

For steam and energy management, we are right on target



If you expect innovative solutions for your steam systems you will be one jump ahead with us. Our highly-engineered steam traps are designed for easy installation and maintenance and ensure that energy is utilized in an optimum way without loss of live steam. The support services provided by our staff of application engineers range from consultancy,

planning and design of steam systems through sizing and selection of steam traps to system monitoring and supervisory inspections. When it comes to steam and energy, come to the company that has the priceless resource of experience. We provide individual concepts rather than off-the-peg solutions. Tailored. Targeted. Clear.

Steam Trap Selection

Not all steam trap types are equally suitable for a given application. Depending on the operating conditions and service in question, one or more systems will be particularly well suited.

The following table contains 14 criteria for steam trap selection based on the operation of the plant and the specific requirements on the part of the plant owner.

Criteria		Steam trap types				Please note:
		Trap type BK with bimetallic regulator	Trap type MK with membrane regulator	Ball float trap type UN1A with Duplex control	Ball float trap type UN1A with Simplex control	
1. Operation with different condensates	Condensate from steam	1	1	1	1	For "cold" condensates or condensates with a saturation curve deviating from that of water only float traps featuring Simplex control (without thermal venting) can be used.
	Condensate from compressed air	-	-	-	1	
	Condensate, distillate from chemical products	-	-	-	1	
2. Different modes of operation	Continuous operation: Constant formation of condensate; flowrate and pressure vary	2	1	1	1	
	Discontinuous operation: Intermittent formation of condensate; flowrate and pressure vary strongly	2	1	1	3*)	*) e. g. air venting difficulties
	Any operation: Heat exchanger may be controlled on the steam side	3**)	2	1	3*)	*) Air venting difficulties **) With partial load (reduced differential pressure) flowrate possibly not sufficient
3. Operation with back pressure	Up to approx. 30 % of upstream pressure	1	1	1	1	
	From 30 % to 60 % of upstream pressure	3*)	1	1	1	*) Possibly readjustment required
	> 60 % of upstream pressure	3*)	1	1	1	*) Possibly readjustment required
4. Sensitivity to dirt	Highly contaminated condensate	1	1	1	1	
5. Air-venting	Automatic	1	1	1	3*)	*) Manual air-venting

Ratings:

- 1 = Excellent
- 2 = Good
- 3 = Fair or conditional
- = Not recommended, unsuitable

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Criteria		Steam trap types				Please note:	
		Trap type BK with bimetallic regulator	Trap type MK with membrane regulator	Ball float trap type UNA with Duplex control	Ball float trap type UNA with Simplex control		
6. Condensate discharge at definite temperatures	Condensate temperature nearly boiling temperature	2*)	2**)	1	1	This may apply to small heat exchangers (e. g. laboratory equipment) *) Possibly readjustment required **) Might require special membrane regulator	
	Condensate undercooling approx. 30 K (required)	1*)	1**)	-	-		*) with U-type regulator or by readjustment **) with U-type capsule
	Condensate undercooling adjustable	2*)	-	-	-		*) By a corresponding readjustment reduction in flowrate; if possible use steam trap with adjustable discharge temperature UBK
7. Frost resistance		1	1	1*)	3*)	*) Only ensured with V-type design	
8. Condensate discharge without loss of live steam	Intermittent condensate formation	1	1	1	1		
	Reduced condensate formation (< 10 kg/h)	1	1	1	1		
	Continuous condensate formation (> 10 kg/h)	1	1	1	1		
9. Resistance to waterhammer		1	1*)	3	3	*) Built-in non-return valve	
10. Non-return valve action		1	1*)	-	-	*) Built-in non-return valve	
11. Application in vacuum		3	2	1	1		
12. Installation in any position		1	1	-	-		
13. Ease of maintenance		1	1	1	1		
14. Service life of control unit		1	2	1	1		

Technical information on steam trapping and trap selection

Title of publication	GESTRA Information # / Medium
Physical basis for evaluating steam-trap performance	A 1.1
Steam trap selection program	CD-ROM
Condensate manual: Basic principles of steam trapping, sizing of steam and condensate return lines, selection and application of steam traps etc.	
Automatic drainage of steam and condensate systems during start-up and shut-down	A 1.2
Waterhammer and how to avoid it	A 1.3
Trapping of steam tracers with elevated steam traps	A 1.4
How to avoid operating trouble	A 1.5
Ball-float traps for draining compressed-air plants	A 1.6
Automatic deaeration of steam-heated heat exchangers	A 1.7
Drainage of rotary cylinders	A 1.8
Utilization of sensible heat of condensate	C 1.2