

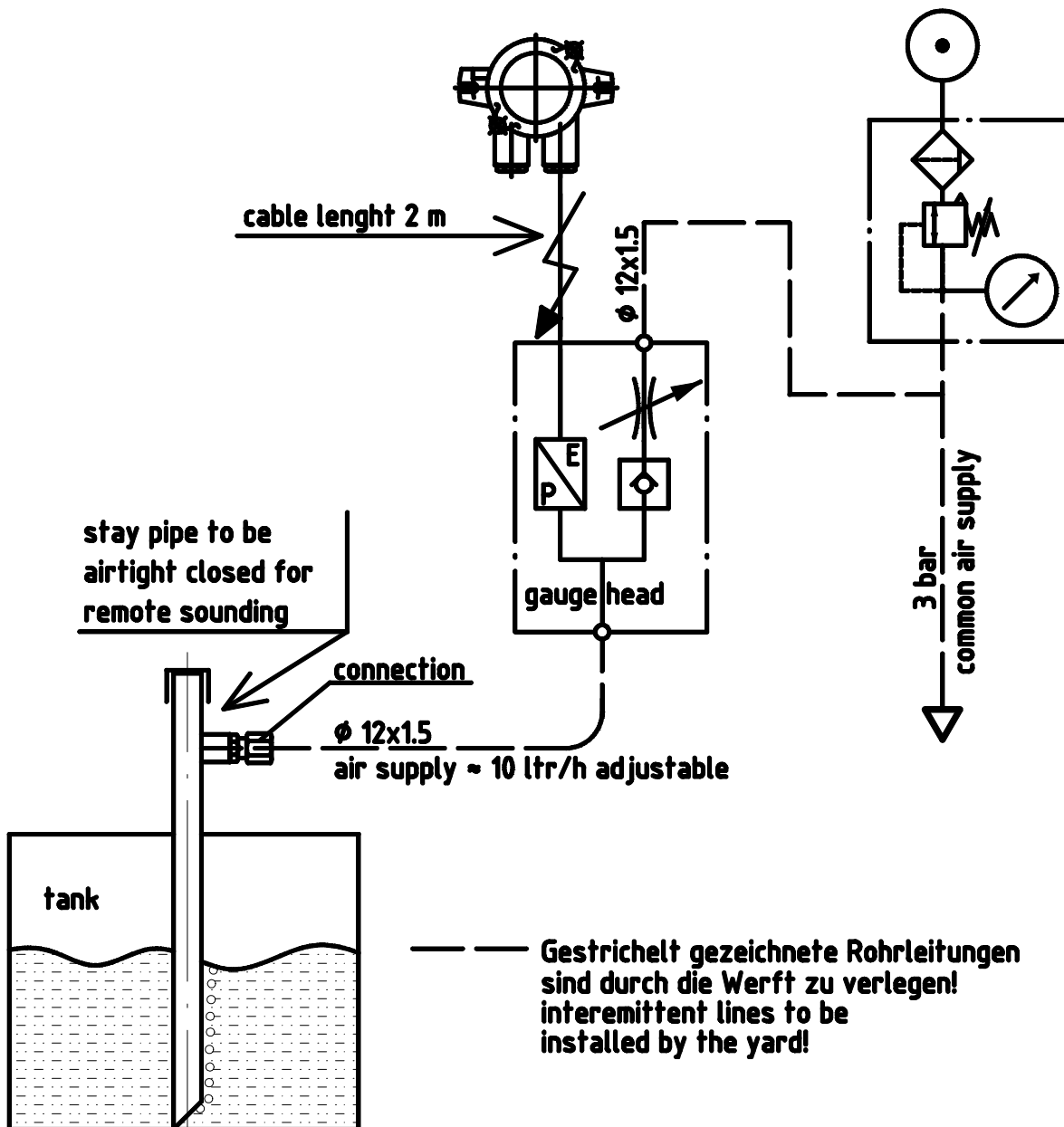


**BESI Armaturen
Bremen**

pressure transmitter

dry mounted
separating ball valve

BESI-PESS



main data

pressure class	PN64
medium temperature	-30°C to +180°C
body	stainless steel 1.4408
ball	stainless steel 1.4401
ball sealing	PTFE, glassfibre reinforced
shaft sealing	PTFE

BESI Armaturen GmbH & Co KG

Phone: +049 (0) 421 57 64 3 - 0;

Fax: +049 (0) 421 58 36 21;

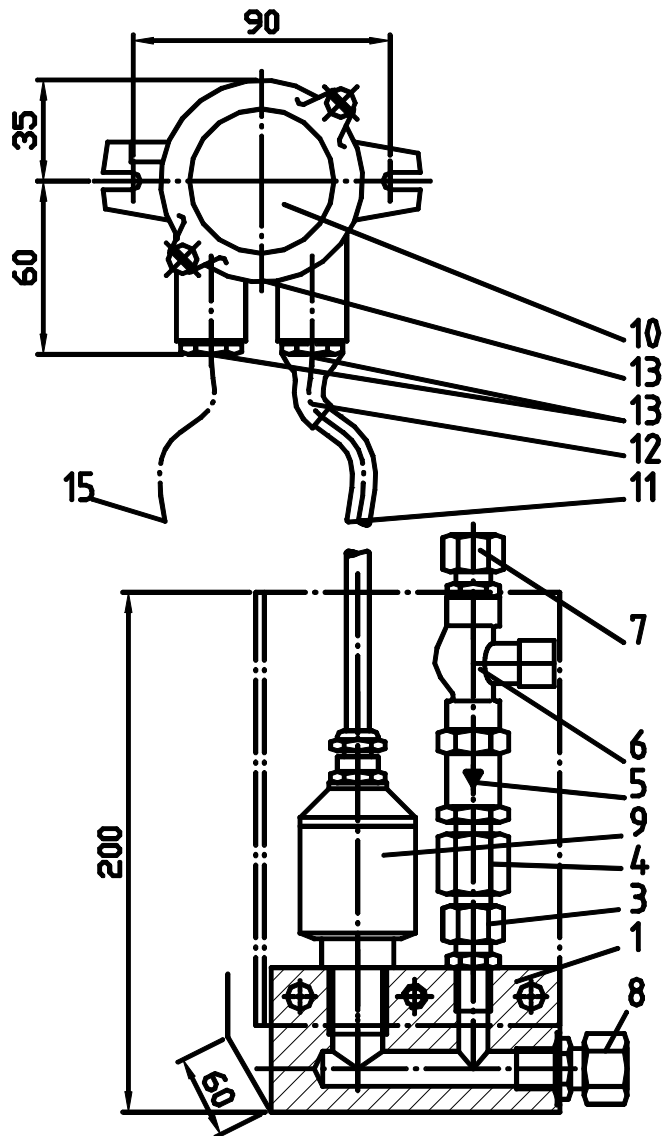
eMail: info@besi.de



**BESI Armaturen
Bremen**

pressure transmitter
dry mounted
drseparating ball valve

BESI-PESS



item	object	material	pce.
1	pressure sensor with cable		1,000
2	ball valve	1.4408	1,000
5	junction box	brass	1,000
8	cable gland - inside		2,000
9	filter plug		1,000
12	fitting G 1/2"		1
13	cable two-wire-system (0,75mm ²)		

BESI Armaturen GmbH & Co KG

Knechtsand 4

P. O. Box 66 03 04

Tel.: +49 (0)421 57 64 3-0

Fax : +49 (0)421 58 36 21

D-28259 Bremen

D-28243 Bremen

e-mail: info@besi.de

Technical Description

Tank Level and Draught Measuring System

BESI Tankmanagement: Electro-Pneumatic Level Measuring System, Air-purge system with electronic signal pick-off from top of tank.

The system consists of **Gauge Heads**, ready assembled with air-throttle valve, non return valve, and electronic pressure transmitter IP 68.

The gauge head to be mounted to a yard supplied 1" measuring pipe, which is guided into the corresponding tank to a level 3 cm above tank bottom.

The Gauge Head is provided with a 12 mm cutting ring connection for connection to a common working-air circuit with supply-air pressure reduced to 3 to 3,5 bar. By the throttle valve the air bubble flow is reduced to max. abt. 30 ltr./h to the tank or draft measuring point. The non-return valve assembled with the Gauge Head secures the air-circuit and the pressure transmitter against tank fluid flowing back into the pneumatic circuit.

The signal pick-off is rendered by an electronic pressure transducer type G1-S with ceramic sensor cell with high purity aluminium oxid membrane, providing analog signals 4 - 20 mA corresponding to the air-overpressure in the measuring pipe.

Signal generation: capacitive sensor cell with full range individual temperature compensation stored on cell, sensor cell and amplifier in one common housing, zero-setting without influence on span-setting.

Tuning: to straight value in excess of max. obtained pressure, allowing easy installation and adaptation to individual tank at indicating instrument.

Exactitude: better 0,2 % FR

Overpressure: at least 6 bar overpressure-safe,

Temperatures: valve body -25 ..+ 80 °C, membrane --40 ... + 125 °C

Materials: membrane AL₂ O₃, body stainless steel 1.4305

Protection IP 68, on request Eex d II.

Power supply: 24 V DC, 11 ... 32V

Output: analog 4 – 20 mA

Connections: 12 mm pneumatic downstream for connection to 1" measuring pipe

electric PG 13,5 (two-wire-system, shielded marine cable)

pneumatic 12 mm cutting ring to air circuit.

Certificates Sensor type-tested by Germanischer Lloyd, Bureau Veritas

Each shipset consists of:

Gauge Heads, for installation to 1" measuring pipes, supplied with 2m vented cable and vented junction box. Protection class IP 68. Cable diameter 8mm.

Ball Valves (certified) to shell penetration for draft measurement to be yards supply.

20-step Bargraph Indicating Instrument, 48 x 72 mm, containing tank name, filling level in m LC, specific weight of tank content, each 6 units assembled in one common frame 144 x 144 mm.

Pressure Reduction Unit for controlling air pressure in common air supply loop.

Features: The electro-pneumatic system provides measurement access from the top of the tank. The bubble-principle keeps the measuring tube permanently free from fluid. Service to the system can be done from outside of the tank. The pneumatic supply on higher pressure level (3 - 3,5 bar) facilitates the installation and checking for leakages, whereas small pressure losses cannot defer the measurement. According to Germanischer Lloyd the sounding pipes can be used as measuring pipes as well; in this case no venting holes should be arranged in the pipe. For such application the stay-pipe will be arranged with a connection to the gauge head, which by-passes the airtight screw cap of the sounding pipe.