

Instruction Manual
Spot Drilling Collar
For the later setting of a measuring point



Contact

Dear customer,

Thank you very much for deciding in favour of the spot drilling collar. Please read this installation and operation manual carefully before mounting and initiating the device and follow our advice. A riskless operation and a correct functioning of the spot drilling collar are only guaranteed in case of careful observation of the described instructions and notes.

1 Contact

Advice

Sales

After-sales service

Seminars

Sales Office North

CS Instruments GmbH

Am Oxer 28c

24955 Harrislee

Phone: +49 (0) 461 700 20 25

Fax: +49 (0) 461 700 20 26

info@cs-instruments.com

www.cs-instruments.com

Sales Office South

CS Instruments GmbH

Zindelsteiner Str. 15

78052 Villingen-Schwenningen

Phone: +49 (0) 7705 978 99-0

Fax +49 (0) 7705 978 99-20

info@cs-instruments.com

www.cs-instruments.com

1	Contact	2
2	Safety instructions	4
3	Field of application	5
4	Preparation of the installation.....	5
5	Installation	5
6	Drilling by means of the CS drilling jig	7
7	Technical Data	7
8	Delivery range	8

2 Safety instructions



Please check whether this manual corresponds with the instruments type.

Please observe all notes indicated in this instruction manual. It contains essential information which have to be observed during installation, operation and maintenance. Therefore this instruction manual has to be read categorically by the technician as well as by the responsible user / qualified personnel before installation, initiation and maintenance.

This instruction manual has to be available at the operation site of the spot drilling collar at any time.

Regional respectively national regulations have to be observed in addition to this instruction manual if necessary.

In case of any obscurities or questions with regards to this manual or to the collar please contact CS Instruments GmbH.



Warning !

Compressed air !

Contact with quickly or abruptly escaping compressed air or bursting parts of the system may cause severe injuries or death.

Measures:

- Do not exceed the maximum operation pressure (see type label)!
- Only use pressure-tight installation material!
- Avoid persons or objects being hit by escaping compressed air!



Warning !

Inadmissible operating parameters!

Undercutting or exceeding of limit values may cause danger to persons and material and may lead to functional and operational disturbances.

Measures:

- Do not exceed the maximum operation pressure (see type label)!
- Make sure that the spot drilling collar is only operated within the admissible limit values indicated on the type label.
- Careful observation of the performance data of the collar in connection with the application.

Further safety instructions:

- Also the applicable national regulations and safety instructions have to be observed during installation and operation.



Attention !

Leakages at the connection pipe / clamp

Due to faulty installation there might be an escape of compressed air at the connection pipe / clamp.

3 Field of application

- The spot drilling collar with ball valve is designed for the later setting up of a measuring site at pressurized compressed air pipes are made from steel.

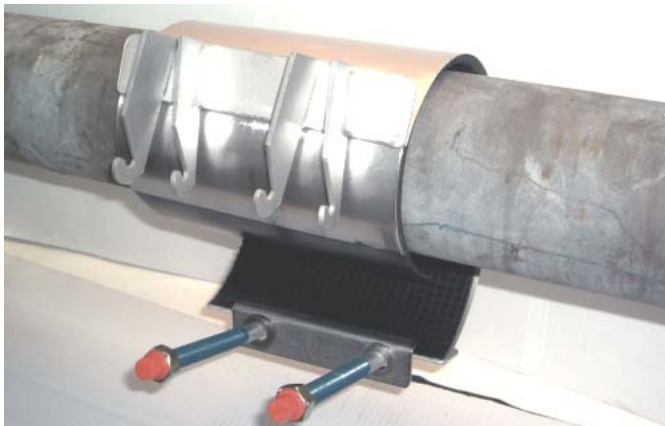


Example:
Volume flow and
consumption measurement

4 Preparation of the installation

- Free the pipe from soiling in the application area.
In spite of the Teflon-coated bolts and the passivated screw nuts the sealing has to be kept as clean as possible in order to avoid a jamming of the nuts and bolts.
- Please make sure that the outer pipe diameter corresponds with the indicated clamping range of the sealed area.
- The rubber collar and the pipe should be tempered with soap water. Mixture ratio (1: 5 soap : water)

5 Installation



Step 1

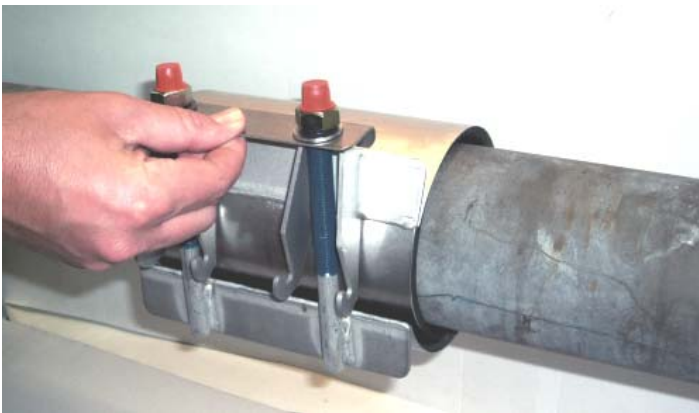
Turn back the nuts to the thread protection caps (do not twist them totally off).
Lift up the stainless steel bridge and bend apart the collar. Place the spot drilling collar in that way that the ball valve is at the correct position for the later mounting of the measuring sensor.

Installation



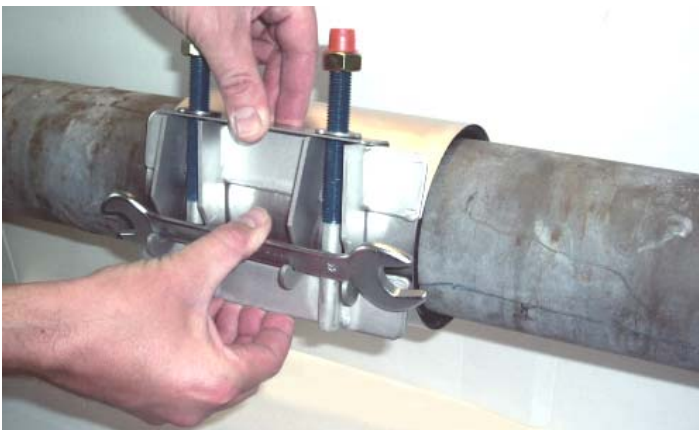
Step 2

Hook the bridge into the gap at the side bars.



Step 3

Then lift the bridge a little bit higher so that the bridge is seated on the ends of the side bars.



Step 4

Take an open-end wrench and put it into the gap of the side bars. Take the open-end wrench and the lower bar of the collar at the same time and tighten them. You may now easily lift up the bridge to its final position. The nuts can now easily be fastened by hand. Please observe that the rubber collar is placed cleanly onto the pipe.

Step 5

Remove the open-end wrench from the gap and fasten the nuts evenly hand-tight. Now tighten the nuts evenly by means of a torque wrench.

Tightening torque of the nuts:

M12 to M14 70 Nm

M16 120 Nm

Fasten the nuts with the same tightening torque after a waiting period of about 15 -20 minutes.

6 Drilling by means of the CS drilling jig

Please observe the instruction manual for the drilling jig

- Do not exceed the max. pressure of 10 bar
- The drilling in the compressed air line should be carried out only by qualified staff
- Observe safety regulations for works at compressed lines
- The spot drilling collar has to be installed pressure-tightly
- Check the connection collar/pipe categorically before drilling. We recommend a pressure test. For this purpose please open the ball valve and charge it with the line pressure.
- A leakage check can be carried out quickly and easily by means of the CS leak detector LD 300.
- Use a slowly running drilling machine with the corresponding safety equipment.



Drilling with CS drilling jig
Order no. 0530 1108

7 Technical Data

Collars are usable for:	Steel pipes with diameters from DN 25 to DN 200 (available diameters please see table on page 8)
Max. operation pressure	10 bar
Max. temperature	-5 °C to 50°C
Ball valve	I/A, 1/2", DN15
Material ball valve	1,4408, PN40
Material collar	1,4301
Material rubber collar	NBR

8 Delivery range

Spot Drilling Collar incl. ball valve ½", I/O	
For pipe outer diameters from – to	Order no.
026 – 030 mm	0500 0447
032 – 036 mm	0500 0446
036 – 040 mm	0500 0448
040 – 044 mm	0500 0449
048 – 052 mm	0500 0450
050 – 057 mm	0500 0451
056 – 063 mm	0500 0452
058 – 065 mm	0500 0453
067 – 074 mm	0500 0454
073 – 080 mm	0500 0455
076 – 083 mm	0500 0456
082 – 089 mm	0500 0457
087 – 094 mm	0500 0458
091 – 098 mm	0500 0459
095 – 102 mm	0500 0460
102 – 112 mm	0500 0461
108 – 118 mm	0500 0462
118 – 128 mm	0500 0463
125 – 135 mm	0500 0464
132 – 142 mm	0500 0465
138 – 148 mm	0500 0466
145 – 155 mm	0500 0467
151 – 161 mm	0500 0468
159 – 170 mm	0500 0469
167 – 177 mm	0500 0470
176 – 186 mm	0500 0471
193 – 203 mm	0500 0472
200 – 210 mm	0500 0473
209 – 219 mm	0500 0474
Other diameters on request	

Drilling jig	
Drilling jig incl. drill Ø13	0530 1108

Leak detector	
LD 300 leak detector	0601 0103
Telescope bar 3 x 120 cm	0530 0102

B			
Ball valve	7		
C			
Collars usable for.....	7		
Connection collar/pipe	7		
Contact	2		
D			
Delivery range	8		
F			
Faulty installation	4		
Field of application.....	5		
I			
Installation	5		
Installation steps.....	5		
L			
Leak detector LD 300	7		
M			
Material ball valve.....	7		
Material collar	7		
		Material rubber collar	7
		Max. operation pressure	7
		Max. temperature.....	7
		O	
		Open-end wrench	6
		Order no.....	8
		P	
		Pipe outer diameters.....	8
		Preparation of the installation	5
		Pressure test.....	7
		S	
		Safety instructions.....	4
		Soiling	5
		T	
		Technical data.....	7
		Tightening torque	6
		W	
		Warning compressed air	4
		Warning inadmissible operating parameters ..	4



Technical changes and errors excepted.
Spot_drilling_collar_manual_EN_V2_01_2009