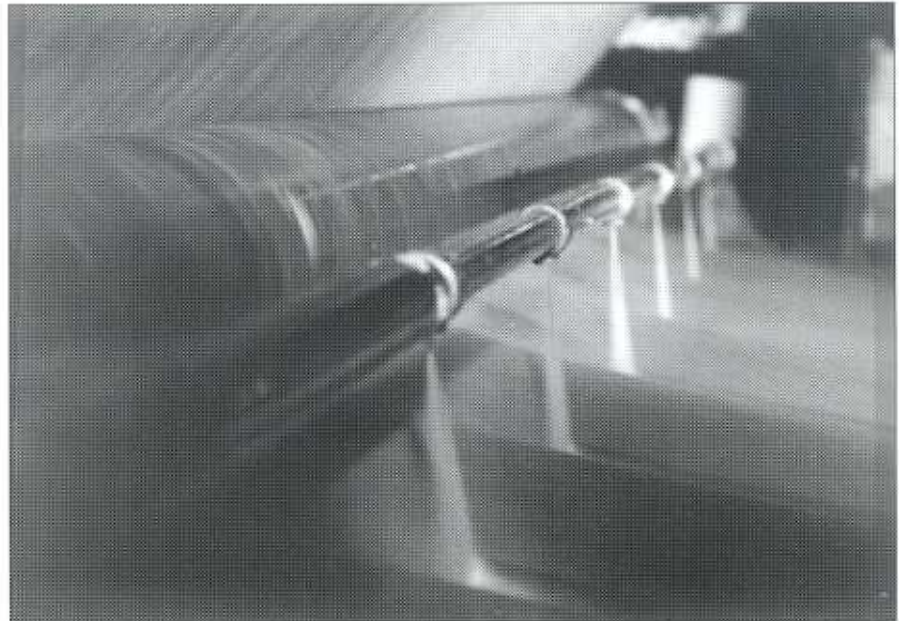


Oscillating high pressure spray pipes

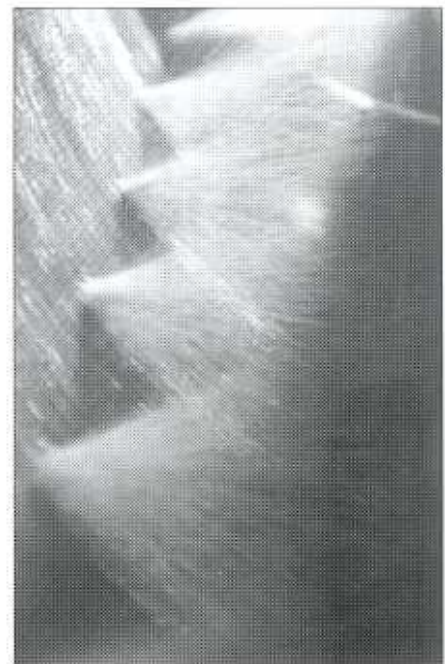
- Continuous cleaning of running felts, sieves, bands, rollers, cylinders etc.
 - in the manufacture of Paper, Cardboard, Box board, Cellulose, Hardboard, Insulating materials etc.
 - in the Baking, Heating, Smoking and Forming processes of the food industry
- Oscillating high pressure spray pipes
 - save water and / or cleaning fluids
 - ensure or improve the product quality



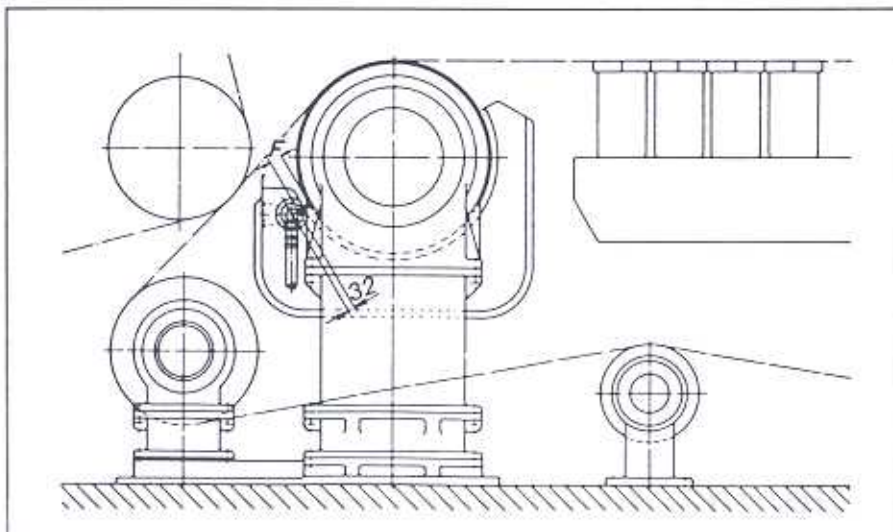
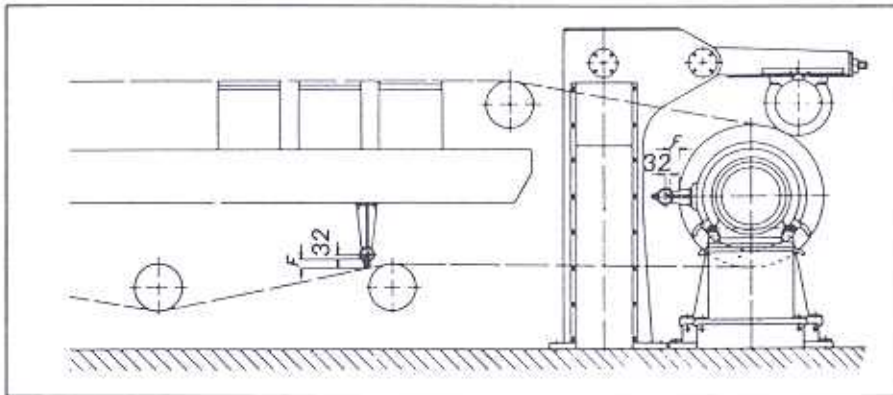
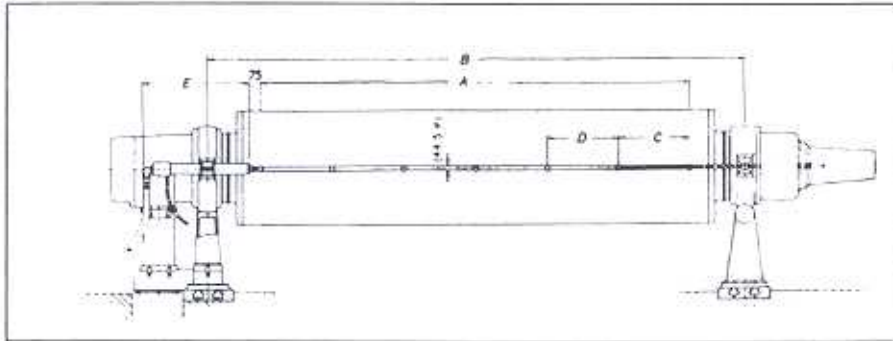
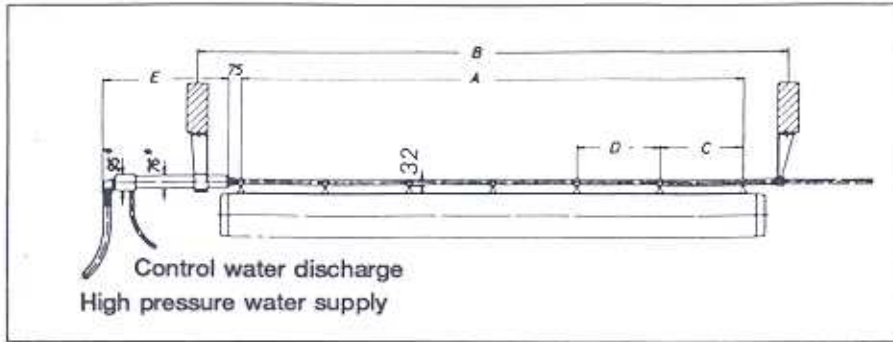
- Coaxially aligned oscillating motion cylinder
 - saves space
 - requires only one input connection if driven by water

- Guide pipes available as accessories
 - allow working widths of up to 12 m
 - enable spray pipe removal and refitting while the plant is running

- Electric stroke monitoring
 - achieves optimum cleaning
 - helps to save energy



Typical installations



Standard calculation of high pressure spray pipe water consumption in relation to working width and stroke

Example: Sieve cleaning

Known parameters

Fan jet nozzles: 2 mm dia
Nozzle angle 30°

Operating pressure: 60 bar

Water consumption: 14 l/min per nozzle

Calculation example:

$$\frac{\text{Working width}}{\text{Stroke}} = \text{Number of nozzles (round up)}$$

$$\frac{3600}{500} = 7,2 = 8 \text{ nozzles at } 14 \text{ l/min.}$$

Water consumption = 112 l/min

Example: Felt cleaning

Known parameters

Stroke: 300 mm

Operating pressure: 30 bar

Working width [mm]	Round jet nozzles	
	Ø 1,0 mm 3,5 l/min	Ø 1,1 mm 4 l/min
	Water consumption [l/min]	
2000	24,5	28
2500	31,5	36
3500	42	48
7000	84	96
10000	119	136

Hammelmann high pressure spray pipes are available with 100, 200, 300, 400, 500, 600, 700 and 800 mm strokes.

High pressure spray pipes, HSR 35 series

13-4-1

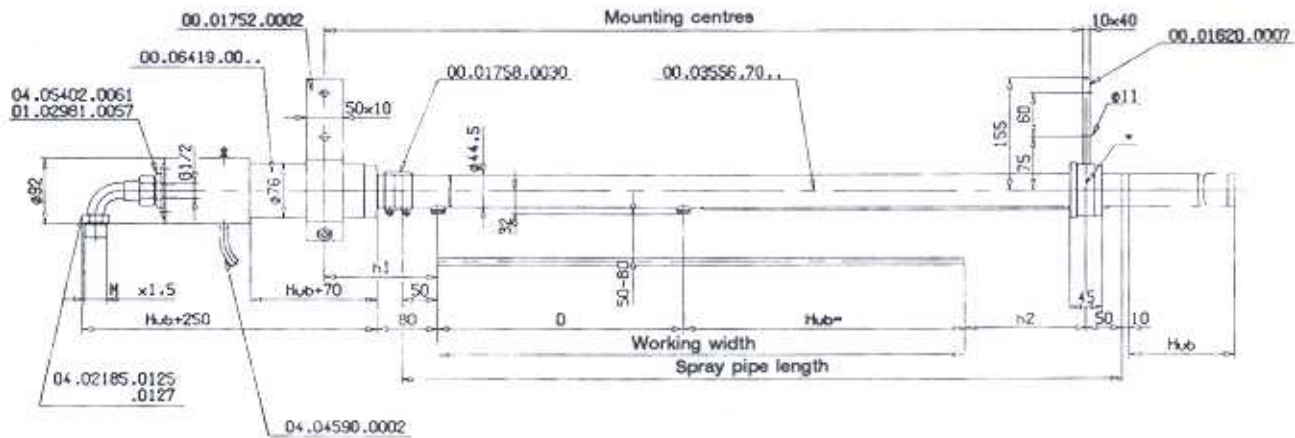
- Free mounted design
- Oscillating motion of the spray pipe powered by a water or oil hydraulic cylinder
- Water hydraulic drive requires only one input connection
- Compact construction! High pressure spray pipe includes integral control mechanism

Technical data

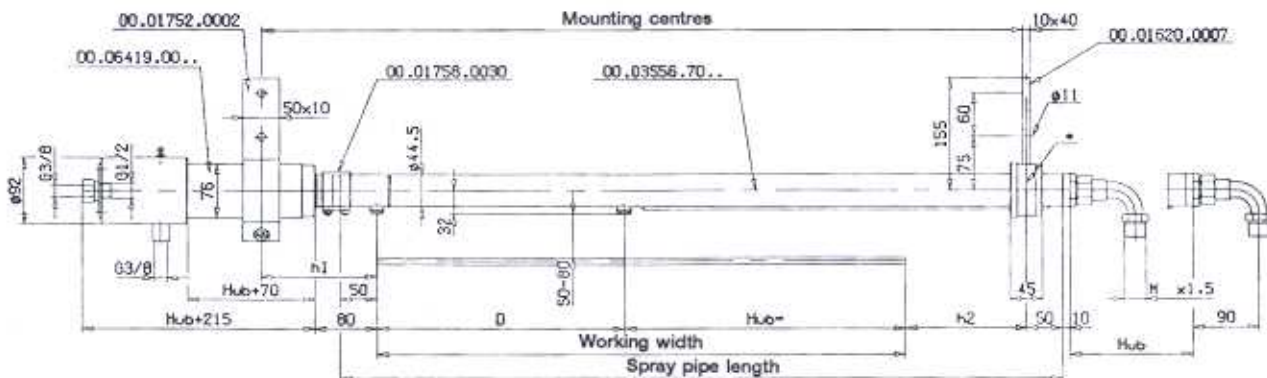
Max. working width: 3.5 m
 Max. mounting centres: 4 m
 Spray pipe o/d: 44.5 mm
 Max. operating pressure: 120 bar
 Special designs: up to 500 bar
 Flow rate: 10 to 200 l/min.
 Drive medium
 Type HSR "W": Water
 Type HSR "O": Oil, oil emulsion
 Material: 1.4571, stainless steel
 Weight of oscillating motion cylinder, stroke 300 mm: 9 kg, 1 kg per extra 100 mm stroke
 Weight of spray pipe per 1 m length: 3 kg

Type	Code no.
HSR 35-W	09.00710.7000
HSR 35-O	09.00712.0000

Water hydraulic drive, type HSR 35-W



Oil hydraulic drive, type HSR 35-O



Oscillating motion cylinder

- Material: 1.4571, stainless steel
- Choice of drive mediums: water, oil, oil emulsion

For type HSR 35-W	
Stroke	Code no.
100	0.06419.0040
200	.0050
300	.0051
400	.0052
500	.0053
600	.0054
700	.0055
800	.0056

For type HSR 35-O	
Stroke	Code no.
100	0.06419.0073
200	.0063
300	.0064
400	.0065
500	.0066
600	.0067
700	.0068
800	.0069

Screw in nozzles

Design	Code no.
C Round jet	see data sheet 12-3-3
D Fan jet	see data sheet 12-3-5

Accessories for electric stroke monitoring

Description	Q'ty	Code no./ per single item.
Magnetic tape	2	01.00170.0007
Cut out switch	1	04.04310.0004
Mounting	1	00.01595.0055

Spare parts for mounting

Description	Code no.
Fixing sleeve, complete	00.01752.0002
Spray pipe mounting, complete	00.01620.0007
Clamping sleeve	01.01780.0002
Nut	01.02805.0012

High pressure spray pipes, HSR 55 series

13-4-3

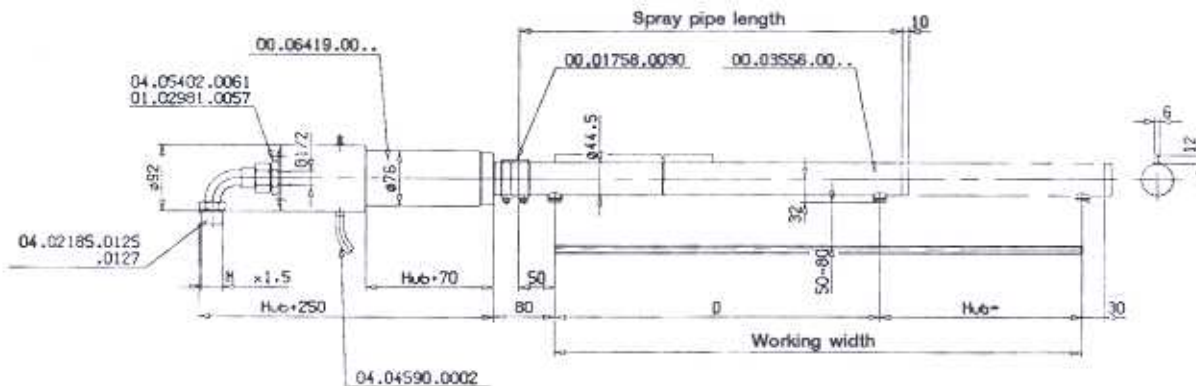
- To build into guide pipes
- Oscillating motion of the spray pipe powered by a water or oil hydraulic cylinder
- Water hydraulic drive requires only one input connection
- Compact construction! High pressure spray pipe includes integral control mechanism
- Removal and refitting when plant is running possible

Technical data

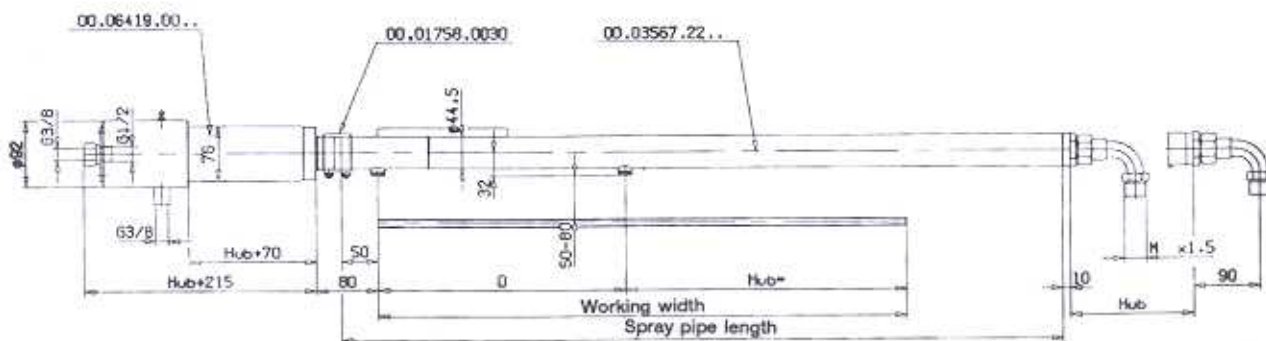
Max. working width: 5.5 m
 Max. mounting centres: 6 m
 Spray pipe ϕ /d: 44.5 mm
 Max. operating pressure: 120 bar
 Special designs: up to 500 bar
 Flow rate: 10 to 200 l/min.
 Drive medium
 Type HSR "W": Water
 Type HSR "O": Oil, oil emulsion
 Material: 1.4571, stainless steel
 Weight of oscillating motion cylinder, stroke 300 mm: 9 kg, 1 kg per extra 100 mm stroke
 Weight of spray pipe per 1 m length: 3 kg

Type	Code no.
HSR 55-W	09.00712.6000
HSR 55-O	09.00712.2000

Water hydraulic drive, type HSR 55-W

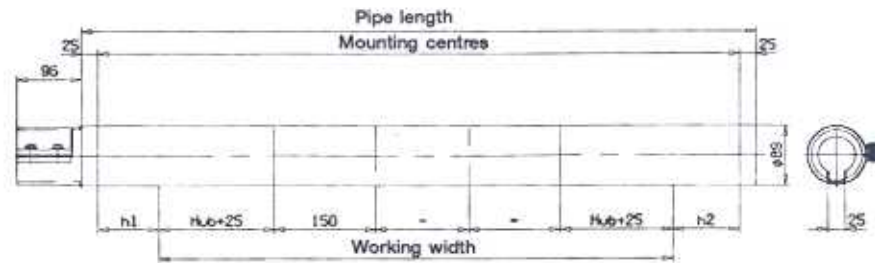


Oil hydraulic drive, type HSR 55-O



Free mounted guide pipe

- Max. working width: 5.5 m
- Material: 1.4571, stainless steel
- Enables removal and refitting while machine is running



Code no.
00.03550.9000

Oscillating motion cylinder

- Material: 1.4571, stainless steel
- Choice of drive mediums water, oil, oil emulsion

For Type HSR 55-W	
Stroke	Code no.
100	0.06419.0040
200	.0050
300	.0051
400	.0052
500	.0053
600	.0054
700	.0055
800	.0056

For Type HSR 55-O	
Stroke	Code no.
100	0.06419.0073
200	.0063
300	.0064
400	.0065
500	.0066
600	.0067
700	.0068
800	.0069

Screw in nozzles

Design	Code no.
C Round jet	see data sheet 12-3-3
D Fan jet	see data sheet 12-3-5

Accessories for electric stroke monitoring

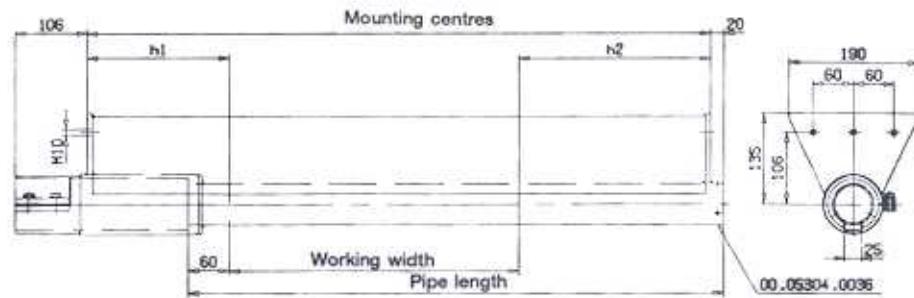
Description	Q'ty	Code no. / per single item.
Magnetic tape	2	01.00170.0007
Cut out switch	1	04.04310.0004
Mounting	1	00.01595.0055

Spare parts for mounting

Description	Code no.
Fixing sleeve, complete	00.01752.0002
Spray pipe mounting, complete	00.01620.0007
Clamping sleeve	01.01780.0002
Nut	01.02805.0012

Free mounted guide pipe

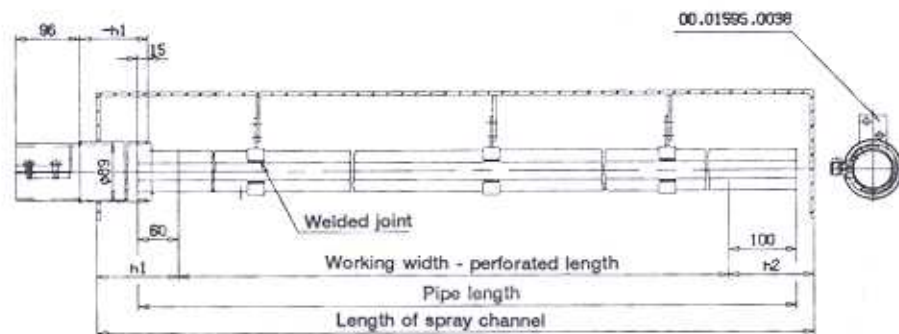
- Max. working width: 10 m
- Material: 1.4571, stainless steel
- Enables removal and refitting while machine is running



Code no.
00.03550.8000

Fixed guide pipe

- Max. working width: 12 m
- Material: 1.4571, stainless steel
- Enables removal and refitting while machine is running
- Especially for enclosed installations, e.g. spray water channels



Drawing shows water hydraulically driven version

Type	Code no.
"W"	00.03550.5000
"O"	00.03550.6000

Oscillating motion cylinder

- Material: 1.4571
- Choice of drive mediums: water, oil, oil emulsion

For Type HSR 120-W	
Stroke	Code no.
100	0.06419.0040
200	.0050
300	.0051
400	.0052
500	.0053
600	.0054
700	.0055
800	.0056

For Type HSR 120-O	
Stroke	Code no.
100	0.06419.0073
200	.0063
300	.0064
400	.0065
500	.0066
600	.0067
700	.0068
800	.0069

Screw in nozzles

Design	Code no.
C Round jet	see data sheet 12-3-3
D Fan jet	see data sheet 12-3-5

Accessories for electric stroke monitoring

Description	Q'ty	Code no./ per single item.
Magnetic tape	2	01.00170.0007
Cut out switch	1	04.04310.0004
Mounting	1	00.01595.0055

Spare parts for mounting

Description	Code no.
Fixing sleeve, complete	00.01752.0002
Spray pipe mounting, complete	00.01620.0007
Clamping sleeve	01.01780.0002
Nut	01.02805.0012