

Bedienungsanleitung Operating Manual Manuel d'utilisation

Flüssigkeits-
standanzeige
FSA mit
Rückschlagventilen
Fluid Level Gauges
FSA with
Check Valves
*Contrôleurs de niveau
FSA avec
clapets anti-retour*



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VERITAS



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Certificate number: 21498/A0 BV

File number: ACM 141/2512/1

Product code: 3714H

This certificate is not valid when presented without the full attached schedule composed of 7 sections

TYPE APPROVAL CERTIFICATE

This certificate is issued to

HYDAC Accessories
Sulzbach - GERMANY

for the type of product

LEVEL GAUGES / INDICATORS

GLASS LEVEL GAUGES Series FSA

Regulations and standards:

BUREAU VERITAS Rules and Regulations for the Classification of Steel Ships

This certificate is issued to attest that BUREAU VERITAS did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements of the Regulations and standards mentioned above.

This certificate is valid until: 10 Apr 2014

At Neuilly, on: 10 Apr 2009

For BUREAU VERITAS,
By order of the Secretary

Approval office

Local office: BV HAMBURG

Surveyor: A. Diene


L. COURREGELONGUE



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1. General

The following instructions must be strictly followed to ensure correct use of this FSA fluid level gauge with check valves.

2. Function

2.1. FUNCTION OF THE CHECK VALVE

The use of the check valves is only permitted in conjunction with HYDAC Fluid Level Gauges.

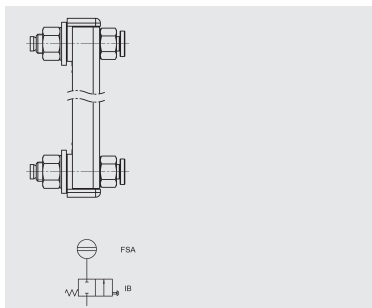
The check valve is a spring-loaded cone poppet valve which is normally closed when at rest. The spring acts with a specific force on the closing cone and presses it onto the valve poppet. Tank pressure also presses the closing cone onto the valve poppet and shuts off the fluid leak-free from the fluid level gauge.

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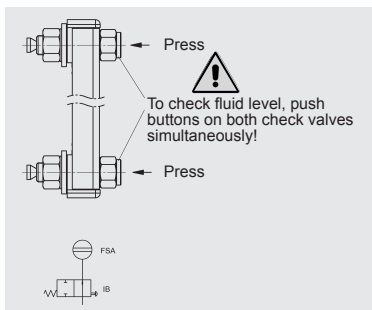
Check valve in
normal position
closed

By pressing fully on the buttons of both top and bottom check valves simultaneously, the actual fluid level will be indicated in the sight tube of the level gauge.

If the temperature gauge option is being used, the actual fluid temperature is also displayed.



Check valve
activated
open

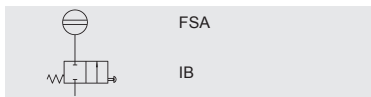


2.2. FUNCTION OF FSA

HYDAC fluid level gauges monitor the fluid level in a hydraulic tank. If the level falls below a minimum, or exceeds a maximum, this is indicated via the visual display of the fluid level and via the minimum and maximum marks on the label. The relevant level of fluid in the tank can be read off visually via the sight glass. There is an additional option for a thermometer to be fitted into the sight glass.

3. Technical specifications for FSA with check valve

3.1. DESIGNATION & SYMBOL



3.2. TYPE OF CONSTRUCTION

The check valve is designed to be used only in conjunction with the fluid level gauge for direct mounting onto a hydraulic tank.

3.3. TYPE OF MOUNTING

Threaded holes on the tank side M12
Alternatively through-holes Ø 13

3.4. MOUNTING POSITION

Vertically on the tank wall

3.5. WEIGHTS

FSA 076 + 2 IB – 0.26 kg

FSA 127 + 2 IB – 0.32 kg

FSA 176 + 2 IB – 0.34 kg

FSA 254 + 2 IB – 0.37 kg

FSA 381 + 2 IB – 0.41 kg

3.6. AMBIENT TEMPERATURE RANGE

min. 0 °C

max. +100 °C

3.7.1 Materials of Check Valve

Valve housing, cone, push-button, spring:
stainless steel

Seals:

Viton (FKM) or Perbunan (NBR)

3.7.2 Materials of FSA

End caps:

high quality synthetic material

Sight tube:

glass tubing (round)

Housing:

stainless steel

Seals:

Viton (FKM) or Perbunan (NBR)

3.8. HYDRAULIC SPECIFICATIONS

3.8.1 Nominal pressure

PN 0.5 bar

3.8.2 Operating fluid

Mineral oil to DIN 51524 part 1 and 2

Water-oil emulsions and synthetic fluids,
such as hydraulic fluids based on phosphate
ester, water, water glycol

Other fluids on request

3.8.3 Temperature range of operating fluid

min. 0 °C

max. +100 °C

3.8.4 Viscosity range

max. 2000 mm²/s





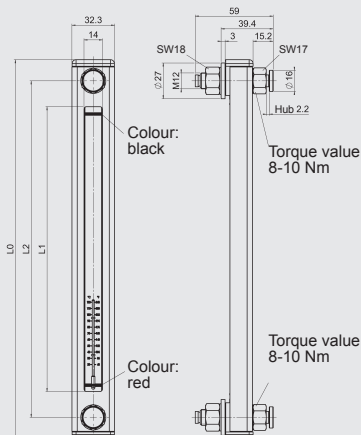
4. Operating conditions

4.1. GENERAL

- If the specified operating pressure is exceeded, or the operating temperature is exceeded or falls too low, the result can be leakage and irreparable damage to the fluid level gauge.
- Fluid level gauges must only be used for the specified fluids.
- When used in the high temperature range, appropriate protective gloves must be worn to actuate the check valve.
- The specified torque value for the banjo bolt of 8 – 10 Nm must be adhered to.
- Use only appropriate tools to fit the gauge.
- The glass tube of the FSA must not be subjected to direct vibration or knocks as there is a risk of it breaking.
- Ensure that no external bending forces, tensile forces or stresses can affect the fluid level gauge.

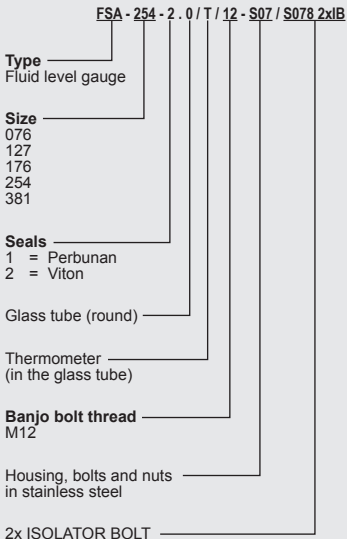
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4.2. DIMENSIONS



	L0	L1	L2
FSA 076 + 2 IB -	107	37	76
FSA 127 + 2 IB -	158	88	127
FSA 176 + 2 IB -	207	137	176
FSA 254 + 2 IB -	285	215	254
FSA 381 + 2 IB -	412	342	381

4.3. MODEL CODE



5. NOTE

The information in this brochure relates to the operating conditions and applications described.

For applications or operating conditions not described, please contact the relevant technical department.

Subject to technical modifications.



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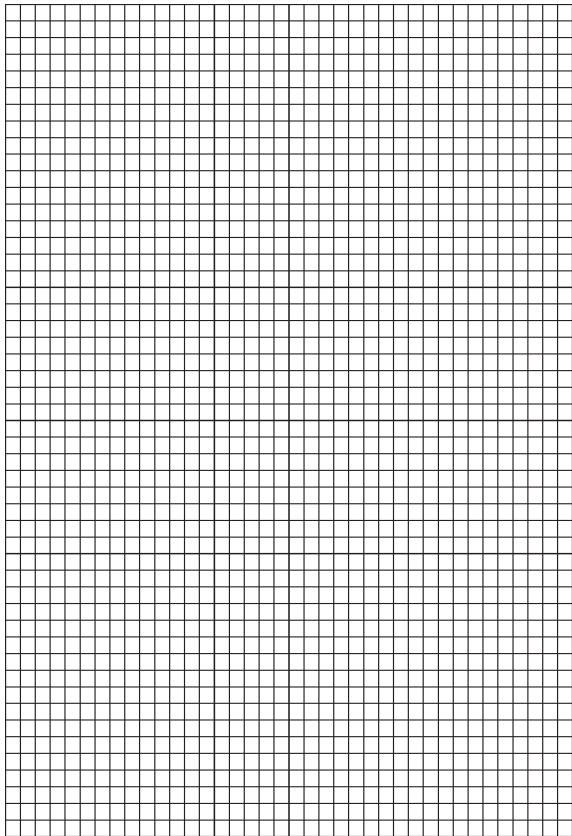
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