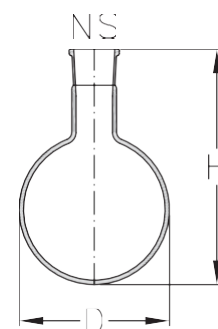


GENERAL

Spherical vessel NS

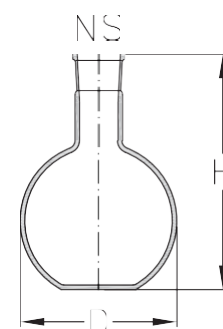
Contents [ml]	NS	D [mm]	H [mm]	VE	Order no.
5	10/19	29	52	10	AFR00005/1019/1
5	14/23	29	64	10	AFR00005/1423/1
10	10/19	34	57	10	AFR00010/1019/1
10	14/23	34	71	10	AFR00010/1423/1
25	10/19	44	83	10	AFR00025/1019/1
25	14/23	44	87	10	AFR00025/1423/1
50	10/19	51	105	10	AFR00050/1019/1
50	14/23	51	105	10	AFR00050/1423/1
50	29/32	51	105	10	AFR00050/2932/1
100	14/23	64	115	10	AFR00100/1423/1
100	29/32	64	115	10	AFR00100/2932/1
250	14/23	85	145	10	AFR00250/1423/1
250	29/32	85	145	10	AFR00250/2932/1
250	45/40	85	145	10	AFR00250/4540/1
500	14/23	105	175	10	AFR00500/1423/1
500	29/32	105	175	10	AFR00500/2932/1
500	45/40	105	175	10	AFR00500/4540/1
1000	29/32	131	210	10	AFR01000/2932/1
1000	45/40	131	210	1	AFR01000/4540/1
2000	29/32	165	260	1	AFR02000/2932/1
2000	45/40	165	260	1	AFR02000/4540/1
4000	29/32	207	315	1	AFR04000/2932/1
4000	45/40	207	315	1	AFR04000/4540/1
6000	29/32	236	355	1	AFR06000/2932/1
6000	45/40	236	355	1	AFR06000/4540/1
10000	45/40	275	420	1	AFR10000/4540/1



- Round-bottom flasks with neck are universally applicable
- manufactured in accordance with DIN 12348, if part of this standard
- Standard ground joint necks NS 10 and NS 14 with metal hooks a s standard

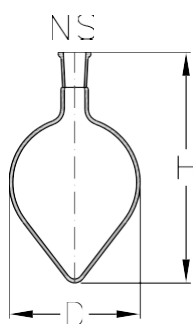
Standing piston NS

Contents [ml]	NS	D [mm]	H [mm]	VE	Order no.
100	29/32	64	110	10	AFRF00100/2932/1
250	29/32	85	140	10	AFRF00250/2932/1
500	29/32	105	170	10	AFRF00500/2932/1
1000	29/32	131	200	10	AFRF01000/2932/1
2000	29/32	165	250	1	AFRF02000/2932/1



- Slightly inward curved base
- Manufactured in accordance with DIN 12 348
- Standing pistons in special sizes on request

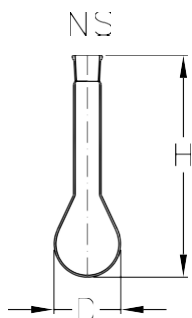
Pointed flask NS



- is mainly used for the distillation of small quantities
- manufactured in accordance with DIN 12 383, insofar as part of this standard
- All standard ground joints are fitted with metal hooks as standard

Contents [ml]	NS	D [mm]	H [mm]	Order no.
5	10/19	28	67	AFPB00005/1019/1
5	14/23	28	71	AFPB00005/1423/1
10	10/19	31	75	AFPB00010/1019/1
10	14/23	31	75	AFPB00010/1423/1
25	10/19	41	90	AFPB00025/1019/1
25	14/23	41	90	AFPB00025/1423/1
50	10/19	51	105	AFPB00050/1019/1
50	14/23	51	105	AFPB00050/1423/1
100	14/23	64	115	AFPB00100/1423/1
250	14/23	85	145	AFPB00250/1423/1
500	14/23	105	175	AFPB00500/1423/1

Kjeldahl flask NS

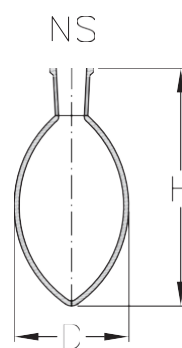


- long-necked, pear-shaped cobs
- are used for the digestion and subsequent distillation of organic substances for analytical purposes
- Manufactured in accordance with DIN 12 360

Contents [ml]	NS	D [mm]	H [mm]	VE	Order no.
50	29/32	51	200	10	AFK00050/2932/1
100	29/32	60	200	10	AFK00100/2932/1
250	29/32	81	270	10	AFK00250/2932/1
500	29/32	101	300	10	AFK00500/2932/1
1000	29/32	126	350	10	AFK01000/2932/1

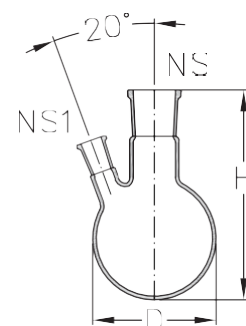
NS plunger

Contents [ml]	NS	D [mm]	H [mm]	Order no.
5	10/19	25	58	AFD00005/1019/1
5	14/23	25	62	AFD00005/1423/1
10	10/19	28	66	AFD00010/1019/1
10	14/23	28	70	AFD00010/1423/1
25	10/19	38	82	AFD00025/1019/1
25	14/23	38	86	AFD00025/1423/1
50	10/19	46	96	AFD00050/1019/1
50	14/23	46	100	AFD00050/1423/1
100	14/23	55	115	AFD00100/1423/1



Round-bottom flask NS with two necks/NS sleeve

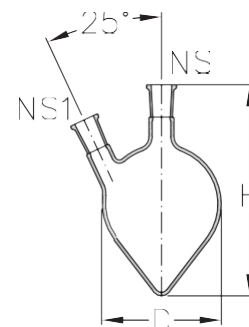
Contents [ml]	NS	NS1 20°	D [mm]	H [mm]	Order no.
25	14/23	14/23	44	87	AFR00025/1423/2
50	14/23	14/23	51	105	AFR00050/1423/2
100	14/23	14/23	64	115	AFR00100/1423/2
100	29/32	14/23	64	115	AFR00100/2932/2
250	14/23	14/23	85	145	AFR00250/1423/2
250	29/32	14/23	85	145	AFR00250/2932/2
500	14/23	14/23	105	175	AFR00500/1423/2
500	29/32	14/23	105	175	AFR00500/2932/2
1000	29/32	14/23	131	210	AFR01000/2932/2
2000	29/32	14/23	165	260	AFR02000/2932/2
4000	29/32	14/23	207	315	AFR04000/2932/2



- Production of pistons in accordance with DIN 12 394, if part of the standard
- Centre necks with NS 14/23 sleeve fitted with metal hooks as standard
- with NS 14/23; others on request

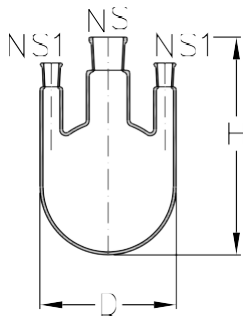
Pointed flask NS with two necks

Contents [ml]	NS	NS1 25°	D [mm]	H [mm]	Order no.
25	14/23	14/23	40	90	AFPB00025/1423/2
50	14/23	14/23	51	100	AFPB00050/1423/2
100	14/23	14/23	64	130	AFPB00100/1423/2
250	14/23	14/23	85	150	AFPB00250/1423/2
500	14/23	14/23	105	175	AFPB00500/1423/2



- Production based on DIN 12 83, if part of the standard
- Centre necks with NS 14/23 sleeve fitted with metal hooks as standard
- with NS 14/23; others on request

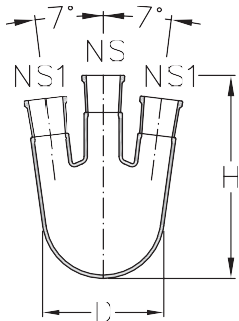
Round bottom flask NS with



- Production based on DIN 12 392, if part of the standard

Cont ents [ml]	NS	NS1	D [mm]	H [mm]	Order no.
100	29/32	14/23	64	115	AFR00100/2932/3-O1
250	29/32	14/23	85	145	AFR00250/2932/3-O1
500	29/32	14/23	105	175	AFR00500/2932/3-O1
1000	29/32	14/23	131	210	AFR01000/2932/3-O1
2000	29/32	14/23	165	260	AFR02000/2932/3-O1
2000	45/40	29/32	165	260	AFR02000/4540/3-O1
4000	45/40	29/32	207	315	AFR04000/4540/3-O1
6000	45/40	29/32	236	355	AFR06000/4540/3-O1
10000	45/40	29/32	275	420	AFR10000/4540/3-O1

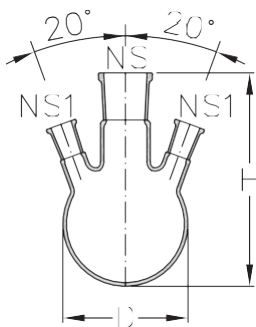
Round flask NS with three necks/ 7°



- Manufactured in accordance with DIN 12 392
- Equalising elbow with 7° inclination on p. xxx

Cont ents [ml]	NS 7°	NS1	D [mm]	H [mm]	Order no.
500	29/32	29/32	105	175	AFR00500/2932/3-O2
1000	29/32	29/32	131	210	AFR01000/2932/3-O2

Round bottom flask NS with three necks/ 20°

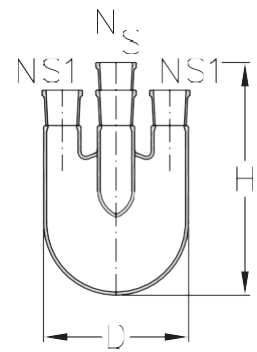


- Manufacture in accordance with DIN 12 394, if part of the standard
- Centre necks with NS 14/23 sleeve fitted with metal hooks as standard
- with NS 14/23; others on request

Cont ents [ml]	NS	NS1 20°	D [mm]	H [mm]	Order no.
50	14/23	14/23	51	105	AFR00050/1423/3
100	14/23	14/23	64	115	AFR00100/1423/3
250	14/23	14/23	85	145	AFR00250/1423/3
500	29/32	14/23	105	175	AFR00500/2932/3
1000	29/32	14/23	131	210	AFR01000/2932/3
2000	29/32	14/23	165	260	AFR02000/2932/3

Round bottom flask NS with

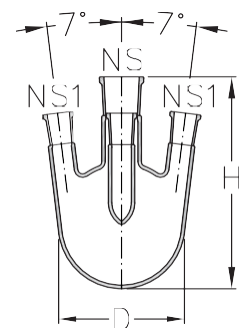
Contents [ml]	NS	NS1	D [mm]	H [mm]	Order no.
1000	29/32	29/32	131	210	AFR01000/2932/4-O1
2000	29/32	29/32	165	260	AFR02000/2932/4-O1
4000	45/40	29/32	207	315	AFR04000/4540/4-O1
6000	45/40	29/32	236	355	AFR06000/4540/4-O1
10000	45/40	29/32	275	420	AFR10000/4540/4-O1



- Production based on DIN 12 392, if part of the standard

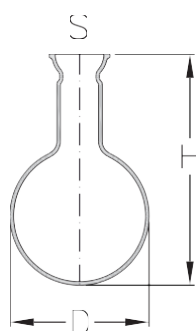
Round flask NS with four necks/ 7°

Contents [ml]	NS 7°	NS1	D [mm]	H [mm]	Order no.
500	29/32	29/32	105	175	AFR00500/2932/4-O2
1000	29/32	29/32	131	210	AFR01000/2932/4-O2



- Manufactured in accordance with DIN 12 392
- Equalising elbow with 7° inclination

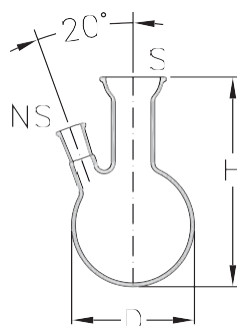
Round bottom



- Manufactured in accordance with DIN 12 244
- Also available with spherical ground joint bowl in millimetre design on request

Contents [ml]	S	D [mm]	H [mm]	Order no.
100	35/25	64	115	AFR00100/3525/1
100	40/25	64	115	AFR00100/4025/1
250	35/25	85	145	AFR00250/3525/1
250	40/25	85	145	AFR00250/4025/1
500	35/25	105	175	AFR00500/3525/1
500	40/25	105	175	AFR00500/4025/1
1000	35/25	131	210	AFR01000/3525/1
1000	40/25	131	210	AFR01000/4025/1
1000	51/30	131	210	AFR01000/5130/1
1000	64/40	131	210	AFR01000/6440/1
2000	35/25	165	260	AFR02000/3525/1
2000	40/25	165	260	AFR02000/4025/1
2000	51/30	165	260	AFR02000/5130/1
2000	64/40	165	315	AFR02000/6440/1
4000	51/30	207	420	AFR04000/5130/1
4000	64/40	207	315	AFR04000/6440/1
6000	51/30	236	355	AFR06000/5130/1
6000	64/40	236	355	AFR06000/6440/1
10000	64/40	275	420	AFR10000/6440/1

Round bottom flask S with two necks/shells

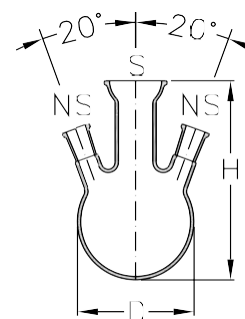


- Production of spherical ground joint cups in accordance with DIN 12 244 or DIN 12 245
- Also available with spherical ground joint bowl in millimetre design on request
- with NS 14/23; others on request

Contents [ml]	S	NS 20°	D [mm]	H [mm]	Order no.
100	35/25	14/23	64	95	AFR00100/3525/2
100	40/25	14/23	64	115	AFR00100/4025/2
250	35/25	14/23	85	105	AFR00250/3525/2
250	40/25	14/23	85	145	AFR00250/4025/2
500	35/25	14/23	165	115	AFR00500/3525/2
500	40/25	14/23	105	175	AFR00500/4025/2
1000	35/25	14/23	131	145	AFR01000/3525/2
1000	40/25	14/23	131	210	AFR01000/4025/2
2000	35/25	14/23	165	260	AFR02000/3525/2
2000	40/25	14/23	165	260	AFR02000/4025/2
2000	51/30	14/23	165	260	AFR02000/5130/2
4000	35/25	14/23	207	315	AFR04000/3525/2
4000	40/25	14/23	207	315	AFR04000/4025/2
4000	51/30	14/23	207	315	AFR04000/5130/2

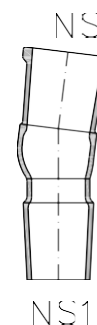
Round bottom flask S with three

Contents [ml]	S	NS 20°	D [mm]	H [mm]	Order no.
100	35/25	14/23	64	115	AFR00100/3525/3
100	40/25	14/23	64	115	AFR00100/4025/3
250	35/25	14/23	85	145	AFR00250/3525/3
250	40/25	14/23	85	145	AFR00250/4025/3
500	35/25	14/23	105	175	AFR00500/3525/3
500	40/25	14/23	131	210	AFR00500/4025/3
1000	35/25	14/23	131	210	AFR01000/3525/3
1000	40/25	14/23	165	210	AFR01000/4025/3
2000	35/25	14/23	165	260	AFR02000/3525/3
2000	40/25	14/23	165	260	AFR02000/4025/3
2000	64/40	14/23	165	260	AFR02000/6440/3
4000	35/25	14/23	207	315	AFR04000/3525/3
4000	40/25	14/23	207	315	AFR04000/4025/3
4000	64/40	14/23	207	315	AFR04000/6440/3
6000	64/40	14/23	236	355	AFR06000/6440/3
10000	64/40	14/23	275	420	AFR10000/6440/3



Equalising elbow 7°

NS	NS1	Order no.
14/23	14/23	PANSC1423/NSS1423-O1
29/32	29/32	PANSC2932/NSS2932-O1



Other sleeve and core combinations available on request

Round bottom flask NS with GL

Contents [ml]	NS	GL1	GC2	GC3	GC4	Order no.
100	29/32	18	18	18	18	AFRD00100/2932/4
250	29/32	18	18	18	18	AFRD00250/2932/4
500	29/32	25	18	18	18	AFRD00500/2932/4
1000	29/32	32	18	18	18	AFRD01000/2932/4
2000	45/40	45	18	18	18	AFRD02000/4540/4
3000	45/40	45	18	18	18	AFRD03000/4540/4
4000	45/40	45	18	18	18	AFRD04000/4540/4
5000	45/40	80	25	25	25	AFRD05000/4540/4
6000	45/40	80	25	25	25	AFRD06000/4540/4
10000	45/40	100	25	25	25	AFRD10000/4540/4
20000	45/40	100	25	25	25	AFRD20000/4540/4

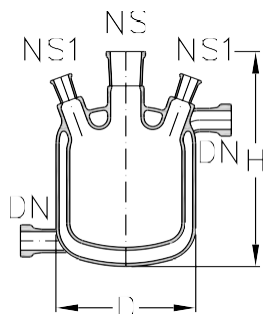
• D [mm] and H [cm] are shown in the tables above

Round bottom flask

- D [mm] and H [cm] are shown in the tables above

Contents [ml]	S	GC1	GC2	GC3	GC4	Order no.
100	35/25	18	18	18	18	AFRD00100/3525/4
250	35/25	18	18	18	18	AFRD00250/3525/4
500	35/25	25	18	18	18	AFRD00500/3525/4
1000	35/25	32	18	18	18	AFRD01000/3525/4
2000	51/30	45	18	18	18	AFRD02000/5130/4
3000	51/30	45	18	18	18	AFRD03000/5130/4
4000	51/30	45	18	18	18	AFRD04000/5130/4
5000	51/30	80	25	25	25	AFRD05000/5130/4
6000	51/30	80	25	25	25	AFRD06000/5130/4
10000	64/40	100	25	25	25	AFRD10000/6440/4
20000	64/40	100	25	25	25	AFRD20000/6440/4

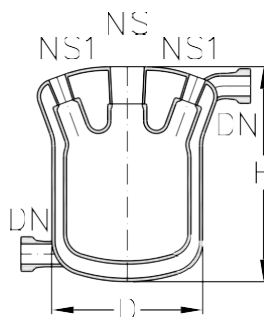
Three-neck reaction flask with tempering jacket



- Centre necks with NS 14/23 sleeve fitted with metal hooks as standard

Contents [ml]	NS	NS1	DN	D [mm]	H [mm]	Order no.
25	14/23	14/23	15	60	110	AFRJ00025/1423/3
50	14/23	14/23	15	65	128	AFRJ00050/1423/3
50	19/26	14/23	15	65	128	AFRJ00050/1926/3
100	19/26	14/23	15	85	125	AFRJ00100/1926/3
100	29/32	14/23	15	85	125	AFRJ00100/2932/3
250	19/26	14/23	15	85	140	AFRJ00250/1926/3
250	29/32	14/23	15	85	140	AFRJ00250/2932/3
500	29/32	14/23	15	100	170	AFRJ00500/2932/3
1000	29/32	14/23	15	130	200	AFRJ01000/2932/3
2000	29/32	14/23	15	150	245	AFRJ02000/2932/3

Three-neck reaction flask with tempering jacket

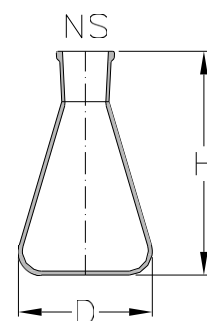


- equipped with temperature control jacket, i.e. container contents can be heated or cooled
- Available with and without temperable ground joints
- Connections on the temperature control jackets also available in other versions

Contents [ml]	NS	NS1	DN	D [mm]	H [mm]	Order no.
25	14/23	14/23	15	60	95	AFRJ00025/1423/3
50	14/23	14/23	15	65	110	AFRJ00050/1423/3
50	19/26	14/23	15	65	110	AFRJ00050/1926/3
100	19/26	14/23	15	85	110	AFRJ00100/1926/3
100	29/32	14/23	15	85	110	AFRJ00100/2932/3
250	19/26	14/23	15	85	125	AFRJ00250/1926/3
250	29/32	14/23	15	85	125	AFRJ00250/2932/3
500	29/32	14/23	15	100	115	AFRJ00500/2932/3
1000	29/32	14/23	15	130	185	AFRJ01000/2932/3
2000	29/32	14/23	15	150	330	AFRJ02000/2932/3

Erlenmeyer flask NS

Contents	NS	D	H	VE	Order no.
10	14/23	32	55	10	AE00010/1423/1
25	14/23	45	65	10	AE00025/1423/1
50	14/23	51	85	10	AE00050/1423/1
50	29/32	51	85	10	AE00050/2932/1
100	14/23	64	105	10	AE00100/1423/1
100	29/32	64	105	10	AE00100/2932/1
250	29/32	85	140	10	AE00250/2932/1
250	45/40	85	140	1	AE00250/4540/1
300	29/32	87	160	10	AE00300/2932/1
300	45/40	87	160	1	AE00300/4540/1
500	29/32	105	175	10	AE00500/2932/1
500	45/40	105	175	1	AE00500/4540/1
1000	29/32	131	220	10	AE01000/2932/1
1000	45/40	131	220	1	AE01000/4540/1
2000	29/32	166	282	1	AE02000/2932/1
2000	45/40	166	282	1	AE02000/4540/1



- Base is flat or only slightly curved inwards (see also upright piston)
- Manufactured in accordance with DIN 12 387, if part of the standard
- Special sizes also available on request

CUSTOMISED PISTONS

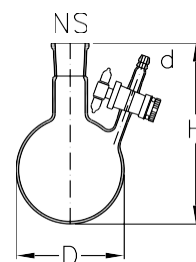


You have not found the desired piston in our range?

We are also happy to manufacture customised variants for you. We can offer you the pistons with all connections from chapter 3. Depending on the size of the pistons, not all sizes and quantities of connections are always possible.

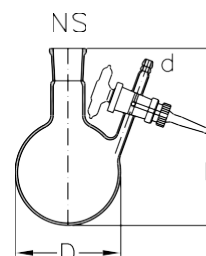
Schlenk round-bottom flask NS with one-way stopcock

Cont ents [ml]	NS	Tap NS [mm]	d [mm]	D [mm]	H [mm]	Order no.
10	14/23	1	8	34	71	AFS00010/1423/SSB1
25	14/23	3	11	44	83	AFS00025/1423/SSB3
50	14/23	3	11	51	105	AFS00050/1423/SSB3
50	29/32	3	11	51	105	AFS00050/2932/SSB3
100	14/23	3	11	64	115	AFS00100/1423/SSB3
100	29/32	3	11	64	115	AFS00100/2932/SSB3
250	14/23	3	11	85	145	AFS00250/1423/SSB3
250	29/32	3	11	85	145	AFS00250/2932/SSB3
500	14/23	3	11	105	175	AFS00500/1423/SSB3
500	29/32	3	11	105	175	AFS00500/2932/SSB3
1000	29/32	3	11	131	210	AFS01000/2932/SSB3
2000	29/32	3	11	165	260	AFS02000/2932/SSB3



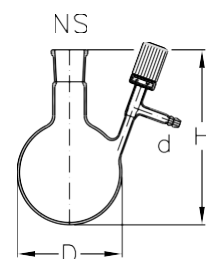
Schlenk round-bottom flask NS with tailcock

Cont ents [ml]	NS	Tap NS [mm]	d [mm]	D [mm]	H [mm]	Order no.
25	14/23	3	11	44	83	AFS00025/1423/ST3
50	14/23	3	11	51	105	AFS00050/1423/ST3
50	29/32	3	11	51	105	AFS00050/2932/ST3
100	14/23	3	11	64	115	AFS00100/1423/ST3
100	29/32	3	11	115	260	AFS00100/2932/ST3
250	14/23	3	11	85	145	AFS00250/1423/ST3
250	29/32	3	11	85	145	AFS00250/2932/ST3
500	14/23	3	11	105	175	AFS00500/1423/ST3
500	29/32	3	11	105	175	AFS00500/2932/ST3
1000	29/32	3	11	131	210	AFS01000/2932/ST3
2000	29/32	3	11	165	260	AFS02000/2932/ST3

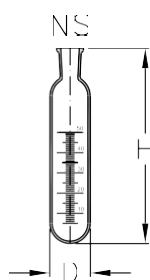


Schlenk round bottom flask NS with spindle valve

Cont ents [ml]	NS	Valve NS [mm]	d [mm]	D [mm]	H [mm]	Order no.
5	14/23	3	8	14	105	AFS00005/1423/VH3
10	14/23	3	8	18	125	AFS00010/1423/VH3
25	14/23	3	11	26	130	AFS00025/1423/VH3
50	14/23	3	11	32	155	AFS00050/1423/VH3
100	14/23	3	11	38	195	AFS00100/1423/VH3
250	14/23	3	11	48	265	AFS00250/1423/VH3



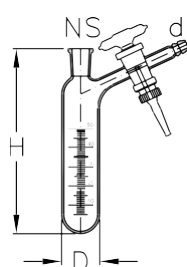
Schlenk flask NS with round bottom



Contents [ml]	D [mm]	H [mm]	Order no.
5	14	105	AFSC00005/1423
10	18	125	AFSC00010/1423
25	26	130	AFSC00025/1423
50	32	155	AFSC00050/1423
100	38	195	AFSC00100/1423
250	48	265	AFSC00250/1423

- All pistons are designed with NS 14/23 as standard, other ground joints or sizes on request

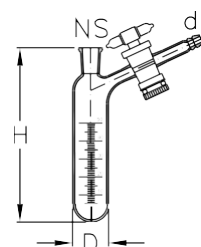
Schlenk flask NS with round bottom and tailcock



Cont ents [ml]	D [mm]	H [mm]	Tap NS [mm]	d [mm]	Order no.
5	14	105	2	8	AFSC00005/1423/ST2
10	18	125	2	8	AFSC00010/1423/ST2
25	26	130	3	11	AFSC00025/1423/ST3
50	32	155	3	11	AFSC00050/1423/ST3
100	38	195	3	11	AFSC00100/1423/ST3
250	48	265	3	11	AFSC00250/1423/ST3

- All pistons are designed with NS 14/23 as standard, other ground joints or sizes on request

Schlenk flask NS with round bottom and one-way stopcock

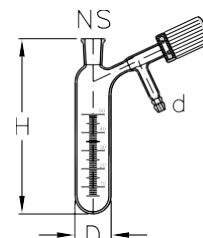


Cont ents [ml]	D [mm]	H [mm]	Tap NS [mm]	d [mm]	Order no.
5	14	105	1	8	AFSC00005/1423/SSB1
10	18	125	1	8	AFSC00010/1423/SSB1
25	26	130	3	11	AFSC00025/1423/SSB3
50	32	155	3	11	AFSC00050/1423/SSB3
100	38	195	3	11	AFSC00100/1423/SSB3
250	48	265	3	11	AFSC00250/1423/SSB3

- All pistons are designed with NS 14/23 as standard, other ground joints or sizes on request

Schlenk flask NS with round bottom and spindle valve

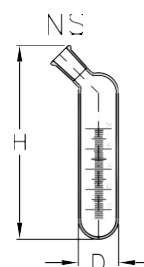
Contents [ml]	D [mm]	H [mm]	Valve NS [mm]	d [mm]	Order no.
5	14	105	3	8	AFSC00005/1423/VH3
10	18	125	3	8	AFSC00010/1423/VH3
25	26	130	3	11	AFSC00025/1423/VH3
50	32	155	3	11	AFSC00050/1423/VH3
100	38	195	3	11	AFSC00100/1423/VH3
250	48	265	3	11	AFSC00250/1423/VH3



- All pistons are designed with NS 14/23 as standard, other ground joints or sizes on request

Schlenk flask NS with round base, sloping neck

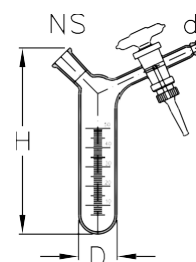
Contents [ml]	D [mm]	H [mm]	Order no.
5	14	105	AFSCO00005/1423
10	18	125	AFSCO00010/1423
25	26	130	AFSCO00025/1423
50	32	155	AFSCO00050/1423
100	38	195	AFSCO00100/1423
250	48	265	AFSCO00250/1423



- All pistons are designed with NS 14/23 as standard, other ground joints or sizes on request

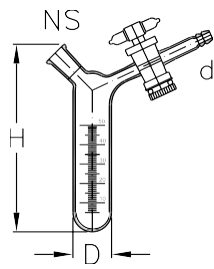
Schlenk flask NS with round base, sloping neck with tailcock

Contents [ml]	D [mm]	H [mm]	Tap NS [mm]	d [mm]	Order no.
5	14	105	2	8	AFSCO00005/1423/ST2
10	18	125	2	8	AFSCO00010/1423/ST2
25	26	130	3	11	AFSCO00025/1423/ST3
50	32	155	3	11	AFSCO00050/1423/ST3
100	38	195	3	11	AFSCO00100/1423/ST3
250	48	265	3	11	AFSCO00250/1423/ST3



- All pistons are designed with NS 14/23 as standard, other ground joints or sizes on request

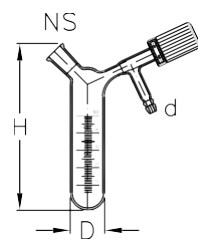
Schlenk flask NS with round bottom, angled neck with one-way stopcock



Cont ents [ml]	D [mm]	H [mm]	Tap NS [mm]	d [mm]	Order no.
5	14	105	1	8	AFSCO00005/1423/SSB1
10	18	125	1	8	AFSCO00010/1423/SSB1
25	26	130	3	11	AFSCO00025/1423/SSB3
50	32	155	3	11	AFSCO00050/1423/SSB3
100	38	195	3	11	AFSCO00100/1423/SSB3
250	48	265	3	11	AFSCO00250/1423/SSB3

- All pistons are designed with NS 14/23 as standard, other ground joints or sizes on request

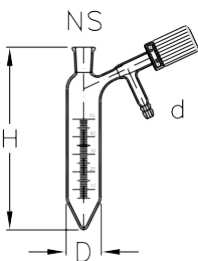
Schlenk flask NS with round base and HV-SPV 3, angled



Cont ents [ml]	D [mm]	H [mm]	Valve NS [mm]	d [mm]	Order no.
5	14	105	3	8	AFSCO00005/1423/VH3
10	18	125	3	8	AFSCO00010/1423/VH3
25	26	130	3	11	AFSCO00025/1423/VH3
50	32	155	3	11	AFSCO00050/1423/VH3
100	38	195	3	11	AFSCO00100/1423/VH3
250	48	265	3	11	AFSCO00250/1423/VH3

- All pistons are designed with NS 14/23 as standard, other ground joints or sizes on request

Schlenk flask NS with pointed base and HV-SPV 3

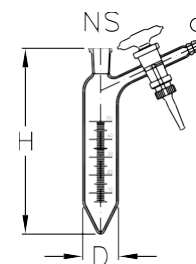


Cont ents [ml]	D [mm]	H [mm]	Tap NS [mm]	d [mm]	Order no.
25	26	155	3	11	AFSCP00025/1423/VH3
50	32	163	3	11	AFSCP00050/1423/VH3
100	38	213	3	11	AFSCP00100/1423/VH3
250	48	293	3	11	AFSCP00250/1423/VH3

- All pistons with NS 14/23 as standard
- Other cuts or sizes on request

Schlenk piston NS sleeve with pointed base and tailcock

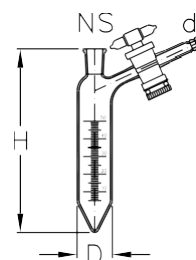
Cont ents [ml]	D [mm]	H [mm]	Tap NS [mm]	d [mm]	Order no.
25	26	128	3	11	AFSCP00025/1423/ST3
50	32	153	3	11	AFSCP00050/1423/ST3
100	38	193	3	11	AFSCP00100/1423/ST3
250	48	263	3	11	AFSCP00250/1423/ST3



- All pistons are designed with NS 14/23 as standard, other ground joints or sizes on request

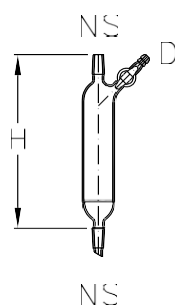
Schlenk flask NS sleeve with pointed base and one-way stopcock

Cont ents [ml]	D [mm]	H [mm]	Tap NS [mm]	d [mm]	Order no.
25	26	128	3	11	AFSCP00025/1423/SSB3
50	32	153	3	11	AFSCP00050/1423/SSB3
100	38	193	3	11	AFSCP00100/1423/SSB3
250	48	263	3	11	AFSCP00250/1423/SSB3



- All pistons with NS 14/23 as standard
- Other cuts or sizes on request

Reverse frit NS with one-way stopcock

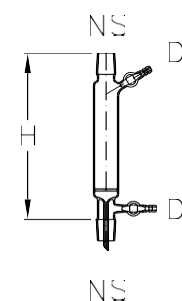


Cont ents [ml]	NS	H [mm]	D [mm]	Frits Ø [mm]	Order no.
25	14/23	135	11	20	ARFS00025/1423/3/X
50	14/23	155	11	30	ARFS00050/1423/3/X
100	14/23	200	11	30	ARFS00100/1423/3/X
100	29/32	200	11	30	ARFS00100/2932/3/X
250	14/23	280	11	40	ARFS00250/1423/3/X
250	29/32	280	11	40	ARFS00250/2932/3/X
500	29/32	300	11	60	ARFS00500/2932/3/X
1000	29/32	350	11	80	ARFS01000/2932/3/X

- Reverse frits are used for the filtration of oxidation- and hydrolysis-sensitive substances, e.g. in organometallic chemistry
- available with different porosities
- fitted with standard taps (3 mm bore)
- Exchange the order number and porosity code number with the X when placing the order

Index for porosity	max. pore size
0	160µ - 250µ
1	100µ - 160µ
2	40µ - 100µ
3	16µ - 40µ
4	10µ - 16µ

Reverse frit NS with one-way stopcocks and drain pipe

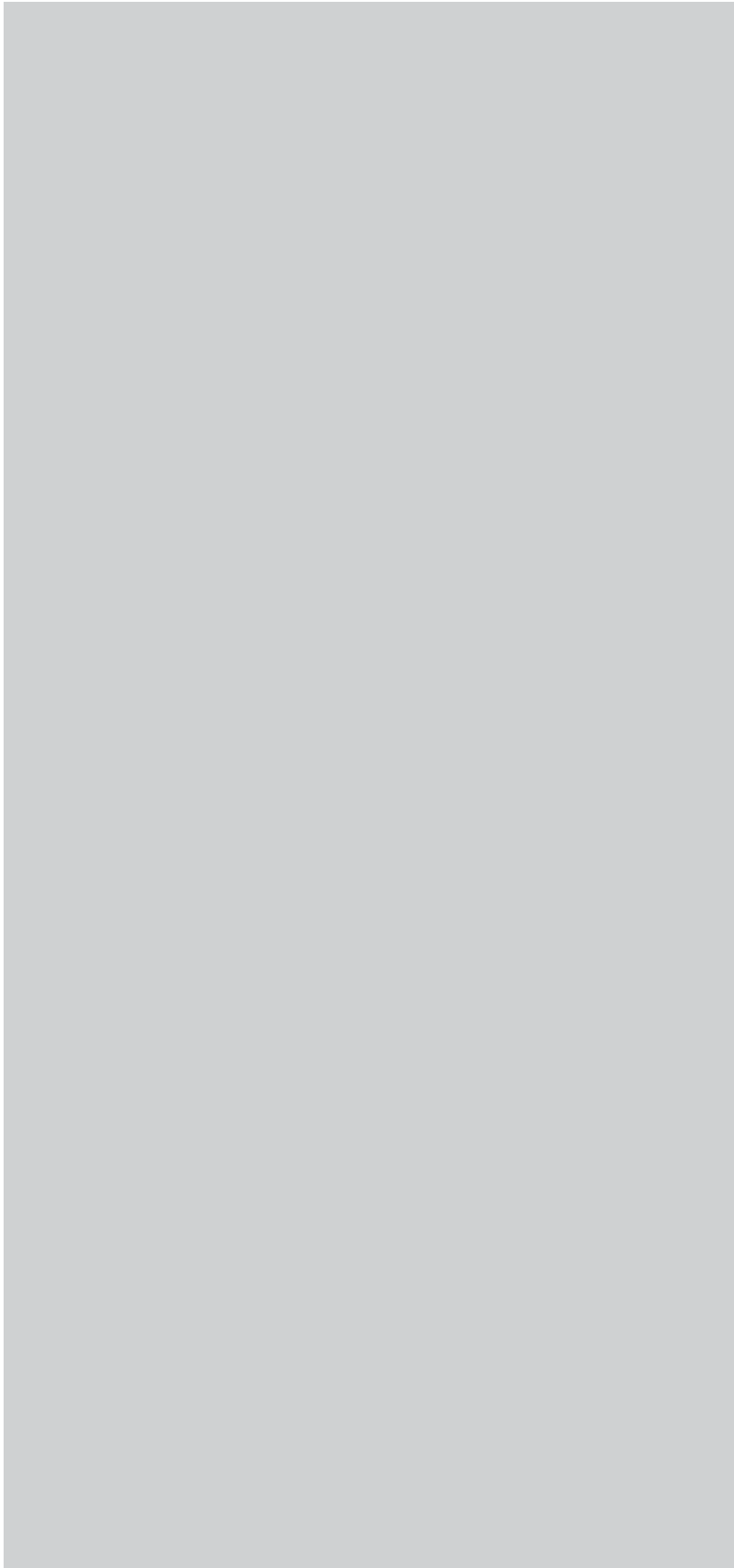


Cont ents [ml]	NS	H [mm]	D [mm]	G	Frits Ø [mm]	Order no.
25	14/23	165	11	14	20	ARFS00025/1423/23/X
50	14/23	185	11	14	30	ARFS00050/1423/23/X
100	14/23	225	11	14	30	ARFS00100/1423/23/X
100	29/32	225	11	14	30	ARFS00100/2932/23/X
250	14/23	305	11	14	40	ARFS00250/1423/23/X
250	29/32	305	11	14	40	ARFS00250/2932/23/X
500	29/32	325	11	14	60	ARFS00500/2932/23/X
1000	29/32	370	11	14	80	ARFS01000/2932/23/X

- Reverse frits are used for the filtration of oxidation- and hydrolysis-sensitive substances, e.g. in organometallic chemistry
- available with different porosities
- fitted with standard taps (3 mm bore)
- Exchange the order number and porosity code number with the X when placing the order

Index for porosity	max. pore size
0	160µ - 250µ
1	100µ - 160µ
2	40µ - 100µ
3	16µ - 40µ
4	10µ - 16µ

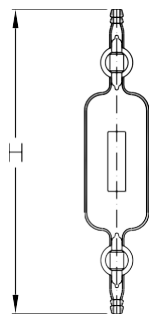
CUSTOMISED PISTONS



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Gas sample pipes with one-way stopcock



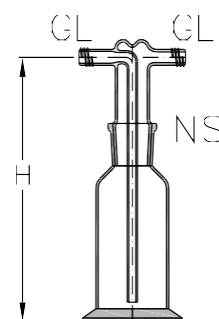
Contents [ml]	H [mm]	Order no.
150	250	AGP0150/SSB3
350	300	AGP0350/SSB3
500	330	AGP0500/SSB3
1000	400	AGP1000/SSB3

Bottle ICOS

Contents [ml]	Order no.
1000	ICOS 1000
2000	ICOS 2000
3000	ICOS 3000

Wash bottles without frit, version A

Contents [ml]	H [mm]	NS	GL	Order no.
100	250	29/32	14	AF0100/2932/14
250	250	29/32	14	AF0250/2932/14
500	250	29/32	14	AF0500/2932/14

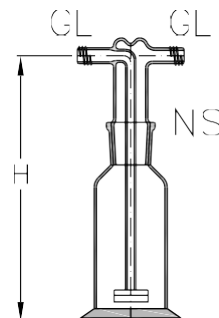


- Use e.g. upstream of reaction equipment to clean the gas flow supplied
- Version A: pure washing bottle; gas is fed into the washing liquid via a pipe

Wash bottles with frit, version B

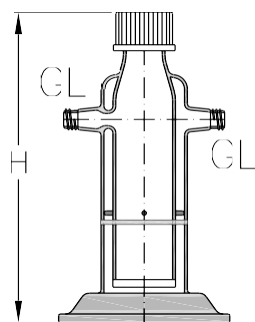
Contents [ml]	H [mm]	NS	GL	Order no.
250	250	29/32	14	AFF0250/2932/14/X
500	250	29/32	14	AFF0500/2932/14/X

Index for porosity	max. pore size
0	160 μ - 250 μ
1	100 μ - 160 μ
2	40 μ - 100 μ
3	16 μ - 40 μ
4	10 μ - 16 μ



- Use e.g. upstream of reaction equipment to clean the gas flow supplied
- Version B: Safety wash bottle with integrated buffer volume; gas is introduced into the washing liquid via a pipe with attached frit (finer distribution of the gas due to the frit)
- Recommendation: When using, place a second empty wash bottle between the reaction apparatus and the wash bottle. If necessary (negative pressure in the gas supply line or positive pressure in the apparatus), this should be able to hold the entire reaction solution. This prevents mixing with the wash liquid in the event of malfunctions

Safety wash bottles

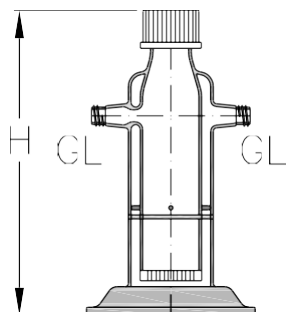


- Use e.g. upstream of reaction equipment to clean the gas flow supplied

Cont ents [ml]	H [mm]	Gas flow rate [l/h]	GL	Order no.
200	250	up to 80	14	AFSF0200/14/X
300	250	up to 90	14	AFSF0300/14/X
500	250	up to 130	14	AFSF0500/14/X

Index for porosity	max. pore size
0	160 μ - 250 μ
1	100 μ - 160 μ
2	40 μ - 100 μ
3	16 μ - 40 μ
4	10 μ - 16 μ

Safety wash bottles with holes



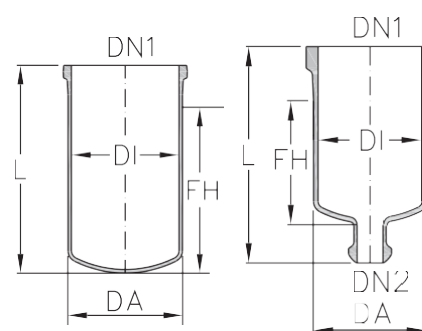
- Safety function as the reaction solution and washing liquid cannot mix with each other in the event of a malfunction

Cont ents [ml]	H [mm]	Number of holes	Bore \varnothing [mm]	GL	Order no.
200	250	21	1,5	14	AFSB0200/14
300	250	25	1,5	14	AFSB0300/14
500	250	25	2,0	14	AFSB0500/14

VESSELS

Cylinder vessels

Contents [ml]	DN1	DN2	L [mm]	FH [mm]	DI [mm]	DA [mm]	Order no. Standard	Order no. with bottom outlet
100	60	15					AV001/060/000-L	AV001/060/015-L
250	60	15					AV002/060/000-L	AV002/060/015-L
250	100	15					AV002/100/000-L	AV002/100/015-L
500	100	15					AV005/100/000-L	AV005/100/015-L
1000	100	15					AV010/100/000-L	AV010/100/015-L
2000	100	15					AV020/100/000-L	AV020/100/015-L
1000	120	15					AV010/120/000-L	AV010/120/015-L
2000	120	15					AV020/120/000-L	AV020/120/015-L
3000	120	15					AV030/120/000-L	AV030/120/015-L
1000	150	15					AV010/150/000-L	AV010/150/015-L
2000	150	15					AV020/150/000-L	AV020/150/015-L
3000	150	15					AV030/150/000-L	AV030/150/015-L
4000	150	15					AV040/150/000-L	AV040/150/015-L
5000	150	25					AV050/150/000-L	AV050/150/025-L
4000	200	25					AV040/200/000-L	AV040/200/025-L
5000	200	25					AV050/200/000-L	AV050/200/025-L
10000	200	25					AV100/200/000-L	AV100/200/025-L
10000	300	25					AV010/300/000-K	AV010/300/025-K
20000	300	25					AV020/300/000-K	AV020/300/025-K
30000	300	25					AV030/300/000-K	AV030/300/025-K
50000	400	25					AV050/400/000-K	AV050/400/025-K
10000	200	25					AV010/200/000-P	AV010/200/025-P
10000	300	25					AV010/300/000-P	AV010/300/025-P
20000	300	25					AV020/300/000-P	AV020/300/025-P
30000	300	25					AV030/300/000-P	AV030/300/025-P
50000	400	25					AV050/400/000-P	AV050/400/025-P

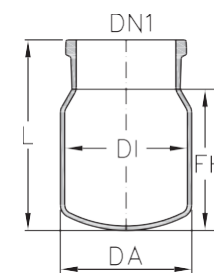


- L with main flange Laboratory flat flange
- L with bottom outlet connection KF ball
- K with main flange KF Plan
- K with connection jacket KF Plan
- P with main flange PF up to DN 150 and KF Plan from DN 200
- P with bottom outlet connection PF

The net volume (content [ml]) ends approx. 3-6 cm below the top edge of the jacket, depending on the vessel size and manufacturing tolerance.

Cylindrical vessels, short design

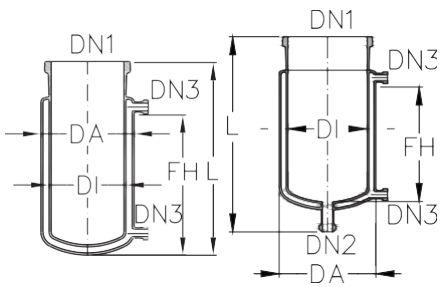
Contents [ml]	DN1	DN2	L [mm]	FH [mm]	DI [mm]	DA [mm]	Order no. Standard	Order no. with bottom outlet
4000	150	15					AVS040/150/000-L	AVS040/150/015-L
5000	150	25					AVS050/150/000-L	AVS050/150/025-L
10000	150	25					AVS100/150/000-L	AVS100/150/025-L
10000	200	25					AVS100/200/000-L	AVS100/200/025-L
20000	200	25					AVS200/200/000-L	AVS200/200/025-L
30000	300	25					AVS030/300/000-K	AVS030/300/025-K
50000	300	25					AVS050/300/000-K	AVS050/300/025-K
50000	400	25					AVS050/400/000-K	AVS050/400/025-K
30000	300	25					AVS030/300/000-P	AVS030/300/025-P
50000	300	25					AVS050/300/000-P	AVS050/300/025-P
50000	400	25					AVS050/400/000-P	AVS050/400/025-P



- L with main flange Laboratory flat flange
- L with bottom outlet connection KF ball
- K with main flange KF Plan
- K with floor drain connection KF ball
- P with main flange PF up to DN 150 and KF Plan from DN 200
- P with bottom outlet connection PF

The net volume (content [ml]) ends approx. 3-6 cm below the top edge of the jacket, depending on the vessel size and manufacturing tolerance.

Jacketed vessels



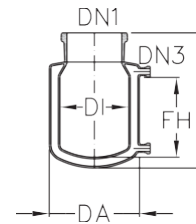
- -L with main flange Laboratory flat flange
- -L with temperature control jacket connection KF Plan
- -L with bottom outlet connection KF ball
- -K with main flange KF Plan
- -K with temperature control jacket connection KF Plan
- -K with bottom outlet connection KF ball
- -P with main flange PF up to DN 150 and KF Plan from DN
- -P with temperature control jacket connection PF
- -P with bottom outlet connection PF

The net volume (content [ml]) ends approx. 3-6 cm below the top edge of the jacket, depending on the vessel size and manufacturing tolerance.

Cont ents [ml]	DN1	DN2	DN3	L [mm]	FH [mm]	DI [mm]	DA [mm]	Order no. Standard	Order no. with bottom outlet
100	60	15	15					AVJ001/060/000-L	AVJ001/060/015-L
250	60	15	15					AVJ002/060/000-L	AVJ002/060/015-L
250	100	15	15					AVJ002/100/000-L	AVJ002/100/015-L
500	100	15	15					AVJ005/100/000-L	AVJ005/100/015-L
1000	100	15	15					AVJ010/100/000-L	AVJ010/100/015-L
2000	100	15	15					AVJ020/100/000-L	AVJ020/100/015-L
1000	120	15	15					AVJ010/120/000-L	AVJ010/120/015-L
2000	120	15	15					AVJ020/120/000-L	AVJ020/120/015-L
3000	120	15	15					AVJ030/120/000-L	AVJ030/120/015-L
1000	150	15	15					AVJ010/150/000-L	AVJ010/150/015-L
2000	150	15	15					AVJ020/150/000-L	AVJ020/150/015-L
3000	150	15	15					AVJ030/150/000-L	AVJ030/150/015-L
4000	150	25	15					AVJ040/150/000-L	AVJ040/150/015-L
5000	150	25	15					AVJ050/150/000-L	AVJ050/150/025-L
4000	200	25	15					AVJ040/200/000-L	AVJ040/200/025-L
5000	200	25	15					AVJ050/200/000-L	AVJ050/200/025-L
10000	200	25	15					AVJ100/200/000-L	AVJ100/200/025-L
10000	300	25	25					AVJ010/300/000-K	AVJ010/300/025-K
20000	300	25	25					AVJ020/300/000-K	AVJ020/300/025-K
30000	300	25	25					AVJ030/300/000-K	AVJ020/300/025-K
50000	400	25	25					AVJ050/400/000-K	AVJ050/400/050-K
10000	300	25	25					AVJ010/300/000-P	AVJ010/300/025-P
20000	300	25	25					AVJ020/300/000-P	AVJ020/300/025-P
30000	300	25	25					AVJ030/300/000-P	AVJ030/300/025-P
50000	400	25	50					AVJ050/400/000-P	AVJ050/400/050-P

Jacketed vessels short design

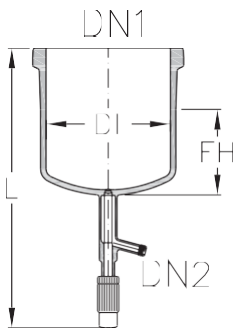
Contents [ml]	DN1	DN2	DN3	L [mm]	FH [mm]	DI [mm]	DA [mm]	Order no. Standard	Order no. with bottom outlet
4000	150	25	15					AVJS040/150/000-L	AVJS040/150/015-L
5000	150	25	15					AVJS050/150/000-L	AVJS050/150/025-L
10000	150	25	15					AVJS100/150/000-L	AVJS100/150/025-L
10000	200	25	15					AVJS100/200/000-L	AVJS100/200/025-L
20000	200	25	15					AVJS200/200/000-L	AVJS200/200/025-L
30000	300	25	25					AVJS030/300/000-K	AVJS030/300/025-K
50000	300	25	25					AVJS050/300/000-K	AVJS050/300/025-K
50000	400	50	25					AVJS050/400/000-K	AVJS050/400/050-K
30000	300	25	25					AVJS030/300/000-P	AVJS030/300/025-P
50000	300	25	25					AVJS050/300/000-P	AVJS050/300/025-P
50000	400	50	25					AVJS050/400/000-P	AVJS050/400/025-P



- -L with main flange Laboratory flat flange
- -L with connection jacket KF Plan
- -L with bottom outlet connection KF ball
- -K with main flange KF Plan
- -K with connection jacket KF Plan
- -K with bottom outlet connection KF ball
- -P with main flange PF up to DN 150 and KF Plan from DN 200
- -P with connection jacket KF Plan
- -P with floor drain connection KF ball

The net volume (content [ml]) ends approx. 3-6 cm below the top edge of the jacket, depending on the vessel size and manufacturing tolerance.

Cylinder vessels for bottom outlet valve

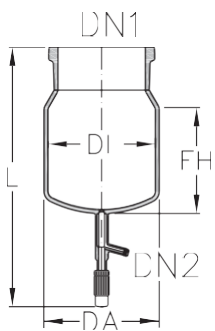


- L with main flange Laboratory flat flange
- L with bottom outlet valve connection GL-K with main flange KF Plan
- K with connection jacket KF Plan
- K with bottom outlet valve connection KF ball
- P with main flange PF up to DN 150 and KF Plan from DN 200
- P with connection jacket PF
- P with bottom outlet valve connection PF
- Suitable bottom drain valve must be ordered separately, see chapter 4

The net volume (content [ml]) ends approx. 3-6 cm below the top edge of the jacket, depending on the vessel size and manufacturing tolerance.

Cont ents [ml]	DN1	DN2	L [mm]	FH [mm]	DI [mm]	DA [mm]	Valve	Order no.
100	60	GL18					VBL06	AV001/060/VBL06-L
250	60	GL18					VBL06	AV002/060/VBL06-L
250	100	GL25					VBL10	AV002/100/VBL10-L
500	100	GL25					VBL10	AV005/100/VBL10-L
1000	100	GL25					VBL10	AV010/100/VBL10-L
2000	100	GL25					VBL10	AV020/100/VBL10-L
1000	120	GL25					VBL10	AV010/120/VBL10-L
2000	120	GL25					VBL10	AV020/120/VBL10-L
3000	120	GL25					VBL10	AV030/120/VBL10-L
1000	150	GL25					VBL10	AV010/150/VBL10-L
2000	150	GL25					VBL10	AV020/150/VBL10-L
3000	150	GL25					VBL10	AV030/150/VBL10-L
4000	150	GL25					VBL10	AV040/150/VBL10-L
5000	150	GL32					VBL15	AV050/150/VBL15-L
4000	200	GL25					VBL10	AV040/200/VBL10-L
5000	200	GL32					VBL15	AV050/200/VBL15-L
10000	200	GL32					VBL15	AV100/200/VBL15-L
10000	300	40					VOB40	AV010/300/VOB40-K
20000	300	40					VOB40	AV020/300/VOB40-K
30000	300	40					VOB40	AV030/300/VOB40-K
50000	400	40					VOB40	AV050/400/VOB40-K
10000	300	40					VOB40	AV010/300/VOB40-P
20000	300	40					VOB40	AV020/300/VOB40-P
30000	300	40					VOB40	AV030/300/VOB40-P
50000	400	40					VOB40	AV050/400/VOB40-P

Cylinder vessels short design for bottom outlet valve



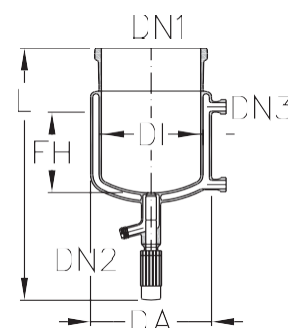
- L with main flange Laboratory flat flange
- L with connection jacket KF Plan
- L with bottom outlet valve connection GL
- K with main flange KF Plan
- K with connection jacket KF Plan
- K with bottom outlet valve connection KF ball
- P with main flange PF up to DN 150 and KF Plan from DN 200
- P with connection jacket PF
- P with bottom outlet valve connection PF
- Suitable bottom drain valve must be ordered separately, see chapter 4

The net volume (content [ml]) ends approx. 3-6 cm below the top edge of the jacket, depending on the vessel size and manufacturing tolerance.

Cont ents [ml]	DN1	DN2	L [mm]	FH [mm]	DI [mm]	DA [mm]	Valve	Order no.
4000	150	GL25					VBL10	AVS040/150/VBL10-L
5000	150	GL32					VBL15	AVS050/150/VBL15-L
10000	150	GL32					VBL15	AVS100/150/VBL15-L
10000	200	GL32					VBL15	AVS100/200/VBL15-L
20000	200	GL32					VBL15	AVS200/200/VBL15-L
30000	300	40					VOB40	AVS030/300/VOB40-K
50000	300	40					VOB40	AVS050/300/VOB40-K
50000	400	50					VOB40	AVS050/400/VOB40-K
30000	300	40					VOB40	AVS030/300/VOB40-P
50000	300	40					VOB40	AVS050/300/VOB40-P
50000	400	40					VOB40	AVS050/400/VOB40-P

Cylindrical jacketed vessels for bottom outlet valve

Cont ents [ml]	DN1	DN2	DN3	L [mm]	FH [mm]	DI [mm]	DA [mm]	Valve	Order no.
100	60	GL18	15					VBL06	AVJ001/060/VBL06-L
250	60	GL18	15					VBL06	AVJ002/060/VBL06-L
250	100	GL25	15					VBL10	AVJ002/100/VBL10-L
500	100	GL25	15					VBL10	AVJ005/100/VBL10-L
1000	100	GL25	15					VBL10	AVJ010/100/VBL10-L
2000	100	GL25	15					VBL10	AVJ020/100/VBL10-L
1000	120	GL25	15					VBL10	AVJ010/120/VBL10-L
2000	120	GL25	15					VBL10	AVJ020/120/VBL10-L
3000	120	GL25	15					VBL10	AVJ030/120/VBL10-L
1000	150	GL25	15					VBL10	AVJ010/150/VBL10-L
2000	150	GL25	15					VBL10	AVJ020/150/VBL10-L
3000	150	GL25	15					VBL10	AVJ030/150/VBL10-L
4000	150	GL25	15					VBL10	AVJ040/150/VBL10-L
5000	150	GL32	15					VBL15	AVJ050/150/VBL15-L
4000	200	GL25	15					VBL10	AVJ040/200/VBL10-L
5000	200	GL32	15					VBL15	AVJ050/200/VBL15-L
10000	200	GL32	15					VBL15	AVJ100/200/VBL15-L
10000	300	40	25					VOB40	AVJ010/300/VOB40-K
20000	300	40	25					VOB40	AVJ020/300/VOB40-K
30000	300	40	25					VOB40	AVJ030/300/VOB40-K
50000	400	50	25					VOB40	AVJ050/400/VOB50-K
10000	300	40	25					VOB40	AVJ010/300/VOB40-P
20000	300	40	25					VOB40	AVJ020/300/VOB40-P
30000	300	40	25					VOB40	AVJ030/300/VOB40-P
50000	400	50	25					VOB50	AVJ050/400/VOB50-P



- -L with main flange Laboratory flat flange
- -L with connection jacket KF Plan
- -L with bottom outlet valve connection GL
- -K with main flange KF Plan
- -K with connection jacket KF Plan
- -K with bottom outlet valve connection KF ball
- -P with main flange PF up to DN 150 and KF Plan from DN 200
- -P with connection jacket PF
- -P with bottom outlet valve connection PF
- Suitable bottom drain valve must be ordered separately, see chapter 4

The net volume (content [ml]) ends approx. 3-6 cm below the top edge of the jacket, depending on the vessel size and manufacturing tolerance.

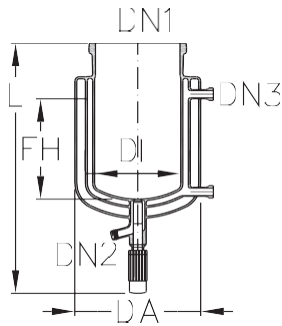
Jacketed vessels short design for bottom outlet valve

Cont ents [ml]	DN1	DN2	DN3	L [mm]	FH [mm]	DI [mm]	DA [mm]	Valve	Order no.
4000	150	GL25	15					VBL10	AVJS040/150/VBL10-L
5000	150	GL32	15					VBL15	AVJS050/150/VBL15-L
10000	150	GL32	15					VBL15	AVJS100/150/VBL15-L
10000	200	GL32	15					VBL15	AVJS100/200/VBL15-L
20000	200	GL32	15					VBL15	AVJS200/200/VBL15-L
30000	300	40	15					VOB40	AVJS030/300/VOB40-K
50000	300	40	25					VOB40	AVJS050/300/VOB40-K
50000	400	50	25					VOB40	AVJS050/400/VOB40-K
30000	300	40	25					VOB40	AVJS030/300/VOB40-P
50000	300	40	25					VOB40	AVJS050/300/VOB40-P
50000	400	50	25					VOB40	AVJS050/400/VOB40-P

- -L with main flange Laboratory flat flange
- -L with connection jacket KF Plan
- -L with bottom outlet valve connection GL
- -K with main flange KF Plan
- -K with connection jacket KF Plan
- -K with bottom outlet valve connection KF ball
- -P with main flange PF up to DN 150 and KF Plan from DN 200
- -P with connection jacket PF
- -P with bottom outlet valve connection PF
- Suitable bottom drain valve must be ordered separately, see chapter 4

The net volume (content [ml]) ends approx. 3-6 cm below the top edge of the jacket, depending on the vessel size and manufacturing tolerance.

Cylindrical vessel with heating and vacuum jacket for bottom outlet valve



- -L with main flange Laboratory flat flange
- -L with connection jacket KF Plan
- -L with bottom outlet valve connection GL
- -K with main flange KF Plan
- -K with connection jacket KF Plan
- -K with bottom outlet valve connection KF ball
- -P with main flange PF up to DN 150 and KF Plan from DN 200
- -P with connection jacket PF
- -P with bottom outlet valve connection PF
- Suitable bottom drain valve must be ordered separately, see chapter 4

Contents [m]	DN2	DN2	DN3	L [mm]	FH [mm]	DI [mm]	DA [mm]	Valve	Order no.
250	60	GL18	15	335	100	70	130	VBL06	AVT002/060/VBL06-L
250	100	GL25	15	320	50	105	150	VBL10	AVT002/100/VBL10-L
500	100	GL25	15	340	75	105	150	VBL10	AVT005/100/VBL10-L
1000	100	GL25	15	410	140	105	150	VBL10	AVT010/100/VBL10-L
1000	120	GL25	15	340	110	130	190	VBL10	AVT010/120/VBL10-L
2000	120	GL25	15	430	200	130	190	VBL10	AVT020/120/VBL10-L
2000	150	GL25	15	410	130	160	225	VBL10	AVT020/150/VBL10-L
3000	150	GL25	15	450	190	160	225	VBL10	AVT030/150/VBL10-L
5000	150	GL32	15	565	300	160	225	VBL15	AVT050/150/VBL15-L
5000	200	GL32	15	505	180	215	300	VBL15	AVT050/200/VBL15-L
10000	200	GL32	15	665	340	215	300	VBL15	AVT100/200/VBL15-L
10000	300	40	25					VOB40	AVT010/300/VOB40-K
20000	300	40	25					VOB40	AVT020/300/VOB40-K
30000	300	40	25					VOB40	AVT030/300/VOB40-K

CUSTOMER SPECIFIC VESSELS

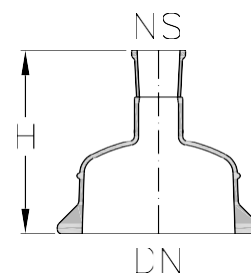


You have found the desired container in our range. We will be happy to produce it according to your specifications.

COVER

Vessel caps with centre spout

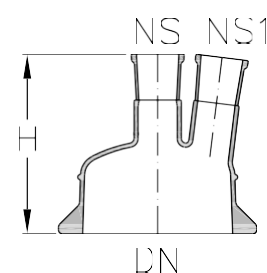
DN	NS	NS1	NS2	NS3	H [mm]	Order no.
60	14/23	-	-	-	90	AL060/1423/1-L-S1
100	29/32	-	-	-	125	AL100/2932/1-L-S1
120	29/32	-	-	-	130	AL120/2932/1-L-S1
150	29/32	-	-	-	130	AL150/2932/1-L-S1
200	45/40	-	-	-	160	AL200/4540/1-L-S1



- Special designs (e.g. with parallel side necks, flanges or threaded ears) are also available on request, although the diameter of the bonnet limits the number and diameter of the necks.
- Flat lids also available on request

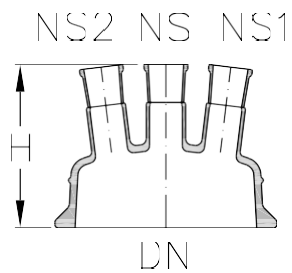
Vessel bonnets with centre spout and 1 side spout

DN	NS	NS1	NS2	NS3	H [mm]	Order no.
60	14/23	14/23	-	-	90	AL060/1423/2-L-S1
100	29/32	29/32	-	-	125	AL100/2932/2-L-S1
120	29/32	29/32	-	-	130	AL120/2932/2-L-S1
150	29/32	29/32	-	-	130	AL150/2932/2-L-S1
200	45/40	29/32	-	-	160	AL200/4540/2-L-S1



- Special designs (e.g. with parallel side necks, flanges or threaded ears) are also available on request, although the diameter of the bonnet limits the number and diameter of the necks.
- Flat lids also available on request

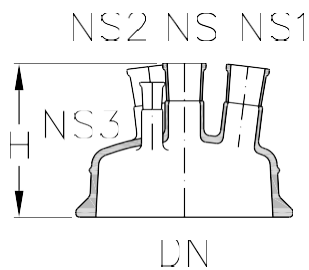
Vessel bonnets with centre spout and 2 side spouts



DN	NS	NS1	NS2	NS3	H [mm]	Order no.
60	14/23	14/23	14/23	-	90	AL060/1423/3-L-S1
100	29/32	29/32	29/32	-	125	AL100/2932/3-L-S1
120	29/32	29/32	29/32	-	130	AL120/2932/3-L-S1
150	29/32	29/32	29/32	-	130	AL150/2932/3-L-S1
200	45/40	29/32	29/32	-	160	AL200/4540/3-L-S1

- Special designs (e.g. with parallel side necks, flanges or threaded ears) are also available on request, although the diameter of the bonnet limits the number and diameter of the necks.
- Flat lids also available on request

Vessel bonnets with centre spout and 3 side spouts



DN	NS	NS1	NS2	NS3	H [mm]	Order no.
60	14/23	14/23	14/23	14/23	90	AL060/1423/4-L-S1
100	29/32	29/32	29/32	14/23	125	AL100/2932/4-L-S1
120	29/32	29/32	29/32	14/23	130	AL120/2932/4-L-S1
150	29/32	29/32	29/32	14/23	130	AL150/2932/4-L-S1
200	45/40	29/32	29/32	14/23	160	AL200/4540/4-L-S1

- Special designs (e.g. with parallel side necks, flanges or threaded ears) are also available on request, although the diameter of the bonnet limits the number and diameter of the necks.
- Flat lids also available on request

Vessel caps, type A

DN	DN1	DN2	d	L1 [mm]	L2 [mm]	L3 [mm]	Number of nozzles	Order no.
100	50	15	-	150	90	115	3	AL100/3-K-S1
150	50	25	-	200	125	145	3	AL150/3-K-S1
200	50	25	-	200	147	147	3	AL200/3-K-S1
300	50	25	-	225	187	187	3	AL300/3-K-S1

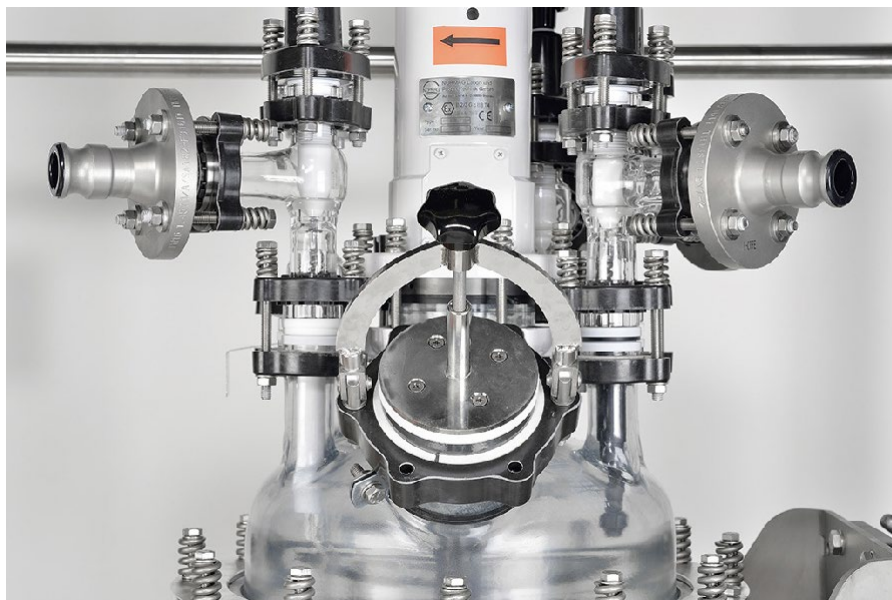
Vessel caps, type B

DN	DN1	DN2	d	L1 [mm]	L2 [mm]	L3 [mm]	Number of nozzles	Order no.
150	40	25	110	200	200	-	3	AL150/3-K-S2
200	40	25	150	200	175	-	3	AL200/3-K-S2
300	40	25	150	250	200	-	3	AL300/3-K-S2

Vessel caps, type C

DN	DN1	DN2	DN3	DN4	DN5	d	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	L5 [mm]	Number of nozzles	Order no.
200	40	50	50	25	-	150	200	154	154	175	-	5	AL200/5-K-S3
300	80	80	80	40	25	250	250	187	187	225	200	7	AL300/7-K-S3

CUSTOMISED BONNETS / LIDS



You have not found the desired piston in our range?

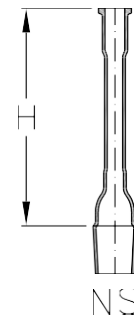
We are also happy to manufacture customised variants for you. We can offer you the pistons with all connections from chapter 3. Depending on the size of the pistons, not all sizes and quantities of connections are always possible.

Nominal diameter [DN]	d _{Subsize} [mm]	Lateral supports [nominal width]	L. side support, typical [mm]	Side supports [Typ. number] ¹	Order no.
100	70	15 - 50	150 - 175	0 - 4	AL100/P-X
150	70 - 120	15 - 50	175 - 200	0 - 4	AL150/P-X
200	70 - 175	15 - 80	175 - 225	0 - 4	AL200/P-X
300	70 - 290	15 - 100	200 - 225	0 - 6	AL300/P-X
400	70 - 375	15 - 150	250 - 300	0 - 6	AL400/P-X
450	70 - 400	15 - 150	275 - 325	0 - 8	AL450/P-X
600	70 - 525	25 - 200	300 - 400	0 - 8	AL600/P-X

STIRRING CAPS

KPG stirrer bushing, not melted down

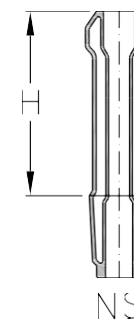
Shaft Ø [mm]	NS	H [mm]	Order no.
10	29/32	145	RW010/2932-N-S1
10	45/40	155	RW010/4540-N-S1



- The glass agitator shafts are sealed by KPG agitator seals (KPG = calibrated precision glass tubes)

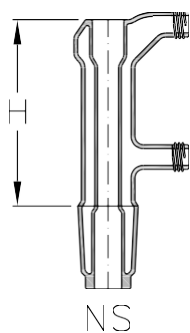
KPG stirrer bushing, melted in

Shaft-Ø [mm]	NS	H [mm]	Order no.
10	29/32	90	RW010/2932-N-S2
10	45/40	90	RW010/4540-N-S2
16	29/32	90	RW016/2932-N-S2
16	45/40	90	RW016/4540-N-S2
16	60/46	95	RW016/6046-N-S2
16	71/51	95	RW016/7151-N-S2



- The glass agitator shafts are sealed by KPG agitator seals (KPG = calibrated precision glass tubes)

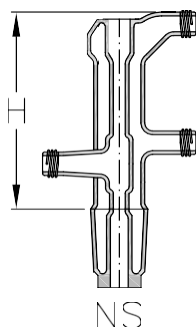
KPG stirrer bushing, with cooling jacket



Shaft-Ø [mm]	NS	H [mm]	GL	Order no.
10	29/32	90	14	RW010/2932-N-S3
10	45/40	90	14	RW010/4540-N-S3
16	29/32	90	14	RW016/2932-N-S3
16	45/40	90	14	RW016/4540-N-S3
16	60/46	95	14	RW016/6046-N-S3
16	71/51	95	14	RW016/7151-N-S3

- The glass agitator shafts are sealed by KPG agitator seals (KPG = calibrated precision glass tubes)

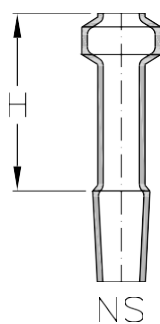
KPG agitator feed-through, with cooling jacket and gas inlet



Shaft Ø [mm]	NS	H [mm]	GL	Order no.
10	29/32	100	14	RW010/2932-N-S4
10	45/40	100	14	RW010/4540-N-S4
16	29/32	100	14	RW016/2932-N-S4
16	45/40	100	14	RW016/4540-N-S4
16	60/46	115	14	RW016/6046-N-S4
16	71/51	115	14	RW016/7151-N-S4

- The glass agitator shafts are sealed by KPG agitator seals (KPG = calibrated precision glass tubes)

KPG stirrer bushing for micro-stirrers



Shaft Ø [mm]	NS	H [mm]	Order no.
6	14/23	45	RW006/1423-N-S5

- The glass agitator shafts are sealed by KPG agitator seals (KPG = calibrated precision glass tubes)

Stirrer bushing Basic PTFE

Shafts - Ø [mm]	Ground joint size *Order no. A NS	
	8with nozzle for attachment	RW008/XX-S6
8	29/32	RW008/2932-N-S6
8	45/40	RW008/4540-N-S6
10	with nozzle for attachment	RW010/XX-S6
10	29/32	RW010/2932-N-S6
10	40/38	RW010/4038-N-S6
10	45/40	RW010/4540-N-S6
16	with nozzle for attachment	RW016/XX-S6
16	29/32	RW016/2932-N-S6
16	40/38	RW016/4038-N-S6
16	45/40	RW016/4540-N-S6

- Other spigots also available on request

Stirrer bushing Pro PTFE / PEEK

Shafts - Ø [mm]	Ground joint size * NS	Order no. B
10	29/32	RW010/2932-N-S7
10	45/40	RW010/4540-N-S7
16	29/32	RW016/2932-N-S7
16	45/40	RW016/4540-N-S7
10	DN15	RW010/15-K-S7
10	DN25	RW010/25-K-S7
16	DN15	RW016/15-K-S7
16	DN25	RW016/25-K-S7

- Other spigots also available on request

ROUTE COUPLINGS

Magnetic stirrer couplings with NS ground joint

NS	Torque [NCM]	Speed rpm	Storage	Order no.
4540	150	2000	Ball bearing steel	RW4540/150-N-S8
2932	150	2000	Ball bearing steel	RW2932/150-N-S8

- Simple and quick bearing replacement makes servicing and cleaning easier
- Magnetic stirrer lock is available in stainless steel, Hastel-loy®, titanium, zirconium and other materials
- Assembly of stirring tools made of the above materials and glass possible
- Delivery of the drive shaft with external square 6 mm and stainless steel adapter 8, 10 and 16 mm

Magnetic stirrer couplings with flange

DN	Torque [Ncm]	Speed rpm	Storage	Order no.
25	150	2000	Ball bearing steel	RW025/150-K-S8
40	150	2000	Ball bearing steel	RW040/150-K-S8
50	150	2000	Ball bearing steel	RW050/150-K-S8

- Simple and quick bearing replacement makes servicing and cleaning easier
- Magnetic stirrer lock is available in stainless steel, Hastel-loy®, titanium, zirconium and other materials
- Assembly of stirring tools made of the above materials and glass possible
- Delivery of the drive shaft with external square 6 mm and stainless steel adapter 8, 10 and 16 mm
- for KF and PF system

Magnetic stirrer couplings, PTFE/PPEK/Hastelloy

Shafts Ø [mm]	Height [mm]	NS/DN	Torque [Ncm]	Order no.
8	145	29/32	90	RW008/2932-N-S9
10	145	29/32	90	RW010/2932-N-S9
10	145	45/40	90	RW010/4540-N-S9
10	160	40	90	RW010/040-K-S9
10	160	50	90	RW010/050-K-S9



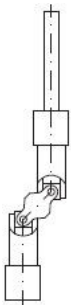
Globus agitator couplings, POM, various types



Bottom agitator shaft mount [mm]	Top mount Ø [mm]	Total length [mm]	Order no.
Ø 4,0	10	190	RWOL04/10-S1
Ø 6,5 + 10	10	190	RWOL06/10-S1
Ø 8 + 10	10	190	RWOL08/10-S1
Internal square SW6	SW8	180	RWOLSW6/SW8-S1
GL 10	10	170	RWOL6L10/10-S1

- Material: POM
- Temperature resistance: -20°C to +110°C
- Chemical resistance: ++ very good
- Product description: mechanically solid plastic, powerful power transmission up to 300 Ncm, suitable for speeds up to 1,200 revolutions per minute, maximum possible axis offset 10 mm.
- Product advantages
 - Extremely low centrifugal forces due to low weight
 - Independent direction of rotation (anti-clockwise rotation not possible with GL 10 threads)
 - Backlash-free design
 - Simple installation due to clamping ring screw connection
 - User can shorten the length of the holder (length: 90 mm)

Double cardan joints



Shaft Ø [mm]	Order no.
16, 10, inside square adapter	RWOC16/10-S2

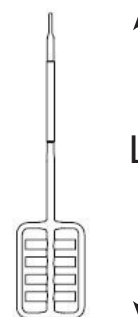
High-precision universal joint

Shaft Ø [mm]	Order no.
10	RWOC10/10-S3
16	RWOC16/10-S3

DRIVERS

Lattice stirrer made of borosilicate glass 3.3

Shaft Ø [mm]	Stirrer width [mm]	Length h [mm]	Order no.
10	60		R010/060/XXXX-S01
10	60		R010/060/XXXX-S01
10	90		R010/090/XXXX-S01
16	90		R016/090/XXXX-S01
16	90		R016/090/XXXX-S01
16	140		R016/140/XXXX-S01
16	140		R016/140/XXXX-S01
16	140		R016/140/XXXX-S01
16	140		R016/140/XXXX-S01



KPG agitator with replaceable PTFE agitator blade

Shaft Ø [mm]	Blade width [mm]	Length h [mm]	Order no.
10	50		R010/050/XXXX-S02
10	50		R010/050/XXXX-S02
10	80		R010/080/XXXX-S02
10	80		R010/080/XXXX-S02
10	100		R010/100/XXXX-S02
10	100		R010/100/XXXX-S02
10	100		R010/100/XXXX-S02
10	100		R010/100/XXXX-S02
10	100		R010/100/XXXX-S02
16	100		R016/100/XXXX-S02
16	100		R016/100/XXXX-S02
16	100		R016/100/XXXX-S02
16	100		R016/100/XXXX-S02
16	100		R016/100/XXXX-S02



Micro-stirrer



Shaft Ø [mm]	for round bottom flasks Capacity [ml]	Length h [mm]	Order no.
6	100		R006/100/XXXX-S03
6	250		R006/250/XXXX-S03

Stirrer with movable glass blade



Shaft Ø [mm]	Leaf width	Length h [mm]	Order no.
10			R010/XXX/XXXX-S04
10			R010/XXX/XXXX-S04
10			R010/XXX/XXXX-S04
10			R010/XXX/XXXX-S04
10			R010/XXX/XXXX-S04
10			R010/XXX/XXXX-S04
10			R010/XXX/XXXX-S04
10			R010/XXX/XXXX-S04
10			R010/XXX/XXXX-S04
10			R010/XXX/XXXX-S04
16			R016/XXX/XXXX-S04
16			R016/XXX/XXXX-S04
16			R016/XXX/XXXX-S04
16			R016/XXX/XXXX-S04
16			R016/XXX/XXXX-S04

Propeller agitator shafts, type A

Length h [mm]	Shaft Ø [mm]	Clamping Ø [mm]	Shaft dimensions as per illustration A - B - C [mm]	Order no.
350	8	6,5	75 - 18 - 3,0	R008/075/0350-S05
450	8	6,5	75 - 18 - 3,0	R008/075/0450-S05
600	8	6,5	75 - 18 - 3,0	R008/075/0600-S05
450	10	8,0	50 - 18 - 3,0	R010/050/0450-S05
450	10	8,0	75 - 18 - 3,0	R010/075/0450-S05
600	10	8,0	75 - 18 - 3,0	R010/075/0600-S05
800	10	8,0	75 - 18 - 3,0	R010/075/0800-S05



- Material: PTFE
- Temperature resistance: -200°C to +250°C
- Chemical resistance: +++ universal
- Stirring effect: from bottom to top
- Product description: PTFE-coated stainless steel shaft, propeller made entirely of PTFE with three 45° inclined blades in round or square shape; universal chemical resistance, as the medium only comes into contact with PTFE
- Applications: Suction of the mix from bottom to top, good axial flow with low shear forces

Vane agitator shafts, PTFE



- Material: PTFE
- Temperature resistance: -200°C to +250°C
- Chemical resistance: +++ universal
- Stirring effect: from bottom to top
- Product description: PTFE-coated stainless steel shaft, agitator blade made entirely of PTFE with two blades inclined at 45°; universal
Chemical resistance, as the medium only comes into contact with PTFE
- Applications: Suction of the mix from bottom to top, good axial flow with low shear forces

Length h [mm]	Shaft Ø [mm]	Clamping Ø [mm]	Sash dimensions according to illustration A - B - C [mm]	Order no.
450	8	6	80 - 18 - 4	R008/080/0450-S06
600	8	6	80 - 18 - 4	R008/080/0600-S06
800	8	6	80 - 18 - 4	R008/080/0800-S06
600	10	8	110 - 20 - 5	R010/110/0600-S06
800	10	8	110 - 20 - 5	R010/110/0800-S06
1000	10	8	110 - 20 - 5	R010/110/1000-S06
1000	16	14	140 - 25 - 12	R016/140/1000-S06

Armature agitator shafts, PTFE

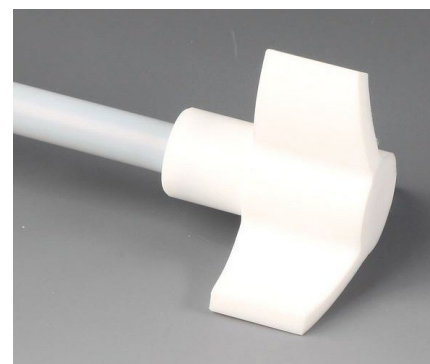


- Material: PTFE
- Temperature resistance: -200°C to +250°C
- Chemical resistance: +++ universal
- Product description: Stainless steel shaft coated with PTFE, armature agitator blade made entirely of PTFE; universal chemical resistance, as the medium only comes into contact with PTFE
- Applications: strong, tangential flow with high shear rate in the wall area, reduced deposits on the vessel wall, ideal for stirring viscous media

Length h [mm]	Shaft Ø [mm]	Clamping Ø [mm]	Sash dimensions as per illustration A - B - C - D [mm]	Order no.
350	8	6,5	40 - 35 - 20 - 26	R008/040/0350-S07
350	8	6,5	60 - 40 - 25 - 30	R008/060/0350-S07
450	8	6,5	60 - 40 - 25 - 30	R008/060/0450-S07
450	8	6,5	80 - 50 - 30 - 44	R008/080/0450-S07
600	8	6,5	80 - 50 - 30 - 44	R008/080/0600-S07
600	8	6,5	100 - 60 - 35 - 56	R008/100/0600-S07
800	8	6,5	60 - 40 - 25 - 30	R008/060/0800-S07
350	10	8,0	80 - 50 - 30 - 44	R010/080/0350-S07
450	10	8,0	80 - 50 - 30 - 44	R010/080/0450-S07
450	10	8,0	100 - 60 - 35 - 56	R010/100/0450-S07
450	10	8,0	130 - 80 - 55 - 80	R010/130/0450-S07
600	10	8,0	80 - 50 - 30 - 44	R010/080/0600-S07
600	10	8,0	100 - 60 - 35 - 56	R010/100/0600-S07
800	10	8,0	100 - 60 - 35 - 56	R010/100/0800-S07
1000	10	8,0	100 - 60 - 35 - 56	R010/100/1000-S07
1200	10	8,0	100 - 60 - 35 - 56	R010/100/1200-S07
600	10	8,0	130 - 80 - 55 - 80	R010/130/0600-S07
800	10	8,0	130 - 80 - 55 - 80	R010/130/0800-S07
1000	16	14,0	130 - 80 - 55 - 80	R016/130/1000-S07
800	16	14,0	150 - 120 - 90 - 90	R016/150/0800-S07
1000	16	14,0	150 - 120 - 90 - 90	R016/150/1000-S07
1200	16	14,0	150 - 120 - 90 - 90	R016/150/1200-S07
1600	16	14,0	180 - 140 - 100 - 110	R016/180/1600-S07
1600	16	14,0	240 - 180 - 140 - 170	R016/240/1600-S07

Impeller agitator shafts, PTFE, type A

Length [mm]	Shaft Ø [mm]	Clamping Ø [mm]	Deflection angle	Sash dimensions as per illustration A - B - C [mm]	Order no.
350	10	8	15°	45 - 22 - 5	R010/045/0350-S08
350	10	8	15°	60 - 25 - 5	R010/060/0350-S08
450	10	8	15°	60 - 25 - 5	R010/060/0450-S08



- Material: PTFE
- Temperature resistance: -200°C to +250°C
- Chemical resistance: +++ universal
- Product description: PTFE-coated stainless steel shaft, impeller made entirely of PTFE with three backward-curved blades, underside of blades either straight or with an angle of attack of 15°; universal chemical resistance, as the medium only comes into contact with PTFE
- Applications: Very good, gentle agitation of the mixture due to backward curved blades, low shear forces; impeller agitator shafts with a 15° angle of attack are ideal for agitating in vessels with a curved base

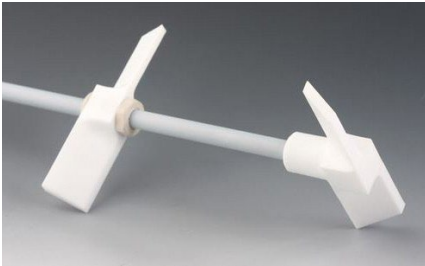
Impeller agitator shafts, PTFE, type B

Length [mm]	Shaft Ø [mm]	Clamping Ø [mm]	Deflection angle	Sash dimensions as per illustration A - B - C [mm]	Order no.
350	10	8	0°	100 - 25 - 5	R010/100/0350-S09
450	10	8	0°	100 - 25 - 5	R010/100/0450-S09
600	10	8	0°	100 - 25 - 5	R010/100/0600-S09
800	10	8	0°	100 - 25 - 5	R010/100/0800-S09
600	10	8	0°	150 - 25 - 5	R010/150/0600-S09
800	10	8	0°	150 - 25 - 5	R010/150/0800-S09



- Material: PTFE
- Temperature resistance: -200°C to +250°C
- Chemical resistance: +++ universal
- Product description: PTFE-coated stainless steel shaft, impeller made entirely of PTFE with three backward-curved blades, bottom side of blades either straight or with an angle of attack of 15°; universal chemical resistance, as the medium only comes into contact with PTFE
- Applications: Very good, gentle agitation of the mixture due to backward curved blades, low shear forces; impeller agitator shafts with a 15° angle of attack are ideal for agitating in vessels with a curved base

Double blade agitator shafts, PTFE



- Material: PTFE
- Temperature resistance: -200°C to +250°C
- Chemical resistance: +++ universal
- Stirring effect: from bottom to top
- Product description: stainless steel shaft coated with PTFE, two agitator blades made of PTFE arranged crosswise at 90° to each other; the upper blade is fastened using clamping screws made of PEEK compound
- Applications: Suction of the mix from bottom to top, very good axial flow, locally low shear forces, upper agitator blade can be positioned individually

Length [mm]	Shaft Ø [mm]	Clamping Ø [mm]	Sash distance [mm]	Sash dimensions as per illustration A - B - C [mm]	Order no.
450	8	6,5	50	80 - 18 - 4	R008/080/0450-S10
600	8	6,5	50	80 - 18 - 4	R008/080/0600-S10
800	8	6,5	50	80 - 18 - 4	R008/080/0800-S10
600	10	8,0	100	110 - 20 - 5	R010/110/0600-S10
800	10	8,0	100	110 - 20 - 5	R010/110/0800-S10
1000	10	8,0	100	110 - 20 - 5	R010/110/1000-S10
600	16	14,0	150	140 - 25 - 12	R016/140/0600-S10
800	16	14,0	150	140 - 25 - 12	R016/140/0800-S10
1000	16	14,0	150	140 - 25 - 12	R016/140/1000-S10
1200	16	14,0	150	140 - 25 - 12	R016/140/1200-S10

Additional propeller blade, PTFE/PEEK



- Material: PTFE
- Temperature resistance: -200°C to +250°C
- Chemical resistance: +++ universal
- Stirring effect: from bottom to top
- Product description:
 - Agitator blades are made of PTFE, the clamping fixtures are made of a PEEK compound;
 - Several agitator blades can be mounted freely on the agitator shaft in height and direction of rotation with a clamp fastening on the matching BOLA agitator shafts
 - A suitable fork spanner is included for assembly
- Applications: Suction of the mix from bottom to top, good axial flow

for Ø shaft [mm]	Sash dimensions as per illustration A - B - C [mm]	Width across flats [mm]	Order no.
8	75 - 18 - 3	15	R008/075/015-S01
10	75 - 18 - 3	19	R010/075/019-S01

Additional impeller blades, PTFE/PEEK

for Ø shaft [mm]	Sash dimensions as per illustration A - B - C [mm]	Width across flats [mm]	Order no.
10	60 - 25 - 6	19	R010/060/19-S02
10	100 - 25 - 6	19	R010/100/19-S02
10	150 - 25 - 6	19	R010/150/19-S02



- Material: PTFE
- Temperature resistance: -200°C to +250°C
- Chemical resistance: +++ universal
- Stirring effect: from bottom to top
- Product description: see BOLA propeller blades, PTFE/PEEK
- Applications: Suction of the mix from bottom to top, good axial flow with low shear forces

Additional propeller blade, four-blade, PTFE/PEEK

for Ø shaft [mm]	Sash dimensions as per illustration A - B - C [mm]	Width across flats [mm]	Order no.
8	50 - 22 - 4	15	R008/050/15-S03
10	100 - 25 - 5	19	R010/100/19-S03
10	140 - 30 - 5	19	R010/140/19-S03
10	200 - 30 - 5	19	R010/200/19-S03
16	140 - 30 - 12	32	R016/140/32-S03
16	200 - 30 - 12	32	R016/200/32-S03

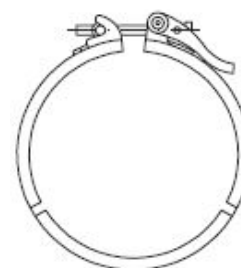


- Material: PTFE
- Temperature resistance: -200°C to +250°C
- Chemical resistance: +++ universal
- Stirring effect: from bottom to top
- Product description: see BOLA propeller blades, PTFE/PEEK
- Applications: Suction of the mix from bottom to top, good axial flow with low shear forces

BRACKETS AND FASTENERS

Quick-release fasteners

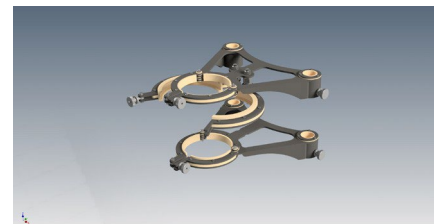
DN	Order no.
60	CQ060-L
100	CQ100-L
120	CQ120-L
150	CQ150-L
200	CQ200-L



- consist of three interconnected and are made of stainless steel

Triple holder Pro

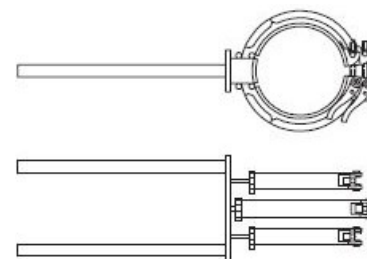
DN	Order no.
100	CTP100-L
150	CTP150-L
200	CTP200-L



- with PTFE insert, chemically coated
- Extra stable holder without additional support, especially for vessels with laboratory flat flanges
- fulfils the following functions: simultaneously forms the connection between the vessel cap and vessel as well as the separate support for the cap and vessel
- This means that the vessel cover can be easily removed for cleaning purposes, while the vessel remains firmly attached to the frame via the triple holder

Basic triple holder

DN	Order no.
60	CTB060-L
100	CTB100-L
120	CTB120-L
150	CTB150-L
200	CTB200-L



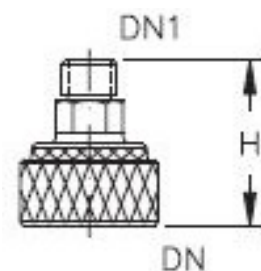
- Holder especially for vessels with laboratory plan- flanges,
- fulfils the following functions: simultaneously forms the connection between the vessel cap and vessel and the separate support for the cap and vessel
- This means that the vessel cover can be easily removed for cleaning purposes, while the vessel remains firmly attached to the frame via the triple holder

Surface-ground suspension connector made of stainless steel, solid version

System "s", flange according to DIN					
	for nominal size clamping screw Order no. DN Ø30 mm Ø		Order no. Ø13 mm	Order no. Ø21 mm	Order no. Ø27 mm
60	4 x M5	CH060/13-L	CH060/21-L	CH060/27-L	-
100	4 x M6	CH100/13-L	CH100/21-L	CH100/27-L	CH100/30-L
120	4 x M6	CH120/13-L	CH120/21-L	CH120/27-L	CH120/30-L
150	4 x M6	CH150/13-L	CH150/21-L	CH150/27-L	CH150/30-L
200	4 x M6	CH200/13-L	CH200/21-L	CH200/27-L	CH200/30-L

Straight metal adapter

DN	DN1	H [mm]	Order no.
10	M16 x 1	40	CM010/GM16x1-K
15	M16 x 1	40	CM015/GM16x1-K
25	M16 x 1	55	CM025/GM16x1-K
25	M30 x 1.5	60	CM025/GM30x1.5-K



- The use of metal hose connections is recommended if flexible energy lines for higher temperature heat transfer media need to be connected to components with a temperature control jacket

Straight metal adapter with Pt100 connection

DN	DN1	H [mm]	Order no.
10	M16 x 1	40	CMT010/GM16x1-K
15	M16 x 1	40	CMT015/GM16x1-K
25	M16 x 1	55	CMT025/GM16x1-K
25	M30 x 1.5	60	CMT025/GM30x1.5-K

- The use of metal hose connections is recommended if flexible energy lines for higher temperature heat transfer media need to be connected to components with a temperature control jacket

90° metal adapter

DN	DN1	H [mm]	L [mm]	Order no.
10	M16 x 1	90	60	CM90/10/GM16x1-K
15	M16 x 1	90	60	CM90/15/GM16x1-K
25	M16 x 1	100	60	CM90/25/GM16x1-K
25	M30 x 1.5	100	60	CM90/25/GM30x1.5-K

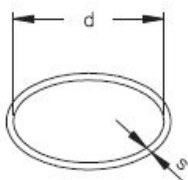
- see straight metal adapter

90° angle piece



DN	DN1	Order no.
GM16 x 1	IM16 x 1	CMA90/GM16x1
GM30 x 1.5	IM30 x 1.5	CMA90/GM30x1.5

Flat gasket for heating jacket adapter

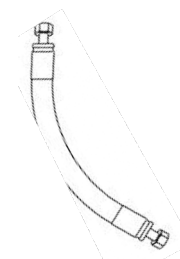


DN	d x s	Order no.
10		CMG010-K
15		CMG015-K
25		CMG025-K

- O-ring seals for laboratory flat flange with groove
- Material: Graphite
- Suitable for high temperatures

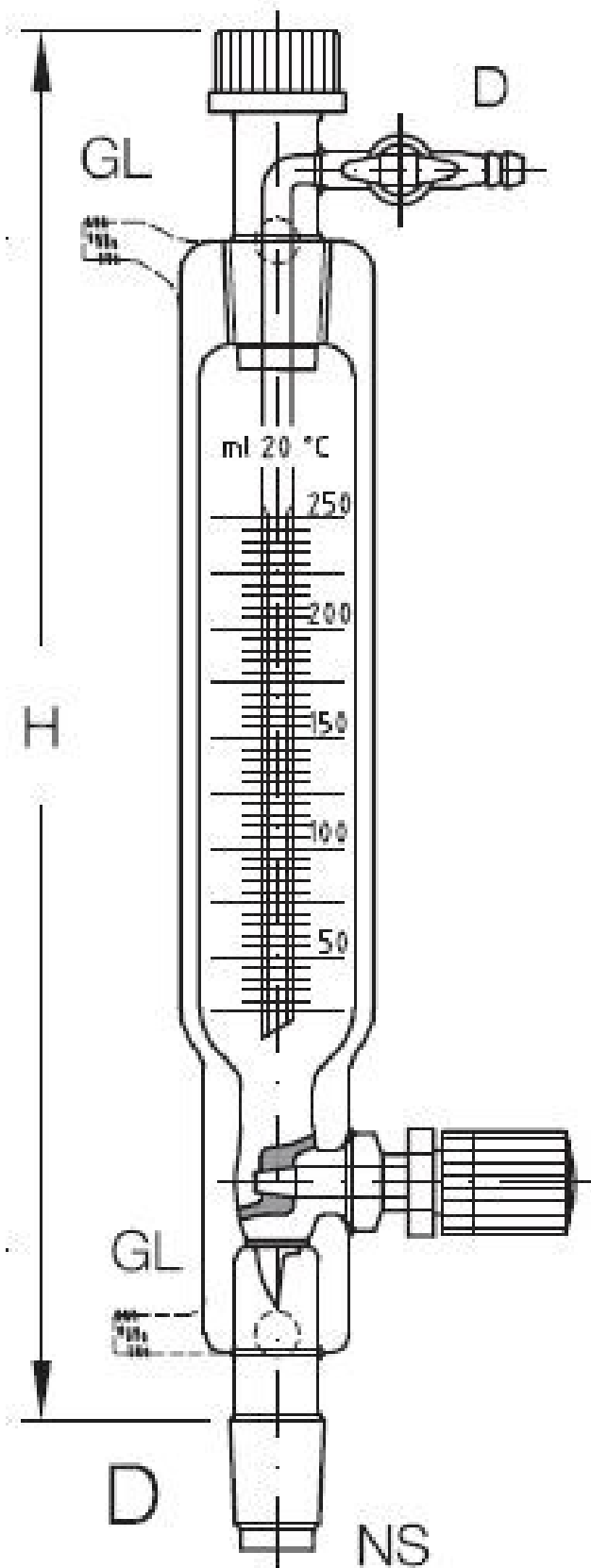
High-temperature heated hoses

Length h [mm]	Temp. [°C]	Thread	Order no.
1000	-50...+200	IM16 x 1	PHM200/IM16x1/1000
1500	-50...+200	IM16 x 1	PHM200/IM16x1/1500
2000	-50...+200	IM16 x 1	PHM200/IM16x1/2000
3000	-50...+200	IM16 x 1	PHM200/IM16x1/3000
1000	-50...+200	IM30 x 1.5	PHM200/IM30x1.5/1000
1500	-50...+200	IM30 x 1.5	PHM200/IM30x1.5/1500
2000	-50...+200	IM30 x 1.5	PHM200/IM30x1.5/2000
3000	-50...+200	IM30 x 1.5	PHM200/IM30x1.5/3000
1000	-100...+350	IM16 x 1	PHM350/IM16x1/1000
2000	-100...+350	IM16 x 1	PHM350/IM16x1/2000
3000	-100...+350	IM16 x 1	PHM350/IM16x1/3000
1000	-100...+350	IM30 x 1.5	PHM350/IM30x1.5/1000
2000	-100...+350	IM30 x 1.5	PHM350/IM30x1.5/2000
3000	-100...+350	IM30 x 1.5	PHM350/IM30x1.5/3000



- thermally insulated
- Equipped with union nut on both sides

TRICHTER

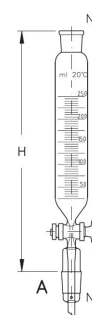


- 1 So-called feed devices with graduations are used to feed liquid or solid media into continuously operating glass apparatus. Their design is usually cylindrical in order to achieve a linear graduation. However, conical or spherical versions are also available on request.
- 2
- 3 The simplest form of feed devices for liquid media are dropping funnels, which are available with or without a pressure equalisation tube. The latter is always required if different pressures can occur or set in closed systems during operation above and below the liquid to be fed in. Alternatively, if the dropping funnels are also to be used under vacuum, a design should be selected in which the equalising tube can be shut off via a one-way or three-way valve. The space above the liquid must then be open to the atmosphere.
- 4

Dosing funnels must be used for processes that require a constant dripping frequency over longer periods of time and even with pressure fluctuations. With these, the desired feed quantity is set via a replaceable spindle valve located below the hopper or a glass needle valve spindle that can be adjusted from above.

Dropping funnel for operation under normal pressure

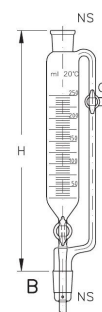
Contents [ml]	H [mm]	NS	Standard tap Bore	Order no.
50	230	14/23	3	DV0050/1423/3
100	270	14/23	3	DV0100/1423/3
100	290	29/32	3	DV0100/2932/3
250	335	29/32	4	DV0250/2932/4
500	380	29/32	4	DV0500/2932/4
1000	430	29/32	6	DV1000/2932/6



- without pressure equalisation
- Preferred use as a pure feed vessel

Dropping funnel for operation under vacuum

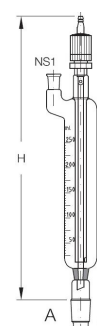
Contents [ml]	H [mm]	NS	GL	Standard tap Bore	Order no.
50	390	14/23	14	3	DVE0050/1423/3
100	430	14/23	14	3	DVE0100/1423/3
100	500	29/32	14	3	DVE0100/2932/3
250	500	29/32	14	4	DVE0250/2932/4
500	550	29/32	14	4	DVE0500/2932/4
1000	640	29/32	14	6	DVE1000/2932/6
2000	790	29/32	14	6	DVE2000/2932/6



- with three-way valve arranged in the pressure equalisation pipe
- The space above the liquid to be dosed must be open to the outside atmosphere

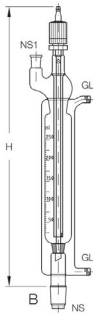
Dosing funnel with Mariotte's tube

Contents [ml]	H [mm]	NS	NS1	Order no.
50	330	29/32	14/23	DVM0050/2932/VG8
100	370	29/32	14/23	DVM0100/2932/VG8
250	430	29/32	14/23	DVM0250/2932/VG8
500	470	29/32	19/26	DVM0500/2932/VG8
1000	575	29/32	19/26	DVM1000/2932/VG8
2000	685	29/32	19/26	DVM2000/2932/VG8



- Suitable for operation under normal pressure and vacuum
- Supply is via a replaceable valve spindle that can be adjusted from above
- Pressure equalisation integrated in the glass needle, just below the valve handle

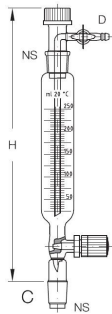
Dosing funnel jacketed with Mariotte's tube



Cont ents [ml]	H [mm]	NS	NS1	GL	Order no.
50	390	29/32	14/23	14	DVMT0050/2932/VG8
100	430	29/32	14/23	14	DVMT0100/2932/VG8
250	500	29/32	14/23	14	DVMT0250/2932/VG8
500	550	29/32	19/26	14	DVMT0500/2932/VG8
1000	640	29/32	19/26	14	DVMT1000/2932/VG8
2000	790	29/32	19/26	14	DVMT2000/2932/VG8

- Suitable for operation under normal pressure and vacuum
- Supply is via a replaceable valve spindle that can be adjusted from above
- Pressure equalisation integrated in the glass needle, just below the valve handle
- with tempering jacket

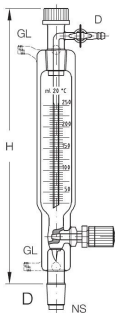
Dosing funnel with Mariotte's tube



Cont ents [ml]	H [mm]	NS	D	Order no.
50	320	29/32	11	DVM10050/2932/VG8
100	390	29/32	11	DVM10100/2932/VG8
250	450	29/32	11	DVM10250/2932/VG8
500	510	29/32	11	DVM10500/2932/VG8
1000	590	29/32	11	DVM11000/2932/VG8
2000	720	29/32	11	DVM12000/2932/VG8
5000	820	29/32	11	DVM5000/2932/VG8

- Suitable for operation under normal pressure and vacuum
- Feed is via a laterally arranged glass needle valve GNV 8
- Pressure equalisation via Mariotte tube with one-way stopcock 3 NS

Dosing funnel jacketed with Mariotte's tube

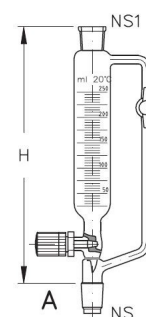


Cont ents [ml]	H [mm]	NS	D	GL	Order no.
50	330	29/32	11	14	DVMT10050/2932/VG8
100	410	29/32	11	14	DVMT10100/2932/VG8
250	470	29/32	11	14	DVMT10250/2932/VG8
500	530	29/32	11	14	DVMT10500/2932/VG8
1000	610	29/32	11	14	DVMT11000/2932/VG8
2000	740	29/32	11	14	DVMT12000/2932/VG8
5000	840	29/32	11	14	DVMT15000/2932/VG8

- Suitable for operation under normal pressure and vacuum
- Feed is via a laterally arranged glass needle valve GNV 8
- Pressure equalisation via Mariotte tube with one-way stopcock 3 NS
- with tempering jacket

Dosing funnel with pressure equalisation tube, A

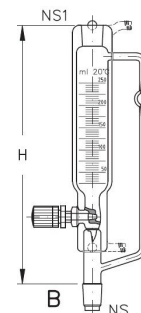
Contents [ml]	H [mm]	NS	NS1	Order no.
50	310	29/32	29/32	DV0050/2932/VG8
100	380	29/32	29/32	DV0100/2932/VG8
250	450	29/32	29/32	DV0250/2932/VG8
500	510	29/32	29/32	DV0500/2932/VG8
1000	590	29/32	29/32	DV1000/2932/VG8
2000	720	29/32	29/32	DV2000/2932/VG8
5000	820	29/32	45/40	DV5000/2932/VG8



- Can be used at normal pressure, vacuum and low overpressure,
- These funnels have a pressure equalisation tube with standard stopcock (PTFE plug, bore 4 mm) and an additional pressure equalisation standard stopcock (to atmosphere)
- Feed via a lateral glass needle valve

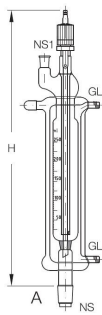
Dosing funnel with pressure equalisation tube, B

Contents [ml]	H [mm]	NS	NS1	Order no.
50	320	29/32	29/32	DVT0050/2932/VG8
100	330	29/32	29/32	DVT0100/2932/VG8
250	470	29/32	29/32	DVT0250/2932/VG8
500	530	29/32	29/32	DVT0500/2932/VG8
1000	650	29/32	29/32	DVT1000/2932/VG8
2000	720	29/32	29/32	DVT2000/2932/VG8
5000	840	29/32	45/40	DVT3000/2932/VG8



- Can be used at normal pressure, vacuum and low overpressure,
- These funnels have a pressure equalisation tube with standard stopcock (PTFE plug, bore 4 mm) and an additional pressure equalisation standard stopcock (to atmosphere)
- with tempering jacket
- Feed via a lateral glass needle valve

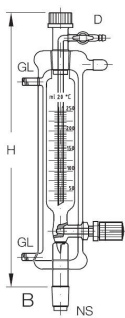
Dosing funnel for cryogenic applications, A



Cont ents [ml]	H [mm]	NS	NS1	GL	Order no.
100	460	29/32	14/23	14	DVTD0100/2932/VG8
250	540	29/32	14/23	14	DVTD0250/2932/VG8
500	590	29/32	19/26	14	DVTD0500/2932/VG8
1000	680	29/32	19/26	14	DVTD1000/2932/VG8

- with tempering jacket and silver-mirrored high-vacuum insulating jacket
- Supply via replaceable valve spindle adjustable from above
- Pressure equalisation integrated in the glass needle, just below the valve handle
- Suitable for use under vacuum and normal pressure

Dosing funnel for cryogenic applications, B

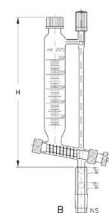


Cont ents [ml]	H [mm]	NS	Standar d tap Bore	D	GL	Order no.
100	440	29/32	3	11	14	DVTD10100/2932/VG8
250	500	29/32	3	11	14	DVTD10250/2932/VG8
500	570	29/32	3	11	14	DVTD10500/2932/VG8
1000	650	29/32	3	11	14	DVTD11000/2932/VG8

- with tempering jacket and silver-mirrored high-vacuum insulating jacket
- Feed via a laterally arranged glass needle valve GNV 8
- Pressure equalisation via Mariotte tube with one-way stopcock 3 NS
- Suitable for use under vacuum and normal pressure

Solids dosing hopper

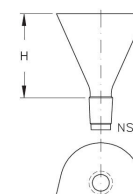
Contents [ml]	H [mm]	NS	Order no.
10	175	14/23	DVS0010/2932
25	195	14/23	DVS0025/2932
50	275	29/32	DVS0050/2932
100	315	29/32	DVS0100/2932
250	385	29/32	DVS0250/2932
500	415	29/32	DVS0500/2932
1000	515	29/32	DVS1000/2932



- is used to dose dry and pulverised substances into a reaction vessel in a controlled manner by means of a PTFE screw conveyor.
- The integrated pressure equalisation line, which can be closed via a PTFE spindle valve if required, allows work to be carried out both under inert gas and under vacuum. D
- Threaded connections ensure excellent tightness in vacuum operation and prevent any contact with grease
- In order to prevent the screw conveyor from sticking when working with boiling solvents, the core grinding of the solids dosing hopper is equipped with a cooling jacket in version B.
- Installation of an additional Liebig cooler between the solids dosing funnel and the reaction flask for working with high-boiling solvents possible
- Alternatively, a motorised version is also available, which allows the solids to be added constantly over longer periods of time
- 10 ml and 20 ml version without temperature control option

Powder hopper

Diameter [mm]	H [mm]	NS	Order no.
60	70	14/23	DFS1423
100	110	29/32	DFS2932



- flattened on one side
- Proven for work on three-necked round-bottom flasks
- Ground joint centre with short extension to avoid contact of the powder with ground joint grease

Separating funnel

Contents [ml]	NS	Standard tap hole	Order no.
50	14/23	3	DFS0050/1423/3
100	14/23	3	DFS0100/1423/3
250	29/32	4	DFS0250/2932/4
500	29/32	4	DFS0500/2932/4
1000	29/32	6	DFS1000/2932/6
2000	29/32	6	DFS2000/2932/6
5000	45/40	8	DFS5000/4540/8



- manufactured according to DIN 12 451
- Preferred use for discontinuous shaking out of solvents

