 LDM, spol. s r.o. Czech Republic	Instructions for installation and service	CHP
	STEAM COOLING UNIT DN 100 and higher PN 25, 40, 63,100	
		PM - 058/09/06/GB

The instructions for installation and service of steam cooling unit (CHP) are binding for users to ensure proper function of steam cooling unit. The user must keep the rules said here while servicing, installation and using.

I. TECHNICAL DESCRIPTION AND VALVE FUNCTION:

1.1 Description:

CHP is a body that is put directly into the steam pipeline and subsequently serves for connection with either mechanical injection head VH or drive-steam injection head VHP. According to dimensions of the pipeline and necessary intensity of cooling, the body can be equipped with more inlets for connection of VH or VHP.

CHP is supplied with flanges or with weld ends with connection flange 2 for connection of VH or VHP (max. temperature 350°C) or DN80 (flange 1 DN 150 and higher) and dimensions according to customers requirements.

1.2 Application:

CHP serves as an in-between link into the steam pipeline into which it is possible to install injection head VH, VHP. It is designed especially for industrial applications such as low-pressure steam production in heating or the steam production for technological processes.

1.3. Technical data:

Series	CHP	
Type	Flanged or weld ends	
Nominal diameter range	Flange 1 - DN 100 and higher, flange 2 - DN50 and 80 *1)	
Nominal pressure PN	PN 25, 40, 63, 100	
Material of pipe	Cast steel 1.0425 (1.0426)	Alloy steel 1.7335
Material of flanges	Cast steel 1.0425 (1.0426)	Alloy steel 1.7335
Process medium temperature range	-20 to 400°C (350°C) *)	-20 to 550°C
Connection dimensions (flange 1/weld ends)	Acc. to ČSN EN 1092-1 / ČSN EN 12627 *1)	
Connection flange 2 dimensions	Acc. to ČSN EN 1092-1	
Flanges sealing surface 2	Acc. to ČSN EN 1092-1 - plain face	

*) Execution with connection flange 2 DN 50 up to 350°C maximum.

*1) Dimensions and type of connection (flange/weld connection) acc. to customer requirements. It shall be specified in order.

1.4. Maximal permissible pressures [MPa] :

Mat. 1.0425 (1.0426)	Temperature [°C]				
	PN	200	250	300	350
25	1.78	1.62	1.47	1.37	1.32
40	2.84	2.60	2.35	2.19	2.11
63	4.48	4.09	3.71	3.45	3.33
100	7.11	6.50	5.89	5.48	5.28

Mat. 1.7335	Temperature [°C]							
	PN	300	350	400	450	475	500	520
25	2.08	1.93	1.80	1.67	1.56	1.39	1.06	0.55
40	3.33	3.09	2.89	2.67	2.50	2.23	1.70	0.88
63	5.24	4.86	4.55	4.20	3.94	3.51	2.67	1.39
100	8.32	7.71	7.22	6.67	6.25	5.57	4.24	2.21

2. DIRECTIONS FOR INSTALLATION AND OPERATING OF STEAM COOLING UNIT - CHP:

2.1 Preparation before installation:

Before installation into pipeline you must check the data on the name-plate with data mentioned in accompanying documentation. Then check if the CHP is not damaged and dirty. Pay attention especially to inner space and packing surface of steam cooling unit.

2.2 Installation the CHP into pipeline:

The steam cooling unit can be installed in any position.

For proper function of CHP, below-mentioned instructions must be obeyed:

- no excessive forces can be transferred from pipeline to steam cooling unit.
- the pipeline must be cleaned from dirt before installation .
- it is recommended to keep clean space around the CHP for easy manipulation and service. Space around the steam cooling unit = minimum length L (acc. to dimensional sketch - length " L ").
- installation itself must be done precisely. Pipeline flange must be coaxial with CHP flange.

2.3 Checking after installation:

After installation, piping system should be pressured and checked if there is no leak.

2.4 Spare parts:

Spare parts are not part of steam cooling unit delivery. They must be ordered separately. When the spare parts are ordered, following data must be written: type of a CHP, registration number CHP and name of a spare part.

2.5 Guarantee conditions :

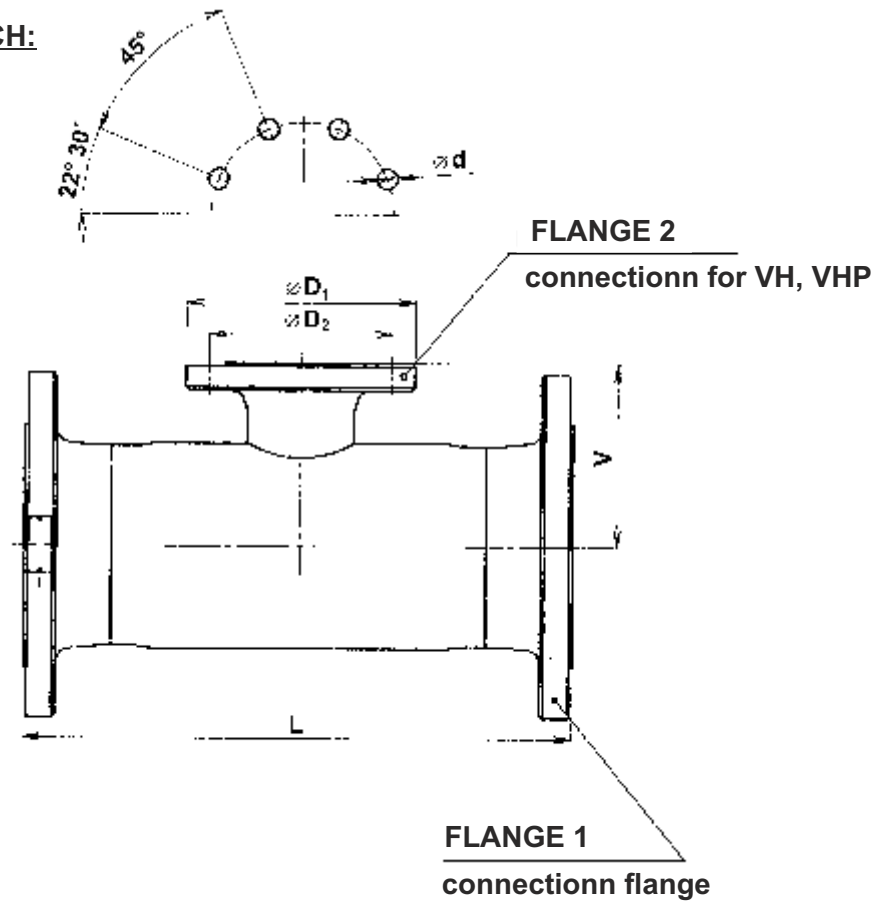
The producer does not guarantee the product operation and safety if the product was used in other way than stipulated in this instructions for installation and service and catalogue data sheet. Any use of the product under different conditions must be consulted with the producer.

The producer does not take over the guarantee if the user makes any change or modification to it without prior written consent from the producer.

2.6 Loading with wastes :

Packaging material and the injection head shall be disposed of in the common way such as by handing over to a specialized enterprise for disposal of (body and metal parts - metal waste, other non-metal parts - communal waste).

DIMENSIONAL SKETCH:



Connection dimensions:

PN	Flange					V	L
	1	2					
	DN	DN	D1	D2	d		
PN 25	min. 100 *1)	only PN 100			26	*1)	*1)
PN 40							
PN 63							
PN 100		50 *)	195	145			
		80 **)	230	180			

*) Execution with connection flange 2 DN 50 t_{max} 350°C

***) Execution with connection flange 2 DN 80 only with flange 1 DN 150 and higher

*1) Dimensions and type of connection (flange / weld connection) acc. to customer requirements. It shall be specified in order.

Valve complete specification No. for ordering CHP:

		XXX	X	XXX	/XX	-XXX	X
1. Series	Steam cooling unit	CHP					
2. No. of inlets	Acc. to intensity of cooling		X				
3. Nominal diameter: steam pipeline connection of - VH, VHP	DN			XXX			
	DN				XX		
4. Nominal pressure	PN					XXX	
5. Body material	1.0425/1.0426 (-20 to 400°C)						1
	1.7335 (-20 to 550°C)						2

Order example: Steam cooling unit, steam pipeline flange DN150, PN40, connection flange DN80, PN100, body material 1.0425 is marked as follows: **CHP 1 150/80-040 1**



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