

Silo filling device

Shut-off valve for filling process of silos

SFA

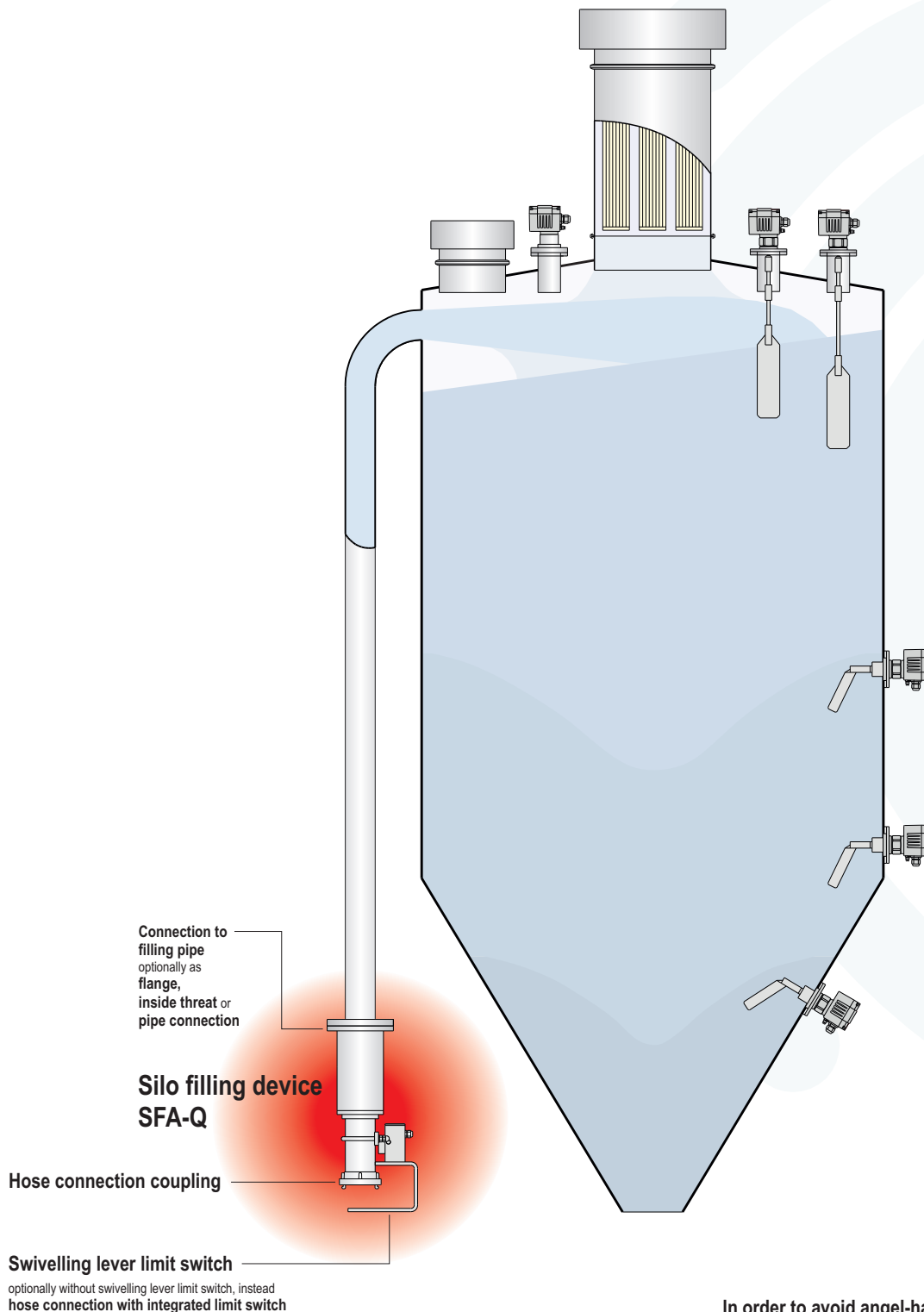
Appliance information

Index	Page
Application	02
Silo filling device with pinch valve	03 - 04
Silo filling device with ball valve	05 - 06
Appendix	
Control solenoid valve	
Quick air-exhaust valve Pressure switch	

Application

Shut-off valve with connection coupling and swivelling lever

Silo filling device for shut-off the filling pipe in order to protect the silo plant against overload and overpressure

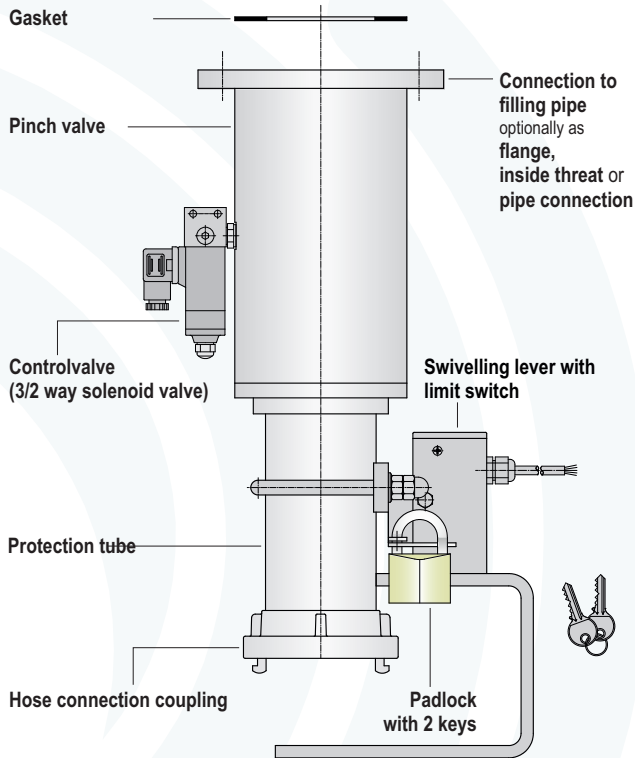


In order to avoid angel-hair, turbulences or change of core structure we supply optionally the silo filling device completely seamless.

Appliance information

Silo filling device to connect the filling pipe and to shut-off the filling pipe while pneumatic filling process of silos from silo vehicles.

Silo filling device with pinch valve
Type: SFA ...Q ... DN 65, 80, 100, and 125



011-0200

Blank cap with chain
(Seal cap)

Manufacturing modification

optional on customer's request

Filling pipe connection	Flange Internal thread Tube
Pinch valve	
Housing and filling pipe connection	Aluminium AIMgS1 Stainless steel 1.4571 / 316 Ti
Clamping sleeve (product touching)	Aluminium AIMgS1 Stainless steel 1.4571 / 316 Ti
Hoses	NR Caoutchouc, resistant to abrasion NRE Caoutchouc, resistant to abrasion, ATEX NW Caoutchouc, inside white for food EP EPDM for food EPE EPDM for food, ATEX VI VITON
Control valve for pinch valve (3/2 way solenoid valve)	normally closed, 230 V AC (SFA ...Q normally open) normally closed, 24 V DC (SFA ...Q normally open) normally closed, 24 V AC (SFA ...Q normally open) normally open, 230 V AC (SFA ...Q normally closed) normally open, 24 V DC (SFA ...Q normally closed) normally open, 24 V AC (SFA ...Q normally closed)
Protection tube	Steel, galvanized Stainless steel 1.4571 / 316 Ti Aluminium AIMgSi1
Hose connection coupling (system and material)	Storz, Aluminium Storz, Aluminium/Stainless steel 1.4571 / 316 Ti Storz, Stainless steel 1.4571 / 316 Ti TW coupling, DIN 28450, Brass TW coupling, DIN 28450, Stainless steel 1.4408 Camlock DIN 2828, Stainless steel 1.4408 Guillemin, Aluminium
Limit switch (Filling hose connected)	Swivelling lever limit switch mechanical Swivelling lever limit switch inductive Swivelling lever limit switch NAMUR Limit switch mechanical mounted on couplings* Limit switch inductive mounted on couplings* Limit switch NAMUR mounted on couplings* * not available with Camlock or Guillemin couplings
Cable length for limit switches	2 m cable (not available with mechanical limit switch) 5 m cable 10 m cable
Accessories for silo filling device	
Quick air-exhaust valve (incl. silencer)	Valve installed at SFA ...Q Valve as separate component
Compressed air switch	Switch installed at SFA ...Q Switch as separate component (for position indication or for signal "hose malfunction")
Padlock (with 2 keys)	for swivelling lever, keyed alike for swivelling lever, keyed different for Storz fixed couplings and Storz blank cap (keyed alike) for Storz fixed couplings and Storz blank cap (keyed different)
Covering hose connection	
Blank cap with chain	Storz couplings/Swivelling lever limit switch Storz couplings/built-in limit switch
Mother end cap for	Camlock couplings/Swivelling lever limit switch
End cap for	Road tanker couplings (TW coupling, DIN 28450)
Further accessories	on request

ATEX option

B3

Dust  II 1/3D IIIB

ATEX option

B11

Gas+  II 1/2G IIB
and
Dust  II 1/2D IIIB

Single parts

Silo filling device with pinch valve

Type SFA ...Q ... DN 65, DN 80 and 100

	DN 65	DN 80	DN 100
Gasket	077-002-DIR-ABF	090-002-DIR-ABF	115-002-DIR-ABF
Hexagonal nut	0934-05-000-STV	0934-05-000-STV	0934-05-000-STV
Cylinder head screw	0912-05-045-STV	0912-05-045-STV	0912-05-045-STV
3/2-way solenoid valve with all components	230 V AC 0 820 005 250B 24 V DC 0 820 005 251B 24 V AC 0 820 005 253B		
Pinch valve depending on version	QV-065-FG-AX-XX	QV-080-FG-AX-XX	QV-100-FG-AX-XX
Threaded pin	0914-06X010-V4A	0914-06X010-V4A	0914-06X010-V4A
Protection tube made of Steel, galvanized 1.4571 / 316 Ti Aluminium	065-200-NIP-STV 065-200-NIP-V4A 065-200-NIP-AL	080-200-NIP-STV 080-200-NIP-V4A 080-200-NIP-AL	100-200-NIP-STV 100-200-NIP-V4A 100-200-NIP-AL
Swivelling lever with integrated limit switch	SES-065-X SIS-065-X SNS-065-X	SES-080-X SIS-080-X SNS-080-X	SES-100-X SIS-100-X SNS-100-X
2=2 m, 5=5 m, 0=10 m Cable length			
Padlock with 2 keys	KS-VS025-G, or optional KS-VS025-U,	the same key for all locks a separate key for every lock	
Thread pin	0914-05X010-V4A	0914-05X010-V4A	0914-05X010-V4A
Connection coupling made of Aluminium Aluminium / 1.4581 / 318	K-FSZ075IG2½-AL K-FSZ075IG2½-VA	K-FSZ075IG3-AL K-FSZ075IG3-VA	K-FSZ110IG4-AL K-FSZ110IG4-AV K-FSZ110IG4-VA

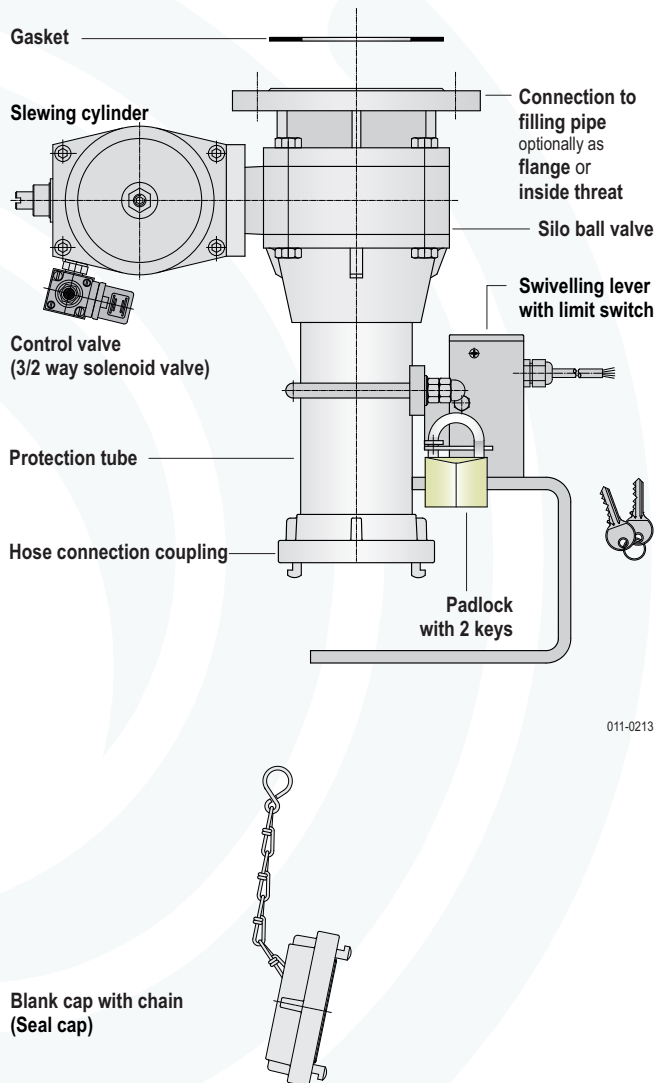
011-0800

Appliance information

Silo filling device to connect the filling pipe and to shut-off the filling pipe while pneumatic filling process of silos from silo vehicles.

Silo filling device with ball valve

Type SFA ... K ... DN 80 and 100



011-0213

Manufacturing modification

optional on customer's request

Filling pipe connection	Flange Internal thread
Ball valve	
Housing and filling pipe connection	Aluminium
Ball	Stainless steel
Seal rings	PTFE / VITON
Actuator	single acting (Valve closes in case of power and/or compressed air failure)
Position switch (position indication „open/closed“)	without position switch 1 switch signal ball valve „closed“ 2 switches signals ball valve „open“ / „closed“
Control valve for ball valve (3/2 way solenoid valve)	normally closed, 230 V AC (SFA ... K normally closed) normally closed, 24 V DC (SFA ... K normally closed) normally closed, 24 V AC (SFA ... K normally closed)
Protection tube	Steel, galvanized Stainless steel 1.4571 / 316 Ti Aluminium AlMgSi1
Hose connection coupling (system and material)	Storz, Aluminium Storz, Aluminium/Stainless steel 1.4571 / 316 Ti Storz, Stainless steel 1.4571 / 316 Ti TW coupling, DIN 28450, Brass TW coupling, DIN 28450, Stainless steel 1.4408 Camlock DIN 2828, Stainless steel 1.4408 Guillemin, Aluminium
Limit switch (Filling hose connected)	Swivelling lever limit switch mechanical Swivelling lever limit switch inductive Limit switch mechanical mounted on couplings* Limit switch inductive mounted on couplings* * not available with Camlock or Guillemin couplings
Cable length for limit switches	2 m cable (not available with mechanical limit switch) 5 m cable 10 m cable

Accessories for silo filling device

Quick air-exhaust valve (incl. silencer)	Valve installed at SFA ... K Valve as separate component
Padlock (with 2 keys)	for swivelling lever, keyed alike for swivelling lever, keyed different for Storz fixed couplings and Storz blank cap (keyed alike) for Storz fixed couplings and Storz blank cap (keyed different)

Covering hose connection

Blank cap with chain	Storz couplings/Swivelling lever limit switch Storz couplings/built-in limit switch
Mother end cap for	Camlock couplings/Swivelling lever limit switch
End cap for	Road tanker couplings (TW coupling, DIN 28450)

Further accessories on request

ATEX option

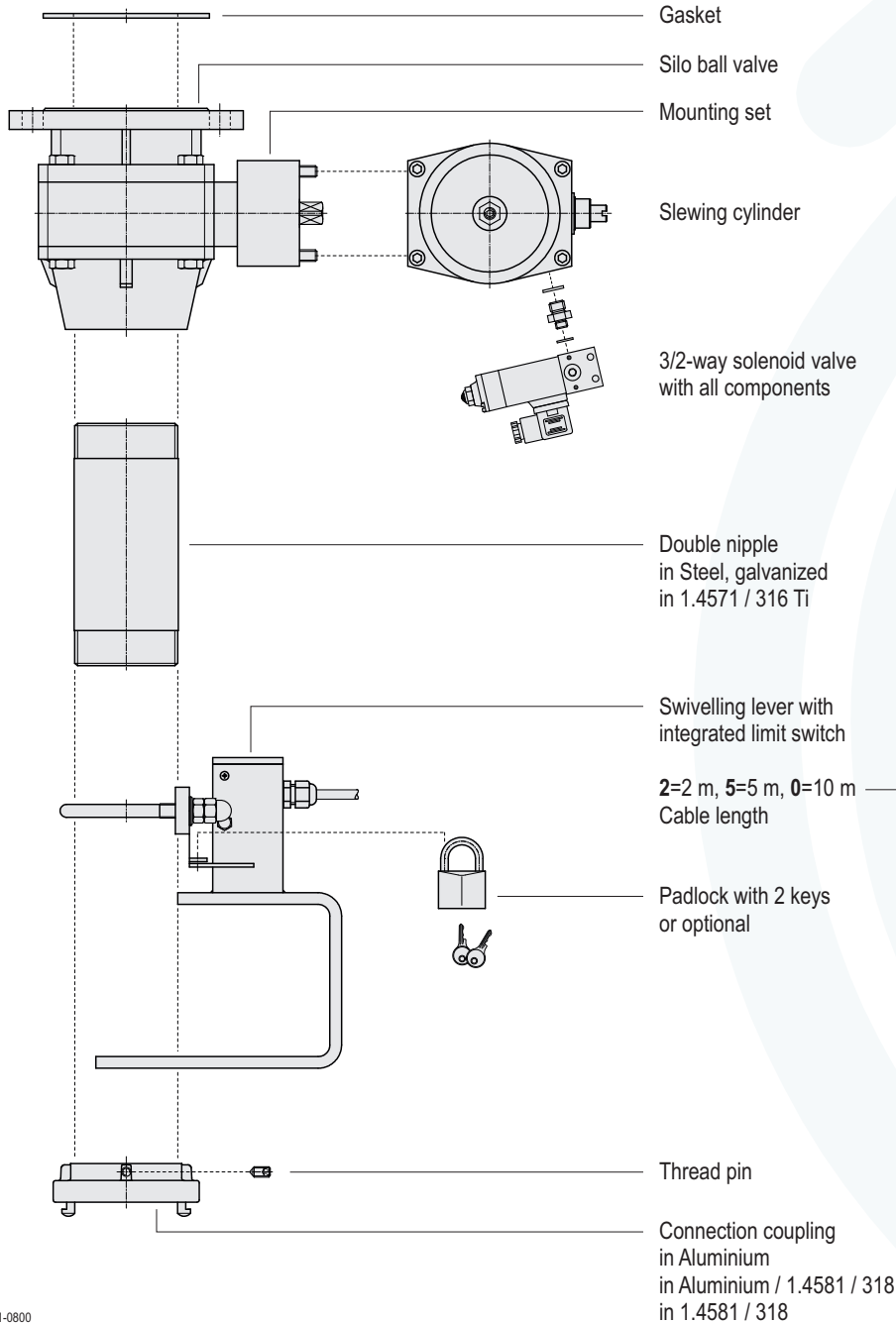
B7

Dust  II 2/3D IIIB

Single parts

Silo filling device with ball valve

Type SFA ... K ... DN 80 and 100



DN 80	DN 100
090-002-DIR-ABF	115-002-DIR-ABF
SKVP080-FG-AE-TN	SKVP100-FG-AE-TN
SKVP080-SET	SKVP100-SET

GTE110	GTE127
--------	--------

230 V AC	0 820 005 150B
24 V DC	0 820 005 151B
24 V AC	0 820 005 153B

080-200-NIP-STV	100-200-NIP-STV
080-200-NIP-V4A	100-200-NIP-V4A

SES-080-X	SES-100-X
SIS-080-X	SIS-100-X
SNS-080-X	SNS-100-X

KS-VS025-G,	the same key for all locks
KS-VS025-U,	separate key for every lock

0914-05X010-V4A	0914-05X010-V4A
-----------------	-----------------

K-FSZ075IG3-AL	K-FSZ110IG4-AL
K-FSZ075IG3-VA	K-FSZ110IG4-AV
	K-FSZ110IG4-VA

011-0800

Accessories

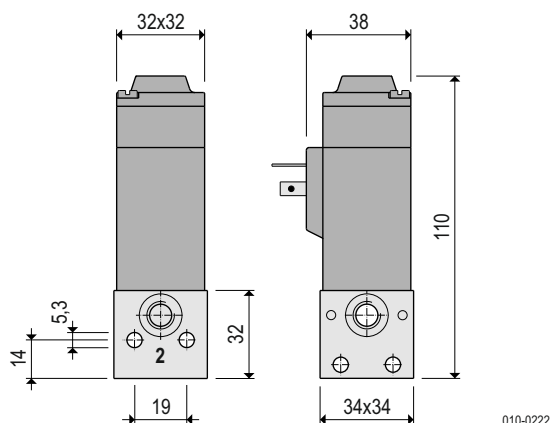
for pinch valves and silo filling devices

QV / SFA

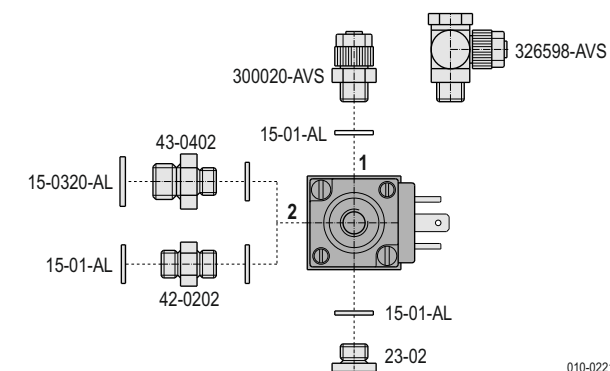
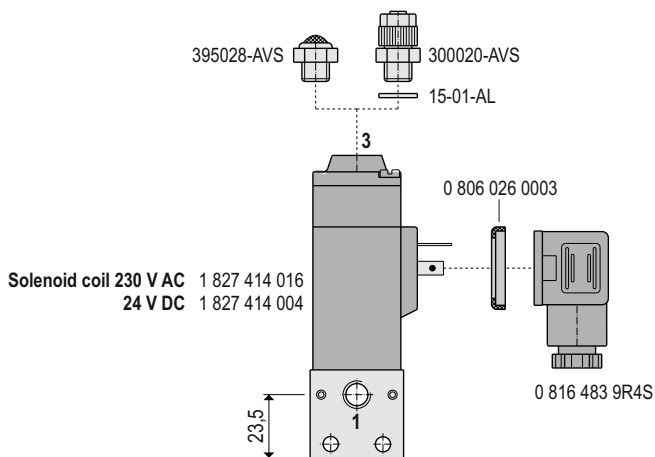
Appliance information

Index	Page
3/2 way solenoid valve, normally closed	02
3/2 way solenoid valve, normally open	03
Quick air-exhaust valve Compressed air switch	04

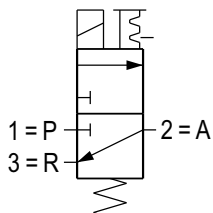
Dimensions



Components



Control scheme



Technical data

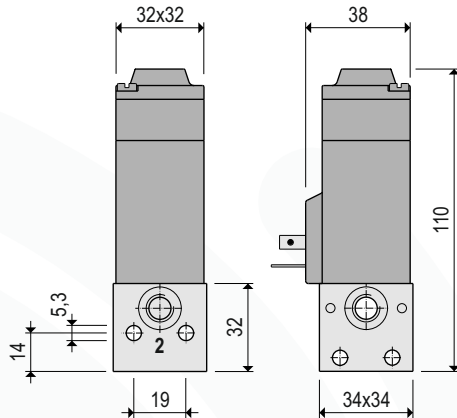
Construction type	Poppet valve, applicable for oil-free usage with manual override
Sealing	elastic soft rubber seal (VITON)
Solenoid coil	4 x 90° turnable
Socket connector	4 x 90° turnable
Connection thread	G 1/8
Mounting position	any
Ambient temperature	max. +50 °C
Medium temperature	max. +50 °C
Min. working pressure	0 bar
Nominal pressure	10 bar
Nominal flow	from 1 to 2 100 l/min from 2 to 3 120 l/min
Nominal size	1.8

Electrical data

Power supply	230 V AC 24 V DC 24 V AC
Power consumption	with AC pick-up power 21 VA holding power 14 VA with DC 8 W
Cyclic duration factor	100 %
Type of protection	IP00 without socket connector IP65 with socket connector
in acc. to	EN DIN 60529

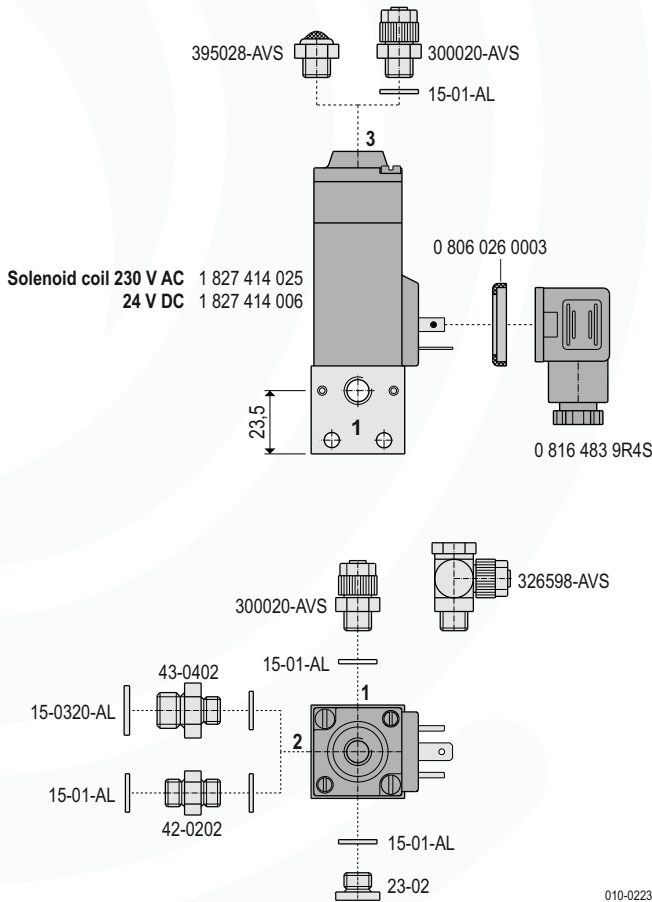
Power supply	Order code solenoid valve
230 V AC	0 820 005 150
24 V DC	0 820 005 151
24 V AC	0 820 005 153

Dimensions



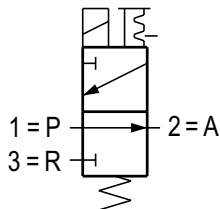
010-0224

Components



010-0223

Control scheme



010-AP01

Technical data

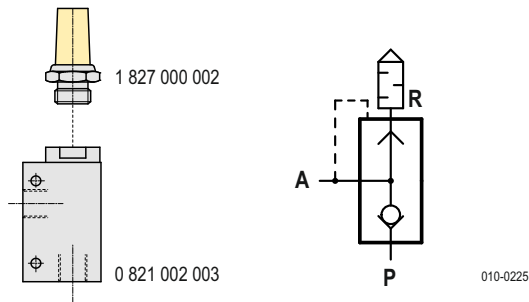
Construction type	Poppet valve, applicable for oil-free usage with manual override
Sealing	elastic soft rubber seal (VITON)
Solenoid coil	4 x 90° turnable
Socket connector	4 x 90° turnable
Connection thread	G 1/8
Mounting position	any
Ambient temperature	max. +50 °C
Medium temperature	max. +50 °C
Min. working pressure	0 bar
Nominal pressure	10 bar
Nominal flow	from 1 to 2 100 l/min from 2 to 3 120 l/min
Nominal size	1.8

Electrical data

Power supply	230 V AC 24 V DC 24 V AC
Power consumption	with AC pick-up power 21 VA holding power 14 VA with DC 8 W
Cyclic duration factor	100 %
Type of protection	IP00 without socket connector in acc. to EN DIN 60529 IP65 with socket connector

Power supply	Order code solenoid valve
230 V AC	0 820 005 250
24 V DC	0 820 005 251
24 V AC	0 820 005 253

Quick air-exhaust valve

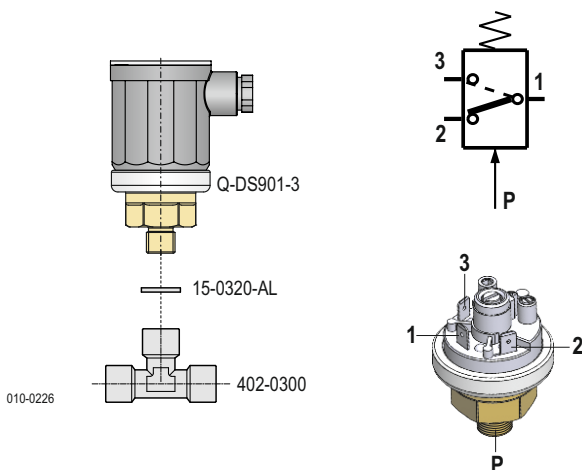


Construction type	Poppet valve, applicable for oil-free usage
Sealing	elastic soft rubber seal (NBR)
Connection thread	A und P = G 1/4, R = 3/8
Mounting position	any
Ambient temperature	max. +40 °C
Control medium temperature	max. +40 °
Min. working pressure	0.5 bar
Nominal pressure	10 bar
Nominal flow	from P to A 1000 l/min from A to R 2050 l/min
Nominal size	6
Silencer	G 3/8

Order code

0 821 002 003

Compressed air switch



Materials	Housing	PA/PC
	Connection thread	Brass
	Membrane	NBR
Connection thread		G 1/4
Mounting position		any
Ambient temperature		-20 °C ... +85 °C
Medium temperature		max. +85 °C
Max. working pressure		10 bar
Works setting		3.0 bar
Capacity of the contact		6 A / 250 V AC
Signal contact		change-over contact
Cable entry		M16x1.5
Electrical connection		AMP plug pins 6.35
Type of protection		IP65 according to DIN EN 60529

ATEX option

B0 **Dust**  II 3D Ex tc IIIB T 135 °C Dc

Order code

Q-DS901-3

Quick air-exhaust valve and compressed air switch as a complete assembly

