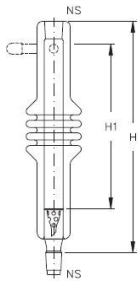


COLUMN SHOTS FOR TOWER PACKINGS



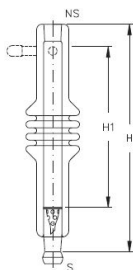
Column shots with conical ground joint



- have a coated head ground joint (sleeve) and a non-coated base ground joint (core) as standard
- Suitable for disorganised packings/fillers

DN	NS	H [mm]	Filling level H1	Filling quantity [ml]	Order no.
15	14/23				ACJ015/1423/0200
15	14/23				ACJ015/1423/0300
15	14/23				ACJ015/1423/0400
15	14/23				ACJ015/1423/0500
20	14/23				ACJ020/1423/0200
20	14/23				ACJ020/1423/0300
20	14/23				ACJ020/1423/0400
20	14/23				ACJ020/1423/0500
20	19/26				ACJ020/1926/0200
20	19/26				ACJ020/1926/0400
20	19/26				ACJ020/1926/0500
20	19/26				ACJ020/1926/0600
20	19/26				ACJ020/1926/0800
20	19/26				ACJ020/1926/1000
25	29/32				ACJ025/2932/0200
25	29/32				ACJ025/2932/0300
25	29/32				ACJ025/2932/0400
25	29/32				ACJ025/2932/0500
25	29/32				ACJ025/2932/0800
25	29/32				ACJ025/2932/1000
30	29/32				ACJ030/2932/0200
30	29/32				ACJ030/2932/0300
30	29/32				ACJ030/2932/0500
30	29/32				ACJ030/2932/0600
30	29/32				ACJ030/2932/0800
30	29/32				ACJ030/2932/1000
30	29/32				ACJ030/2932/1200
30	29/32				ACJ030/2932/1500

Column shots with conical/spherical ground joint

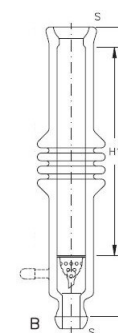


- have a coated head grinding (sleeve) and a non-coated base grinding (ball) as standard.
- Suitable for disorganised packings/fillers

DN	NS	S	H [mm]	Filling level H1	Filling quantity [ml]	Order no.
30	29/32	35/25				ACJ030/3525/0200
30	29/32	35/25				ACJ030/3525/0300
30	29/32	35/25				ACJ030/3525/0500
30	29/32	35/25				ACJ030/3525/0600
30	29/32	35/25				ACJ030/3525/0800
30	29/32	35/25				ACJ030/3525/1000
30	29/32	35/25				ACJ030/3525/1200
30	29/32	35/25				ACJ030/3525/1500
30	29/32	40/25				ACJ030/4025/0200
30	29/32	40/25				ACJ030/4025/0300
30	29/32	40/25				ACJ030/4025/0500
30	29/32	40/25				ACJ030/4025/0600
30	29/32	40/25				ACJ030/4025/0800
30	29/32	40/25				ACJ030/4025/1000
30	29/32	40/25				ACJ030/4025/1200
30	29/32	40/25				ACJ030/4025/1500

Column shots with spherical ground joint, version A

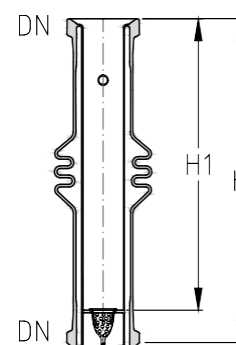
DN	S	H [mm]	Filling level H1	Filling quantity [ml]	Order no.
30	35/25				ACJS030/3525/0200
30	35/25				ACJS030/3525/0300
30	35/25				ACJS030/3525/0500
30	35/25				ACJS030/3525/0600
30	35/25				ACJS030/3525/0800
30	35/25				ACJS030/3525/1000
30	35/25				ACJS030/3525/1200
30	35/25				ACJS030/3525/1500
30	40/25				ACJS030/4025/0200
30	40/25				ACJS030/4025/0300
30	40/25				ACJS030/4025/0500
30	40/25				ACJS030/4025/0600
30	40/25				ACJS030/4025/0800
30	40/25				ACJS030/4025/1000
30	40/25				ACJS030/4025/1200
30	40/25				ACJS030/4025/1500
50	64/40				ACJS050/6440/0400
50	64/40				ACJS050/6440/0600
50	64/40				ACJS050/6440/0800
50	64/40				ACJS050/6440/1000
50	64/40				ACJS050/6440/1200
50	64/40				ACJS050/6440/1500



- have a coated head ground joint (bowl) and a non-coated base ground joint (ball) as standard
- From DN50, the basic ground joint is also encased
- Suitable for disorganised packings/fillers

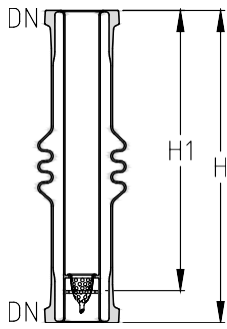
Column shots with ball flanges

DN	KF DN	H [mm]	Filling level H1	Filling quantity [ml]	Order no.
50	50				ACJ050/050/0400-K
50	50				ACJ050/050/0600-K
50	50				ACJ050/050/0800-K
50	50				ACJ050/050/1000-K
50	50				ACJ050/050/1200-K
50	50				ACJ050/050/1500-K
80	80				ACJ080/080/0500-K
80	80				ACJ080/080/1000-K
80	80				ACJ080/080/1500-K
100	100				ACJ100/100/0500-K
100	100				ACJ100/100/1000-K
100	100				ACJ100/100/1500-K
120	150				ACJ120/150/0500-K
120	150				ACJ120/150/1500-K
150	150				ACJ150/150/0500-K
150	150				ACJ150/150/1000-K
150	150				ACJ150/150/1500-K



- with silver-mirrored high vacuum jacket (10-7 mbar) with expansion bellows and sight glass
- Head ground F2 coated
- Basic grinding F1 coated
- ...-01 without support ring
- Suitable for structured packs

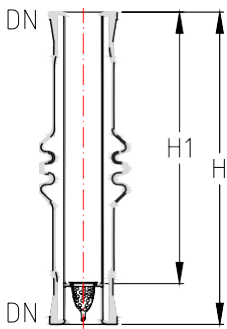
Column sections with flat flange KF



- with silver-mirrored high vacuum jacket (10-7 mbar) with expansion bellows and sight glass
- for rectification under largely adiabatic conditions
- Head ground F3 coated
- Basic grinding F3 coated
- ...-01 without support ring

DN	KF DN	H [mm]	Filling level H1	Filling quantity [ml]	Order no.
50	50				ACJ050/050/0400-F33
50	50				ACJ050/050/0600-F33
50	50				ACJ050/050/0800-F33
50	50				ACJ050/050/1000-F33
50	50				ACJ050/050/1200-F33
50	50				ACJ050/050/1500-F33
80	80				ACJ080/080/0500-F33
80	80				ACJ080/080/1000-F33
80	80				ACJ080/080/1500-F33
100	100				ACJ100/100/0500-F33
100	100				ACJ100/100/1000-F33
100	100				ACJ100/100/1500-F33
150	150				ACJ150/150/0500-F33
150	150				ACJ150/150/1000-F33
150	150				ACJ150/150/1500-F33

Column shots with plane flange PF



- with silver-mirrored high vacuum jacket (10-7 mbar) with expansion bellows and sight glass
- for rectification under largely adiabatic conditions
- Head ground F4 coated
- Basic grinding F4 coated
- ...-01 without support ring

DN	KF DN	H [mm]	Filling level H1	Filling quantity [ml]	Order no.
50	50				ACJ050/050/0400-P
50	50				ACJ050/050/0600-P
50	50				ACJ050/050/0800-P
50	50				ACJ050/050/1000-P
50	50				ACJ050/050/1200-P
50	50				ACJ050/050/1500-P
80	80				ACJ080/080/0500-P
80	80				ACJ080/080/1000-P
80	80				ACJ080/080/1500-P
100	100				ACJ100/100/0500-P
100	100				ACJ100/100/1000-P
100	100				ACJ100/100/1500-P
150	150				ACJ150/150/0500-P
150	150				ACJ150/150/1000-P
150	150				ACJ150/150/1500-P

## Packing columns for Sulzer laboratory packings with flange

DN [mm]	KF DN	H [mm]	H1 [mm]	Packing	Height [mm]	Quantity	Order no.
20	50			DX / EX	55	9	
20	50			DX / EX	55	18	
30	50			DX / EX	55	9	
30	50			DX / EX	55	18	
43	80			DX / EX	55	9	
43	80			DX / EX	55	18	
50	80			DX / EX	55	9	
50	80			DX / EX	55	18	
80	150			DX / EX	55	9	
80	150			DX / EX	55	8	

- have a coated head ground joint (bowl) and a non-coated base ground joint (ball) as standard
- Vigreux columns are also available with spherical ground joint balls and shells in millimetre versions on request

## Packing columns for Sulzer laboratory packings with ground joint

DN [mm]	KF DN	H [mm]	H1 [mm]	Packing	Height [mm]	Quantity	Order no.
20	50			DX / EX	55	9	
20	50			DX / EX	55	18	
30	50			DX / EX	55	9	
30	50			DX / EX	55	18	
43	80			DX / EX	55	9	
43	80			DX / EX	55	18	
50	80			DX / EX	55	9	
50	80			DX / EX	55	18	

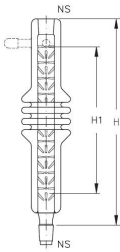
- have a coated head ground joint (bowl) and a non-coated base ground joint (ball) as standard
- Vigreux columns are also available with spherical ground joint balls and shells in millimetre versions on request

## Packings - Sulzer Packings

DN [mm]	Pack height [mm]	Material	Kind	Order no.
20	55	1.4435	EX	
30	55	1.4435	EX	
43	55	1.4435	EX	
50	55	1.4435	EX	
80	55	1.4435	EX	
20	55	1.4435	DX	
30	55	1.4435	DX	
43	55	1.4435	DX	
50	55	1.4435	DX	
80	55	1.4435	DX	

- High-performance packings from Sulzer

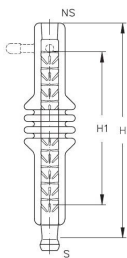
Vigreux column shots with conical ground joint



- have a coated head ground joint (sleeve) and a non-coated base ground joint (core) as standard

DN	NS	H [mm]	H1 [mm]	Order no.
15	14/23			ACV015/1423/0200
15	14/23			ACV015/1423/0300
15	14/23			ACV015/1423/0500
20	19/26			ACV020/1926/0200
20	19/26			ACV020/1926/0300
20	19/26			ACV020/1926/0500
20	19/26			ACV020/1926/0600
20	19/26			ACV020/1926/0800
20	19/26			ACV020/1926/1000
25	29/32			ACV025/2932/0300
25	29/32			ACV025/2932/0500
25	29/32			ACV025/2932/0600
25	29/32			ACV025/2932/0800
25	29/32			ACV025/2932/1000
25	29/32			ACV025/2932/1200

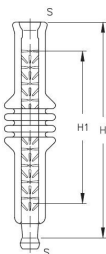
Vigreux column shots with conical/spherical ground joint



- have a coated head ground joint (sleeve) and a non-coated base ground joint (ball) as standard
- Vigreux columns are also available with millimetre beads on request

DN	NS	S	H [mm]	H1 [mm]	Order no.
25	29/32	35/25			ACV025/3525/0300
25	29/32	35/25			ACV025/3525/0400
25	29/32	35/25			ACV025/3525/0500
25	29/32	35/25			ACV025/3525/0600
25	29/32	35/25			ACV025/3525/0800
25	29/32	35/25			ACV025/3525/1000
25	29/32	35/25			ACV025/3525/1200
25	29/32	40/25			ACV025/4025/0300
25	29/32	40/25			ACV025/4025/0400
25	29/32	40/25			ACV025/4025/0500
25	29/32	40/25			ACV025/4025/0600
25	29/32	40/25			ACV025/4025/0800
25	29/32	40/25			ACV025/4025/1000
25	29/32	40/25			ACV025/4025/1200

Vigreux column shots with spherical ground joint



- have a coated head ground joint (bowl) and a non-coated base ground joint (ball) as standard
- Vigreux columns are also available with spherical ground joint balls and shells in millimetre versions on request

DN	S	H [mm]	H1 [mm]	Order no.
25	35/25			ACVS025/3525/0300
25	35/25			ACVS025/3525/0400
25	35/25			ACVS025/3525/0500
25	35/25			ACVS025/3525/0600
25	35/25			ACVS025/3525/0800
25	35/25			ACVS025/3525/1000
25	35/25			ACVS025/3525/1200
25	40/25			ACVS025/4025/0300
25	40/25			ACVS025/4025/0400
25	40/25			ACVS025/4025/0500
25	40/25			ACVS025/4025/0600
25	40/25			ACVS025/4025/0800
25	40/25			ACVS025/4025/1000
25	40/25			ACVS025/4025/1200

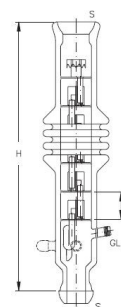
Bell base column wefts with spherical or conical ground joint

DN	S1 / NS 1	S2 / NS 2	H [mm]	H1 [mm]	GL	Floors	Order no.
30	29/32	29/32			18	5	ACTB030/2932/5
30	29/32	29/32			18	10	ACTB030/2932/10
50	64/40	64/40			18	5	ACTB050/6440/5
50	64/40	64/40			18	10	ACTB050/6440/10
50	45/40	45/40			18	5	ACTB050/4540/5
50	45/40	45/40			18	10	ACTB050/4540/10



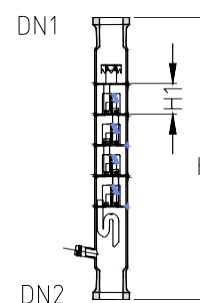
Bell base columns with spherical ground joint or conical ground joint and insulating jacket

DN	S1 / NS 1	S2 / NS 2	H [mm]	H1 [mm]	GL	Floors	Order no.
30	NS 29/32	NS 29/32			18	5	ACTBJ030/2932/5
30	NS 29/32	NS 29/32			18	10	ACTBJ030/2932/10
50	S 64/40	S 64/40			18	5	ACTBJ050/6440/5
50	S 64/40	S 64/40			18	10	ACTBJ050/6440/10
50	NS 45/40	NS 45/40			18	5	ACTBJ050/4540/5
50	NS 45/40	NS 45/40			18	10	ACTBJ050/4540/10

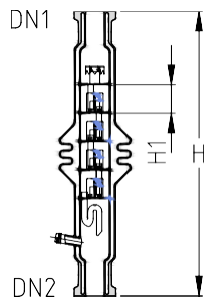


Bell bottom column shots with flange

DN	DN1/2	H [mm]	H1 [mm]	GL	Floors	Order no.
30	DN50/F1/DN50/F2			18	5	ACTB030/050/5-K
30	DN50/F1/DN50/F2			18	10	ACTB030/050/10-K
50	DN80/F1/DN80/F2			18	5	ACTB050/080/5-K
50	DN80/F1/DN80/F2			18	10	ACTB050/080/10-K
30	DN50/F3			18	5	ACTB030/050/5-F33
30	DN50/F3			18	10	ACTB030/050/10-F33
50	DN80/F3			18	5	ACTB050/080/5-F33
50	DN80/F3			18	10	ACTB050/080/10-F33
30	DN50/F4			18	5	ACTB030/050/5-P
30	DN50/F4			18	10	ACTB030/050/10-P
50	DN80/F4			18	5	ACTB050/080/5-P
50	DN80/F4			18	10	ACTB050/080/10-P

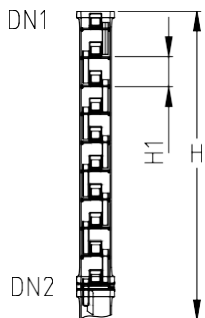


### Bell base column with flange and insulating jacket



DN	DN1/2	H [mm]	H1 [mm]	GL	Floors	Order no.
30	DN50/F1/DN50/F2			18	5	<a href="#">ACTBJ030/050/5-K</a>
50	DN50/F1/DN50/F2			18	10	<a href="#">ACTBJ050/050/10-K</a>
50	DN80/F1/DN80/F2			18	5	<a href="#">ACTBJ050/080/5-K</a>
50	DN80/F1/DN80/F2			18	10	<a href="#">ACTBJ050/080/10-K</a>
30	DN50/F3			18	5	<a href="#">ACTBJ030/050/5-F33</a>
30	DN50/F3			18	10	<a href="#">ACTBJ030/050/10-F33</a>
50	DN80/F3			18	5	<a href="#">ACTBJ050/080/5-F33</a>
50	DN80/F3			18	10	<a href="#">ACTBJ050/080/10-F33</a>
30	DN50/F4					<a href="#">ACTBJ030/050/5-P</a>
30	DN50/F4					<a href="#">ACTBJ030/050/10-P</a>
50	DN80/F4					<a href="#">ACTBJ050/080/5-P</a>
50	DN80/F4					<a href="#">ACTBJ050/080/10-P</a>

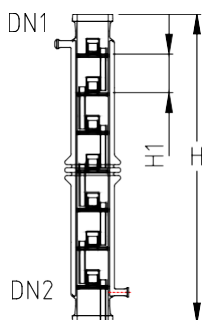
### Bell bottom column with flexible trays



DN	DN1/2	H [mm]	H1 [mm]	GL	Floors	Order no.
80	DN80/F3					<a href="#">ACTB080-K</a>
100	DN100/F3					<a href="#">ACTB100-K</a>
150	DN150/F3					<a href="#">ACTB150-K</a>
80	DN80/F4					<a href="#">ACTB080-P</a>
100	DN100/F4					<a href="#">ACTB100-P</a>
150	DN150/F4					<a href="#">ACTB150-P</a>

- Floor construction as before, but interchangeable and flexibly customisable
- Sealing of the bases and spacers made of PTFE

### Inverted bucket tray column with flexible trays and insulating jacket

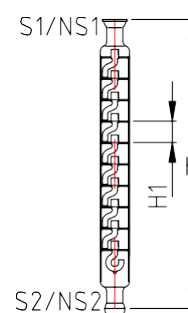


DN	DN1/2	H [mm]	H1 [mm]	GL	Floors	Order no.
80	DN80/F3					<a href="#">ACTBJ080-K</a>
100	DN100/F3					<a href="#">ACTBJ100-K</a>
80	DN80/F4					<a href="#">ACTBJ080-P</a>
100	DN100/F4					<a href="#">ACTBJ100-P</a>



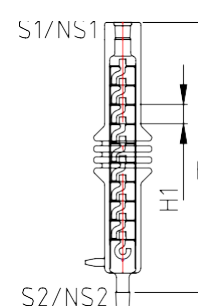
### Sieve tray column wefts with spherical ground joint or conical ground joint

DN	S1 / NS 1	S2 / NS 2	H [mm]	H1 [mm]	GL	Floors	Order no.
30	29/32	29/32			18	5	ACTS030/2932/5
30	29/32	29/32			18	10	ACTS030/2932/10
50	64/40	64/40			18	5	ACTS050/6440/5
50	64/40	64/40			18	10	ACTS050/6440/10
50	45/40	45/40			18	5	ACTS050/4540/5
50	45/40	45/40			18	10	ACTS050/4540/10



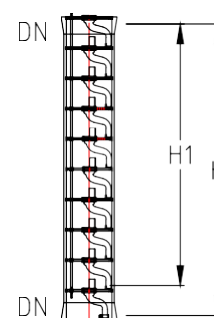
### Sieve tray columns with spherical ground joint or conical ground joint and insulating jacket

DN	S1 / NS 1	S2 / NS 2	H [mm]	H1 [mm]	GL	Floors	Order no.
30	NS 29/32	NS 29/32			18	5	ACTSJ030/2932/5
30	NS 29/32	NS 29/32			18	10	ACTSJ030/2932/10
50	S 64/40	S 64/40			18	5	ACTSJ050/6440/5
50	S 64/40	S 64/40			18	10	ACTSJ050/6440/10
50	NS 45/40	NS 45/40			18	5	ACTSJ050/4540/5
50	NS 45/40	NS 45/40			18	10	ACTSJ050/4540/10



### Sieve tray column with flexible trays

DN	DN1/2	H [mm]	H1 [mm]	GL	Floors	Order no.
80	DN80/F3					ACTS080-K
100	DN100/F3					ACTS100-K
150	DN150/F3					ACTS150-K
80	DN80/F4					ACTS080-P
100	DN100/F4					ACTS100-P
150	DN150/F4					ACTS150-P

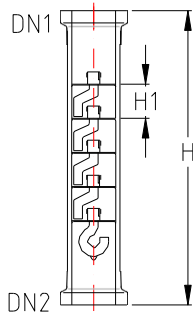


- Floor construction as before, but interchangeable and flexibly customisable
- Sealing of the bases and spacers made of PTFE

### Sieve tray column with flexible trays and insulating jacket

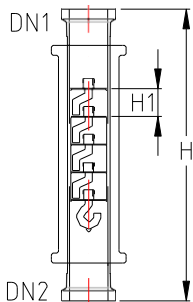
DN	DN1/2	H [mm]	H1 [mm]	GL	Floors	Order no.
80	DN80/F3					ACTSJ080-K
100	DN100/F3					ACTSJ100-K
80	DN80/F4					ACTSJ080-P
100	DN150/F4					ACTSJ100-P

Sieve tray column shots with flange



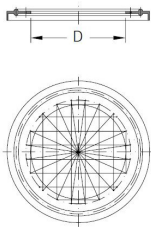
DN	DN1/2	H [mm]	H1 [mm]	GL	Floors	Order no.
30	DN50/F1/DN50/F2			18	5	ACTS030/050/5-K
30	DN50/F1/DN50/F2			18	10	ACTS030/050/10-K
50	DN80/F1/DN80/F2			18	5	ACTS050/080/5-K
50	DN80/F1/DN80/F2			18	10	ACTS050/080/10-K
30	DN50/F3			18	5	ACTS030/050/5-F33
30	DN50/F3			18	10	ACTS030/050/10/5-F33
50	DN80/F3			18	5	ACTS050/080/5-F33
50	DN80/F3			18	10	ACTS050/080/10-F33
30	DN50/F4					ACTS030/050/5-P
30	DN50/F4					ACTS030/050/10-P
50	DN80/F4					ACTS050/080/5-P
50	DN80/F4					ACTS050/080/10-P

Sieve tray column with flange and insulating jacket



DN	DN1/2	H [mm]	H1 [mm]	GL	Floors	Order no.
30	DN50/F1/DN50/F2	440	40	18	5	ACTSJ030/050/5-K
30	DN50/F1/DN50/F2	650	40	18	10	ACTSJ030/050/10-K
50	DN80/F1/DN80/F2	540	40	18	5	ACTSJ050/080/5-K
50	DN80/F1/DN80/F2	800	40	18	10	ACTSJ050/080/10-K
30	DN50/F3	540	50	18	5	ACTSJ030/050/5-F33
30	DN50/F3	800	50	18	10	ACTSJ030/050/10-F33
50	DN80/F3	540	50	18	5	ACTSJ050/080/5-F33
50	DN80/F3	800	50	18	10	ACTSJ050/080/10-F33
30	DN50/F4					ACTSJ030/050/5-P
30	DN50/F4					ACTSJ030/050/10-P
50	DN80/F4					ACTSJ050/080/5-P
50	DN80/F4					ACTSJ050/080/10-P

Packing catcher

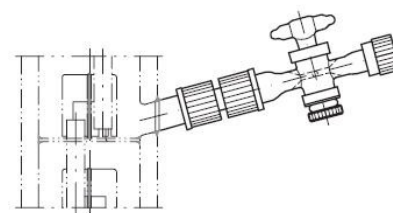


- are used at the top of columns to prevent damage to reflux heads or capacitors due to possibly ruptured tower packings
- cannot be used as packing carriers
- Material: Tantalum wire covered PTFE ring
- are clamped between the glass components instead of a PTFE ring seal

DN	OD free	Order no.	[mm]
50	45	81	ACHP050-K
80	67	76	ACHP080-K
100	98	87	ACHP100-K
150			ACHP150-K
50	45	81	ACHP050-P
80	67	76	ACHP080-P
100	98	87	ACHP100-P
150			ACHP150-P

## Sampler

Description of the	Order no.
Column up to DN050	AP050
Column up to DN100	AP100



- The sampler has a standard stopcock NS 14/23 with a 3 mm bore, which is connected to a GL 18 thread; a screw cap with silicone seal is placed on the outer end of such a stopcock piece
- A hypodermic syringe can be used to conveniently withdraw very small amounts of substance under normal pressure or vacuum, which can be easily broken down by gas chromatography, for example

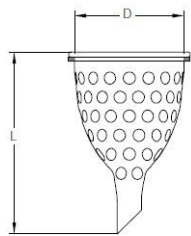
## Temperature measuring bag/sample collection bag

Description of the	Order no.
Column up to DN050 Temperature	ABT050
Column up to DN100 Temperature	ABT100
Column up to DN150 Sample	ABT150

## Temperature measuring nozzle/sampling nozzle

Description of the	Order no.
Column up to DN050 Temperature	APT050
Column up to DN100 Temperature	APT100

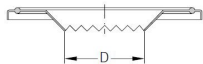
### Packing carrier



for DN	D	L	Order no.
50	26	50	ACSD050
80	44	75	ACSD080
100	63	105	ACSD100
150			ACSD150

- Ensures centralised liquid transfer to the next column for small diameters
- Free cross-section is also sufficient for use with organised packs
- are inserted into the column sections together with a PTFE intermediate ring, which is included in the scope of delivery

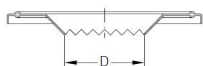
### Guide funnel for insulating jacket columns



DN	OD free %	Order no.	[mm]
50/30	20	51	ACDLJ050-K
80/50	35	49	ACDLJ080-K
100/80	55	47	ACDLJ100-K
150/150			ACDLJ150-K
			ACDLJ050-P
			ACDLJ080-P
			ACDLJ100-P
			ACDLJ150-P

- are clamped into the standard flange connection and simultaneously fulfill the function of a ring seal
- When filling the columns, the necessary distance between the packing and the lower edge of the guide funnel must be observed

### Guide funnels for columns

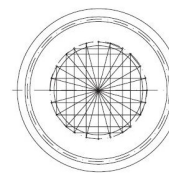


DN	OD free %	Order no.	[mm]
50			ACDL050-K
80			ACDL080-K
100			ACDL100-K
150			ACDL150-K
50			ACDL050-P
80			ACDL080-P
100			ACDL100-P
150			ACDL150-P

- are used at the top of columns to prevent damage to reflux heads or capacitors due to possibly ruptured tower packings
- cannot be used as packing carriers
- Material: Tantalum wire covered PTFE ring
- are clamped between the glass components instead of a PTFE ring seal

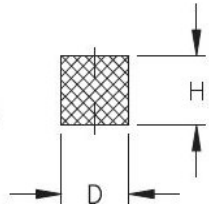
## Packing catcher for jacketed components

DN		OD free	Order no.	[mm]
		%		
50/30	25	88	ACHPJ050-K	
80/50	45	98	ACHPJ080-K	
100/80	67	100	ACHPJ100-K	
150/100			ACHPJ150-K	
50/30	25	88	ACHPJ050-P	
80/50	45	98	ACHPJ080-P	
100/80	67	100	ACHPJ100-P	
150/100			ACHPJ150-P	



- are used at the top of columns to prevent damage to reflux heads or capacitors due to possibly ruptured tower packings
- cannot be used as packing carriers
- Material: Tantalum wire covered PTFE ring
- are clamped between the glass components instead of a PTFE ring seal

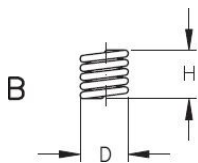
Packing - wire mesh rings, 3600 meshes/cm<sup>2</sup>, double without web



- offer high separation efficiency combined with a low pressure drop, but the low corrosion resistance can be a disadvantage
- Fillers of other sizes and designs also available on request

Size [mm]	D [mm]	H [mm]	Material	Order no.
2 x 2	2	2	1.4401	<a href="#">ACPM02</a>
3 x 3	3	3	1.4401	<a href="#">ACPM03</a>
4 x 4	4	4	1.4401	<a href="#">ACPM04</a>
5 x 5	5	5	1.4401	<a href="#">ACPM05</a>
6 x 6	6	6	1.4401	<a href="#">ACPM06</a>
8 x 8	8	8	1.4401	<a href="#">ACPM08</a>
10 x 10	10	10	1.4401	<a href="#">ACPM10</a>
			Hastelloy C4	<a href="#">ACPMH02</a>
			Hastelloy C4	<a href="#">ACPMH03</a>
			Hastelloy C4	<a href="#">ACPMH04</a>
			Hastelloy C4	<a href="#">ACPMH05</a>
			Hastelloy C4	<a href="#">ACPMH06</a>

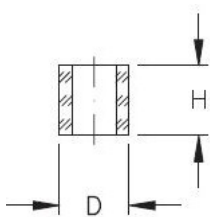
Packing - Wilson spirals



- Version B: high corrosion resistance, but lower separation efficiency and higher pressure loss
- Fillers of other sizes and designs also available on request

Size [mm]	D [mm]	H [mm]	Material	Order no.
3	3	3	Boro 3.3	<a href="#">ACPW03</a>
4	4	4	Boro 3.3	<a href="#">ACPW04</a>
7	7	7	Boro 3.3	<a href="#">ACPW07</a>
10	10	10	Boro 3.3	<a href="#">ACPW10</a>
12	12	12	Boro 3.3	<a href="#">ACPW12</a>
15	15	15	Boro 3.3	<a href="#">ACPW15</a>

Packing - Raschig rings

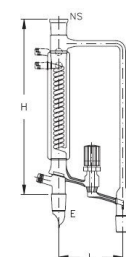


- corrosion-resistant Raschig rings made of borosilicate glass 3.3 have the lowest separation performance and higher pressure losses, but they are advantageous for products that are easy to separate and can be replaced relatively inexpensively, e.g. with substances containing dirt
- Fillers made of quartz glass and soda glass on request

Size [mm]	D [mm]	H [mm]	Material	Order no.
2 x 2	2	2	Boro 3.3	<a href="#">ACPR02</a>
3 x 3	3	3	Boro 3.3	<a href="#">ACPR03</a>
4 x 4	4	4	Boro 3.3	<a href="#">ACPR04</a>
5 x 5	5	5	Boro 3.3	<a href="#">ACPR05</a>
6 x 6	6	6	Boro 3.3	<a href="#">ACPR06</a>
8 x 8	8	8	Boro 3.3	<a href="#">ACPR08</a>
10 x 10	10	10	Boro 3.3	<a href="#">ACPR10</a>
12 x 12	12	12	Boro 3.3	<a href="#">ACPR12</a>

### Liquid divider with vertical glass needle valve

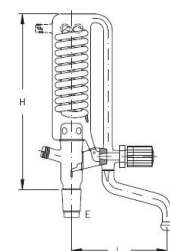
Entrance E	Output NS A	H [mm]	L [mm]	Cooling surface	Order no.
NS 19/26	NS 14/23				ACRM1926/1423/XX-S1
NS 29/32	NS 14/23				ACRM2932/1423/XX-S1
NS 29/32	NS 29/32				ACRM2932/2932/XX-S1
S 40/25	NS 29/32				ACRM4025/2932/XX-S1



- Combination of intensive cooler and glass needle valve GNV 8 enables low-cost column attachment
- Suitable for operation under normal pressure
- have a space-saving variant to distillate bridges a s standard

### Liquid divider with vapour dome

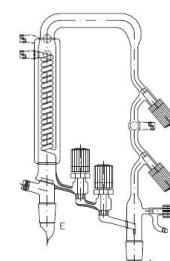
Entrance E	Outlet A	H [mm]	L [mm]	Cooling surface	Order no.
NS 14/23	S 19				ACRM1423/1909/XX-S2
NS 19/26	S 19				ACRM1926/1909/XX-S2
NS 29/32	S 19				ACRM2932/1909/XX-S2
S 40/25	S 19				ACRM4025/1909/XX-S2



- Column top with integrated vapour dome and horizontal glass needle valve GNV 8
- Design prevents uncontrolled return of even small quantities of distillate
- no intensive cooler but double-slope cooler provided
- Suitable for operation under normal pressure

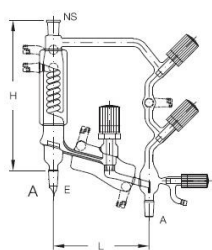
### Liquid divider with two glass needle valves

Entrance E	Outlet A	H [mm]	L [mm]	Cooling surface	Order no.
NS 14/23	NS 14/23				ACRM1423/1423/XX-S3
NS 19/26	NS 14/23				ACRM1926/1423/XX-S3
NS 29/32	NS 14/23				ACRM2932/1423/XX-S3
NS 29/32	NS 29/32				ACRM2932/2932/XX-S3
S 40/25	NS 29/32				ACRM4025/2932/XX-S3



- Column attachment with intensive coolers and vacuum frame
- Also suitable for use under vacuum
- The template can be replaced without a vacuum template, as it is possible to use the first valve GNV 8 as seen in the direction of flow for regulation and the second valve as a shut-off valve GNV8
- Spindle valves are used in the vacuum frame as shut-off valves (size SPV 6) and as venting valves (SPV 3)

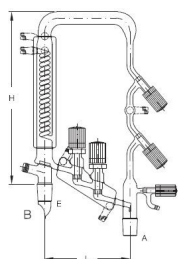
### Liquid divider with temperature control jacket, version A



Entrance E	Outlet A	NS	H [mm]	L [mm]	Cooling surface	Order no.
NS 14/23	NS 14/23	14/23				ACRM1423/1423/XX-S4

- Ideal for processing highly volatile or high-melting substances, as the column attachment has an intensive cooler
- are equipped with a tempering jacket for cooling or tempering the distillate in the distillate outlet
- GNV 8 glass needle valves are used as regulating valves or additional shut-off valves
- Spindle valves are used in the vacuum frame as shut-off valves (size SPV 6) and as venting valves (SPV 3)

### Liquid divider with temperature control jacket, version B



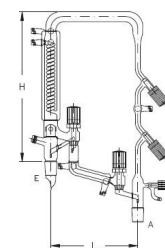
Entrance E	Outlet A	NS	H [mm]	L [mm]	Cooling surface	Order no.
NS 29/32	NS 14/23	-				ACRM2932/1423/XX-S5
NS 29/32	NS 29/32	-				ACRM2932/2932/XX-S5
S 40/25	NS 29/32	-				ACRM4025/2932/XX-S5

- see version A



## Liquid divider with pick-up cooling pipe

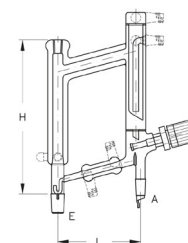
Entrance E	Outlet A	H [mm]	L [mm]	Cooling surface	Order no.
NS 29/32	NS 29/32				ACRM2932/2932/XX-S6
S 40/25	NS 29/32				ACRM4025/2932/XX-S6
KF 80	KF 25				ACRM080/025/XX-K-S6



- These column tops differ from the above version with tempering jacket by the double jacket tube arranged between two glass needle valves of the GNV 8 design for tempering the distillate
- have a vapour dome that prevents uncontrolled return of even small quantities of distillate
- Spindle valves are used in the vacuum frame as shut-off valves (size SPV 6) and as venting valves (SPV 3)

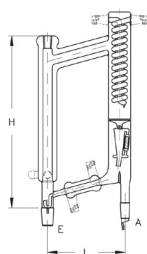
## Micro liquid divider, hand-operated

Entrance E	Outlet A	H [mm]	L [mm]	Note.	Order no.
NS 19/26	NS 14/23	260	110		SAA 09085 01
NS 29/32	NS 14/23	260	110	sheathed	SAA 09085 11



- Guide rod runs in vacuum-tight PTFE bushing and is actuated via valve screw connection
- The set division ratio remains constant even with fluctuating condensate quantities
- Total drain or return flow is adjustable

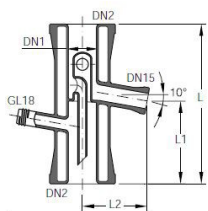
### Micro liquid divider, electromagnetically actuated



Entrance E	Outlet A	H [mm]	L [mm]	Note.	Order no.
NS 19/26	NS 14/23	260	110		SAA 09086 01
NS 29/32	NS 14/23	260	110	sheathed	SAA 09086 11

- Condensate is collected below the coil cooler and flows into the swivelling funnel via a central drain
- Electromagnets and clock generator must be ordered separately

### Manual reflux divider



- GL with GL18 for DN2

DN	DN1/2	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	A free %	Order no.
40								ACRM040-K
50								ACRM050-K
80								ACRM080-K
100								ACRM100-K
150								ACRM150-K
40								ACRM040-P
50								ACRM050-P
80								ACRM080-P
100								ACRM100-P
150								ACRM150-P

## Reflux divider with insulating jacket, manual

DN	DN 1	DN2	L [mm]	L1 [mm]	L2 [mm]	Order no.
50/30	30	50				ACRMJ030-K
80/50	50	80				ACRMJ050-K
100/80	80	100				ACRMJ080-K
150/100						ACRMJ100-K
50/30	30	50				ACRMJ030-P
80/50	50	80				ACRMJ050-P
100/80	80	100				ACRMJ080-P
150/100						ACRMJ100-P

- GL with GL18 instead of flange for DN2

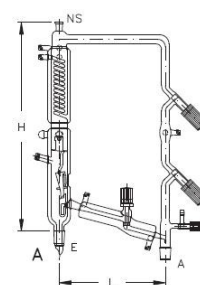
## Liquid closures with valve

DN	DN 1	L [mm]	L1 [mm]	Order no.
15	15			ACLS015015-K
25	25			ACLS025025-K
40	25			ACLS040025-K
50	25			ACLS050025-K
15	15			ACLS015015-P
25	25			ACLS025025-P
40	25			ACLS040025-P
50	25			ACLS050025-P



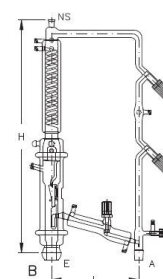
## Electromagnetically actuated liquid divider, 7 litres

Entrance E	Outlet A	NS/GL	H [mm]	L [mm]	Flow rate max. l/h	Cooling surface	Order no.
NS 29/32	NS 29/32	18			7		ACRE2932/2932/XX
NS 45/40	NS 29/32	18			7		ACRE4540/2932/XX
S 35/25	S 35/25	18			7		ACRE3525/3525/XX



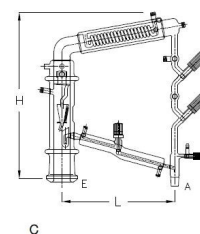
## Electromagnetically actuated liquid divider, 12 litres

Entrance E	Outlet A	NS/GL	H [mm]	L [mm]	Flow rate max. l/h	Cooling surface	Order no.
NS 45/40	NS 29/32	18			12		ACRE4540/2932/XX
S 64/40	S 35/25	18			12		ACRE6440/3525/XX



## Electromagnetically actuated liquid divider, short design

Entrance E	Outlet A	NS/GL	H [mm]	L [mm]	Flow rate max. l/h	Cooling surface	Order no.
KF 50	KF15	18			7		ACRE050.015/XX-K
KF 80	KF15	18			12		ACRE080.015/XX-K
PF 50	PF15	18			7		ACRE050.015/XX-P
PF 80	PF15	18			12		ACRE080.015/XX-P



## Reflux separator, electromagnetically actuated

DN	DN	DN2	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	Order no.
40	15	15					ACRE040-K
50	15	15					ACRE050-K
80	25	25					ACRE080-K
100	25	25					ACRE100-K
150	25	25					ACRE150-K
40	15	15					ACRE040-P
50	15	15					ACRE050-P
80	25	25					ACRE080-P
100	25	25					ACRE100-P
150	25	25					ACRE150-P

- Liquid seal is always required for electromagnetically actuated liquid dividers to prevent vapour from entering the distillate line
- Electromagnet and timer must be ordered separately

## Electromagnetically actuated reflux separator with insulating jacket

DN	DN 1	DN2	L [mm]	L1 [mm]	L2 [mm]	Order no.
30	50	15				ACREJ030-K
50	80	15				ACREJ050-K
80	100	25				ACREJ080-K
100	150	25				ACREJ100-K
30	50	15				ACREJ030-P
50	80	15				ACREJ050-P
80	100	25				ACREJ080-P
100	150	25				ACREJ100-P

- GL with GL18 instead of flange for DN2



## ELECTROMAGNETICALLY ACTUATED VAPOUR DIVIDERS

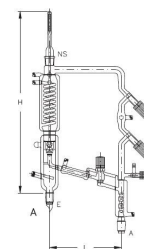
Application: Vapour dividers are particularly suitable for the precise adjustment of reproducible reflux ratios in difficult separation processes, such as low-temperature distillation or when working with highly volatile substances or two-phase azeotropes

- Vapour dividers are always preferable to liquid dividers if the product flow is very small and the division of the condensate no longer leads to the desired accuracy.
  - In the majority of applications, even the standard version delivers optimum results
  - Vapour dividers in special design are used for the distillation of highly viscous and/or easily crystallising substances
  - Due to the special design of the discharge path, special versions allow fine temperature control of the product that is fed into the feeder
  - In principle, the vapour-like product flow rising from the column, which has a large volume when the working volume is low, is divided via an electromagnetically actuated valve GNV 8, i.e. it is fed either to the return or discharge line and condensed there
  - The valve is actuated via a timer and an electromagnet
  - If the latter is de-energised, the return path is enabled
  - When current flows, the iron core melted into the valve spindle is attracted and the drain path is opened
- 
- All steam dividers are only supplied with a silver-coated high-vacuum insulating jacket (10<sup>-6</sup> mbar)
  - Electromagnets and clock generator must be ordered separately
  - Measuring spigots are supplied with GL 18 glass thread as standard, but are also available with standard ground joint NS 14/23 on request
  - Cooling water connections: Glass thread GL 14 complete with threaded hose connections GL 14
  - Electromagnetically actuated vapour dividers with a spherical ground joint base are also available in millimetre versions



### Standard vapour divider

Entrance E	Outlet A	NS	H [mm]	L [mm]	Flow rate max. l/h	Order no.
NS 29/32	NS 29/32	29/32			8	ACSE2932/2932/XX
S 35/25	NS 29/32	29/32			8	ACSE3525/2932/XX
S 64/40	NS 29/32	34/35			12	ACSE6440/2932/XX
S 64/40	S 35/25	34/35			12	ACSE6440/3525/XX
KF 50	KF 15	34/35			12	ACSE050/015/XX-K
KF 80	KF 25				12	ACSE080/025/XX-K
PF 50	PF 15					ACSE050/015/XX-P
PF 80	PF 25					ACSE080/025/XX-P



- has intensive coolers in the return path as well as product coolers in the partially jacketed discharge path
- available in two sizes and different designs
- Glass needle valve GNV 8 as shut-off valve
- SPV 10 spindle valves are used in the vacuum frame as shut-off valves and SPV 6 as venting valves

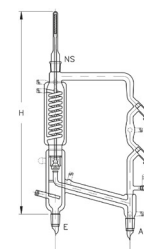
### Spacers for return flow measurement with insulating jacket, version B

DN	DN1	DN2	L [mm]	Order no.
80/50	50	80		
100/80	80	100		

- With this intermediate piece for return flow measurement with silver mirrored insulating jacket, the marking can be observed through the viewing strip

### Special steam divider

Entrance E	Outlet A	NS	H [mm]	L [mm]	Flow rate max. l/h	Order no.
NS 29/32	NS 29/32	29/32	650	240	8	VAB 09292 21
S 40	NS 29/32	29/32	650	240	8	VAB 09292 23
S 64	NS 29/32	34/35	800	245	12	VAB 09292 24
S 64	S 40	34/35	800	245	12	VAB 09292 26

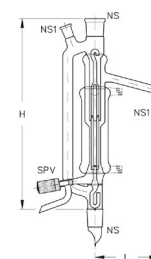


- Drainage path from the column to the distillate receiver is provided with a temperature control jacket without any gaps
- Distillate temperature can be set very precisely, which is advantageous for highly viscous and/or easily crystallising substances
- Without shut-off valve
- Available in two sizes and different designs

HETERO-AZEOTROPIC COLUMN TOPS

Column attachments for removing the specific lighter phase

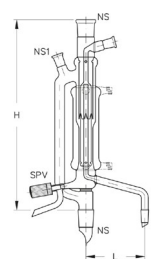
H [mm]	L [mm]	NS	NS1	SPV	Order no.
340	120	29/32	14/23	3	<a href="#">SAA 09096 01</a>
455	150	45/40	14/23	6	<a href="#">SAA 09096 02</a>



- Suitable for density ratios of light to heavy phase from 0.60 : 1 to 0.95 : 1

Column tops for removing the specifically heavier phase

H [mm]	L [mm]	NS	NS1	SPV	Order no.
360	120	29/32	14/23	3	<a href="#">SAA 09097 01</a>
475	150	45/40	14/23	6	<a href="#">SAA 09097 02</a>

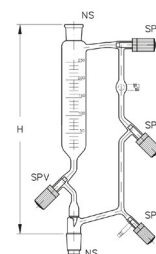


- Suitable for density ratios of heavy to light phase from 1.60 : 1 to 1.05 : 1

CONTACTOR-THIELE-TEMPLATE VESSELS

## Anschütz-Thiele storage vessel with spindle valves

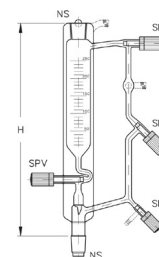
Contents [ml]	H [mm]	NS	SPV	SPV1	Order no.
50	300	29/32	6	3	<a href="#">SAA 09207 02</a>
100	355	29/32	6	3	<a href="#">SAA 09207 03</a>
250	415	29/32	6	3	<a href="#">SAA 09207 04</a>
500	470	29/32	6	3	<a href="#">SAA 09207 05</a>
1000	580	29/32	10	6	<a href="#">SAA 09207 06</a>
2000	700	29/32	10	6	<a href="#">SAA 09207 07</a>



- Graduated receiver vessel with vacuum frame
- Only available with adjustable spindle valves

## Anschütz-Thiele receiver vessel with spindle valves and tempering jacket

Contents [ml]	H [mm]	NS	SPV	SPV1	Order no.
50	310	29/32	6	3	<a href="#">SAA 09208 62</a>
100	365	29/32	6	3	<a href="#">SAA 09208 63</a>
250	425	29/32	6	3	<a href="#">SAA 09208 64</a>
500	480	29/32	6	3	<a href="#">SAA 09208 65</a>
1000	565	29/32	10	6	<a href="#">SAA 09208 66</a>
2000	690	29/32	10	6	<a href="#">SAA 09208 67</a>

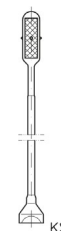


- Graduated receiver vessel with vacuum frame
- Only available with adjustable spindle valves

ACCESSORIES

### Steam tappet

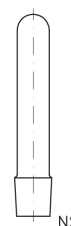
KS	Suitable for steam dividers with order no.	Order no.
18	SAA 09192 21 and SAA 09192 23	SAA 09192 30
	VAB 09292 21 and VAB 09292 23	SAA 09192 30
28	SAA 09192 24 and SAA 09192 26	SAA 09192 31
	VAB 09292 24 and VAB 09292 26	SAA 09192 31



- Both components can be purchased as spare parts for electromagnetically actuated vapour dividers
- Ensure that the support ring is locked precisely during installation

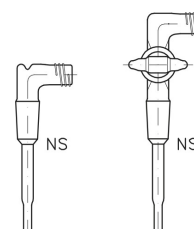
### Ground joint caps

NS	Suitable for steam dividers with order no.	Order no.
29/32	SAA 09192 21 and SAA 09192 23	SAA 09192 40
	VAB 09292 21 and VAB 09292 23	SAA 09192 40
34/35	SAA 09192 24 and SAA 09192 26	SAA 09192 41
	VAB 09292 24 and VAB 09292 26	SAA 09192 41

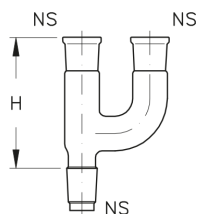


### Boiling capillaries

NS	Standard tap hole	Connection	Order no.
10/19	-	Thread GL 14	GSG 01052
10/19	1	Olive D 8	GSG 01053
14/23	-	Thread GL 14	GSG 01057
14/23	3	Thread GL 14	GSG 01058

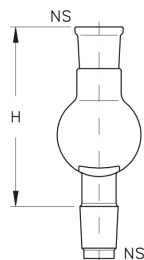


## Double neck attachments



H [mm]	NS	Order no.
95	14/23	GSG 01060B
125	29/32	GSG 01060A

## Splash guard attachment



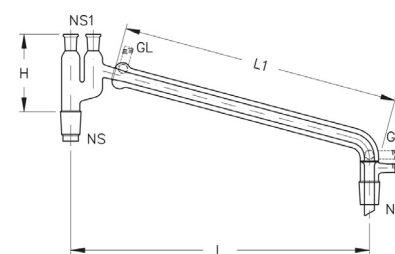
H [mm]	NS	Order no.
140	29/32	GSG 01054

- Can be used as a splash guard and foam brake
- Advantageous for use on rotary evaporators



### Claisenbrücken

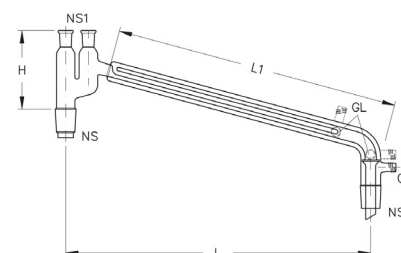
H [mm]	L [mm]	L1 [mm]	NS	NS1	GL	Order no.
100	170	150	14/23	14/23	14	LSG 11053 01
100	270	250	29/32	14/23	14	LSG 11053 02
100	430	400	29/32	14/23	14	LSG 11050



- Other sheath lengths available on request
- L1: stretched length of the tempering jacket
- Thermometer installation length: 70 mm
- Temperature measuring nozzle alternatively available as GL 18

### Kurzweg-Claisenbrücken

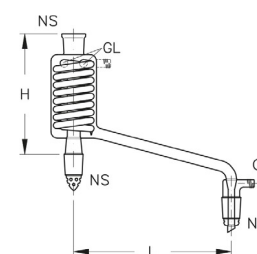
H [mm]	L [mm]	L1 [mm]	NS	NS1	GL	Order no.
100	235	250	29/32	14/23	14	SAA 11010
110	405	400	29/32	14/23	14	SAA 11011



- Double cooling
- Other sheath lengths available on request
- L1: stretched length of the tempering jacket
- Thermometer installation length: 70 mm
- Temperature measuring nozzle alternatively available as GL 18

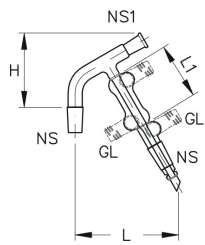
### Distillation cooler

H [mm]	L [mm]	NS	GL	Thermometer installation length [mm]	Order no.
160	185	14/23	14	70	SAA 08340 01
180	235	29/32	14	80	SAA 08340 02



- Special arrangement of the cooling coil prevents any vapour build-up and associated pressure losses
- Vacuum advance allows connection of a feed piston without additional devices
- Temperature measuring nozzle alternatively available as GL 18

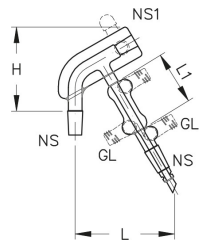
### Micro-distillery, version A



H [mm]	L [mm]	L1 [mm]	NS	NS1	GL	Order no.
70	95	50	14/23	10/19	14	LSG 01088

- with fused vacuum advance
- Thermometer installation length: 50 mm
- 
- The temperature measuring spigots are also available as GL 18.

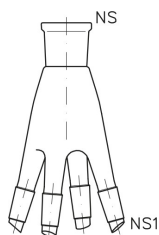
### Micro-distillery, version B



H [mm]	L [mm]	L1 [mm]	NS	NS1	GL	Order no.
85	95	50	14/23	10/19	14	LSG 01089

- Version B with silver mirrored insulating jacket (10-6mbar)
- with fused vacuum advance
- Thermometer installation length: 50 mm
- The temperature measuring spigots are also available as GL 18.

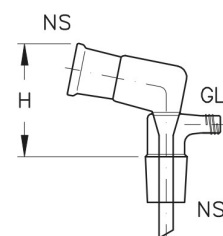
### Spider distributor, standard version



NS	GL	Order no.
14/23	14/23	GSG 01095F
29/32	14/23	GSG 01095C

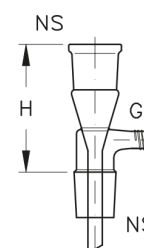
## Vacuum advance, version A

H [mm]	NS	GL	Order no.
70	14/23	14	<a href="#">GSG 01064B</a>
80	29/32	14	<a href="#">GSG 01064A</a>



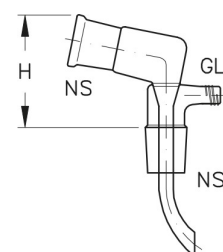
## Vacuum advance, version B

H [mm]	NS	GL	Order no.
75	14/23	14	<a href="#">GSG 01064D</a>
90	29/32	14	<a href="#">GSG 01064C</a>



## Vacuum advance, version C

H [mm]	NS	GL	Order no.
70	14/23	14	<a href="#">GSG 01095G</a>
80	29/32	14	<a href="#">GSG 01095D</a>



- Version C is used exclusively for spider distributors in the "standard version"
- Due to its curved outlet pipe, the spider distributor can be rotated to The fraction discharged can be fed into one of the four receiver flasks.

