

Steam trap for high flow rate  
up to 200 °C

## Technical Data

Connection	PN 16: DN 15 - 150 PN 25: DN 15 - 100 PN 40: DN 15 - 80
Nominal Pressure	PN 16 - 40
Operating Pressure	0 - 40 bar in several ranges
Flow Rate	up to 193 m <sup>3</sup> /h

## Description

Steam traps automatically drain condensate without loss of steam of gas. They operate instantaneously and are not affected by back-pressure or pressure fluctuations. They do not require an external energy input.

For many decades NIAGARA steam traps have been used in all industries. Their excellent reliability and durability have made them renowned throughout the world.

KN Niagara is a float-controlled steam trap for all applications where large volumes have to be handled. Body, cover and valve cap are manufactured from cast iron; the cone is fitted with a metallic seal. NIAGARA KN 1 is fitted as standard equipment with a manual bleed valve, a test gag and, for the larger valve sizes, with a drain plug in the sludge collecting chamber.

The pipe diameter downstream of the steam trap should be dimensioned according to the volume of condensate and the length of the pipe.

## STANDARD EQUIPMENT

- KN 1 : Manual bleed valve
- KN 80 : thermal start-up bleeding and fixed continuous bleed orifice
- KN 81 : fixed continuous bleed orifice
- KN 83 : thermal start-up and continuous bleeding
- KN 88 : adjustable continuous bleeding
- manual test gag
- From size DN 65 up: drain plug in sludge collecting chamber

## OPTIONS

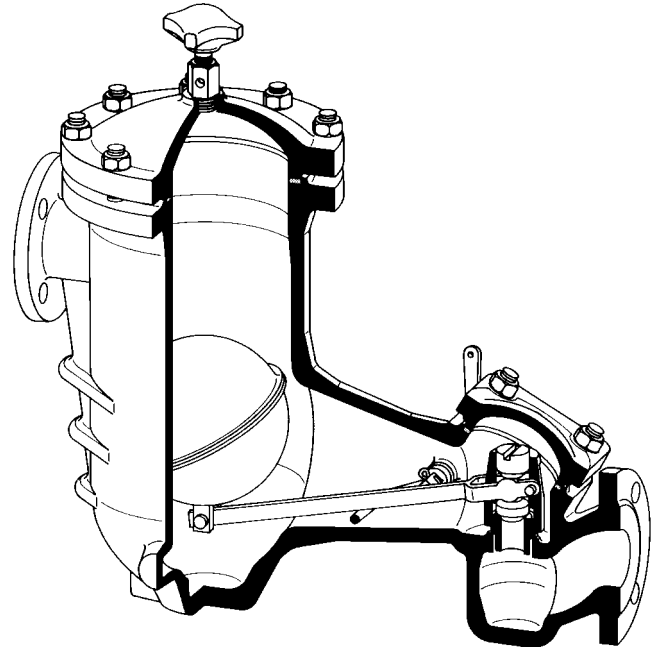
- Up to size DN 65: drain plug in sludge collecting chamber (standard equipment for sizes DN 65 and larger)
- Various seal materials suitable for your medium
- Special versions up to 400 °C
- Designs for special applications and extreme operating conditions on request

Operating instructions, Know How and Safety instructions must be observed.

The pressure has always been indicated as overpressure.

We reserve the right to alter technical specifications without notice.

KA Niagara 1



Pressure Ranges [bar]									
PN 16	0-2	0-4	0-8	0-13	0-16				
PN 25	0-2	0-4	0-8	0-13	0-16	0-22			
PN 40	0-2	0-4	0-8	0-13	0-16	0-22	0-25	0-32	0-40

Flow Rate in m<sup>3</sup>/h see Sheet KA Niagara/2.1.061.2

Please state working pressure range, when inquiring or ordering

# Level Control Valve

# KA Niagara

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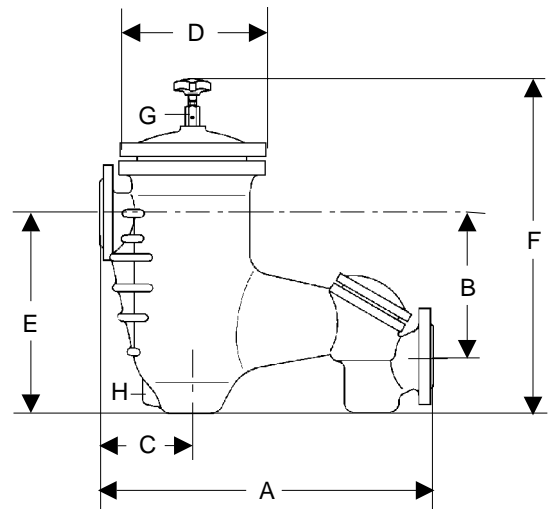
Materials		
Body	PN 16	spheroidal cast iron
	PN 25/40	cast steel
Forklever	up to DN 80	CrNiMo-steel
	from DN 100	gun metal
Seat		Cr-steel
Cone		CrNiMo-steel
Float		CrNiMo-steel
Body Seal		Nova Universal

Dimensions [mm]												
size	PN	nominal diameter DN										
		15	20	25	32	40	50	65	80	100	125	150
A	16	285	295	340	355	445	530	635	685	800	900	1055
	25	305	305	390	415	455	550	635	685	800		
	40	305	305	390	415	445	550	635	720			
B	16	100	135	120	135	170	215	280	270	315	400	490
	25	155	155	165	185	185	235	280	270	315		
	40	155	155	165	185	220	235	280	330			
C	16	100	110	140	140	155	175	175	235	300	275	345
	25	115	115	160	150	165	200	215	230	300		
	40	115	115	160	150	170	200	215	250			
D	16	130	135	200	210	230	270	285	365	380	460	520
	25	160	160	230	230	230	285	325	345	395		
	40	160	160	230	230	265	285	325	390			
E	16	150	185	185	205	245	300	385	370	430	555	635
	25	215	215	225	255	260	320	385	385	450		
	40	215	215	225	255	295	320	385	430			
F	16	270	310	310	365	390	470	610	575	655	835	920
	25	330	330	365	385	385	480	550	560	655		
	40	330	330	365	385	455	480	550	645			
G	16	G 1/4	G 1/4	G 1/4	G 1/4	G 1/4	G 3/8	G 3/8	G 3/8	G 3/8	G 3/8	G 1/2
	25	G 3/8	G 3/8	G 3/8	G 3/8	G 3/8	G 3/8	G 3/8	G 3/8	G 3/8		
	40	G 3/8	G 3/8	G 3/8	G 3/8	G 3/8	G 3/8	G 3/8	G 3/8			
H*	16	G 3/8	G 3/8	G 3/8	G 3/8	G 3/8	G 1/2	G 1/2	G 1/2	G 3/4	G 3/4	G 3/4
	25	G 3/8	G 3/8	G 3/8	G 3/8	G 3/8	G 1/2	G 1/2	G 1/2	G 1/2		
	40	G 3/8	G 3/8	G 3/8	G 3/8	G 3/8	G 1/2	G 1/2	G 1/2			

\*) from DN 65 standard

Weights [kg]												
nom. press.	nominal diameter DN											
		15	20	25	32	40	50	65	80	100	125	150
PN 16		11	12	18	25	31	46	77	107	135	186	270
PN 25		22	23	23	30	35	58	90	110	144		

Special designs on request.  
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Venting Devices			
KA 80	PN 16	KA 81	PN 16-40
therm. start vent. and rigid perm. vent. nozzle		rigid permanent venting nozzle	
KA 83	PN 16	KA 88	PN 16-40
thermal start up and permanent venting		adjustable permanent venting	

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Steam Trap for high flow rate  
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max. Flow Rate in m³/h												
pressure range bar	operating pressure bar	nominal diameter DN										
		15	20	25	32	40	50	65	80	100	125	150
0 - 2	0.1	0.46	0.57	0.69	1.1	1.94	3.15	5.38	9.5	14.8	21.5	35.8
	0.25	0.73	0.9	1.1	1.8	3.1	5	8.6	15.2	23.6	34	57
	0.5	1.13	1.4	1.7	2.8	4.8	7.8	13.5	23.6	35.8	53	89
	1	1.59	2	2.4	3.9	6.8	11	19	33.5	52	75	125
	1.5	2.2	2.7	3.1	5.3	9.5	15.6	26	46	64	103	172
	2	2.47	3.05	3.7	6	10.6	17.4	29	52	73	116	193
0 - 4	0.1	0.28	0.36	0.47	0.7	1.12	2.4	4	6.1	9.5	12	23
	0.5	0.69	0.9	1.15	1.7	2.8	6	10	15	23.6	30	60
	1	0.97	1.28	1.6	2.4	4	8.36	14	21.4	33.4	42.3	83
	2	1.5	1.95	2.5	3.7	6	13	21.7	32.8	51.4	65	114
	3	1.84	2.4	3.05	4.52	7.35	15.8	26.6	40.3	63	79	137
	4	2.12	2.76	3.5	5.3	8.6	18.4	30.7	46.5	72.7	92	156
0 - 8	2	0.73	1.06	1.5	1.7	3.7	6	10.2	19.5	29	39.5	64.5
	4	1.05	1.5	2.12	2.8	5.22	8.5	12.9	26.3	41	55.7	89
	6	1.32	1.9	2.75	3.54	6.66	10.8	15.3	33.5	52.4	71	106
	8	1.54	2.22	3.13	4.1	7.72	12.5	17	38	60.4	82	123
0 - 13	4	0.63	1.05	1.26	1.5	2.76	6.22	11.6	18.2	26.2	35.6	55.7
	8	0.94	1.54	1.86	2.22	4.08	9.19	17.2	26.88	37.8	52.7	82
	10	1.08	1.76	2.15	2.55	4.69	10.55	19.75	30.86	44.4	60.5	98
	12	1.18	1.93	2.33	2.78	5.13	11.55	21.6	33.75	48.6	66.2	110
	13	1.23	2.01	2.43	2.9	5.35	12.04	22.5	35.2	50.7	69	115
0 - 16	8	0.72	1.19	1.54	1.86	3.12	6.38	14.4	21.7	32.5	44	82
	12	0.9	1.49	1.93	2.33	3.93	8.02	18	27.4	40.9	57	110
	14	0.98	1.6	2	2.52	4.24	8.66	19.5	29.5	44.1	61	119
	16	1.04	1.73	2.23	2.7	4.54	9.26	20.8	31.6	47.2	65	127
0 - 22	12	1.22	1.49	1.93	1.78	6.49	11.55	15.7	21.6			
	16	1.42	1.73	2.23	3.2	7.5	13.34	18.15	24.9			
	18	1.52	1.85	2.4	3.45	8.05	14.33	19.5	26.8			
	20	1.61	1.96	2.54	3.64	8.49	15.1	20.5	28.2			
	22	1.66	2.04	2.6	3.75	8.89	15.82	21.5	29.6			
0 - 25	16	0.66	1.04	1.36	3.5	5.21	9.26	13.34	18.15			
	20	0.75	1.18	1.55	4	5.9	10.49	15.1	20.5			
	22	0.77	1.22	1.62	4.15	6.18	10.98	15.82	21.5			
	25	0.83	1.32	1.74	4.4	6.62	11.78	16.96	23.1			
0 - 32	20	0.52	0.75	1.18	1.95	3.05	5.1	8.5				
	22	0.55	0.78	1.22	2.05	3.15	5.4	8.9				
	25	0.58	0.84	1.32	2.2	3.4	5.8	9.5				
	28	0.62	0.9	1.42	2.35	3.65	6.2	10.2				
	32	0.66	0.95	1.5	2.5	3.9	6.6	10.85				
0 - 40	35	0.25	0.69	0.99	0.99	2.1	3.8	6.8				
	40	0.28	0.74	1.06	1.06	2.3	4.1	7.3				

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