A.11.2, A.12.6

ISO 14743

Not applicable

EN 10204

With the order reference, we can provide types 2.2 ou 2.1 certificates, upon request.

Pressure equipment directive 2014/68/EC

Not applicable

Complementary Ranges

- LF 3000® push-in fittings
- LIQUIfit® push-in fittings

Machine Safety Product Sheet

Ball Valves, Universal Series, Lockable

These valves are normally open (NO) ball valves. The flow passes through the ball valve in a straight or elbow line. These valves can be open or closed by a simple 90° rotation of the handle.

2/2 In-Line Lockable Ball Valve, Female BSPP Thread

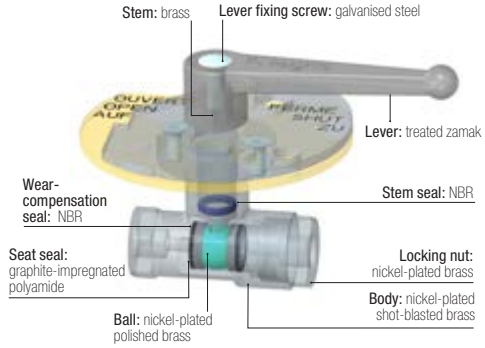
3/2 In-line Vented Lockable Ball Valve, Female BSPP Thread

3/2 In-Line Lockable Ball Valve with Threaded Exhaust Port, Female BSPP and Metric Thread

3/2 In-line Vented 3-Point Lockable Ball Valve, Female BSPP Thread

3/2 Right-Angled 3-Point Lockable Ball Valve, Female BSPP Thread

Component Materials



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Machinery Directive DI 2006/42/EC

ISO 13849 : Reliability (related to MTTFd of safety function)	Conditions of use Safety coefficient (related to CCF)	Endurance (related to CCF)	Diagnostic coverage (related to DC avg and to safety function)
Not applicable	Fluids: Industrial fluids Working pressure: 20 to 40 bar, according to the model Working temperature: -40°C to +80°C	5000 operating cycles (opening/ closing) at 6 bar according to standard EN 13828	Not applicable

Reference Directives and Standards for Design

ISO 4414	EN 13828	EN 10204	Pressure equipment directive 2014/68/CE
To prevent hazards caused by unintended operations, the lockable plate fixed to the stem guarantees the conformity to this standard.	Standard's performance requirements and test methods. Sealing is reinforced with the double wear compensation seat ball.	With the order reference, we can provide types 2.2 ou 2.1 certificates, upon request.	Mandatory CE marking for DN > 25 mm. For use with dangerous gases, please consult us.

Complementary Products

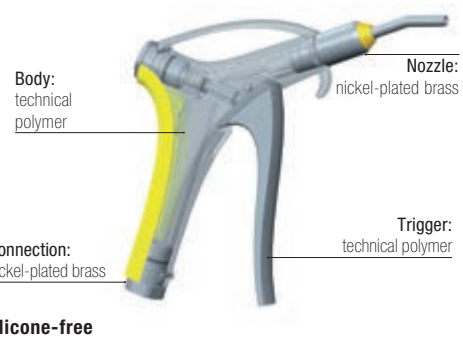
- Polyamide tubing
- Polyurethane tubing
- Polyethylene tubing
- Compression fittings

Machine Safety Product Sheet

Safety Blowgun

This blowgun is designed with a blowing nozzle including a normally open (NO) valve with automatic blockage in case there is an obstruction of the nozzle. The remaining pressure is therefore limited to 0,5 bar.

Component Materials



Silicone-free

0654

Safety Blowgun, Lower Connection, Female BSPP Thread

C	DN	
G1/4	3	0654 00 13

0654

SUVA Safety Blowgun, Lower Connection, Female BSPP Thread

C	DN	
G1/4	3	0654 01 13

Machine Directive DI 2006/42/EC

ISO 13849 : reliability
(related to MTTFd of safety function)

Not applicable

Conditions of use Safety Factor
(related to CCF)

Fluid: compressed air

Working pressure: 0 to 10 bar

Working temperature: -20°C to +80°C

Endurance
(related to CCF)

Number of piston operating cycles allowing opening/closing of compressed air circuit at 6 bar : 365 000 cycles.

Diagnostic coverage
(related to DC avg and to safety function)

Sources of failure related to pneumatic components, taken from the DIN EN ISO 13849-2 standard.

Impossible to eliminate the failure for the nozzle :

- Change of response time
- No commutation/no return commutation
- Change of leakage over a long period of use
- Pressure drop

Reference Directives and Standards for Design

OSHA 1910.242 (b)

Residual static pressure < 30 psi in the case when the nozzle is blocked

OSHA 1910.95 (b) DI 2003/11/EC

Noise level measured for 8 hours'exposure and risks involved for operators:

- 80 dBA
- No ear protection necessary

EN 10204

With the order reference, we can provide types 2.2 ou 2.1 certificates, upon request.

Pressure equipment directive 2014/68/EC

Meet the requirements of § 4.3 article and test pressure equivalent to 1.5 times the recommended working pressure.

Complementary Products

- Braided PU ester and ether recoil hose
- Recoil semi-rigid PA tubing