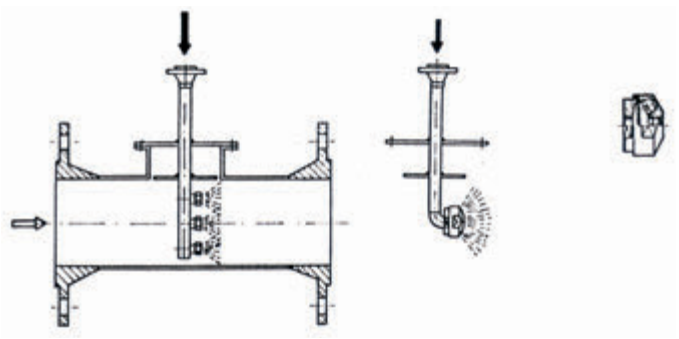
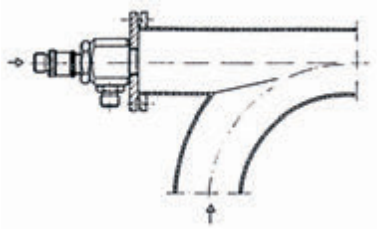
MC Desuperheating Steam

Superheated steam is cooled when high steam temperatures are impermissible for processing reasons, or when heated steam has to be saturated or cooled. Steam cooling is possible if superheated steam is available as live steam from a boiler with superheater or as low-pressure steam resulting from a throttling of high-pressure steam.

A. Unary nozzles

The easiest way to desuperheat steam is be means of unary, full cone or hollow cone nozzles.
However, it has to be seen to it that all water evaporates completely and that no droplets reach the pipe walls.



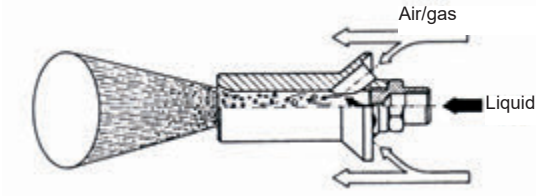


B. Binary fuel aggregate

Water, or preferrably cold condensate, is micro-atomized with the help of atomizing steam. Droplets turn nebular and are smaller than the ones produced by unary nozzles. Heat transfer improves, and condensate generation is prevented.

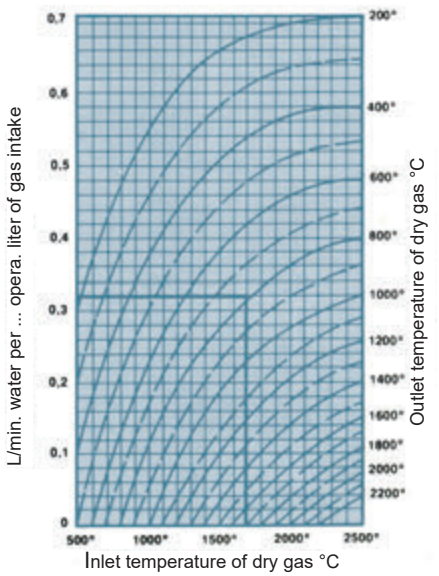
C. Orifice plate principle

The orifice plate principle is a special form.
Through an orifice plate, superheated steam is directed into the nozzle, where water and cold condensate are atomized. In the nozzle's forking section all media are mixed and fog the droplets.



Temperature and specific gravity of water		
Condensate temperature °C	Specific gravity t/m³	Conversion factor
65	0.9806	1,010
80	0.9718	1,015
95	0.9619	1,020
110	0.9510	1,025
130	0.9351	1.030
140	0.9263	1,040
150	0.9172	1,045
160	0.9076	1,050
180	0.8866	1,065
190	0.875	1,070
210	0.850	1,085
230	0.823	1,102
250	0.794	1,122
270	0.765	1,145
290	0.720	1,180
300	0.700	1,200

Amount of water injected at gas in- and outlet temperatures for evaporative cooling



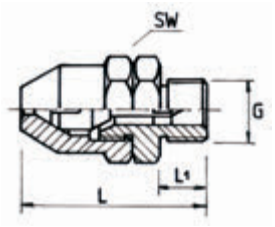
Example: dry gas at ...°C to be cooled to ...°C outlet temperature requires ... l/min. injection amount per ... operating liter of gas intake

Subject to technical alterations!

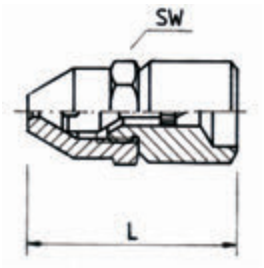
Steam Cooling Nozzles HH

Characteristics

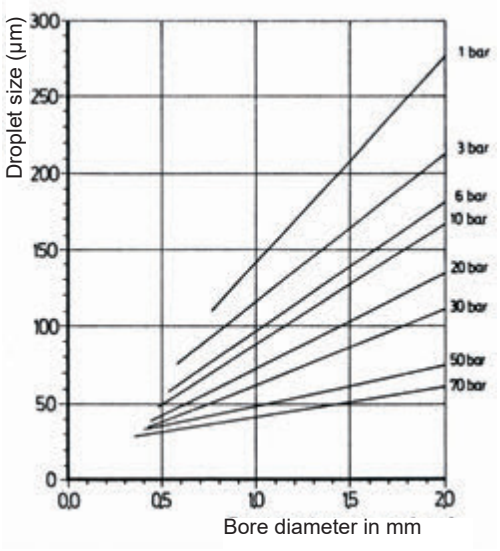
Steam cooling nozzles **HH** are unary nozzles creating particularly fine droplets, and thus allow for the condensate's complete evaporation and the prevention of corrosion.
Fine droplets come about by means of high injection pressure, high condensate temperatures and the utilization of many small nozzles with potentially large spray angles.
Minimal pressure: 2-3 bar. Higher pressures allow for better control behavior and adjustment to operating conditions.
Minimal evaporation line: 6-8m.
Spray pattern: standard hollow cone; full cone also available.
Material: 1.4404

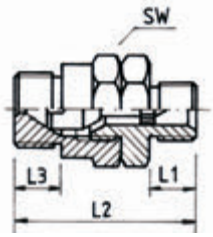


Type **HH**
with screw-in adapter



Type **HHS**
with welding adapter





Type **HHK**
on request
with head thread

Thread G	L	l1	SW
1/4“	40	10	19
3/8“	48	12	24
1/2“	56	14	27
3/4“	72	16	36

Order example: (Thread - type - material) G 3/8“ - HH 12 - V 2A, intermediate sizes available on request

Thread G ISO 228	Type	Bore-Ø (mm)	Flow rate V̇ (l/min.) at pressure p (bar)																
			1	2	3	4	6	8	10	12	14	16	18	20	22	24	26	28	30
G 1/4“	**HH 0,5**	1.1	0.27	0.38	0.47	0.54	0.66	0.77	0.86	0.94	1.02	1.09	1.16	1.22	1.28	1.34	1.39	1.45	1.50
	HH 1	1.6	0.58	0.81	1.00	1.16	1.43	1.64	1.83	1.99	2.15	2.30	2.44	2.57	2.70	2.82	2.93	3.04	3.15
	HH 2	2.3	1.19	1.68	2.06	2.38	2.92	3.37	3.76	4.13	4.45	4.76	5.05	5.33	5.60	5.84	6.07	6.30	6.53
	HH 3	2.8	1.76	2.48	3.05	3.52	4.32	4.98	5.57	6.10	6.60	7.05	7.46	7.87	8.25	8.62	8.97	9.31	9.65
	HH 4	3.2	2.30	3.26	4.00	4.62	5.65	6.52	7.30	8.00	8.65	9.25	9.80	10.32	10.82	11.30	11.80	12.20	12.65
	HH 5	3.6	2.92	4.12	5.05	5.83	7.20	8.30	9.25	10.15	10.90	11.70	12.40	13.10	13.75	14.35	14.90	15.50	16.05
	HH 6	3.9	3.40	4.80	5.90	6.82	8.35	9.63	10.75	11.90	12.85	13.70	14.60	15.35	16.10	16.80	17.50	18.20	18.80
	HH 7	4.2	3.98	5.63	6.90	7.95	9.75	11.30	12.60	13.80	14.90	16.00	16.90	17.80	18.70	19.55	20.35	21.10	21.80
	HH 8	4.5	4.55	6.45	7.90	9.10	11.20	12.90	14.40	15.85	17.10	18.30	19.40	20.50	21.45	22.40	23.35	24.20	25.20
	HH 9	4.8	5.20	7.35	9.00	10.40	12.75	14.70	16.50	18.00	19.40	20.80	22.20	23.25	24.40	25.45	26.50	27.50	28.45
G 3/8“	**HH 10**	5	5.60	7.95	9.75	11.13	13.80	15.90	17.80	19.50	21.20	22.55	23.90	25.20	26.40	27.60	28.70	29.80	30.80
	HH 12	5.5	6.80	9.65	11.80	13.60	16.70	19.25	21.50	23.70	25.60	27.40	29.00	30.60	32.10	33.60	34.90	36.20	37.50
	HH 14	6	8.10	11.40	14.00	16.20	19.80	22.80	25.80	28.20	30.50	32.60	34.60	36.40	38.20	40.00	41.60	43.20	44.65
G 1/2“	**HH 19**	7	11.00	15.60	19.10	22.00	27.00	31.20	34.80	38.40	41.50	44.30	47.00	49.60	52.00	54.40	56.50	58.60	60.80
	HH 25	8	14.40	20.40	25.00	28.80	35.40	40.80	45.70	50.00	54.00	57.60	61.25	64.50	67.80	70.70	74.60	76.50	79.20
G 3/4“	**HH 39**	10	22.50	31.80	39.00	45.00	55.20	63.70	71.50	78.40	84.60	90.50	96.00	101	106	111	115	120	124
	HH 47	11	27.20	38.40	47.00	54.50	66.50	77.00	86.00	94.60	102	109	116	122	128	134	139	145	150

Binary Fuel Aggregates ZAD

Especially for desuperheating steam

Characteristics

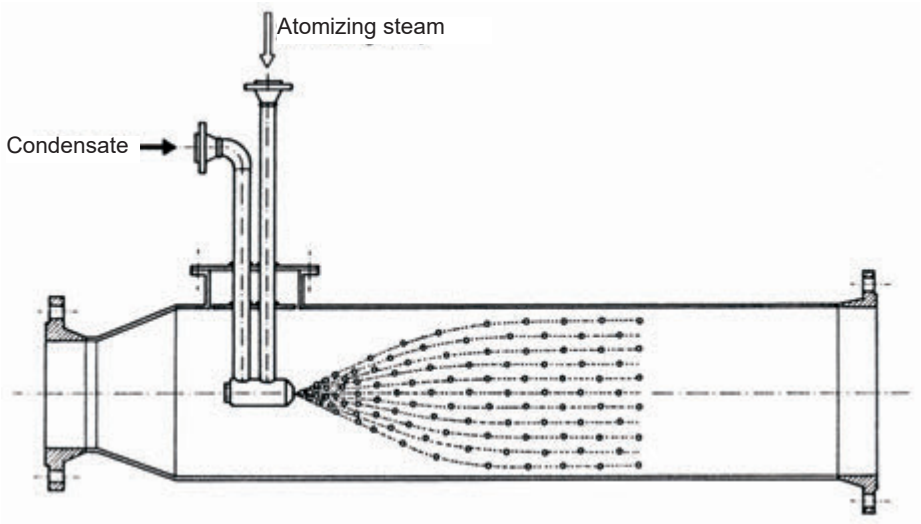
Large control range.
Atomizing steam pressure remains constant.
Amount of condensat is adjustable from 0 to maximum.
Micro-atomization with large control range.
Intensive cooling also near saturated steam limit.
Great atomization results at supercritical pressure conditions.
Finest droplets with large heat transfer capacity allow for a short evaporation distance.

Application

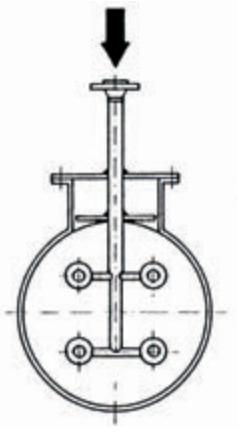
Desuperheating steam, various connection possibilities.

Material

Stainless steel, others on request



Type	Max. Water capacity at medium droplet size of about 50 to 70µ Water capacity l/min. at pressure p					
	1	2	3	4	5	6
ZAD 1	0.4	1.0	1.8	2.3	3.1	4.1
ZAD 2	1.2	2.5	4.1	5.8	7.8	10.1
ZAD 3	2.3	4.8	7.5	10.9	15.0	20.0



Multiple nozzle with intake

Type	Atomizing steam consumption (kg/h)									
	1	2	3	4	5	6	7	8	9	10
ZAD 1	15	22	28	35	42	49	57	62	70	78
ZAD 2	34	50	68	83	100	130	150	170	180	190
ZAD 3	67	100	140	170	200	240	270	300	340	380

Subject to technical alterations!

Return Nozzle HR

MC

Characteristics

Inside of MC's hollow cone return nozzles **HR** a part of the liquid amount is discharged via a valve in the return, which decreases the liquid outlet of the nozzle without noteworthy fluctuations in spray angle and droplet size.
The atomizing quality depends on nozzle size, control range and special operating conditions. Pressures above 40 bar result in finer droplets than the other way aroand.

Application

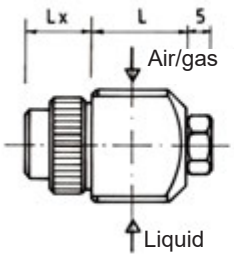
Gas treatment
Desuperheating steam

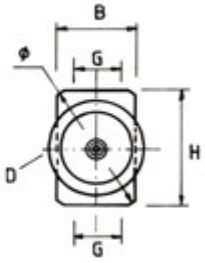
Material

Stainless steel,
Acid and
heat resistant
stainless steels

Hollow cone spray pattern

1. Dimensions



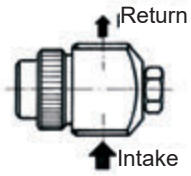


Type	G	L	L1*	H	B	Ø	Varies with air cap L x	D
HR 1-2	1/8“ or 1/4“	25	45	30	20	34	17 to 21	24
HR 3-6	3/8“ or 1/2“	38	68	50	30	52	20 to 28	33

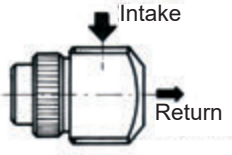
* Length of variant 3

2. Connection variants

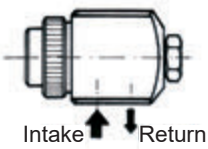
Variant 1
Standard



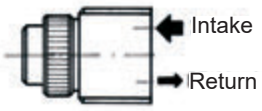
Variant 2
Most inexpensive variant; however, no control needle possible

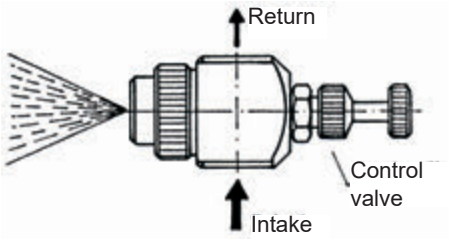


Variant 3
Both connections on one side

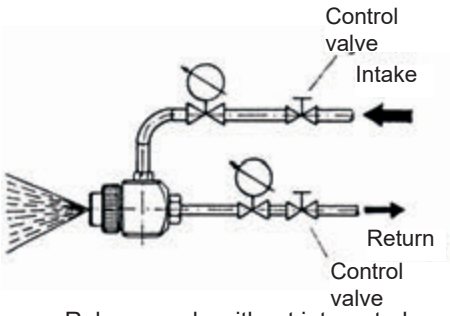


Variant 4
With connections on the backside

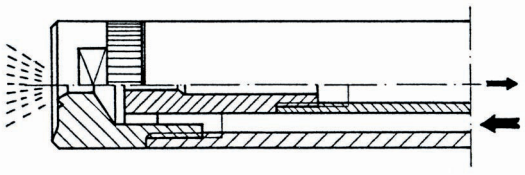




HR nozzle with integrated control valve



Rule example without integrated control valve



Rule example with nozzle lance
ZL 1/2“ - HR-2
(other see page 11.1-11.4)

3. Dimensioning tool

Type	Flow rate at 42 bar		Control range	Spray angle
	min.	max.		
HR-1	1.13	11.3	10:01	75
HR-2	0.76	11.3	15:01	80
HR-3	1.89	18.9	10:01	85
HR-4	1.21	18.9	15:01	80
HR-5	2.65	26.5	10:01	85
HR-6	2.19	26.5	12:01	80

Spray-Drying Nozzles ST

Characteristics

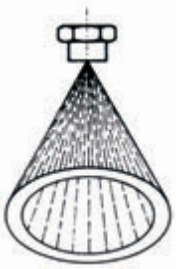
Spray-drying is a process engineering procedure to turn lotions, emulsions and suspensions with solid matter contents in a continuous process into powder, granulates or agglomerates.

Application

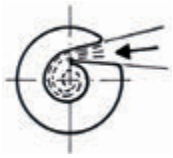
Dry atomization of:
milk, eggs, extracts, soaps, cleaning detergents, chemicals, food, paint, ceramic compoands

Material

Basic body made from 1.4404, O-ring NBR or Viton, end plates, swirler and drill plate made from carbide metal



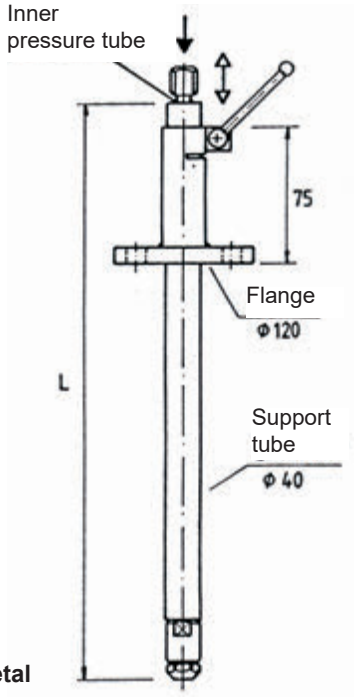
Hollow cone spray pattern



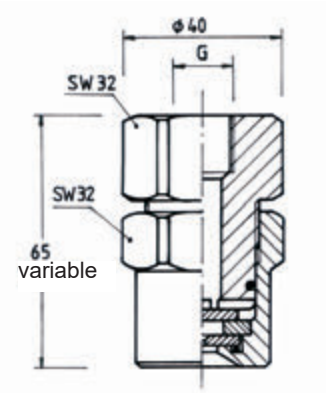
Function diagram of swirl chamber

The swirl chamber's tangential conic inlet leads to a free swirling of the liquid. Friction is reduced to a minimum. Thus, atomization is optimized and abrasion reduced.

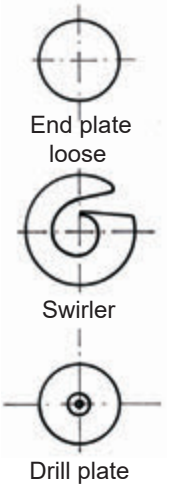
Examples of nozzles lances
for more information see page 10.3



Type ST - Standard nozzle
compact design; no tools needed for installation; O-rings sealed, max. operating pressure: 500 bar, G = 1/4"-3/8"-1/2" or 3/4"

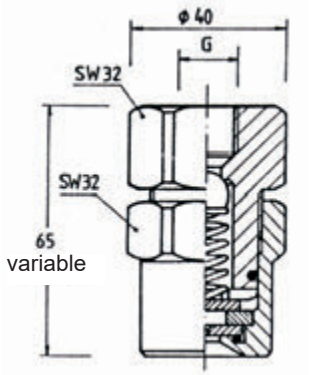


Wear parts made from carbide metal



Drill plate with integrated end plate

Nozzle variant with drip-stop
for type ST



Subject to technical alterations!

Performance tables

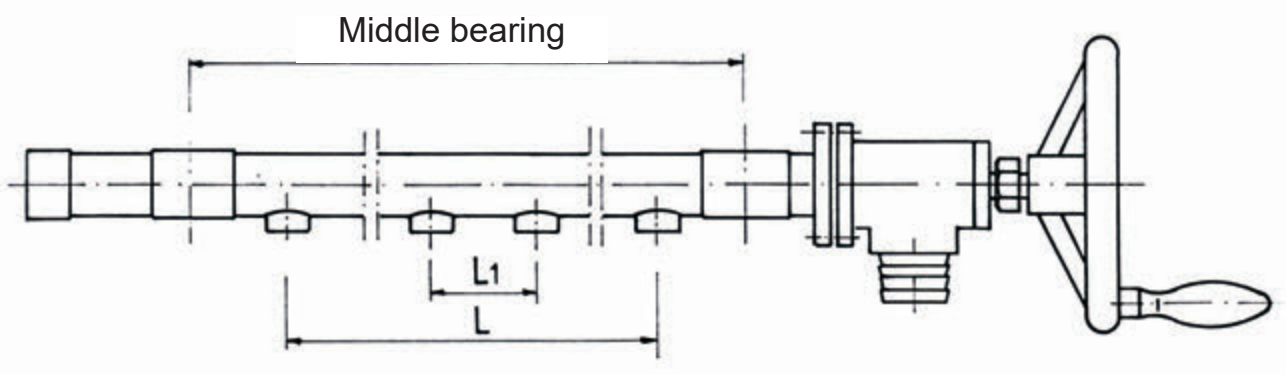
Spray angle	Swirler	Drill plate	Flow rate $\dot{V}$ (l/h) at pressure p (bar)								
			bar 15	bar 25	bar 50	bar 75	bar 100	bar 125	bar 150	bar 200	bar 300
50°	SB	ST 021	22.06	28.48	40.28	49.33	56.96	63.68	69.76	80.56	98.66
50°	SC	ST 026	34.41	44.43	62.83	76.95	88.85	93.34	108.82	125.66	153.90
50°	SD	ST 028	39.71	51.26	72.50	88.79	102.53	114.63	125.57	144.99	177.58
50°	SE	ST 032	56.47	72.91	103.11	126.28	145.82	163.03	178.59	206.21	252.56
50°	SF	ST 040	88.24	113.92	161.10	197.31	227.83	254.73	279.04	322.21	394.62
50°	SG	ST 050	150.00	193.65	273.87	335.42	387.31	433.03	474.36	547.74	670.84
50°	SH	ST 070	282.36	364.53	515.52	631.38	729.05	815.11	892.91	1,031.04	1,262.76
50°	SI	ST 082	414.72	535.40	757.17	927.34	1,070.80	1,197.19	1,311.46	1,514.34	1,854.68

Spray angle	Swirler	Drill plate	Flow rate $\dot{V}$ (l/h) at presssure p (bar)								
			bar 15	bar 25	bar 50	bar 75	bar 100	bar 125	bar 150	bar 200	bar 300
60°	SA	ST 020	17.65	22.78	32.22	39.46	45.56	50.94	55.80	64.44	78.92
60°	SB	ST 025	27.36	35.32	49.95	61.17	70.63	78.97	86.51	99.89	122.34
60°	SC	ST 031	42.36	54.68	77.33	94.71	109.36	122.27	133.94	154.66	189.42
60°	SD	ST 034	52.94	68.35	96.66	118.38	136.69	152.83	167.41	193.31	236.76
60°	SE	ST 041	79.42	102.53	144.99	177.58	205.05	229.25	251.14	289.99	355.16
60°	SF	ST 056	141.18	182.26	257.76	315.69	364.53	407.55	446.45	515.52	631.38
60°	SG	ST 073	240.01	309.85	438.19	536.67	619.69	692.84	758.97	876.38	1,073.34
60°	SH	ST 096	441.19	569.57	805.50	986.53	1,139.15	1,273.60	1,395.16	1,611.00	1,973.06

Spray angle	Swirler	Drill plate	Flow rate $\dot{V}$ (l/h) at pressure p (bar)								
			bar 15	bar 25	bar 50	bar 75	bar 100	bar 125	bar 150	bar 200	bar 300
70°	SA	ST 029	26.47	34.17	48.33	59.19	68.35	76.41	83.71	96.66	118.38
70°	SB	ST 033	34.97	45.15	63.85	78.20	90.30	100.96	110.59	127.70	156.40
70°	SC	ST 039	56.47	72.91	103.11	126.28	145.82	163.03	178.59	206.21	252.56
70°	SD	ST 052	88.24	113.92	161.10	197.31	227.83	254.73	279.04	322.21	394.62
70°	SE	ST 064	141.18	182.26	257.76	315.69	364.53	407.55	446.45	515.52	631.38
70°	SF	ST 083	241.77	312.13	441.41	540.62	624.25	697.94	764.55	882.83	1,081.24
70°	SG	ST 106	402.37	519.45	734.62	899.72	1,038.91	1,161.53	1,272.40	1,469.24	1,799.44
70°	SH	ST 133	705.90	911.32	1,288.80	1,578.45	1,822.64	2,037.77	2,232.27	2,577.60	3,156.90

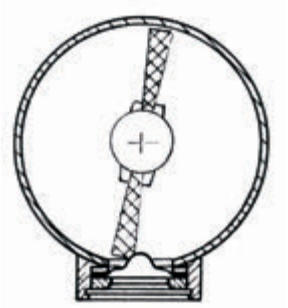
Spray angle	Swirler	Drill plate	Flow rate $\dot{V}$ (l/h) at pressure p (bar)								
			bar 15	bar 25	bar 50	bar 75	bar 100	bar 125	bar 150	bar 200	bar 300
80°	SA	ST 038	35.29	45.56	64.44	78.92	91.13	101.89	111.61	128.88	157.84
80°	SB	ST 047	53.83	69.49	98.27	120.36	138.98	155.35	170.21	196.55	240.72
80°	SC	ST 063	93.53	120.75	170.77	209.15	241.51	270.01	295.78	341.54	418.30
80°	SD	ST 076	141.18	182.26	257.76	315.69	364.53	407.55	446.45	515.52	631.38
80°	SE	ST 101	250.60	323.52	457.52	560.35	647.04	723.41	792.45	915.05	1,120.70
80°	SF	ST 127	423.54	546.79	773.28	947.07	1,093.58	1,222.66	1,339.36	1,546.56	1,894.14
80°	SG	ST 153	663.55	856.64	1,211.48	1,483.75	1,713.29	1,915.51	2,098.34	2,422.95	2,967.50
80°	SH	ST 183	1,090.62	1,407.99	1,991.20	2,438.71	2,815.98	3,148.36	3,448.86	3,982.40	4,877.42

Please request further technical data!



High-pressure spray tube

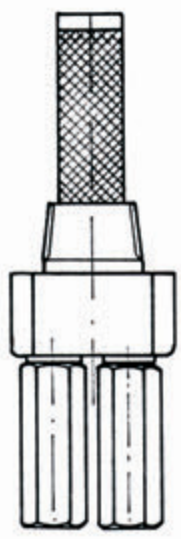
Nozzle plate
type **PF**



High-pressure spray tube
with brush cleaning

Nozzles for paper margin separation

Type **PA**

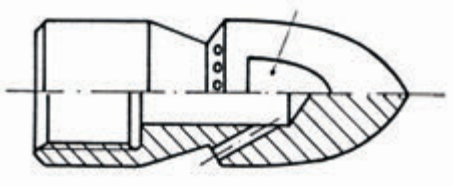


Type **P2**

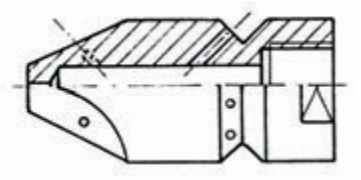
Type **PK**

Subject to technical alterations!

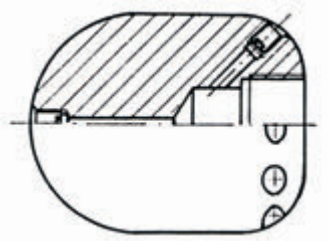
Please request further technical data!



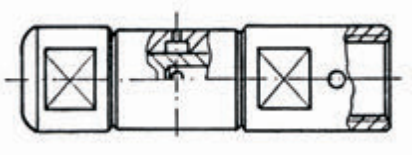
Grenade
type **GK**
(see more data on page 5.5)



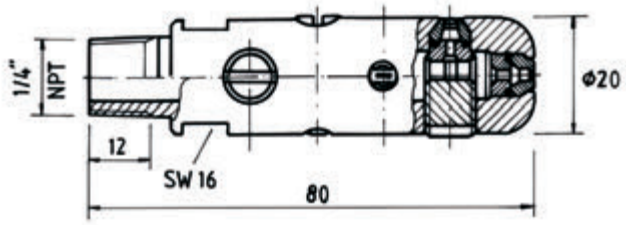
Milling nozzle
type **GF**



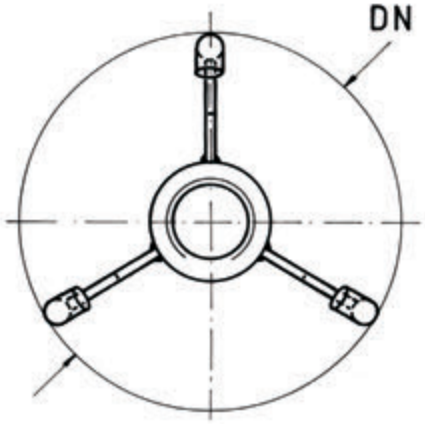
Bombs
type **GB**

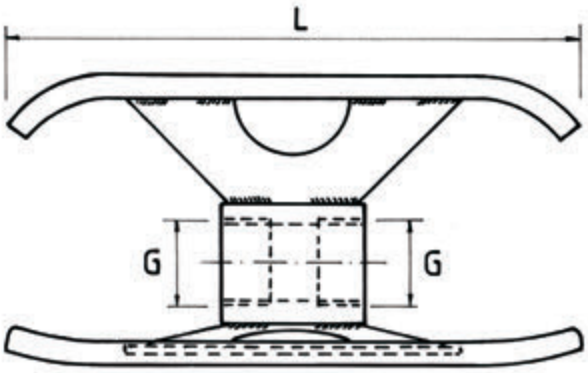


Rotating high-pressure nozzles
type **GB**



Sewer cleaning nozzle **GHM**
with 5 screwed-in carbide metal nozzles for cleaning of pipes and sewers





Nozzle slide for sewer cleaning

On request

Nozzles for Mining

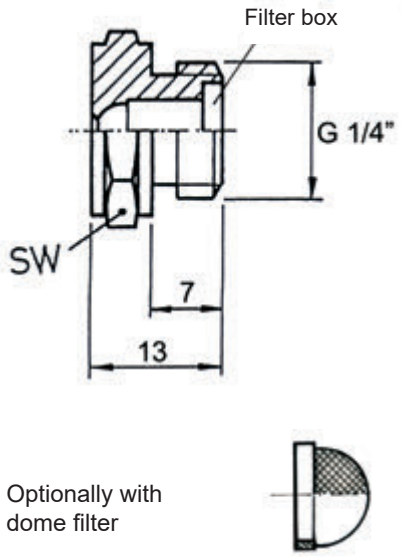
MC nozzles for mining are marked with the additional letter B. These nozzles have cylindrical threads and inclusions for dome filters. The nozzles are metered at a pressure of 5 bar.

Flat fan nozzles FGB

Spray angles are available: **20°-30°-45°-60°-90°-120°**

Type	Equiv. bore (mm)	Flow rate V̇ (l/min.) at pressure p (bar)					
		0.5	1	2	3	5	10
FGB 0.6	0.80	0.19	0.27	0.38	0.46	0.60	0.85
FGB 1	1.00	0.32	0.45	0.63	0.77	1.00	1.41
FGB 1.5	1.20	0.47	0.67	0.95	1.16	1.50	2.12
FGB 2	1.35	0.63	0.89	1.26	1.55	2.00	2.83
FGB 2.5	1.50	0.79	1.12	1.58	1.94	2.50	3.54
FGB 3	1.65	0.95	1.34	1.90	2.32	3.00	4.24
FGB 4	2.00	1.26	1.79	2.53	3.10	4.00	5.64
FGB 5	2.20	1.50	2.24	3.16	3.87	5.00	7.07
FGB 6	2.50	1.90	2.68	3.79	4.56	6.00	8.49
FGB 7.5	2.70	2.37	3.35	4.74	5.81	7.50	10.61
FGB 10	3.00	3.16	4.47	6.32	7.75	10.00	14.14
FGB 13	3.50	4.11	5.81	8.22	10.07	13.00	18.38
FGB 16	4.00	5.06	7.16	10.12	12.39	16.00	22.63
FGB 20	4.50	6.32	8.94	12.65	15.49	20.00	28.28
FGB 35	5.00	7.91	11.18	15.81	19.36	25.00	35.36

Material: Brass or stainless steel



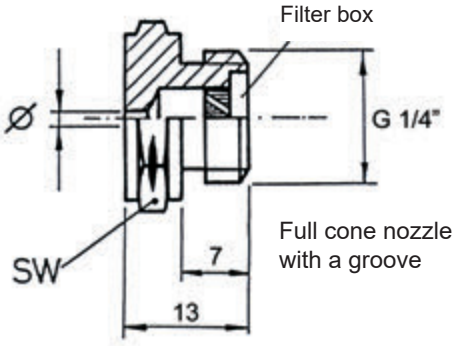
Optionally with dome filter

Full cone nozzles VGR

Spray angles are available: **45°-60°-90°**

Type	Flow rate V̇ (l/min.) at pressure p (bar)					
	0.5	1	2	3	5	10
VGR 0.6	0.19	0.27	0.38	0.47	0.60	0.85
VGR 1	0.32	0.45	0.64	0.78	1.00	1.42
VGR 1.5	0.47	0.67	0.95	1.16	1.50	2.12
VGR 2	0.63	0.89	1.26	1.54	2.00	2.31
VGR 2.5	0.79	1.12	1.58	1.94	2.50	3.54
VGR 3	0.95	1.34	1.90	2.32	3.00	4.24
VGR 4	1.27	1.79	2.53	3.10	4.00	5.66
VGR 5	1.58	2.24	3.17	3.88	5.00	7.08
VGR 6	1.90	2.68	3.79	4.64	6.00	8.47

Material: Brass or stainless steel
Standard: Stainless steel with brass swirler



Full cone nozzle marked with a groove

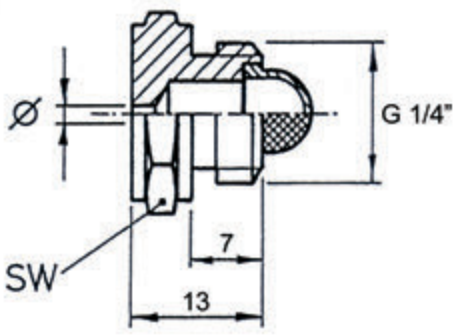
Optionally with dome filter

Solid stream nozzles GGB

Type	Bore B (mm)	Flow rate V̇ (l/min.) at pressure p (bar)					
		0.5	1	2	3	5	10
GGB 0.3	0.50	0.09	0.13	0.18	0.23	0.30	0.41
GGB 0.4	0.59	0.13	0.18	0.25	0.31	0.40	0.57
GGB 0.6	0.70	0.19	0.27	0.38	0.47	0.60	0.85
GGB 1	0.85	0.32	0.45	0.64	0.78	1.00	1.42
GGB 1.5	1.00	0.47	0.67	0.95	1.16	1.50	2.12
GGB 2.5	1.40	0.79	1.12	1.58	1.94	2.50	3.54
GGB 4	1.70	1.27	1.79	2.53	3.10	4.00	5.66
GGB 6	2.20	1.90	2.68	3.79	4.64	6.00	8.47
GGB 8	2.45	2.53	3.58	5.06	6.20	8.00	11.32
GGB 10	2.75	3.16	4.47	6.32	7.74	10.00	14.14
GGB 16	3.20	5.06	7.16	10.13	12.40	16.00	22.64
GGB 25	4.30	7.91	11.18	15.81	19.36	25.00	35.35
GGB 40	5.50	12.65	17.89	25.30	30.99	40.00	56.57

Material: Brass or stainless steel

This solid stream nozzle is displayed with dome filter.



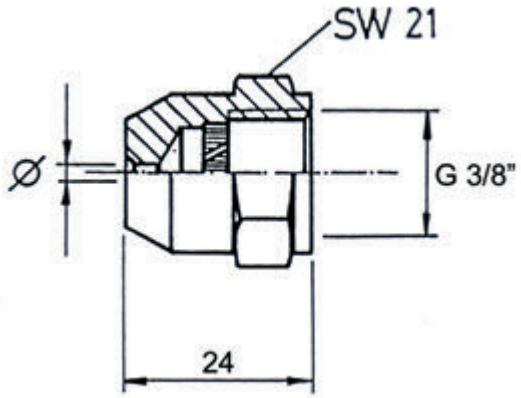
Subject to technical alterations!

Hollow cone nozzles HGB

Spray angles are available: **60°-90°**

Type	Bore (mm)	Flow rate V̇ (l/min.) at pressure p (bar)					
		0.5	1	2	3	5	10
HGB 0.5	1.0	0.16	0.22	0.32	0.39	0.50	0.71
HGB 0.8	1.2	0.18	0.36	0.51	0.62	0.80	1.13
HGB 1	1.3	0.32	0.45	0.63	0.77	1.00	1.41
HGB 1.5	1.7	0.47	0.67	0.95	1.16	1.50	2.12
HGB 2	1.9	0.63	0.89	1.26	1.55	2.00	2.83
HGB 3	3.3	0.95	1.34	1.90	2.32	3.00	4.24
HGB 4	3.5	1.26	1.79	2.53	3.10	4.00	5.66
HGB 6	4.0	1.90	2.68	3.79	4.65	6.00	8.49
HGB 8	4.4	2.53	3.58	5.06	6.20	8.00	11.32

Material: Brass or stainless steel



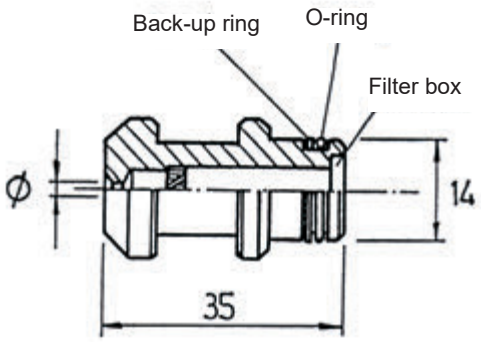
Full cone nozzles Stecko VSB

Spray angles are available: **45°-60°-90°**

Type	Flow rate V̇ (l/min.) at pressure p (bar)					
	0.5	1	2	3	5	10
VSB 0.6	0.19	0.27	0.38	0.47	0.60	0.85
VSB 1	0.32	0.45	0.64	0.78	1.00	1.42
VSB 1.5	0.47	0.67	0.95	1.16	1.50	2.12
VSB 2	0.63	0.89	1.26	1.54	2.00	2.81
VSB 2.5	0.79	1.12	1.58	1.94	2.50	3.54
VSB 3	0.95	1.34	1.90	2.32	3.00	4.24
VSB 4	1.27	1.79	2.53	3.10	4.00	5.66
VSB 5	1.58	2.24	3.17	3.88	5.00	7.08
VSB 6	1.90	2.68	3.79	4.64	6.00	8.47

Material: Brass or stainless steel

Size DN 10



Optionally with dome filter

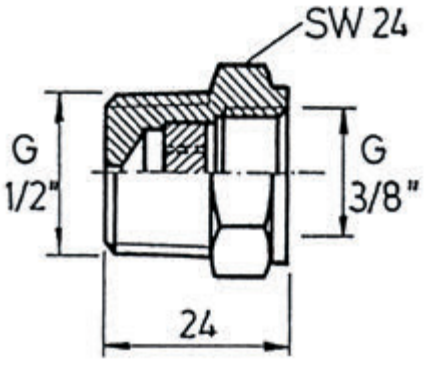
Full cone nozzles VDB

With male and female thread

Spray angles are available: **45°-60°-90°**

Type	Flow rate V̇ (l/min.) at pressure p (bar)					
	0.5	1	2	3	5	10
VDB 2.5	0.79	1.12	1.58	1.94	2.50	3.54
VDB 5	1.58	2.24	3.17	3.88	5.00	7.08
VDB 7.5	2.37	3.35	4.47	5.80	7.50	10.59
VDB 10	3.16	4.47	6.32	7.74	10.00	14.14
VDB 13	4.11	5.81	8.22	10.06	13.00	18.37

Material: Brass or stainless steel



MC | Fountain Nozzle Type B

Characteristics

MC manufactures different fountain nozzles which can be used for various effects:

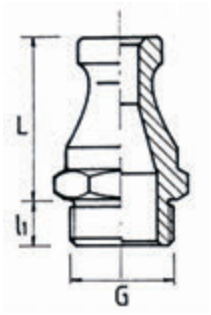
1. Smooth jet fountain nozzles type **B + BL**, short or long design
2. Smooth jet fountain nozzles type **BR** with internal regulation of different heights
3. Smooth jet fountain nozzles type **BK** with spring-loaded ball, keeping the pressure inside of the distribution pipe constant
4. Shaping nozzles **BH** or balls **BD**
5. Other shaping nozzles type **Z** (see catalog page 2.5)
   type **L** (see catalog page 2.4)
6. Walk-in nozzles (security nozzles) **BG**
7. Energy-saving nozzles **BJ** and **BJL**

Material

Brass
Stainless steel

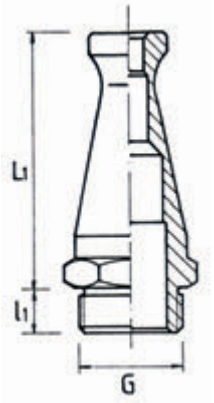
Smooth jet fountain nozzles

Illu. 1



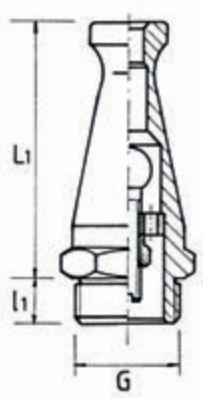
Type **B**
short

Illu. 2



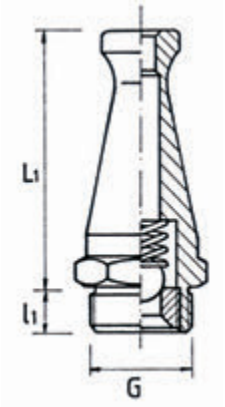
Type **BL**
long

Illu. 3



Type **BR**
with flow control

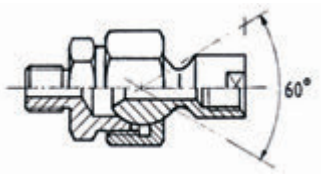
Illu. 4



Type **BK**
with spring-loaded ball

Type Bore-Ø (mm)	Flow rate V̇ (l/min.) at pressure p (bar)									Thread connection			
	bar 0.03	bar 0.05	bar 0.1	bar 0.15	bar 0.2	bar 0.3	bar 0.5	bar 0.7	bar 1.0	1/4“	3/8“	1/2“	3/4“
B 3.0	0.98	1.27	1.85	2.25	2.6	3.17	4.1	4.85	5.77	*	*		
B 3.5	1.32	1.71	2.49	3.04	3.51	4.28	5.51	6.54	7.79	*	*		
B 4.0	1.73	2.24	3.21	3.98	4.59	5.61	7.24	8.57	10.2	*	*		
B 4.5	2.21	2.86	4.16	5.07	5.85	7.15	9.23	10.9	13.0	*	*	*	
B 5.0	2.72	3.52	5.12	6.24	7.2	8.8	11.4	13.5	16.0		*	*	
B 5.5	3.28	4.25	6.18	7.53	8.69	10.6	13.7	16.2	19.3		*	*	
B 6.0	3.93	5.08	7.39	9.01	10.4	12.7	16.4	19.4	23.1			*	*
B 7.0	5.3	6.86	9.98	12.2	14.0	17.2	22.1	26.2	31.2			*	*
B 8.0	6.97	9.02	13.1	16.0	18.5	22.6	29.1	34.4	41.0			*	*
B 9.0	8.82	11.4	16.6	20.2	23.4	28.6	36.9	43.6	51.9			*	*
B 10	10.9	14.1	20.5	25.0	28.8	35.2	45.4	53.8	64.0				*
B 11	13.1	16.1	24.7	30.1	34.8	42.5	54.9	65.0	77.3				*
B 12	15.6	20.1	29.3	42.3	41.3	50.0	65.1	77.0	91.7				*
B 13	18.4	23.8	34.6	42.1	48.6	59.4	76.7	90.7	108				*
B 14	21.2	27.5	40.0	48.8	56.2	68.8	88.7	105	125				*

Thread G	L	L1	l1	SW	Sizes available					
					B	BL	BR	BK	BJ	BJL
1/4“	22	40	7	17	*	*			*	*
3/8“	30	50	10	19	*	*				
1/2“	36	60	12	24	*	*				
3/4“	40	80	15	30	*	*	*	*		

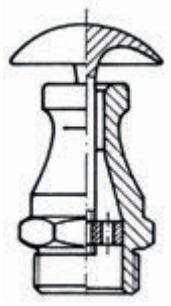


Ball joint **K**
for nozzle orientation
(see catalog page 8.2)

Subject to technical alterations!

Shaping fountain nozzles

Illu. 5

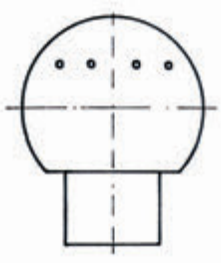


Type **BH** with defector cap
Mushroom-shaped
water distribution

Illu. 6

Type **BH** with defector cap
Trumpet-shaped
water distribution

Illu. 7

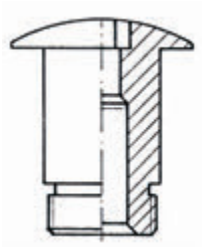


Type **BD**
Ball with multiple jet,
varies with request

Walk-in fountain nozzles BG

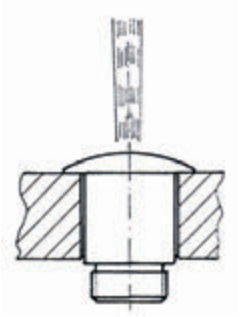
MC's walk-in nozzles are produced according to their surroandings. Water is distributed anderneath a cap, and are engulfed to prevent accidents. All fountain nozzles BG come with or without flow regulation and spring-loaded ball (see Illu. 3 and 4). They are available in single or multiple jet design, according to the effect wanted.

Illu. 8

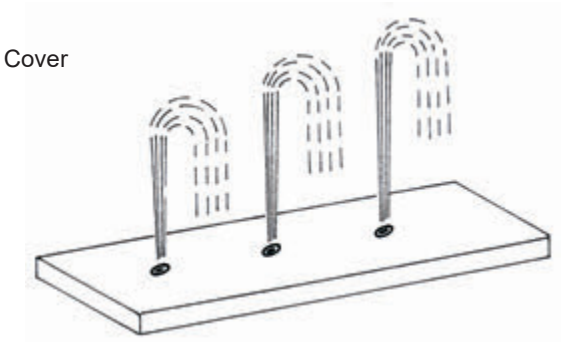


Type **BG**

Illu. 9

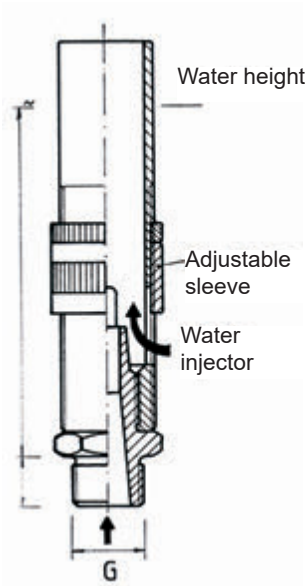


Illu. 10



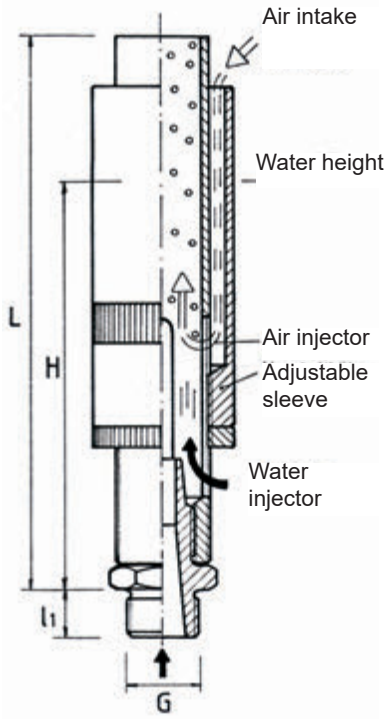
Energy-saving nozzles BJ and BJL

Illu. 11



Type **BJ** is an energy-saving nozzle which effects can be controlled easily and individually.
The injector effect allows for a suction of up to the 4-fold of the pump capacity.
The more the injector is closed, the less well water is sucked in; the fountain height increases and vice versa.
The design has to be arranged!

Illu. 12



Type **BJL** is an energy-saving nozzle as type BJ, yet features an additional injector to take in air. This results in a strong, opaque and lively fountain jet.

The design has to be arranged!