

High pressure rig

Mounting of VA 300 and VA 400



	Seite
Please read prior to initialization!	2
Purpose of the pressure rig	3
Mounting of the device	3
Mounting of the sensor	3
Alignment of the sensor	3
Removal of the sensor	3
Assignment of the items	4
List of items	5
Alignment of the sensor	5
Ordering data	6



Please read before initialization!

Attention: **Recommended for measurement from 10 bar to 50 bar .**

Please observe measuring ranges of the sensor!

The sensor has to be screwed-in pressure-tightly.

The manufacturer cannot be held liable for any damage which occurs as a result of non-observance or non-compliance with these instructions. Should the device be tampered with in any matter other than a procedure which is described and specified in the manual, the warranty is cancelled and the manufacturer is exempt from liability.

The device is destined exclusively for the described application.

CS Instruments GmbH offers no guarantee for the suitability for any other purpose and is not liable for errors which may have slipped into this operation manual. CS Instruments GmbH is also not liable for consequential damage resulting from the delivery, capability or use of this device.

PURPOSE OF THE PRESSURE RIG

The supplementary device "high pressure rig " serves for a safe installation and fastening of the CS sensors VA 300 and VA 400 under pressure. It is strongly recommended to be used for gas or air pressures from 10 bar. It is important and absolutely necessary to read the instruction manuals of the sensors VA 300 and VA 400 prior to the installation.

MOUNTING OF THE DEVICE

- Set up measuring site with screw neck (G1/2" **outer diameter**) according to the mounting instruction of the sensor VA 300/ VA 400.
- Screw on the high pressure rig pressure-tightly and make sure that the ball valve can be opened and closed.
- Close ball valve before mounting the sensor.

MOUNTING OF THE SENSOR

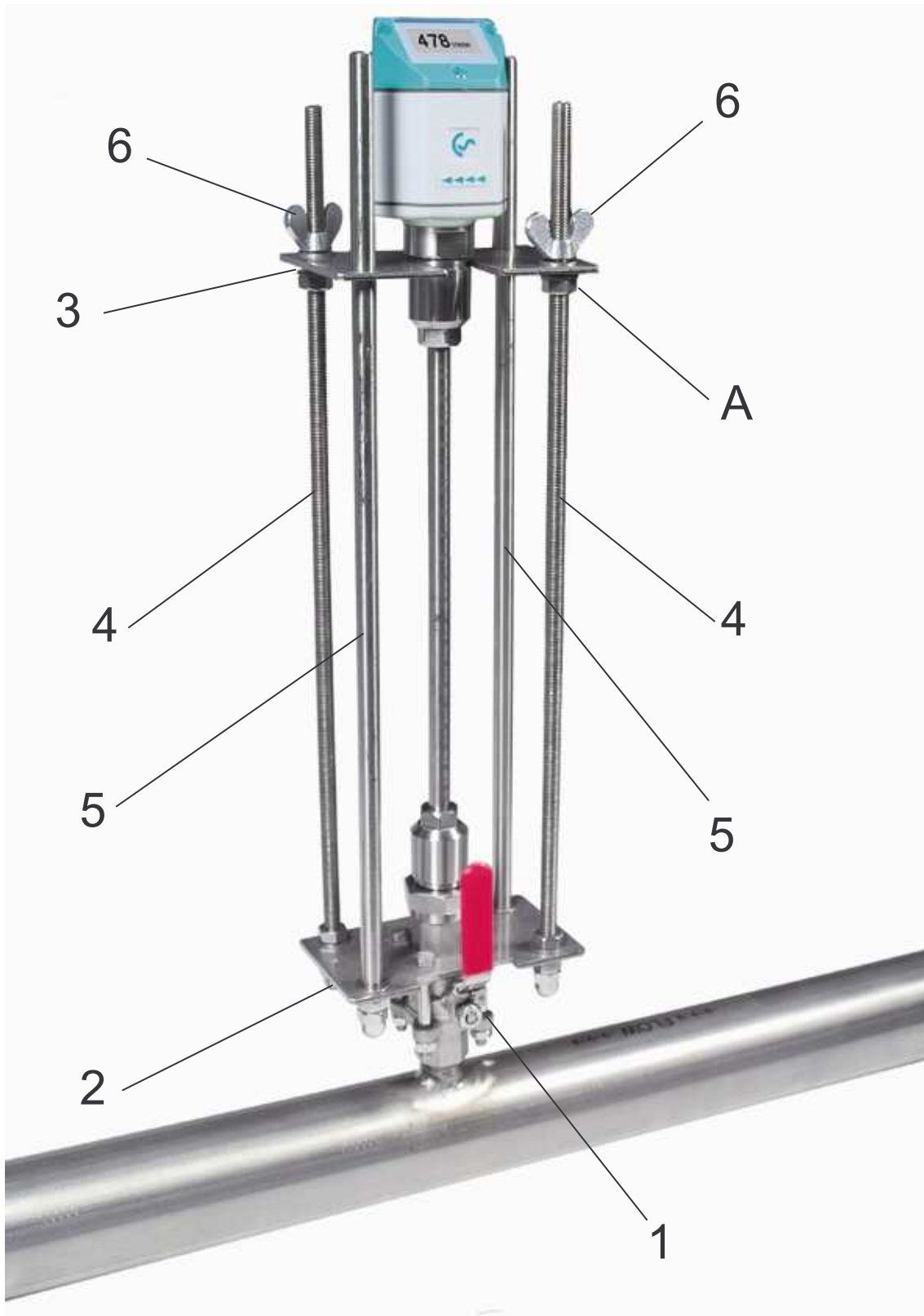
- Insert the upper plate (3) which has not been fixed yet with its notch into the slot below the sensor head.
- Connect the flexible mounting thread of the sensor VA 300/VA 400 gas-tightly to the ball valve.
Attention: Sensor tip is not allowed to touch the ball of the ball valve.
- Adjust the wing nuts (6) that way that the upper plate is secured upwards .
- Adjust the counter nuts (A) as stop position of the upper plate for the operating position of the sensor (typically in the middle of the pipe).

INSTALLATION OF THE SENSOR

- After opening the ball valve please insert the sensor into the pipeline by permanently screwing of the wing nuts.
- Upon reaching of the operation position of the upper plate please fix the device with the wing nuts and the counter nuts.
- Tighten the adapter sleeve of the sensor screwing according to the mounting instruction of VA 300/ VA 400.

REMOVAL OF THE SENSOR

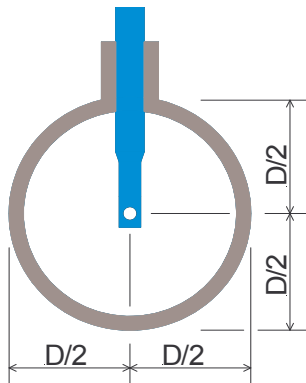
- Slightly release the adapter sleeve of the sensor screwing.
- Release constantly the wing nuts of the high pressure rig. If there is a sufficient operating pressure the sensor will be pressed back by the medium through the ball valve as far as it will go into the sensor screwing.
- Close ball valve carefully.
- Before removal of the sensor from the device please screw the wing nuts at least by the thread length of the sensor screwing.
- For safety reasons please close the outlet of the ball valve with a G1/2" stopper.



Position	Quantity	Designation of the itme
1	1	Ball valve G1/2“, threepart, made of stainless-steel
2	1	Fastening plate
3	1	Upper plate
4	2	Thread bars
5	2	Guide bars
6	2	Wing nuts
		Fastening nuts and washers A = Counter nuts

ALIGNMENT OF THE SENSOR
Safety information must be observed.

Assembly is carried out by inserting the connection thread (1/2“ thread, SW 27) into the connection piece of the ball valve.



The sensor is then inserted to the required immersion depth and aligned according to the direction of air flow as described on page 3. A depth scale engraved on the probe tube, a flow alignment arrow and an aligning device will be of help to you.

Once the sensor has been aligned, the adapter sleeve must be tightened with the stipulated torque (20 - 30 Nm - SW 17).

Attention: Alignment of the sensor must not be modified when tightening the connection thread and adapter sleeve. In this case please check the immersion depth and alignment again and correct if necessary. The angular deviation should not be greater than $\pm 2^\circ$ in relation to the ideal position as otherwise the measuring accuracy will decrease.

An undisturbed flow progression is achieved if the sections in front of the sensor (inlet) and behind the sensor (outlet) are sufficiently long, absolutely straight and without any obstructions such as edges, seams, curves etc.

For more details please see the instruction manuals of the consumption sensors.

ORDERING DATA

Order no.	Description
0530 1105	High pressure rig, recommended for measurements from 10 to 50 bar
3300 0080	Consumption sensor VA 300-80, up to 80 m/s, lengths 120, 160, 220 mm, freely selectable depending on the pipe diameter
3300 0120	Consumption sensor VA 300-120, up to 120 m/s, lengths 120, 160, 220 mm, freely selectable depending on the pipe diameter
0695 4001	VA 400 consumption sensor without display including plug
	Options for VA 400
Z695 4000	Display for VA 400
Z695 4003	Max. version 160 m/s
Z695 4002	High Speed version 230 m/s
ZSL 0120	Special length 120 mm
ZSL 0160	Special length 160 mm
ZSL 0220	Special length 220 mm
ZSL 0300	Special length 300 mm
ZSL 0400	Special length 400 mm
Z553 0104	Connection cable for VA/FA Series 400, 5 m, with M12-plug
Z553 0105	Connection cable for VA/FA Series 400, 10 m, with M12-plug
0500 3000	Multifunction measuring instrument DS 300
	Options DS 300
Z500 3001	Integrated data logger for 1 000 000 measured values
Z500 3002	Interface RS 485 for connection of up to 32 DS 300 instruments
Z500 3003	2 analogue inputs for connection of further sensors (mA, mV, Pt100, NiCrNi)
3200 0001	5 point precision calibration with ISO certificate
0554 2005	CS configuration software for parametrization incl. USB interface
0554 2005	PC connection set including configuration software SFA 300 for parametrization and CS Soft
0554 0108	Mains unit in wall housing 230 VAC/24 VDC
on request	external display, wall-mountable

Sales office SOUTH Germany

Zindelsteiner Str. 15
D-78052 Villingen-Schwenningen

Phone +49 (0) 7705 97 89 9-0
Fax +49 (0) 7705 97 89 9-20

info@cs-instruments.com
www.cs-instruments.com

Sales office NORTH Germany

Am Oxer 28c
D-24955 Harrislee

Phone +49 (0) 461 700 20 25
Fax +49 (0) 461 700 20 26

info@cs-instruments.com
www.cs-instruments.com