

INSTALLATION, REGULATION & MAINTENANCE INSTRUCTIONS

AISI316 and Aluminium 3/2 Roller Lever Spool Valves - 04 Serie



1. INTRODUCTION

Throughout this manual there are a number of HAZARD WARNINGS that must be read and adhered to in order to prevent possible personal injury and/or damage to equipment. Three signal work "DANGER", "WARNING" and "CAUTION" are used to indicate the severity of a hazard, and are preceded by the safety alert symbol.

Danger Denotes the most serious hazard and is used when serious injury or death WILL result from misuse or failure to follow specific instructions.

Warning Used when serious injury or death MAY result from misuse or failure to follow specific instructions.

Caution Used when injury or product/equipment damage may result from misuse or failure to follow specific instructions.

Caution It is the responsibility and duty of all personnel involved in the installation, operation and maintenance of the equipment on which this device is used, to fully understand the procedures by which hazards can be avoided.

The compatibility of the product is the responsibility of the person who designs the equipment or decides its specifications.

Only personnel with appropriate training should operate machinery and equipment.

Do not service or attempt to remove the machinery or equipment until safety is confirmed.

2. DESCRIPTION

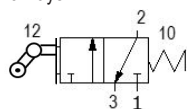
The pneumatic valve are devices that control the compressed air direction, therefore allow the actuation of the actuators and the distribution of compressed air in the system.

3. OPERATION

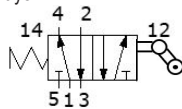
With pushed lever (12*) the valve switches, with the lever not pressed the spring (10*) commutates the position of the valve.

4. PNEUMATIC DIAGRAM

3 ways



5 ways



5. TECHNICAL FEATURES

Medium: compressed air or compatible gases

Port thread: 1/4", 3/8", 1/2"NPT

Pilot thread: 1/8"NPT

Working pressure: 0.9 - 10 bar

Signal pressure: 2.5 - 10bar

Orefice: Dn 8mm (1/4"NPT), Dn 12 (3/8", 1/2"NPT)

Materials: Body in SS316L or aluminum alloy

Spool in SS316 (AISI vers) or aluminum (all vers)

Screws & spring in stainless steel

Gasket & seals in synthetic rubber

MATERIAL		TEMPERATURE		
DIAPHRAGM	SEALS	TRANSPORT	STORAGE	OPERATING
NBR	NBR	-20°C...+80°C	-20°C...+80°C	-20°C...+80°C
FKM	FKM	-25°C...+90°C	-25°C...+90°C	-25°C...+90°C
EPDM	EPDM	-40°C...+80°C	-40°C...+80°C	-40°C...+80°C
HNBR	HNBR	-60°C...+90°C	-60°C...+90°C	-60°C...+90°C

6. TRANSPORTATION & STORAGE

The preferred storage location is a clean, dry and protected warehouse. If the components have to be stored outside, precautions should be taken to keep valves clean and dry. For storage temperatures, refer to the table in paragraph "TECHNICAL FEATURES".

To avoid contamination of impurities during the storage period, don't remove thread protection caps; remove them just before the installation phase.

7. INSTALLATION

Warning Before performing any work, read this manual and study all figures. Assume yourself that you understand and you can do what is required in each step. Failure to follow these instructions may affect quick release valve operation and may result in exposure to personal injury.

Before installing the valve, set and block the machine or equipment in a secure position; close the air shutoff valve and exhaust air from air lines and disconnect all electrical power.

- Caution** It is recommendable to check its condition s before the application
- A pressure reducer is necessary when air pressure is higher than max operating pressure.
- Install the pneumatic connections according to the pneumatic diagram enclosed.
- Caution** Gradually increase air supply to the max operating pressure.

8. MOUNTING

Caution For Energize-to-trip operation:

All the requirements of IEC 61511-1 par. 11.2.11 shall be met. For this reason, as a pressure switch or pressure transmitter mounted downstream the DP or upstream the DP (signal line) would be ineffective, the corresponding tubing connections' length shall be reduced at a minimum.

9. TESTING

- For DP and DPP apply the supply pressure in the inlet port. For DP-M1 and DP-M2 push the knob (see "TECHNICAL FEATURES").

NOTE: the DP is a universal valve and can work in NO, NC and Multi-Directional Line version

- With the lever pushed, the spool commutates and opens the line pressure.
- With lever not pushed, the spool returns in the position for thrust of the spring, closes the line pressure and discharges to the exhaust.

10. MAINTENANCE

Warning Before performing any work, read this manual and study all figures. Assume yourself that you understand and can do what is required in each step. Failure to follow these instructions may affect quick release valve operation and may result in exposure to personal injury.

Before uninstalling the valve, set and block the machine or equipment in a secure position; close the air shutoff valve and exhaust air from air lines; disconnect all electrical power.

A. Ordinary maintenance

Caution The DP should be periodically checked for proper functioning:

- Clean the DP from impurities and dirt;
- Visually check of the integrity of the body;
- Check that there aren't leakages;
- Check the correct functionality of the DP.

B. Troubleshooting

Issue	Possible Cause	Fixes
pneumatic valve doesn't move	lack of pneumatic supply	check supply line
	damaged internal parts (spring, seal, spool, etc...)	Replace part with REPAIR KIT or contact SITECNA technical support for more information
leakages	Deterioration and/or damage of gasket	Replace part with REPAIR KIT or contact SITECNA technical support for more information

After replacing the DP & DPP "TESTING" phase

C. Disassembly

- Disassemble in general accordance with the item numbers on exploded view.

D. Repair Kit

- K-code of the item. Example: K-DP3204NSSNB.

E. Assembly

- Lubricate O-ring and seals with alight coat of good quality.
- Assemble the unit as shown on the exploded view.

11. MARKING ACORDING TO 2014/34/UEAtex

II 2G Ex h IIC T6/T5 Gb X
II 2D Ex h IIC T85°C/T100°C Db X

For using these equipment in potentially explosive atmospheres, it is recommended - for the installation and the maintenance operation - to use tools and instruments that can produce only a single spark (for instance: screwdrivers, spanners). Avoid use of tools that can produce sparks like disk saw or grinder

Action must be taken to put to earth the units through a suitable connection, checking that all the metal components (fittings and pipe line) have to be equitable potential.

Equipment have to be installed in the corresponding zone according to the marking.

NOTE: special conditions for safe use (X conditions)

Before performing any work, read this manual and assure yourself you understand. X at the end of ATEX substitutes T amb depending on used seals based on the following correspondance:

Series VB, EP, VSR, LK04: NBR=-20°C+80°C, FMK=-25°C+90°C,

EPDM= -40°C+80°C, FVMQ & HNBR= -60°C+90°C

Series: DP, RF, LK08, TF: NBR=-20°C+80°C, FMK=-25°C+90°C,

EPDM= -40°C+80°C, FVMQ & HNBR= -55°C+90°C

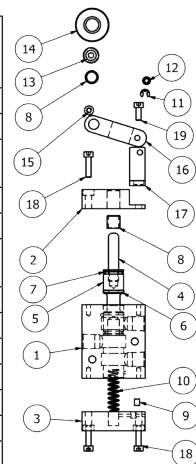
Serie FP: -30°+180°C / Serie SLHF, SLVP, SLSC: -55°C+150°C

Serie PV, PVSL: -20°C +80°C / Serie SCLP: 2°C+80°C

Serie FLGS: -20°C+90°C / Serie VS: -50°C+230°C

PART LIST

POS	Q.TY	DESCRIPTION
1	1	BODY
2	1	COVER
3	1	SPRING COVER
4	1	PIN
5	1	SPOOL
6	2	SPOOL GASKET
7	2	O-RING
8	2	BUSHING
9	1	FILTER
10	1	SPRING
11	1	SEEGER
12	1	LEVER PIN
13	1	WHEEL PIN
14	1	WHEEL
15	1	SCREWS
16	1	LEVER
17	1	LEVER CONNECTION
18	6	SCREWS
19	2	SCREWS



REPAIRING KIT

K-code of the item.

Example:

K-DP3204NSSNB-W1

Contains: 5, 6, 7, 10

LABEL



HOW TO ORDER

TYPE

DP.....W1 = Operator: Roller Lever / Return: Spring

MATERIAL

SS= 316-316L Stainless steel

AL= Copper free aluminum alloy

DP 32 AL 04N FK -W1

WAYS

32= 3 ways, 2 positions

52= 5 ways, 2 positions

SIZE

04N= 1/4" NPT

DIAPHRAGM & SEALS MATERIAL

FK= FKM (WT -25° +90°C)

NB= NBR (WT -20° +80°C)

HN= HNBR (WT -55° +90°C)

For technical information refer to the corresponding technical data sheet

Dichiarazione di conformità UE

In accordo con la Direttiva Europea 2014/34/UE

EU-Declaration of Conformity

In accordance with Directive 2014/34/EU

Noi, Sitecna Srl, dichiariamo che i seguenti prodotti / Sitecna Srl declares that the following equipment:

Product	mod.	Product	mod.	Product	mod.
Filter	F	Control spool valve	DP	Vacuum pump	ST-VP
Regulator	R	Poppet Valves	EP	Silencer	SLHF, SLVP, SLSC
Filter Regulator	FR	Quick exhaust valve	VSR	Dust excluder	PV, PVSL
Back Pressure valve	BP	Lock-up valve	LK	Pressure gauge	MBSS, MBS6, MBSN
2 ways switching valve	SV	Overload protector	SCLP	Vacuum pump	ST-VP
3 ways switching valve	S3	Flow regulator	RF	Ball valve	VS
Volume Booster	VB	Tee Filter	TF		

Sono conformi alla normativa di armonizzazione dell'Unione / They comply with the Union harmonization legislation:

Direttiva 2014/34/UE ATEX	Direttiva 2014/34/UE del Parlamento europeo e del Consiglio, del 26 febbraio 2014, concernente l'armonizzazione delle legislazioni degli Stati membri relative agli apparecchi e sistemi di protezione destinati a essere utilizzati in atmosfera potenzialmente esplosiva (rifusione) Testo rilevante ai fini del SEE.
	Directive 2014/34/EU of the European Parliament and of the Council of 26 February 2014 on the harmonisation of the laws of the Member States relating to equipment and protective systems intended for use in potentially explosive atmospheres (recast) Text with EEA relevance.

Secondo le seguenti Norme di riferimento / As per following reference Normative Documents:

EN ISO 80079-36:2016	Atmosfere esplosive - Apparecchi non elettrici per atmosfere esplosive - Metodo di base e requisiti
	Explosive atmospheres - Non-Electrical equipment for explosive atmospheres - Basic method and requirements
EN ISO 80079-37:2016	Atmosfere esplosive - Apparecchi non elettrici per atmosfere esplosive - Tipo di protezione non elettrica per sicurezza costruttiva "c", per controllo della sorgente di accensione "b", per immersione in liquido "k"
	Explosive atmospheres - Non-Electrical equipment for explosive atmospheres - Non-electrical type of protection constructional safety "c", control of ignition sources "b", liquid immersion "k"
N 1127-1:2011	Atmosfere esplosive - Prevenzione dell'esplosione e protezione contro l'esplosione - Concetti fondamentali e metodologia
	Explosive atmospheres - Explosion prevention and protection - Basic concepts and methodology

Ai sensi della Direttiva 2014/34/EU, i prodotti sopra indicati riportano la seguente marcatura / According to the Directive 2014/34/EU, above mentioned products reports the following marking:



II 2G Ex h IIC T6/T5 Gb X
II 2D Ex h IIIC T85°C/T100°C Db X

Inoltre, ai sensi della direttiva 2014/34/UE, i prodotti sopra menzionati sono oggetto, per gli aspetti relativi sia alla progettazione sia alla fabbricazione, al controllo interno di fabbricazione (Allegato VIII – Modulo A). Ref 557/Ex-Ab 3213/20 c/o N° 0035 TÜV Rheinland.

In conformity to Directive 2014/34/EU, the afore mentioned equipment, regarding their design and production, are object to internal manufacturing check (Attachment VIII – Module A). Ref 557/Ex-Ab 3213/20 c/o N° 0035 TÜV Rheinland.

La presente dichiarazione di conformità è rilasciata sotto la responsabilità esclusiva del fabbricante.

This declaration of conformity is issued under exclusive responsibility of the manufacturer.

Milan, 08/02/2022
Davide Matteo De Corrado
Managing Director

