NORMAG - LABORATORY GLASSWARE

CONDENSER

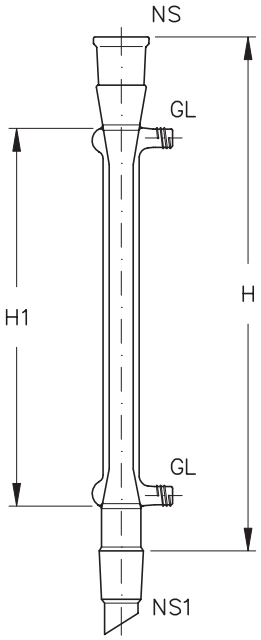
Heat exchangers are used both for condensation of vapour products and for tempering of liquid media (cooling and heating). Available in two different designs with or without jacket. The jacketed condenser is an interesting variant, where the tempering jacket is integrated in the cooling or heating circulation. This means, that first the coil is flowed through by the tempering media and then the jacket.

☞ Other connecting arms at the tempering jacket are available on request.

Condensers, Liebig

Liebig condensers are manufactured according to DIN 12 576. Liebig condensers according to West have a simple design with cylindrical shape. The vapour line is narrow sealed onto the jacket. These condensers can be used in oblique and vertical fitting.

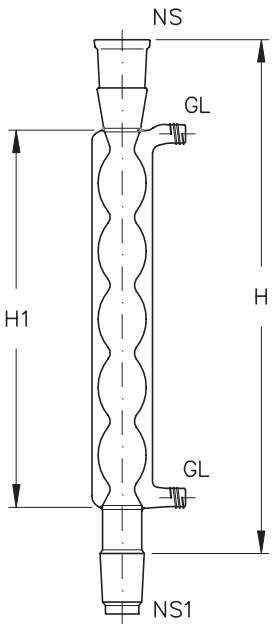
Cooling area (cm²)	NS	NS1	H	H1	GL	Catalogue No.
30	14/23	14/23	190	100	14	GSG 01062A 01
45	14/23	14/23	250	160	14	GSG 01062A 02
95	29/32	29/32	340	250	14	GSG 01062 01
150	29/32	29/32	490	400	14	GSG 01062 02



All ground joints are also available in other standard sizes, e.g. US-standard.

Allihn condenser

Bulb condenser (outside condenser) are manufactured according to DIN 12 581 as far as they are part of this standard. The inner surface is greater than those of simple condensers. The bulb shape mainly changes the flow speed of the vapour, and so the time for the heat exchange to the cooling water is substantial longer. This condenser are only suitable for vertical use. An oblique or horizontal use is not recommended, the condensed liquid cannot completely drain.

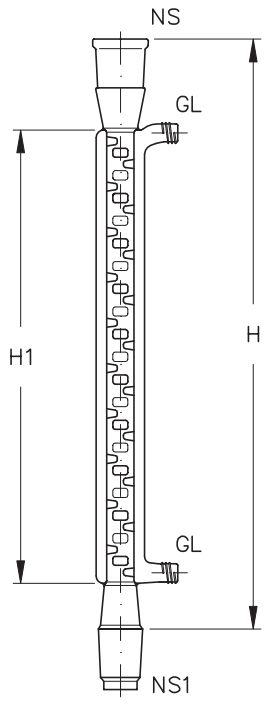


Cooling area (cm²)	NS	NS1	H	H1	GL	Catalogue No.
100	14/23	14/23	250	160	14	GSG 01067A
160	29/32	29/32	340	250	14	GSG 01067
240	29/32	29/32	490	400	14	GSG 01067B

Product condenser

This condenser can be only used in vertical fitting for descending condensations. In oblique or horizontal fitting, the condensed liquid cannot completely drain.

☞ Just as bulb condensers, product condensers have an enlarged inner surface.

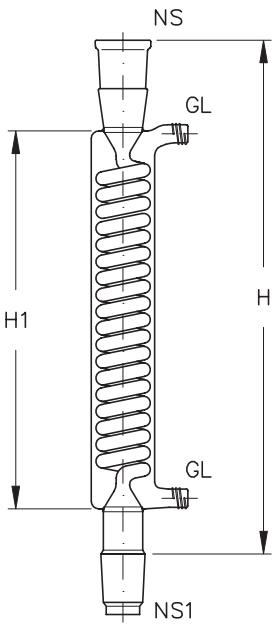


Cooling area (cm²)	NS	NS1	H	H1	GL	Catalogue No.
120	14/23	14/23	240	160	14	GSG 09002A
200	14/23	14/23	330	250	14	GSG 09002B
200	29/32	29/32	340	250	14	GSG 09002C
240	29/32	29/32	390	300	14	GSG 09002D

All ground joints are also available in other standard sizes, e.g. US-standard.

Coil condensers

These coil condensers are an enhanced model due to the coil arrangement of the vapour tube. The surface area is considerably greater than corresponding Liebig condenser. The inner coil has a relative small diameter, so that the vapour passage will be increased and the time for the heat exchange from the vapour to the cooling water is short. These condensers are only suitable for vertical fitting. In oblique or horizontal fitting, the condensed liquid cannot completly drain. (see also bulb and product condenser)

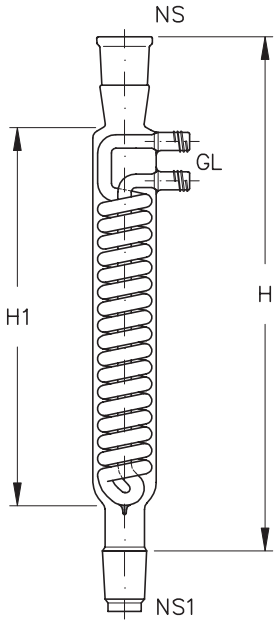


Cooling area (cm²)	NS	NS1	H	H1	GL	Catalogue No.
130	14/23	14/23	250	160	14	GSG 01069A 01
155	29/32	29/32	250	160	14	GSG 01069 01
260	14/23	14/23	340	250	14	GSG 01069A 02
310	29/32	29/32	340	250	14	GSG 01069 02
480	29/32	29/32	490	400	14	GSG 01069 03

Condensers, Dimroth

Dimroth condensers are manufactured according to DIN 12 591 as far as they are part of this standard. Just as coil condensers, Dimroth condensers have a greater inner surface.

The cooling water does not flow through the jacket, but is guided through the coil. Due to this construction, the Dimroth condenser is an inner condenser and has a considerably higher effectiveness than a coil condenser.



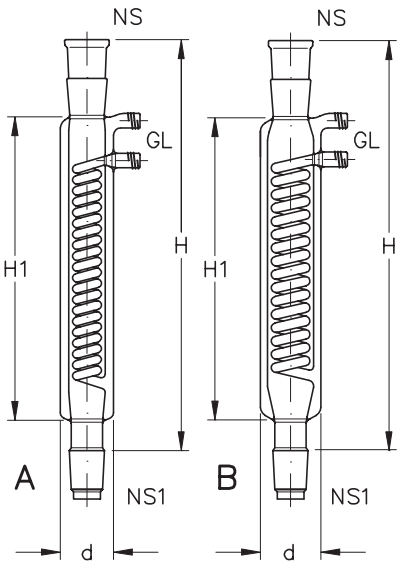
Cooling area (cm²)	NS	NS1	H	H1	GL	Catalogue No.
190	14/23	14/23	250	160	14	GSG 01070A 01
220	29/32	29/32	250	160	14	GSG 01070 01
370	14/23	14/23	340	250	14	GSG 01070A 02
390	29/32	29/32	340	250	14	GSG 01070 02
680	29/32	29/32	490	400	14	GSG 01070 03

All ground joints are also available in other standard sizes, e.g. US-standard.

Jacketed coil condenser

They are combined outer- and inner condenser and manufactured according to DIN 12 593 as far as they are part of this standard.

Surface area condenser and condenser with greater inner surface are built together in this combined condenser. The advantages of this design are a high heat transfer as well as a great cooling surface area on smallest space. Due to the cooling water speed, a high effectiveness is reached.

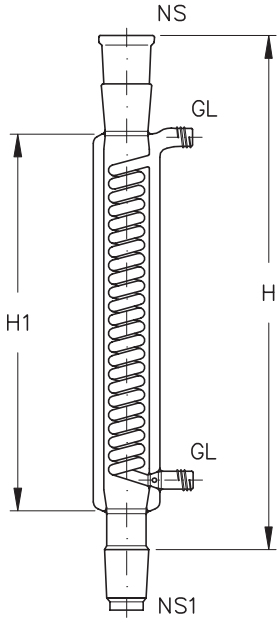


Cooling area (cm²)	NS	NS1	H	H1	d	GL	Des.	Catalogue No.
350	14/23	14/23	250	160	44	14	A	GSG 01072 01
370	29/32	29/32	250	160	44	14	A	GSG 01073 01
370	29/32	29/32	250	160	50	14	B	GSG 01074 01
630	14/23	14/23	340	250	44	14	A	GSG 01072 02
630	29/32	29/32	340	250	44	14	A	GSG 01073 02
630	29/32	29/32	340	250	50	14	B	GSG 01074 02
1070	29/32	29/32	490	400	44	14	A	GSG 01073 03
1070	29/32	29/32	490	400	50	14	B	GSG 01074 03

Rapid condenser

The speciality of this variant, the feeding tube has an opening with a defined diameter. This guarantees an even cooling water flow in the jacket and in the coil.

Rapid condenser are also available in other jacket lengths.



Cooling area (cm²)	NS	NS1	H	H1	GL	Catalogue No.
370	29/32	29/32	250	160	14	LSG 01086 01
630	29/32	29/32	340	250	14	LSG 01086 02
1070	29/32	29/32	490	400	14	LSG 01086 03

All ground joints are also available in other standard sizes, e.g. US-standard.

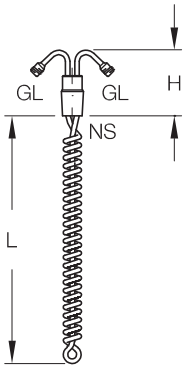
Coil condenser/cooling/heating

They are mainly used for tempering of liquid media in vessels.

Inset for coil condenser/heater

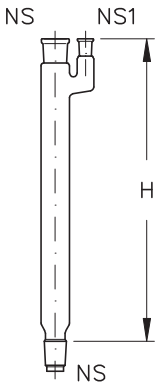
stainless: steal

Cooling area (cm^2)	NS	spiral length L (mm)	H	GL	Catalogue No.
360	29/32	300	70	14	LSG 08810V 01
480	29/32	400	70	14	LSG 08810V 02



Glass jacket for coil condenser/heater

NS	NS1	H	Catalogue No.
29/32	14/23	400	LSG 08810 52
29/32	14/23	500	LSG 08810 53

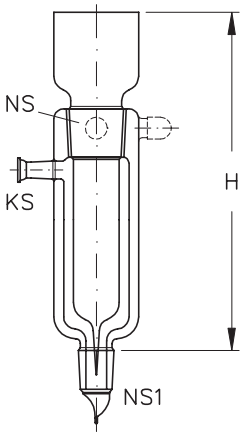


All ground joints are also available in other standard sizes, e.g. US-standard.

Low-temperature condensers

The low-temperature condenser serves for condensation of volatile substances.

Main advantages of this condenser are the silver coated high vacuum jacket and the removable cooling inset, which can be filled with several cooling media such as dry ice, solid carbon dioxide or liquid nitrogen.

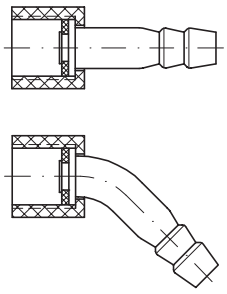


Cooling area (cm²)	NS	NS1	H	KS	Catalogue No.
100	29/32	14/23	235	18	SAA 09010
180	45/40	29/32	280	18	SAA 09011

THREADED HOSE CONNECTORS GL 14

These hose connectors are made of glass fibre reinforced PTFE material.

Design	Catalogue No.
straight	SAS 00747 01
bent (45 °)	SAS 00749 01



Larger heat exchanger are available on request.

All ground joints are also available in other standard sizes, e.g. US-standard.