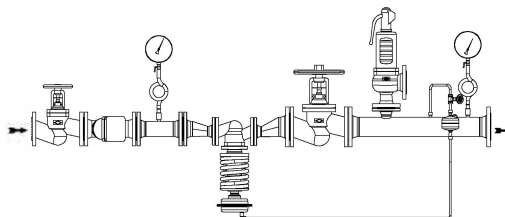


ARI-Pressure reducing station, self-acting or with electro-pneumatic control

**ARI-PREsys®-S**  
Pressure reducing station  
for steam

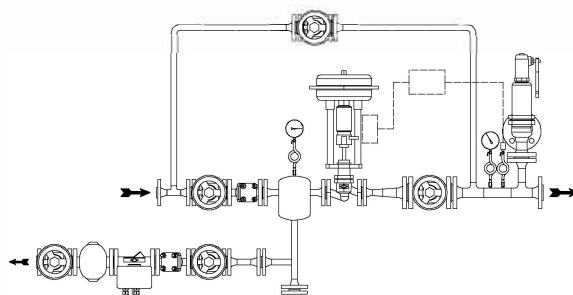
- Pressure reducing station ready for operation
- self-acting or with electro-pneumatic control
- Pipe material: P235GH  
1.4571/1.4541
- Valve materials:  
EN-JL1040  
EN-JS1049  
1.0619+N  
1.4408 (only electro-pneumatic)



ARI-PREsys®-S

**ARI-PREsys®-S Complete**  
Pressure reducing station  
for steam

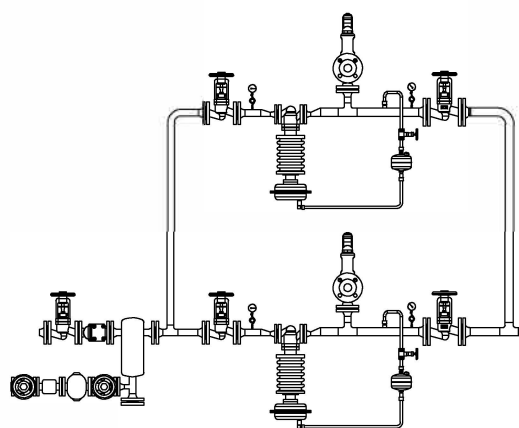
- Pressure reducing station ready for operation
- self-acting or with electro-pneumatic control
- Pipe material: P235GH  
1.4571/1.4541
- Valve materials:  
EN-JL1040  
EN-JS1049  
1.0619+N  
1.4408 (only electro-pneumatic)



ARI-PREsys®-S Complete

**ARI-PREsys® Duplex**  
Pressure reducing station

- Pressure reducing station ready for operation
- self-acting or with electro-pneumatic control
- Pipe material: P235GH  
1.4571/1.4541
- Valve materials:  
EN-JL1040  
EN-JS1049  
1.0619+N  
1.4408 (only electro-pneumatic)

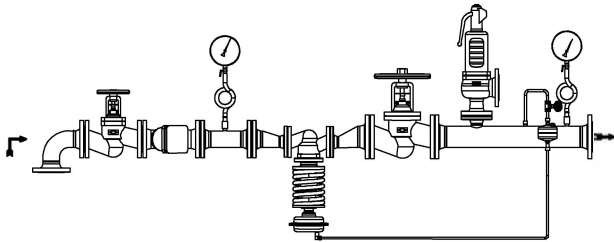


ARI-PREsys® Duplex

**Features:**

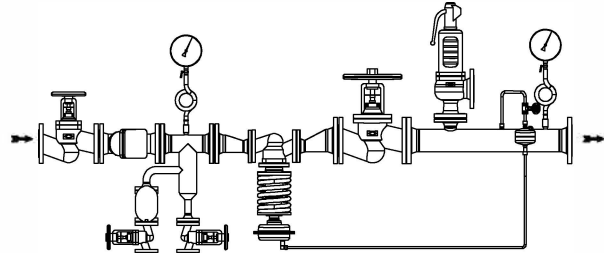
- Compact design
- Exact and easy adjustment
- Maintenance-free design through stainless steel bellows
- Process security through harmonized individual components
- Pressure-secure subassembly
- Dry and clean process steam optionally with separator (steam drier)
- Emergency operation during maintenance through bypass line
- Minimum-pressure side condensate drain possible
- Optionally with wall or floor bracket
- Service through plant documentation

**ARI-PREsys®-S for steam**



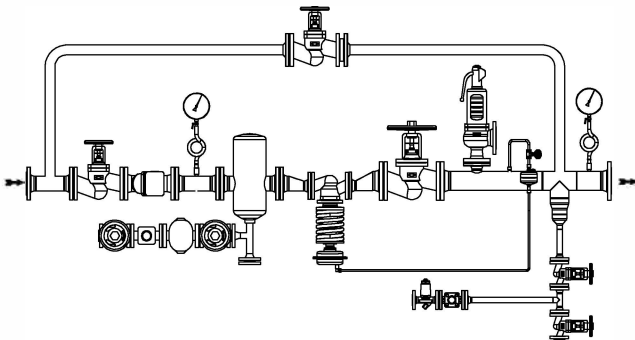
**PRS-S**

Pressure reducing station with connection to ascending pipeline  
(also as Duplex or with electro-pneumatic control)



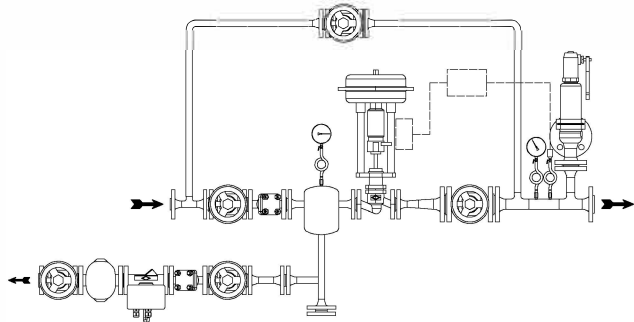
**PRS-S Plus**

Pressure reducing station with P1-side condensate drain  
(also as Duplex or with electro-pneumatic control)



**PRS-S Complete**

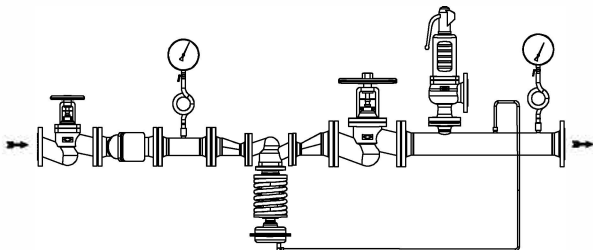
Pressure reducing station with complete equipment  
(Bypass, steam drier, condensate drain P1- and P2-side)  
(also with electro-pneumatic control)



**Electro-pneumatic control**

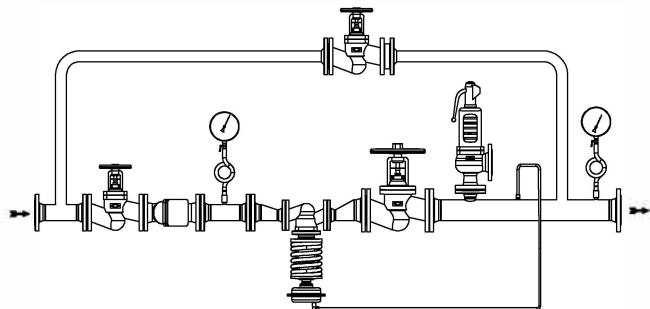
(with transmitter and PID-controller)

**ARI-PREsys®-W for water / ARI-PREsys®-A for air**



**PRS-W / PRS-A**

Pressure reducing station in standard design  
(also as Duplex or with electro-pneumatic control)



**PRS-W / PRS-A Complete**

Pressure reducing station with bypass,  
stop valves and safety valves with soft seal  
(also with electro-pneumatic control)

For dimensions and weights refer to specification sheet of the plan.

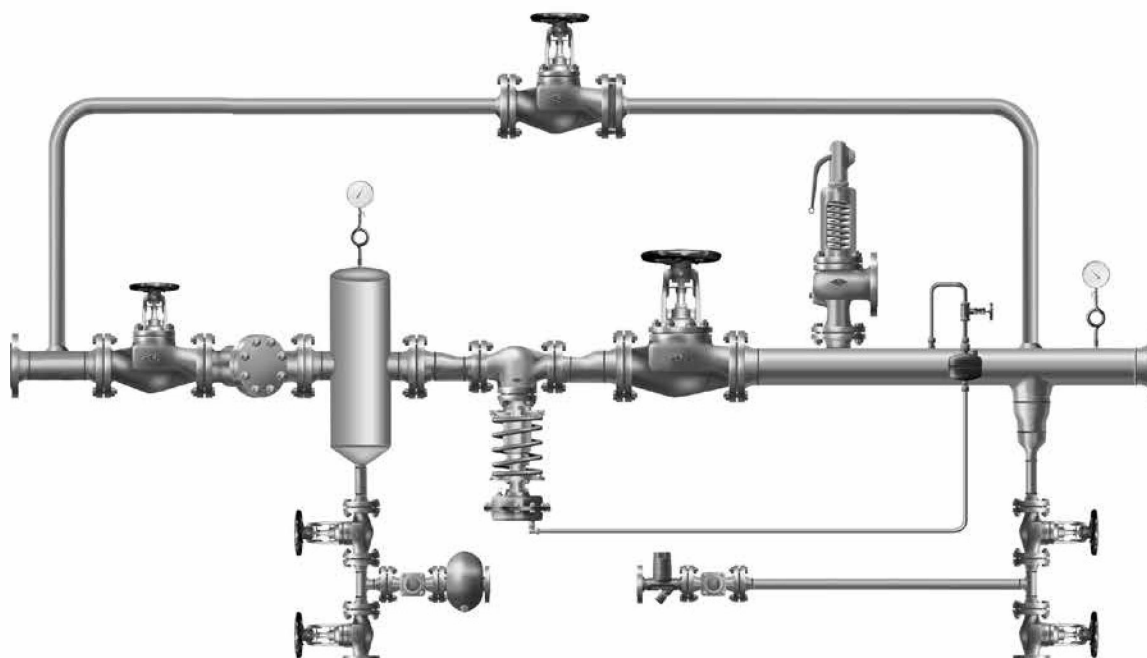
### Application

The pressure reducing station is a fully-mounted unit. The pressure reducer used here is a directly controlled proportional controller without auxiliary power for reducing a higher input pressure to a lower minimum pressure.

The pressure reducer used here is solely for reducing pressure, which is why stop valves are installed for the connection of the minimum pressure side over a longer period. To guarantee a longer service life for the station a strainer and, optionally, a steam drier, are provided on the input pressure side. The minimum pressure side is fitted with a safety valve adjusted to the station.

The input and minimum pressure are read off directly at the pressure gauge supplied.

A desired bypass pipe guarantees emergency operations even without a pressure reducer.



**Example illustration**  
(also with electro-pneumatic control)

#### Evaluation of the pressure reducing station in accordance with PED 2014/68/EU (Fluid Group 2)

The evaluation of an installation (assembly of pressure vessels) is aligned to the correspondingly highest category of an installation component Art.10 Paragraph 2. Fittings with a safety function are not taken into account in the evaluation.

If all the individual components of a subassembly fall under Art. 3.3 (sound engineering practice), the installation may not display a CE mark in accordance with the PED.

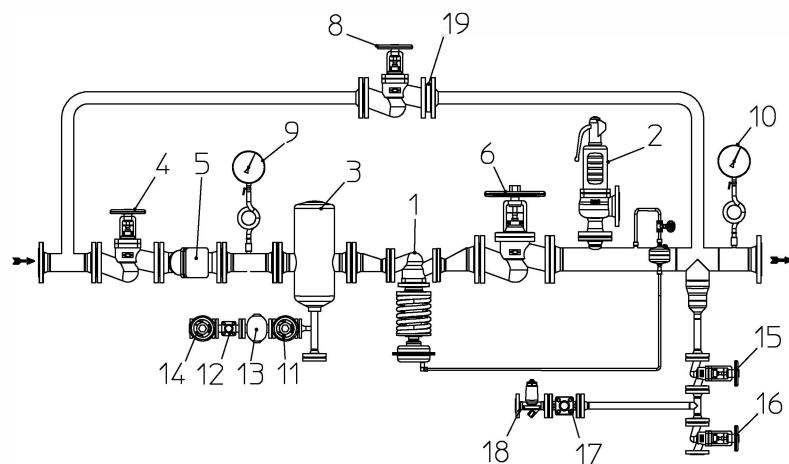
**Declaration of conformity/machinery's declaration:** See the last page in the current operating instructions for the above-mentioned EC Directives.

**Operating instructions can be ordered on request by phone (+49 52 07) 994-0 or fax (+49 52 07) 994-158 or 159.**

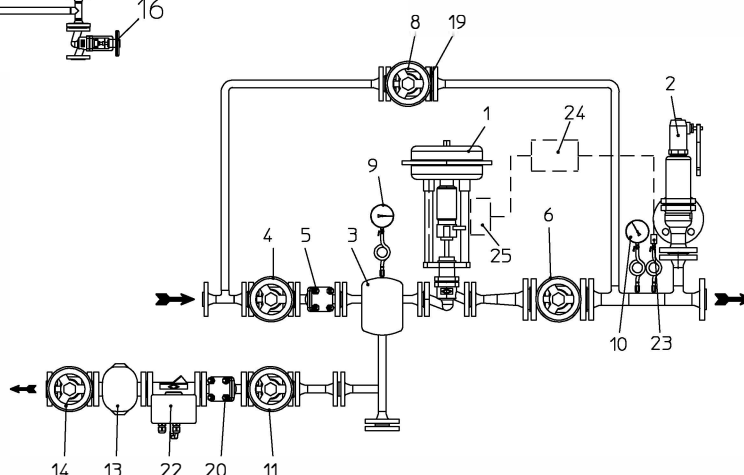
Pressure-temperature-ratings				Intermediate values for max. permissible operational pressures can be determined by linear interpolation of the given temperature / pressure chart.						
acc. to DIN EN 1092-1/-2				-10°C up to 50°C	100°C	150°C	200°C	250°C	300°C	350°C
12.PRS-...	EN-JL1040, P235GH	16	(bar)	16	14,9	13,9	12,4	11,2	9,6	-
22.PRS-...	EN-JS1049, P235GH, P250GH	16	(bar)	16	14,9	13,9	12,4	11,4	10,3	9,6
23.PRS-...	EN-JS1049, P235GH, P250GH	25	(bar)	25	23,3	21,7	19,4	17,8	16,1	15
32.PRS-...	1.0619+N, P235GH, P250GH	16	(bar)	16	14,9	13,9	12,4	11,4	10,3	9,6
34.PRS-...	1.0619+N, P235GH, P250GH	25	(bar)	25	23,3	21,7	19,4	17,8	16,1	15
35.PRS-...	1.0619+N, P235GH, P250GH	40	(bar)	40	37,3	34,7	30,2	28,4	25,8	24
55.PRS-...	1.4408, 1.4571, 1.4541	40	(bar)	40	39,6	36,3	33,7	31,8	29,7	28,5

Observe regulations

Information / restrictions in technical rules must be observed!



ARI-PREsys® self-acting (Example illustration)



ARI-PREsys® with electro-pneumatic control (Example illustration)

Pos.	Designation	Material			
		PN16 - 12.PRS	PN16 - 22.PRS PN25 - 23.PRS	PN16 - 32.PRS PN40 - 35.PRS	PN16 - 52.PRS <sup>1)</sup> PN40 - 55.PRS <sup>1)</sup>
1	Pressure reducing valve ARI-PREDU, DN15-100	EN-JL1040, EN-GJL-250	EN-JS1049, EN-GJS-400-18U-LT	GP240GH+N, 1.0619+N	??
1	Control valve ARI-STEVI, DN15-100	EN-JL1040, EN-GJL-250	EN-JS1049, EN-GJS-400-18U-LT	GP240GH+N, 1.0619+N	GX5CrNiMo19-11-2, 1.4408
2	Safety valve ARI-SAFE	EN-JL1040, EN-GJL-250	EN-JS1049, EN-GJS-400-18U-LT	GP240GH+N, 1.0619+N	GX5CrNiMo19-11-2, 1.4408
3	Steam drier or water pocket	P265GH, 1.0425 / P235GH, 1.0345			X6CrNiMoTi17-12-2, 1.4571
4	Stop valve ARI-FABA-Plus	EN-JL1040, EN-GJL-250	EN-JS1049, EN-GJS-400-18U-LT	GP240GH+N, 1.0619+N	GX5CrNiMo19-11-2, 1.4408
5	ARI-Y strainer with fine screen	EN-JL1040, EN-GJL-250	EN-JS1049, EN-GJS-400-18U-LT	GP240GH+N, 1.0619+N	GX5CrNiMo19-11-2, 1.4408
6	Stop valve ARI-FABA-Plus	EN-JL1040, EN-GJL-250	EN-JS1049, EN-GJS-400-18U-LT	GP240GH+N, 1.0619+N	GX5CrNiMo19-11-2, 1.4408
7	Water seal pot	P265GH, 1.0425			
8	Stop valve ARI-FABA-Plus	EN-JL1040, EN-GJL-250	EN-JS1049, EN-GJS-400-18U-LT	GP240GH+N, 1.0619+N	GX5CrNiMo19-11-2, 1.4408
9	Pressure gauge+valve+siphon (upstream press. P1)	St			
10	Pressure gauge+valve+siphon (downstream press. P2)	St			
11	Stop valve ARI-FABA-Plus	EN-JL1040, EN-GJL-250	EN-JS1049, EN-GJS-400-18U-LT	GP240GH+N, 1.0619+N	GX5CrNiMo19-11-2, 1.4408
12	Double window sight glass	EN-JL1040, EN-GJL-250	EN-JS1049, EN-GJS-400-18U-LT	GP240GH+N, 1.0619+N	GX5CrNiMo19-11-2, 1.4408
13	Ball float steam trap ARI-CONA SC	EN-JL1040, EN-GJL-250	EN-JS1049, EN-GJS-400-18U-LT	GP240GH+N, 1.0619+N	X6CrNiTi18-10, 1.4541
14	Stop valve ARI-FABA-Plus	EN-JL1040, EN-GJL-250	EN-JS1049, EN-GJS-400-18U-LT	GP240GH+N, 1.0619+N	GX5CrNiMo19-11-2, 1.4408
15	Stop valve ARI-FABA-Plus	EN-JL1040, EN-GJL-250	EN-JS1049, EN-GJS-400-18U-LT	GP240GH+N, 1.0619+N	GX5CrNiMo19-11-2, 1.4408
16	Stop valve ARI-FABA-Plus	EN-JL1040, EN-GJL-250	EN-JS1049, EN-GJS-400-18U-LT	GP240GH+N, 1.0619+N	GX5CrNiMo19-11-2, 1.4408
17	Double window sight glass	EN-JL1040, EN-GJL-250	EN-JS1049, EN-GJS-400-18U-LT	GP240GH+N, 1.0619+N	GX5CrNiMo19-11-2, 1.4408
18	Steam trap ARI-CONA B / M	EN-JL1040, EN-GJL-250	EN-JS1049, EN-GJS-400-18U-LT	GP240GH+N, 1.0619+N	X6CrNiTi18-10, 1.4541
19	Orifice disc	P265GH, 1.0425			X6CrNiMoTi17-12-2, 1.4571
20	Strainer	EN-JL1040, EN-GJL-250	EN-JS1049, EN-GJS-400-18U-LT	GP240GH+N, 1.0619+N	GX5CrNiMo19-11-2, 1.4408
22	Monitoring system for steam traps CONA-control	P250GH, 1.0460			X6CrNiTi18-10, 1.4541
23	Transmitter				
24	Pressure controller (PID)				
25	Electronic positioner				
	Pipes / flanges	P235GH, 1.0345 / P250GH, 1.0460			X6CrNiMoTi17-12-2, 1.4571 / X6CrNiTi18-10, 1.4541

**Pressure reducing valve**

DN		15	20	25	32	40	50	65	80	100
Kvs values	(m³/h)	3,2	5	8	12,5	20	32	50	80	125

Downstream pressure ranges	(bar-ü)	0,2 - 0,6	0,5 - 1,2	0,8 - 2,5	2 - 5	4,5 - 10	8 - 16
Actuator DMA	(cm²)	400	250	160	80	40	
max. permissible pressure	(bar)	1,6	2,5	6	10	20	

Design with control valves: refer to data sheet STEVI440/441 and STEVI470/471.

**Designs**

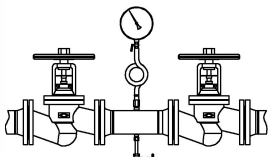
Code	Design	Type						
		PRS-S	PRS-S Plus	PRS-S complete	PRS-W	PRS-W complete	PRS-A	PRS-A complete
B	Bypass pipe	O	O	X	O	X	O	X
C	Condensate drain P2 side	O	O	X				
D	Steam drier insert	O		X				
E	Stop valve and safety valve with soft seal <sup>1)</sup>				O	X	O	X
F	Inlet pipe bend	X	O	O	O	O	O	O
G	Water pocket (simple steam trap)	O	X					
H	Wall bracket	O	O	O	O	O	O	O
J	Floor bracket	O	O	O	O	O	O	O
K	Double isolation <sup>2)</sup>	O	O	O	O	O	O	O
T	Duplex (double design)	O	O		O		O	

X = standard design / O = special design

<sup>1)</sup>

E	<b>Soft seal PRS-W:</b> Stop valves PTFE plug Safety valve EPDM plug PREDU actuator EPDM rolling diaphragm	<b>Soft seal PRS-A:</b> Stop valves PTFE plug Safety valve EPDM plug PREDU actuator EPDM rolling diaphragm
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<sup>2)</sup> z.B.

K	<b>Special design for inlet and outlet:</b> Double isolation bleed valve (P1- and P2-side)	
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**Information on pressure protection**

Possible fluctuations in the input-side steam output and an additional bypass operation make it advantageous to spread the overpressure protection. For this purpose a safety valve for normal operations is provided directly downstream from the pressure reducer with another safety valve directly downstream from the last stop valve (for bypass operations).

In principle, the max. possible mass flow must be included to determine the safety valve. Normal operations are to be regarded as ideal operations and do not govern size of the safety valve.

**The following operating conditions are to be avoided:**

- Maximum mass flow of the total system applied, because, e.g., all the other consumers close.
- The pressure in the inlet area increases until it reaches the set pressure on the safety valve installed in the inlet area. The greater pressure difference this cases (upstream pressure to downstream pressure) leads to different operating conditions and possibly to a greater mass flow.
- Simultaneous opening of the bypass and main pipes.

Please take this into account for your enquiry or order and let us know which operating conditions can occur!

**System code:**

<b>Type</b>	PRS-S (steam), PRS-W (water), PRS-A (air)
<b>Standard design</b> (see page 2)	PRS-S, PRS-S Plus, ARI-PREsys®-S complete PRS-W, PRS-W complete PRS-A, PRS-A complete
<b>Material (valves)</b>	12 (PN16, EN-JL1040) / 22 (PN16, EN-JS1049) / 23 (PN25, EN-JS1049) 32 (PN16, 1.0619+N) / 35 (PN40, 1.0619+N) / 52 (PN16, 1.4408) / 55 (PN40, 1.4408)
<b>Material (pipes)</b>	P235GH (St35.8) / 1.4571 / 1.4541
<b>Special design</b>	Code B to T (see page 5)
<b>Flange connection</b>	PN16, PN25, PN40

**Order example::**

<b>Type 22.PRS-S, Code B, C, H saturated steam 6 - 2</b>	Pressure reducing station with ...	- Pipe bend for connection to an ascending pipe - Pipe system PN16, accessories material EN-JS1049 - Medium saturated steam 2000 kg/h with special design bypass pipe - Supply pressure 6 bar minimum pressure 2 bar - Discharge condensate drain (P2 side) - Additional wall bracket
--	------------------------------------	--

**Please indicate when ordering:**

1. ARI-PREsys®  
 Type \_\_\_\_\_  
 e.g. Type 22.PRS-S with Code B, C, JH (pressure reducing station at ascending pipe, PN16, valves made of EN-JS1049, pipe made of P235GH, bypass pipe, steam traps -P2, wall bracket)
2. Medium \_\_\_\_\_ (Fluid group 2 in accordance with PED 2014/68/EU)
3. Upstream pressure P1 \_\_\_\_\_ (bar ü) Upstream pressure PS1 max. \_\_\_\_\_ (bar ü)  
 (e.g. set pressure of the safety valve in the feeder system)
4. Downstream pressure P2 \_\_\_\_\_ (bar ü) Downstream pressure PS1 max. \_\_\_\_\_ (bar ü)  
 (e.g. for determining the safety valve)
5. Temperature \_\_\_\_\_ (°C)
6. Required output (see note on page 5) \_\_\_\_\_ ☐ (kg/h) max. possible output \_\_\_\_\_ ☐ (kg/h)  
☐ (kW) (e.g. Boiler output) \_\_\_\_\_ ☐ (kW)
7. Dimensions of installation location (if known) \_\_\_\_\_ (m) / \_\_\_\_\_ (m) / \_\_\_\_\_ (m)  
 (clearance to wall, ceiling height, room dimensions))
8. Design deviating from standard \_\_\_\_\_ (Code B to T, see page 5)
9. Materials  
 Pipes: ☐ P235GH (St35.8)  
☐ 1.4571 / 1.4541  
 Valves: ☐ EN-JL1040 (GG-25)  
☐ EN-JS1049 (GGG-40.3)  
☐ 1.0619+N (GS-C25N)  
☐ 1.4408
10. Control device ☐ PREDU ☐ STEVI (electro-pneumatic control)  
☐ Transmitter  
☐ Pressure controller (PID)
11. Desired final inspections or approvals \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

