

Platinum cured silicone hose designed for Biopharmaceutical applications



- Fully traceable materials
- Free from peroxyde
- Suitable for CIP and SIP
- No axisymmetric contraction of the union to the hose



Type BBS-4S
Hose union



Type BBS-05
Quick connect



Type BBS-10
Ball check valve



Type 2103
Diaphragm valve



Type 8221
Conductivity sensor



Type 8650
Process Automation

The hose is made from platinum cured silicone and meets FDA requirements and has USP VI approval. The production is based on exceptional quality standards that enable the use of the hose in combination with the type BBS-04 reusable connections and is available in all standard connection and sizes required in hygienic processing.

The simplicity of the reusable connection system gives total unlimited flexibility in the field and supports truly cost effective maintenance.

Applications

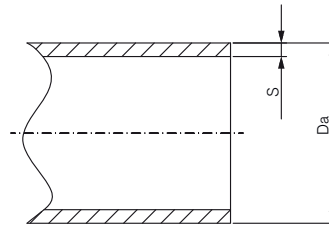
- Biotechnology
- Pharmaceutical
- Chemical industry
- Dairy
- Food
- Cosmetic

Technical data

Available standard sizes	ISO DN06 up to DN50 SMS DN06 up to DN50 BS-OD DN 1/4" up to DN2" DIN DN04 up to DN50
Hose type	Type CL – Standard hose without reinforcement Type MD – Glass based silk reinforced Type MA – Aramide reinforced Type MB – Double aramide reinforced Type MR – Stainless steel reinforced
Surface quality	Internal surface $\leq 0.2Ra$
Operating / Burst pressure	See technical specification
Process temperature	See technical specification
Media	Gases or liquids
Ports/Connection	See data sheet for BBS-4S hose union
Certification	USDA, FDA, USP Class VI, BGA XV.

Dimensions [mm]

Standard pipe dimensions



Dimension Da X S	ISO 4200	DIN 11850	BD-OD	SMS
6.00 x 1.00		DN04		
6.35 x 0.89			DN1/4"	
8.00 x 1.00		DN06		DN06
9.53 x 0.89			DN3/8"	
10.00 x 1.00		DN08		DN08
12.00 x 1.00		DN10		DN10
12.70 x 1.65			DN1/2"	
13.00 x 1.50		DN10		
13.50 x 1.60	DN08			
17.20 x 1.60	DN10			
18.00 x 1.00				DN15
19.00 x 1.50		DN15		
19.05 x 1.65			DN3/4"	
21.30 x 1.60	DN15			
22.00 x 1.00				DN20
23.00 x 1.50		DN20		
25.00 x 1.20				DN25
25.40 x 1.65			DN1"	
26.90 x 1.60	DN20			
29.00 x 1.50		DN25		
32.00 x 1.20				DN32
33.70 x 2.00	DN25			
35.00 x 1.50		DN32		
38.00 x 1.20				DN40
38.10 x 1.65			DN1 1/2"	
41.00 x 1.50		DN40		
42.40 x 2.00	DN32			
48.30 x 2.00	DN40			
50.80 x 1.65			DN2"	
51.00 x 1.20				DN50
53.00 x 1.50		DN50		
60.30 x 2.00	DN50			
63.50 x 1.60				DN65
63.50 x 1.65			DN2 1/2"	
70.00 x 2.00		DN65		
76.10 x 1.60				DN80
76.10 x 2.00	DN65			
76.20 x 1.65			DN3"	
85.00 x 2.00		DN80		
88.90 x 2.30	DN80			
101.60 x 2.00				DN100
101.60 x 2.11			DN4"	
104.00 x 2.00		DN100		
114.30 x 2.30	DN100			
129.00 x 2.00		DN125		
139.70 x 2.60	DN125			
152.40 x 2.77			DN6"	
154.00 x 2.00		DN150		
168.30 x 2.60	DN150			

Dimensions [mm]

Hose type CL – without reinforcement



Size DIN	Size ISO	Size BS-OD	Size SMS	Inner Ø	Min. Bend Radius	Max. operating pressure (20 °C)	Max. operating pressure (150 °C)	Max. material temp.	Min. burst pressure	Vacuum Resistance	Item no.
DN04		DN1/4"		5.0 mm	30 mm	Ambient	Ambient	160 °C	4.0 bar	No collapse	BBS-04-00.R04.00.CL.0 (730 131)
DN06			DN06	6.0 mm	50 mm	Ambient	Ambient	160 °C	4.0 bar	No collapse	BBS-04-00.R06.00.CL.0 (730 137)
DN08		DN3/8"	DN08	8,0 mm	60 mm	Ambient	Ambient	160 °C	3.0 bar	No collapse	BBS-04-00.R08.00.CL.0 (730 143)
DN10	DN08		DN10	10.0 mm	70 mm	Ambient	Ambient	160 °C	3.0 bar	No collapse	BBS-04-00.R10.00.CL.0 (730 148)
DN15	DN10	DN1/2"	DN15	12.7 mm	80 mm	Ambient	Ambient	160 °C	2.0 bar	No collapse	BBS-04-00.S10.00.CL.0 (730 156)

Other sizes on request

Hose type MD – glass silk reinforced



Size DIN	Size ISO	Size BS-OD	Size SMS	Inner Ø	Min. Bend Radius	Max. operating pressure (20 °C)	Max. operating pressure (150 °C)	Max. material temp.	Min. burst pressure	Vacuum Resistance	Item no.
DN04		DN1/4"		5.0 mm	30 mm	16.0 bar	10.0 bar	160 °C	32.0 bar	No collapse	BBS-04-00.R04.00.MD.0 (730 133)
DN06			DN06	6.0 mm	50 mm	16.0 bar	10.0 bar	160 °C	28.0 bar	No collapse	BBS-04-00.R06.00.MD.0 (730 139)
DN08		DN3/8"	DN08	8.0 mm	60 mm	14.0 bar	8.5 bar	160 °C	26.0 bar	No collapse	BBS-04-00.R08.00.MD.0 (730 145)
DN10	DN08		DN10	10.0 mm	70 mm	12.0 bar	8.0 bar	160 °C	24.0 bar	No collapse	BBS-04-00.R10.00.MD.0 (730 152)
DN15	DN10	DN1/2"	DN15	12.7 mm	80 mm	10.0 bar	6.5 bar	160 °C	20.0 bar	650 mm/HG	BBS-04-00.S10.00.MD.0 (730 160)
DN20	DN15	DN3/8"	DN20	19.0 mm	150 mm	8.0 bar	5.0 bar	160 °C	18.0 bar	580 mm/HG	BBS-04-00.S15.00.MD.0 (730 168)
DN25	DN20	DN1"	DN25	25.4 mm	180 mm	6.0 bar	3.5 bar	160 °C	15.0 bar	400 mm/HG	BBS-04-00.S20.00.MD.0 (730 174)
DN32	DN25		DN32	32.0 mm	220 mm	4.0 bar	2.5 bar	160 °C	12.0 bar	180 mm/HG	BBS-04-00.S25.00.MD.0 (730 180)

Other sizes on request

Note: The item no. refers to 1m length of hose.
 The hose is available according to the size in 10 m, 25 m or 50 m rolls.
 Minimum order quantity, please check with you local sales team for the corresponding length.
 A proper gap-free connection feature can only be given in combination with BBS sterile hose union.

Dimensions [mm]

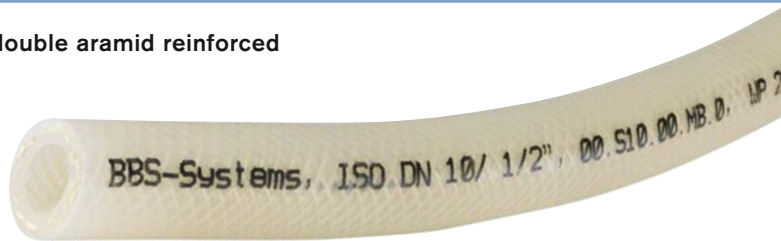
Hose type MA – aramid reinforced



Size DIN	Size ISO	Size BS-OD	Size SMS	Inner Ø	Min. Bend Radius	Max. operating pressure (20 °C)	Max. operating pressure (150 °C)	Max. material temp.	Min. burst pressure	Vacuum Resistance	Item no.
	DN08 DN10		DN10	10.0 mm	70 mm	16.0 bar	10.0 bar	160 °C	36.0 bar	No collapse	BBS-04-00.R10.00.MA.0 (730 150)
DN15	DN10	DN1/2"	DN15	12.7 mm	80 mm	16.0 bar	10.0 bar	160 °C	30.0 bar	650 mm/HG	BBS-04-00.S10.00.MA.0 (730 158)
DN20	DN15	DN3/4"	DN20	19.0 mm	150 mm	12.0 bar	8.0 bar	160 °C	24.0 bar	580 mm/HG	BBS-04-00.S15.00.MA.0 (730 164)
DN25	DN20	DN1"	DN25	25.4 mm	180 mm	10.0 bar	6.5 bar	160 °C	20.0 bar	400 mm/HG	BBS-04-00.S20.00.MA.0 (730 172)
DN32	DN25		DN32	32.0 mm	220 mm	8.0 bar	5.0 bar	160 °C	18.0 bar	180 mm/HG	BBS-04-00.S25.00.MA.0 (730 178)
DN40	DN32	DN 1 1/2"	DN40	38,0 mm	260 mm	5.0 bar	3.0 bar	160 °C	12.0 bar	180 mm/HG	BBS-04-00.S32.00.MA.0 (730 186)
	DN40	DN2"		45,0 mm	350 mm	5.0 bar	3.0 bar	160 °C	12.0 bar	120 mm/HG	BBS-04-00.S40.00.MA.0 (730 193)
DN50	DN50		DN50	55.0 mm	450 mm	5.0 bar	3.0 bar	160 °C	12.0 bar	120 mm/HG	BBS-04-00.S50.00.MA.0 (730 199)

Other sizes on request

Hose type MB – double aramid reinforced



Size DIN	Size ISO	Size BS-OD	Size SMS	Inner Ø	Min. Bend Radius	Max. operating pressure (20 °C)	Max. operating pressure (150 °C)	Max. material temp.	Min. burst pressure	Vacuum Resistance	Item no.
DN15	DN10	DN1/2"	DN15	12.7 mm	90 mm	25.0 bar	16.0 bar	160 °C	48.0 bar	No collapse	BBS-04-00.S10.00.MB.0 (743 018)
DN20	DN15	DN3/4"	DN20	19.0 mm	150 mm	20.0 bar	12.5 bar	160 °C	48.0 bar	No collapse	BBS-04-00.S15.00.MB.0 (743 019)
DN25	DN20	DN1"	DN25	25.4 mm	180 mm	15.0 bar	10.0 bar	160 °C	32.0 bar	No collapse	BBS-04-00.S20.00.MB.0 (743 020)
DN32	DN25		DN32	32.0 mm	220 mm	13.0 bar	8.5 bar	160 °C	30.0 bar	No collapse	BBS-04-00.S25.00.MB.0 (743 021)
DN40	DN32	DN 1 1/2"		38.0 mm	260 mm	10.0 bar	6.5 bar	160 °C	20.0 bar	No collapse	BBS-04-00.S32.00.MB.0 (743 022)
	DN40	DN2"		45.0 mm	350 mm	10.0 bar	6.5 bar	160 °C	20.0 bar	No collapse	BBS-04-00.S40.00.MB.0 (743 023)
DN50	DN50			55.0 mm	450 mm	8.0 bar	5.0 bar	160 °C	20.0 bar	No collapse	BBS-04-00.S50.00.MB.0 (743 024)

Other sizes on request

Note: The item no. refers to 1m length of hose.
The hose is available according to the size in 10 m, 25 m or 50 m rolls.
Minimum order quantity, please check with you local sales team for the corresponding length.
A proper gap-free connection feature can only be given in combination with BBS sterile hose union.

Dimensions [mm]

Hose type MR – stainless steel reinforced



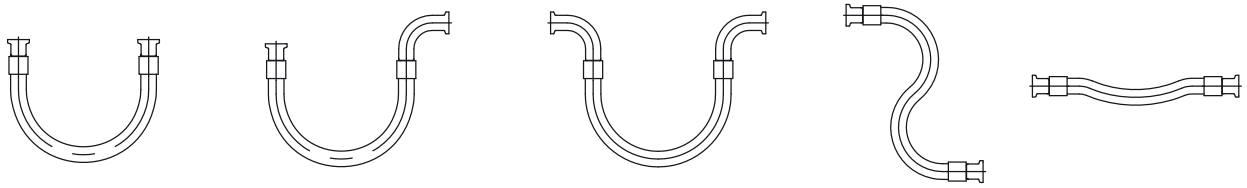
Size DIN	Size ISO	Size BS-OD	Size SMS	ID in mm	Min. Bend Radius	Max. operating pressure (20 °C)	Max. operating pressure (150 °C)	Max. material temp.	Min. burst pressure	Vacuum Resistance	Item no.
DN10	DN08		DN10	10.0 mm	70 mm	16.0 bar	11.0 bar	160 °C	45.0 bar	No collapse	BBS-04-00.R10.00.MR.0 (730 154)
DN15	DN10	DN1/2"	DN15	12.7 mm	90 mm	16.0 bar	11.0 bar	160 °C	30.0 bar	650 mm/HG	BBS-04-00.S10.00.MR.0 (730 162)
DN20	DN15	DN3/4"	DN20	19.0 mm	150 mm	12.0 bar	7.6 bar	160 °C	24.0 bar	580 mm/HG	BBS-04-00.S15.00.MR.0 (730 170)
DN25	DN20	DN1"	DN25	25.4 mm	180 mm	10.0 bar	6.0 bar	160 °C	20.0 bar	400 mm/HG	BBS-04-00.S20.00.MR.0 (730 176)
DN32	DN25		DN32	32.0 mm	220 mm	8.0 bar	5.4 bar	160 °C	18.0 bar	180 mm/HG	BBS-04-00.S25.00.MR.0 (730 182)
DN40	DN32	DN 1 1/2"		38.0 mm	260 mm	8.0 bar	2.5 bar	160 °C	14.0 bar	180 mm/HG	BBS-04-00.S32.00.MR.0 (730 189)
	DN40	DN2"		45.0 mm	350 mm	5.0 bar	2.5 bar	160 °C	12.0 bar	120 mm/HG	BBS-04-00.S40.00.MR.0 (730 195)
DN50	DN50			55.0 mm	450 mm	5.0 bar	2.5 bar	160 °C	10.0 bar	120 mm/HG	BBS-04-00.S50.00.MR.0 (730 201)

Other sizes on request

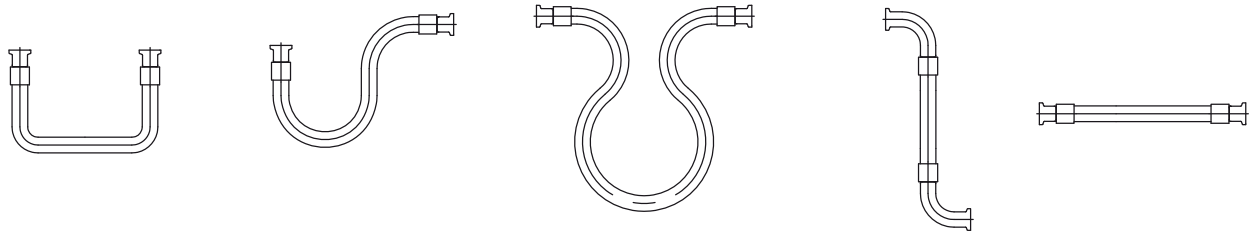
Note: The item no. refers to 1m length of hose.
 The hose is available according to the size in 10 m, 25 m or 50 m rolls.
 Minimum order quantity, please check with you local sales team for the corresponding length.
 A proper gap-free connection feature can only be given in combination with BBS sterile hose union.

General information about silicone hose

Recommended installation



Not recommended installation



Temperatures

The operating temperatures listed in this data sheet are valid only for the flow medium and provide an area, within which according to experience a more proper service life is expected. If higher requirements are needed then the maximum life cycle will reduce. Temperatures are specified as limit values, which guarantee sufficient flexibility of the hose. If the ambient temperature differs from 20°C it is essential to consider this one when determining the maximum effective operating temperature. The specified pressure indications are valid – where nothing else is mentioned – also only at 20°C. Correction value should be calculated for higher pressure.

Steam

The BBS system silicone hoses may be sterilized by steam at a temperature of 135°C and a pressure of 3.5 bar. We recommend a maximum of 1 ½ hours at a temperature of 135°C. At least 1 hour (at room temperature) should be passed to achieve an hose stabilization between several sterilization processes. Steam affects the mechanical and volumetric properties of the silicone elastomer. We recommend a hose inspection after 150 hours of steam exposure.

Pressure

If the temperature of the medium differs from the room temperature, the operating pressures has to be reduce according to the information. If no specific information is made then correction factors may be used as guidelines. It is important to take care of the ambient temperature, which has a significant influence on the pressure resistance, provided that they substantially differ from room temperature (20°C). BBS system hoses are not suitable for pulsating pressure application. Likewise, continuous steam applications are excluded.

Contrary to piping silicone hose is a flexible, elastic material which accommodates a respective reinforcement material used to achieve certain pressure resistance. Such elastic material is affected by ageing and therefore restricted in life cycle through a natural material fatigue. Therefore hoses are always to be inspected at regular intervals. If necessary the hoses have to be changed at each maintenance service.