

A member of NEUMO Ehrenberg Group



NEUMO ASEPTIC TECHNOLOGY

STAINLESS SOLUTIONS FOR LIFE

NEUMO BioControl®

Modular concept with almost unlimited adaptation opportunities





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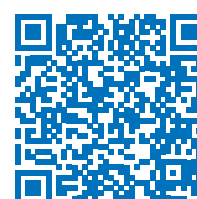
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[Catalogue Download \(PDF\)](#)

Subject to technical modifications



Components, equipment and tubes - made of stainless steel and special alloys

NEUMO in Knittlingen was founded by Senator Henry J. Ehrenberg in 1947. The young enterprise quickly became a leading supplier of components for the food processing industry.

NEUMO is the parent company of an owner-managed group of companies with more than 1.900 employees. Today, NEUMO is the leader in technology regarding components, vessels, assemblies and apparatuses, made of stainless steel and special alloys for the fluid handling, used in the significant production processes of the pharmaceutical industry, biotechnology, chemical industry and semiconductor technology.

NEUMO – Product Innovations for Tomorrow's Markets

When biosciences really started to take off in the 1970s and the triumph of biotechnology appeared to be inevitable, NEUMO made an important strategic decision: to shift its focus on aseptic technology. A successful move as it turned out, since today the majority of all biopharmaceuticals is made in plants

equipped with components, apparatuses and tubes supplied by the NEUMO Ehrenberg Group.

The production site in Knittlingen is specialised in the development and production of sterile applications, pooling its expertise in the fabrication of high-alloy stainless steels, corrosion resistant duplex steels and nickel-base alloys.

The product range includes special tubing grades, couplings, all kinds of fittings and equipment as well as fabrication to drawing. Furthermore, NEUMO is a significant OEM manufacturer of pharmaceutical vessels and fermenters and a major supplier of equipment such as aseptic heat exchangers.

NEUMO has taken over technological leadership with innovative and unique solutions such as elastomer-free coupling as well as the CleanLip technology. These innovations led for example to the aseptic couplings which have gone from strength to strength in red biotechnology, marketed under the brand names BioConnect®, ConnectS® and BioControl®.





NEUMO BioControl®

Modular concept with almost unlimited adaptation opportunities

Advantages NEUMO BioControl®

Constructive Benefits

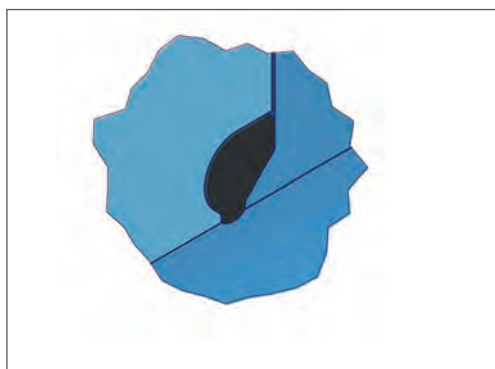
- one technology, 2 housing types (inline- and angle housing)
- block flanges for vessel installation
- high flexibility due to standardised modular concept
- more than 40 producers of measuring and analysis instruments offer their devices with NEUMO BioControl® connections
- innovative, elastomer-free solution available (BioControl® CS)
- cGMP compliant design
- no dome, virtually no dead space

Technical Benefits

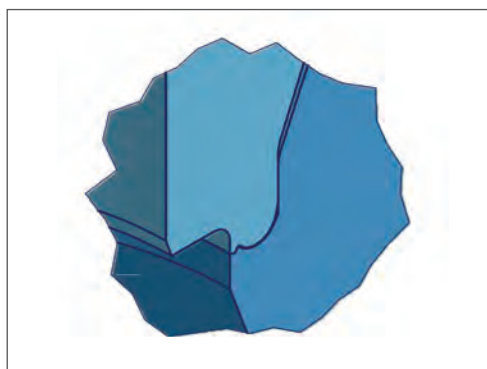
- standardised connections allows maximum flexibility, for sight glass installation as well as adaptation of instruments
- minimum exposure of the medium to the elastomer
- no dome like for example with tee-pieces for instruments or Ingold connections
 - optimal cleanability (CIP / SIP)
 - controlled elastomer pressing
 - no elastomer return

Economic Benefits

- reduces maintenance costs and downtimes
- can reduce several conventional interfaces
- high potential in view of total cost of ownership
- minimises the risks of process disturbances



BioControl®



BioControl® CS



BioControl® – Inline Housing G25



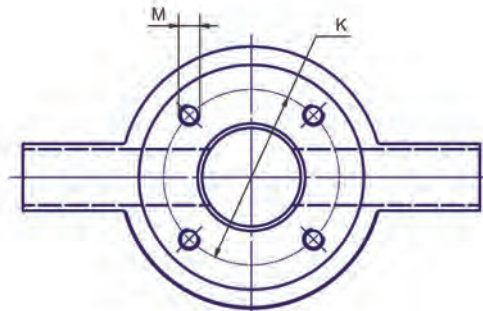
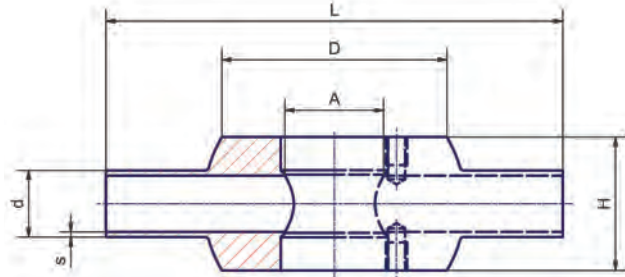
BioControl® – Inline Housing G50 – G65

Technical Data

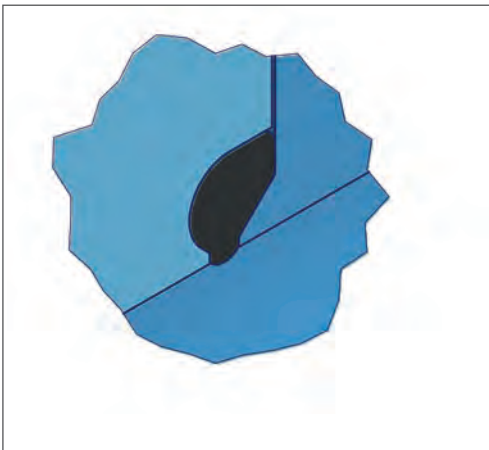
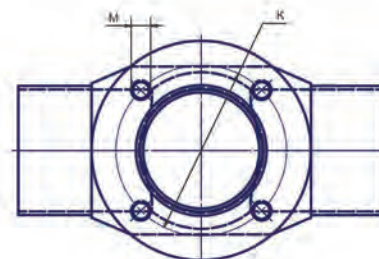
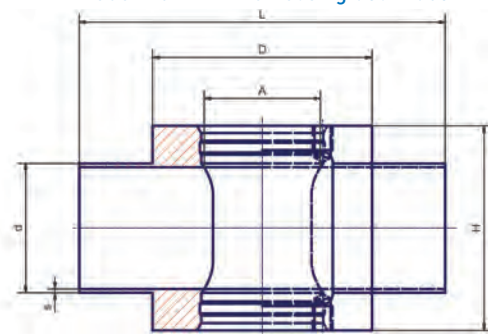
Material*	1.4435 / 316L
Surface finish (product contacted area)*	Ra < 0,8 µm electropolished
Max. permissible pressure	PN16
Max. operating temperature	-10°C / +200°C
Delta ferrite content (raw material)*	< 1%
Process connection	G25, G50 and G65
Connections*	Orbital welding ends in accordance with DIN11866 line A (DIN), line B (ISO), line C (ASME-BPE)
Approvals	TÜV-component testing

* Alternative material grades (such as 2.4602, 2.4605, 1.4539, AL-6XN®, titanium, etc.) as well as different connections, surface qualities and delta ferrite values are available on request.

BioControl® – Inline Housing G25



BioControl® – Inline Housing G50 – G65



Elastomer-free solution also available (BioControl® CS) - please contact us!



BioControl® Inline Housing G25 / G50 / G65, tube dimensions in accordance with DIN11866 line A

Process Connection	DN	d	s	A	D	L	H	K	M
G25	4	6	1	28,1	64	130	26	50	M6
G25	6	8	1	28,1	64	130	28	50	M6
G25	8	10	1	28,1	64	130	30	50	M6
G25	10	13	1,5	28,1	64	130	32	50	M6
G25	15	19	1,5	28,1	64	130	38	50	M6
G25	20	23	1,5	28,1	64	130	42	50	M6
G50	25	29	1,5	47,6	90	150	60	70	M8
G50	32	35	1,5	47,6	90	150	66	70	M8
G50	40	41	1,5	47,6	90	150	72	70	M8
G50	50	53	1,5	47,6	90	150	84	70	M8
G50	65	70	2	47,6	90	170	100	70	M8
G50	80	85	2	47,6	90	170	115	70	M8
G50	100	104	2	47,6	90	170	134	70	M8
G65	40	41	1,5	65,6	120	180	72	95	M10
G65	50	53	1,5	65,6	120	180	84	95	M10
G65	65	70	2	65,6	120	200	100	95	M10
G65	80	85	2	65,6	120	200	115	95	M10
G65	100	104	2	65,6	120	200	134	95	M10

BioControl® Inline Housing G25 / G50 / G65, tube dimensions in accordance with DIN11866 line B

Process Connection	DN	d	s	A	D	L	H	K	M
G25	6	10,2	1,6	28,1	64	130	26	50	M6
G25	8	13,5	1,6	28,1	64	130	32,3	50	M6
G25	10	17,2	1,6	28,1	64	130	36	50	M6
G25	15	21,3	1,6	28,1	64	130	40,1	50	M6
G25	20	26,9	1,6	28,1	64	130	45,7	50	M6
G50	25	33,7	2	47,6	90	150	63,7	70	M8
G50	32	42,4	2	47,6	90	150	72,4	70	M8
G50	40	48,3	2	47,6	90	150	78,3	70	M8
G50	50	60,3	2	47,6	90	150	90,3	70	M8
G50	65	76,1	2	47,6	90	170	106,1	70	M8
G50	80	88,9	2,3	47,6	90	170	118,3	70	M8
G50	100	114,3	2,3	47,6	90	170	143,7	70	M8
G65	40	48,3	2	65,6	120	180	78,3	95	M10
G65	50	60,3	2	65,6	120	180	90,3	95	M10
G65	65	76,1	2	65,6	120	200	106,1	95	M10
G65	80	88,9	2,3	65,6	120	200	118,3	95	M10
G65	100	114,3	2,3	65,6	120	200	143,7	95	M10

BioControl® Inline Housing G25 / G50 / G65, tube dimensions in accordance with DIN11866 line C

Process Connection	DN	d	s	A	D	L	H	K	M
G25	1/4"	6,35	0,89	28,1	64	130	26,75	50	M6
G25	3/8"	9,53	0,89	28,1	64	130	29,75	50	M6
G25	1/2"	12,7	1,65	28,1	64	130	31,4	50	M6
G25	3/4"	19,05	1,65	28,1	64	130	37,75	50	M6
G25	1"	25,4	1,65	28,1	64	130	44,1	50	M6
G50	1"	25,4	1,65	47,6	90	150	56,1	70	M8
G50	1 1/2"	38,1	1,65	47,6	90	150	68,8	70	M8
G50	2"	50,8	1,65	47,6	90	150	81,5	70	M8
G50	2 1/2"	63,5	1,65	47,6	90	170	94,2	70	M8
G50	3"	76,2	1,65	47,6	90	170	106,9	70	M8
G50	4"	101,6	2,11	47,6	90	170	131,38	70	M8
G65	1 1/2"	38,1	1,65	65,6	120	180	68,8	95	M10
G65	2"	50,8	1,65	65,6	120	180	81,5	95	M10
G65	2 1/2"	63,5	1,65	65,6	120	200	94,2	95	M10
G65	3"	76,2	1,65	65,6	120	200	106,9	95	M10
G65	4"	101,6	2,11	65,6	120	200	131,38	95	M10



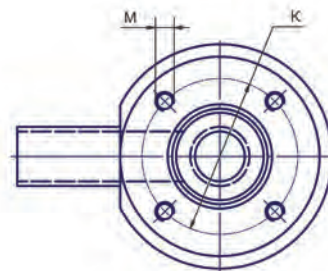
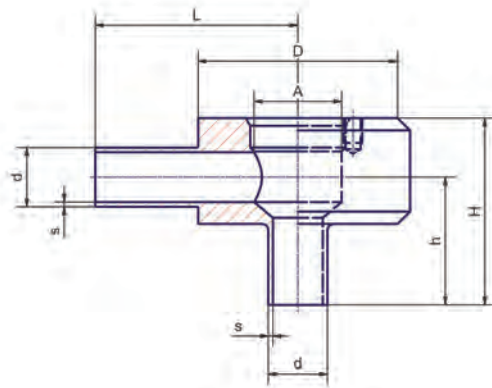
BioControl® – Angle Housing U25



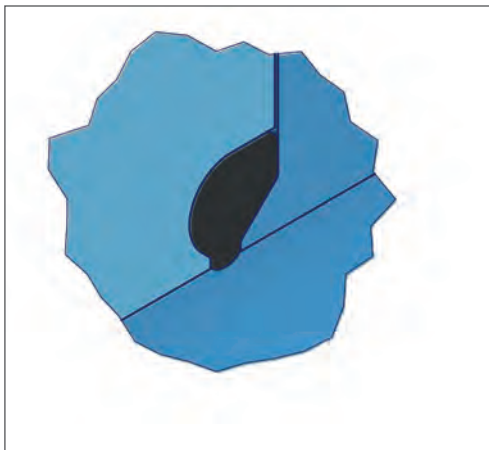
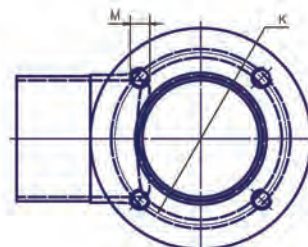
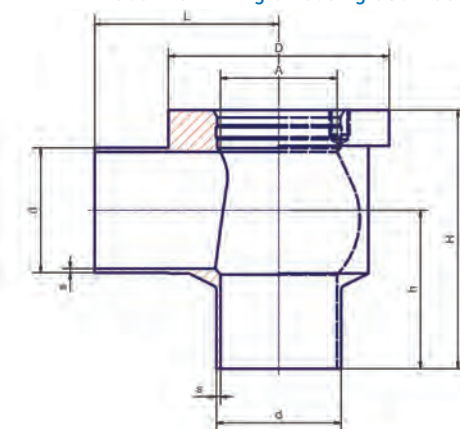
BioControl® – Angle Housing U50 –

Technical Data	
Material*	1.4435 / 316L
Surface finish (product contacted area)*	Ra < 0,8 µm electropolished
Max. permissible pressure	PN16
Max. operating temperature	-10°C / +200°C
Delta ferrite content (raw material)*	< 1%
Process connection	U25, U50 and U65
Connections*	Orbital welding ends in accordance with DIN11866 line A (DIN), line B (ISO), line C (ASME-BPE)
Approvals	TÜV-component testing
* Alternative material grades (such as 2.4602, 2.4605, 1.4539, AL-6XN®, titanium, etc.) as well as different connections, surface qualities and delta ferrite values are available on request.	

BioControl® – Angle Housing U25



BioControl® – Angle Housing U50 – U65



Elastomer-free solution also available (BioControl® CS) - please contact us!



BioControl® – Angle Housing U25 / U50 / U65, tube dimensions in accordance with DIN11866 line A

Process Connection	DN	d	s	A	D	L	H	h	K	M
U25	4	6	1	28,1	64	65	46	33	50	M6
U25	6	8	1	28,1	64	65	48	34	50	M6
U25	8	10	1	28,1	64	65	50	35	50	M6
U25	10	13	1,5	28,1	64	65	51	35	50	M6
U25	15	19	1,5	28,1	64	65	60	41	50	M6
U25	20	23	1,5	28,1	64	65	65	44	50	M6
U50	25	29	1,5	47,6	90	75	90	60	70	M8
U50	32	35	1,5	47,6	90	75	95	62	70	M8
U50	40	41	1,5	47,6	90	75	95	59	70	M8
U50	50	53	1,5	47,6	90	75	105	63	70	M8
U50	65	70	2	47,6	90	85	130	80	70	M8
U50	80	85	2	47,6	90	90	145	87,5	70	M8
U50	100	104	2	47,6	90	100	165	98	70	M8
U65	40	41	1,5	65,6	120	90	105	69	95	M10
U65	50	53	1,5	65,6	120	90	112	70	95	M10
U65	65	70	2	65,6	120	100	130	80	95	M10
U65	80	85	2	65,6	120	100	145	87,5	95	M10
U65	100	104	2	65,6	120	100	165	98	95	M10

BioControl® – Angle Housing U25 / U50 / U65, tube dimensions in accordance with DIN11866 line B

Process Connection	DN	d	s	A	D	L	H	h	K	M
U25	6	10,2	1,6	28,1	64	65	48	33,5	50	M6
U25	8	13,5	1,6	28,1	64	65	53	36,85	50	M6
U25	10	17,2	1,6	28,1	64	65	57	39	50	M6
U25	15	21,3	1,6	28,1	64	65	61	40,95	50	M6
U25	20	26,9	1,6	28,1	64	65	66	43,15	50	M6
U50	25	33,7	2	47,6	90	75	95	63,15	70	M8
U50	32	42,4	2	47,6	90	75	95	58,8	70	M8
U50	40	48,3	2	47,6	90	75	100	60,85	70	M8
U50	50	60,3	2	47,6	90	75	110	64,85	70	M8
U50	65	76,1	2	47,6	90	85	135	81,95	70	M8
U50	80	88,9	2,3	47,6	90	90	150	90,85	70	M8
U50	100	114,3	2,3	47,6	90	100	175	103,15	70	M8
U65	40	48,3	2	65,6	120	90	107	67,85	95	M10
U65	50	60,3	2	65,6	120	90	115	69,85	95	M10
U65	65	76,1	2	65,6	120	100	135	81,95	95	M10
U65	80	88,9	2,3	65,6	120	100	155	95,85	95	M10
U65	100	114,3	2,3	65,6	120	100	175	103,15	95	M10

BioControl® – Angle Housing U25 / U50 / U65, tube dimensions in accordance with DIN11866 line C

Process Connection	DN	d	s	A	D	L	H	h	K	M
U25	1/4"	6,35	0,89	28,1	64	65	46	32,72	50	M6
U25	3/8"	9,53	0,89	28,1	64	65	49	34,13	50	M6
U25	1/2"	12,7	1,65	28,1	64	65	52	36,3	50	M6
U25	3/4"	19,05	1,65	28,1	64	65	58	37,75	50	M6
U25	1"	25,4	1,65	28,1	64	65	65	42,95	50	M6
U50	1"	25,4	1,65	47,6	90	75	80	51,95	70	M8
U50	1 1/2"	38,1	1,65	47,6	90	75	95	60,6	70	M8
U50	2"	50,8	1,65	47,6	90	75	105	64,25	70	M8
U50	2 1/2"	63,5	1,65	47,6	90	75	115	67,9	70	M8
U50	3"	76,2	1,65	47,6	90	85	135	81,55	70	M8
U50	4"	101,6	2,11	47,6	90	100	165	99,31	70	M8
U65	1 1/2"	38,1	1,65	65,6	120	90	100	65,96	95	M10
U65	2"	50,8	1,65	65,6	120	90	110	69,25	95	M10



BioControl® – Block Flange standard

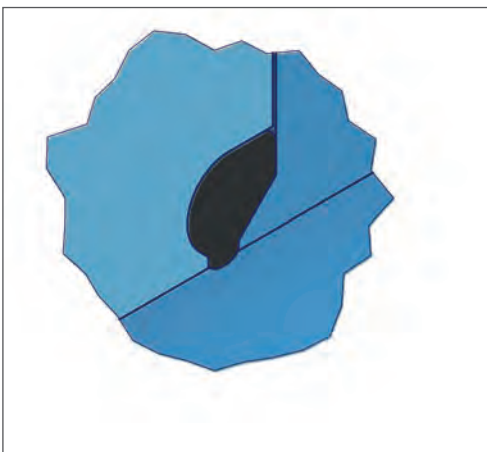


BioControl® – Block Flange high version

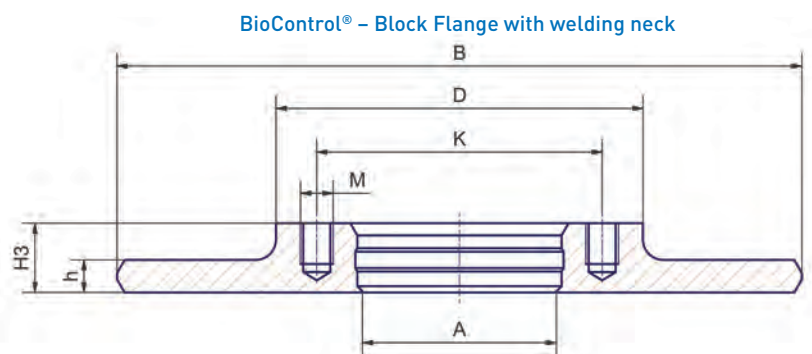
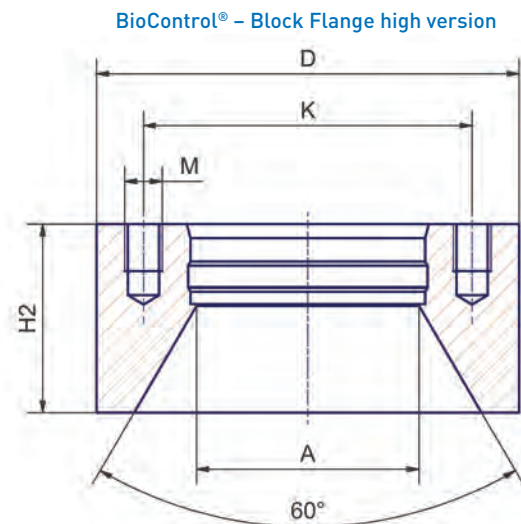
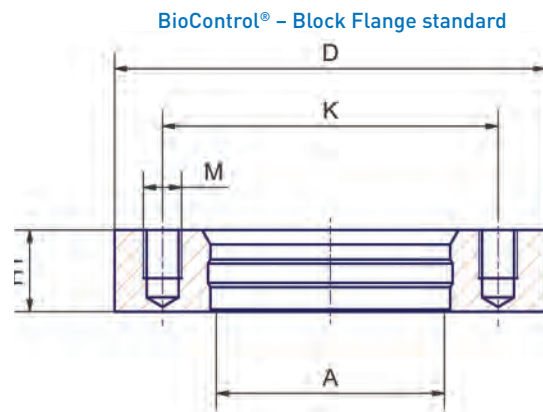


BioControl® – Block Flange with welding neck

Technical Data	
Material*	1.4435 / 316L
Surface finish (product contacted area)*	Ra < 0,8 µm electropolished area*
Max. permissible pressure	PN16
Max. operating temperature	-10°C / +200°C
Delta ferrite content (raw material)*	< 1%
Process connection	B25, B50, B65 and B80
Sealing*	EPDM (FDA + USP Class VI)
Block flange standard	Vessel wall thickness < 4mm
Block flange high version*	Vessel wall thickness > 4mm
Block flange with welding neck*	Vessel wall thickness up to 12mm
Approvals	TÜV-component testing
Notification	Please refer to our homepage for processing instructions
* Alternative material grades (such as 2.4602, 2.4605, 1.4539, AL-6XN®, titanium, etc.) as well as different designs (such as customised heights, turned radii, etc.), surface qualities and delta ferrite values are available on request.	



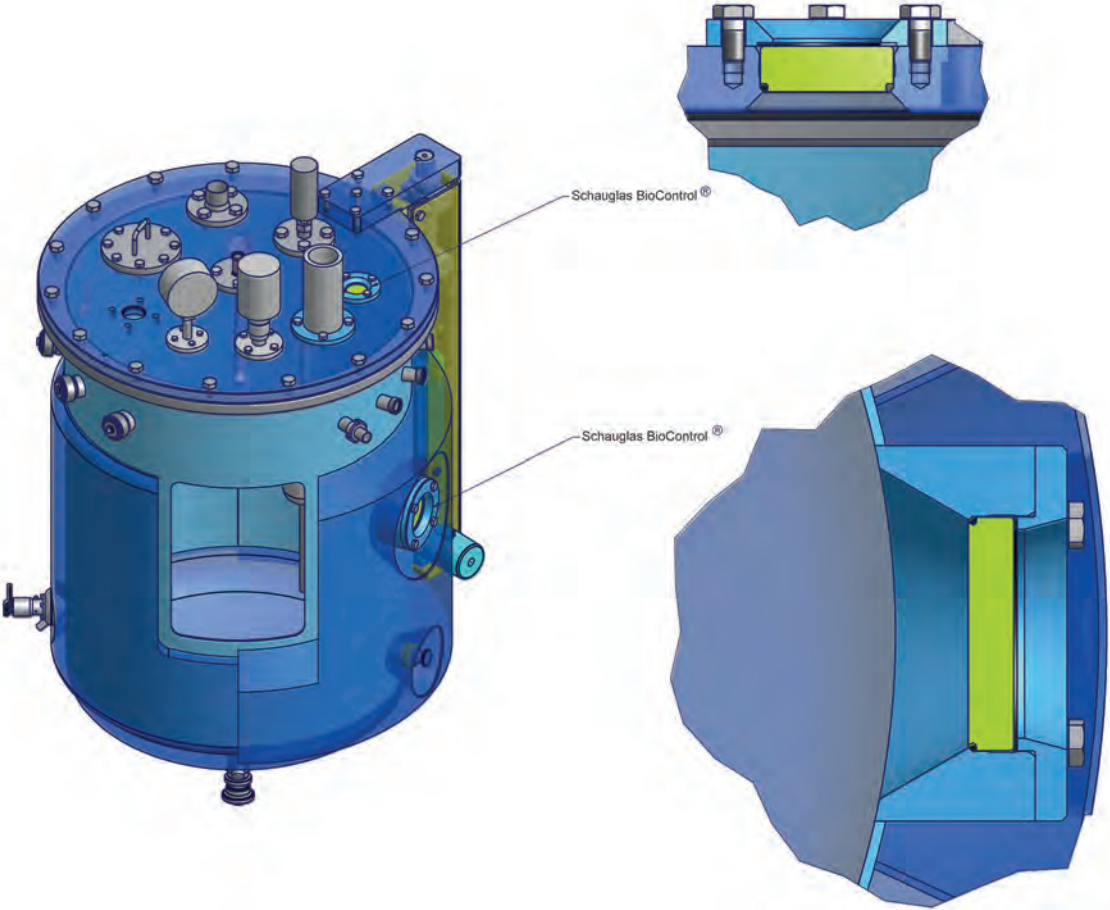
Elastomer-free solution also available BioControl® CS) - please contact us!





BioControl® – Block Flanges B25 / B50 / B65 / B80									
Size	A	D	H1	H2	B	H3	h	K	M
B25	28,1	64	11	25	144	11	8	50	4x M6
B50	47,6	90	17	40	170	17	10	70	4x M8
B65	65,6	120	17	50	200	17	10	95	4x M10
B80	85,1	140	25	65	220	25	10	115	4x M10

Application Examples



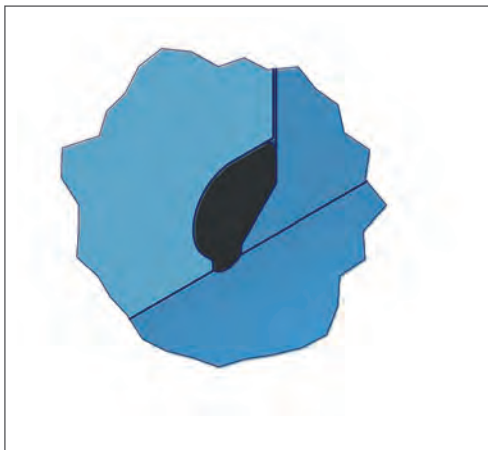


BioControl® – Sight Glass Set



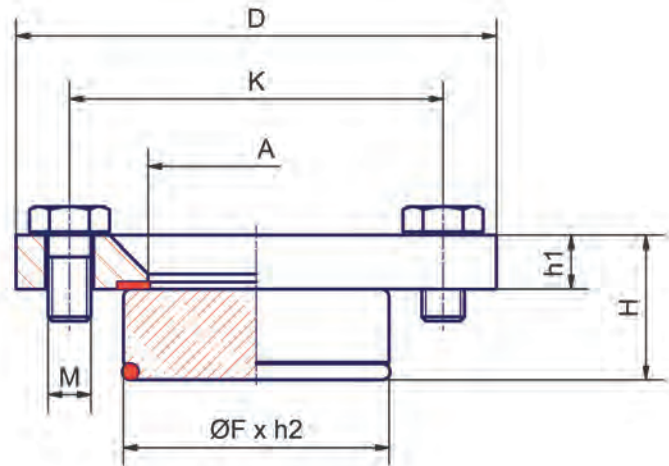
BioControl® – Blind Flange Set

Technical Data	
Materials Blind Flange Set*	Blind Flange: 1.4435 / 316L O-Ring: EPDM (FDA)
Materials Sight Glass Set*	Flange: 1.4435 / 316L
	Glass: ESG borosilicate
	O-Ring: EPDM (FDA + USP class VI) Flat Seal: Klinger Top Chem 2000
Surface finish (product contacted area)	Ra < 0,8 µm electropolished area
Max. permissible pressure	PN16
Delta ferrite content (raw material)*	< 1%
Process connection	25, 50, 65 and 80
Approvals	TÜV-component testing
* Alternative material grades (such as 2.4602, 2.4605, 1.4539, AL-6XN®, titanium, etc.), alternative seal materials (such as Viton, Viton / FEP-encapsulated, PTFE, etc.) as well as different surface qualities and delta ferrite values are available on request.	

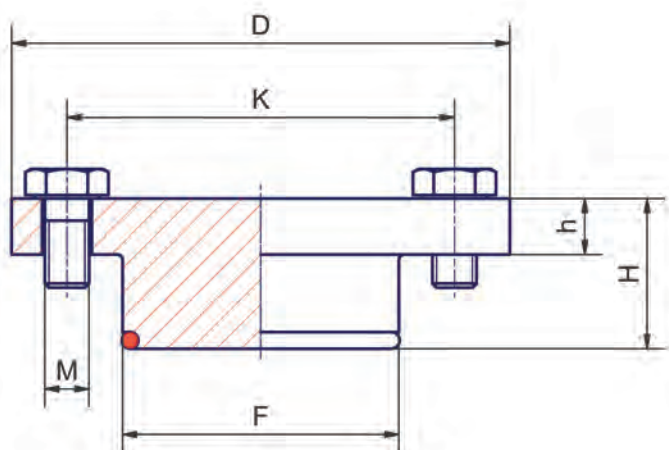


Elastomer-free solution also available
BioControl® CS) - please contact us!

BioControl® – Sight Glass Set



BioControl® – Blind Flange Set





BioControl® – Sight Glass Set S25 – S80

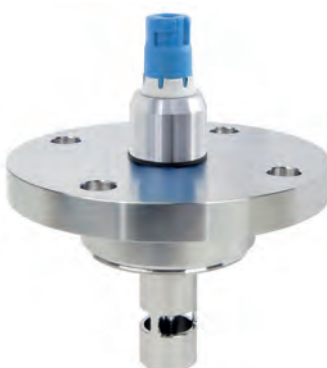
Size	D	H	h1	K	A	øF x h2	M
S25	64	20	9	50	25	30,3 x 13	M6 x 16
S50	90	27	10	70	40,5	49,8 x 17	M8 x 16
S65	120	27	10	95	58,5	67,8 x 17	M10 x 18
S80	140	37	12	115	78	87,3 x 17	M10 x 25

BioControl® – Blind Flange Set DS25 – DS80

Size	D	H	h	K	F	M
DS25	64	20	9	50	30,4	M6 x 16
DS50	90	27	10	70	49,9	M8 x 16
DS65	120	27	10	95	67,9	M10 x 18
DS80	140	37	12	115	87,4	M10 x 25

BioControl® – a system with almost unlimited possibilities of adaptation

Measuring and analysis instruments as well as sampling valves with BioControl®-connection are available from more than 40 international partners, such as: Gebr. Rieger, WIKA, Labom, Endress + Hauser, Negele, Siemens and many more.





High-performance Materials and Custom Design



Over many years NEUMO has increasingly specialised in special materials and special design. Today we dominate the market as a competent reference and warehouse keeper for special alloys. Furthermore we are a supplier of high quality special design.

The product range includes the production of components fabricated to drawing as well as tubes and standardised fittings (for example DIN11865 and ASME-BPE) in special alloys.

In addition, we offer our patented products BioConnect®, ConnectS®, BioControl® and BioFlow check valves in special materials.

Our offered product portfolio is rounded off by our range of semi-finished products, such as sheets, bar steel and cuttings in standard or special materials.



Distribution Pipes



Customised Construction



Customised Connections

Customised Fittings

Reducer Elbows

... designed and manufactured with support of your specialist engineers!

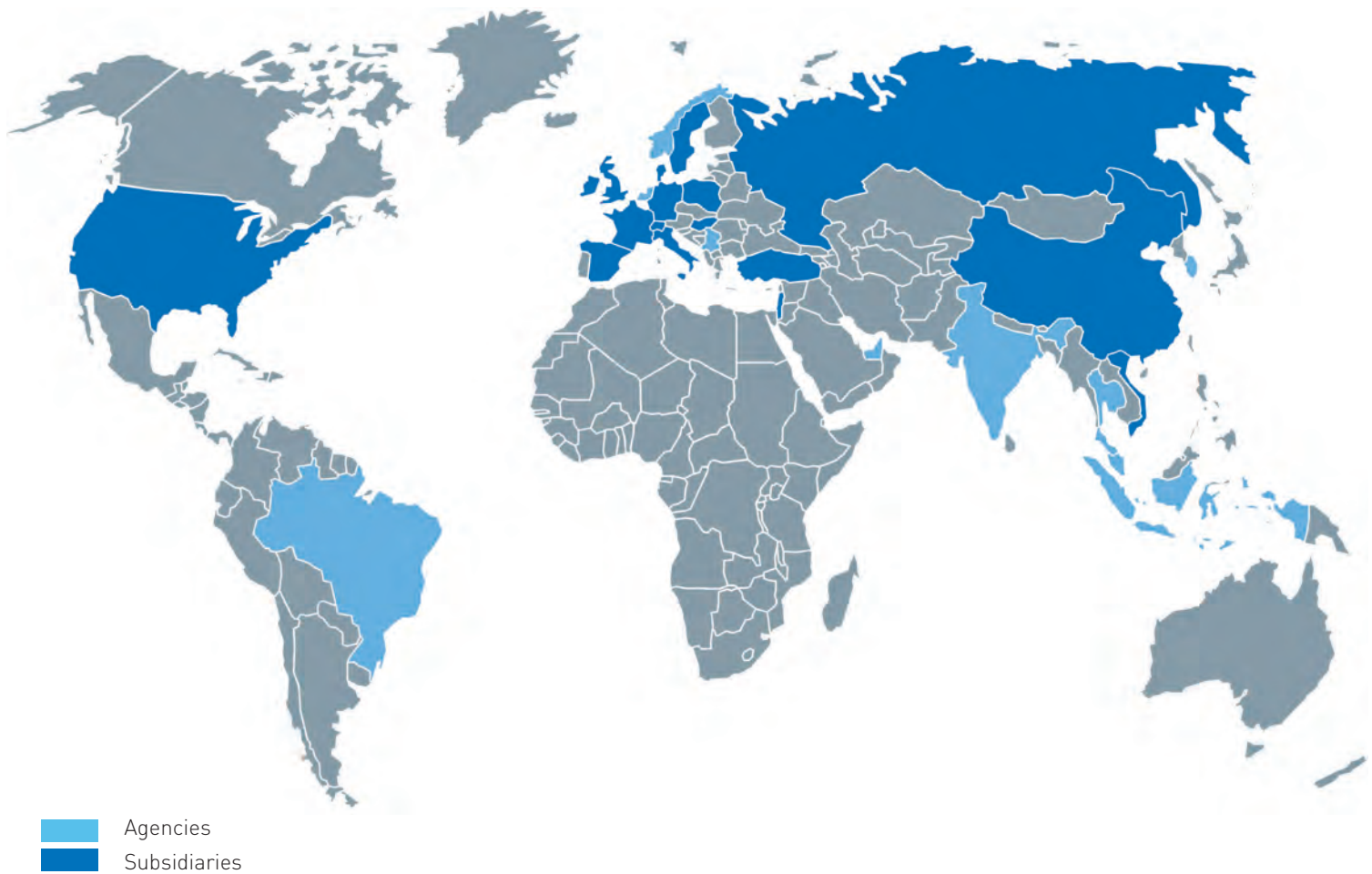


- 1.4539/904L
- AL-6XN[®]
- 2.4602/C-22
- 2.4605/Alloy 59
- 2.4610/C-4
- 2.4819/C-276
- 1.4462
- Titanium
- ...

- Tubes
- Fittings (standard + custom)
- Tube Connections (standard + custom)
- Customised Machined Items
- Prefabricated Spools
- Distribution Pipes
- Customised Constructions
- Process Equipment
- Bar Steel
- Sheets
- Cuttings
- and many more ...



NEUMO worldwide



The **NEUMO Ehrenberg Group** is a privately owned and managed multi-national corporate group with more than 1.900 employees.

Founded in 1947, NEUMO, the group's parent company, now produces, manufactures and supplies fittings, equipment and tubes made from stainless steel as well as corrosion-resistant special alloys for the pharmaceutical, biotechnology, chemical and semicon industries.

NEUMO products provide a significant contribution to safety and integrity of production processes.

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