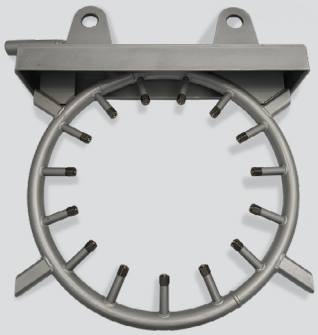
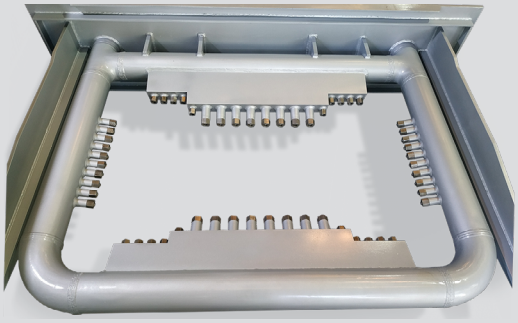
LECHLER DESCALING HEADERS
HOW TO GET SPRAYS IN LINE



Seamless pipe mills
Descaling header for a seamless pipe mill. Configuration with Lechler DESCALE application software.

The optimal nozzle arrangement on spray headers is as important as the selection of the correct nozzle. That's why Lechler also offers engineering and production of spray headers. With this service, the circle is now complete, starting from the development of the spray nozzle and measuring the spray performance through to application engineering and finally the spray header.

With transparent processes, audited and certified by world leading plant engineering companies, Lechler spray headers undergo dedicated QA procedures from production planning to dimensional control prior and during production. Quality control also includes nondestructive testing of the material, welds and the final header. Either performed according to a customer's special QA specifications or according to the internal Lechler NDT standards. No header leaves a Lechler factory without its test certificate.



Beam blank rolling mills
Special descaling header design for a beam blank with identical spray height at flanges, tips and web.

Plate and hot strip mills
Bottom descaling header for a 5,000 mm plate mill descaler.

YOUR BENEFITS

Header and nozzles from one source
- Reduced number of suppliers
- Fewer project interfaces to coordinate

Optimized spray header design from the nozzle experts due to
- Process know-how
- Nozzle application know-how

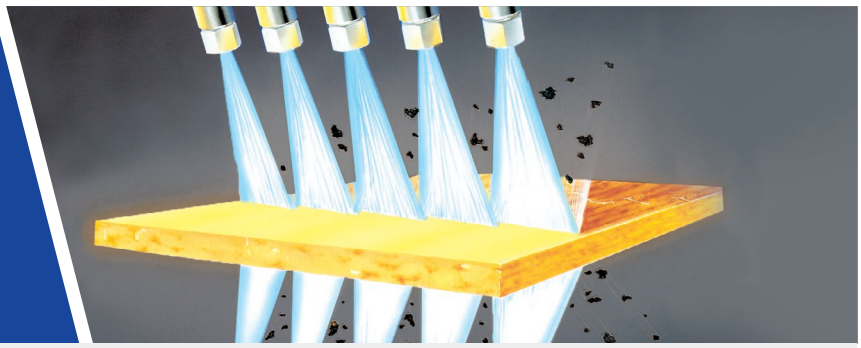
Guaranteed overall spray performance
- Welding nipples and bases welded correctly
- Perfect nozzle alignment

Product quality and plant availability
- Approved and certified NDT and QA procedures
- Longer lifetime, less downtime

- **Headers engineered and manufactured by Lechler**
- **Header manufactured according to customer drawings**

NOZZLE ARRANGEMENT ON THE SPRAY HEADER

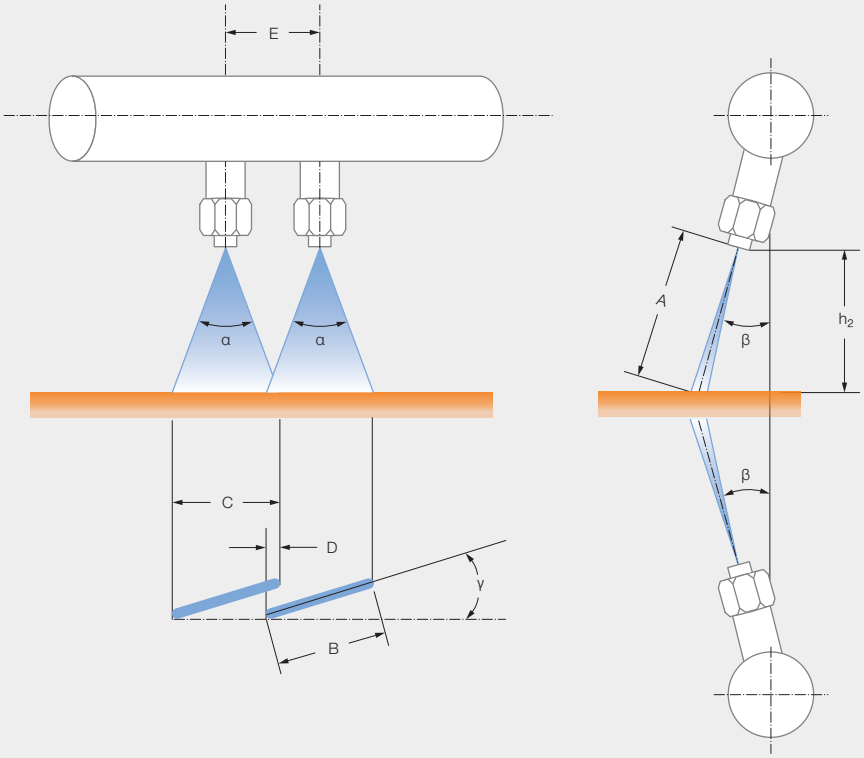
Data and terminology



E = C – D
C = cos γ · B
β = 5°, 10° or 15°

A = Spray length
B = Spray width
C = Spray width in rolling direction
D = Overlap
E = Nozzle distance

h_2 = Vertical spray height
α = Nozzle spray angle
β = Angle of inclination
γ = Offset angle of the nozzle against pipe roll axis
Standard: 0°, 5° and 15°



Vertical spraying height	Angle of inclination β = 15°	Nominal nozzle spray angle α at p = 150 bar																			
		α = 22°				α = 26°				α = 30°				α = 34°				α = 40°			
h_2 [mm]	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	B [mm]	C [mm]	D [mm]	E [mm]	B [mm]	C [mm]	D [mm]	E [mm]	B [mm]	C [mm]	D [mm]	E [mm]	B [mm]	C [mm]	D [mm]	E [mm]
50	**52**	26	25	–	–	30	29	–	–	35	34	–	–	39	38	–	–	47	45	5	40*
75	**78**	36	35	–	–	43	42	5	37*	49	47	5	42*	55	53	6	47**	67	65	7	58**
100	**104**	47	45	7	38*	56	54	5	49**	64	62	5	57***	71	69	7	62***	55	85	8	77
125	**129**	57	55	7	48**	68	66	7	59***	78	75	7	68	87	84	9	75	108	104	10	94
150	**155**	68	66	8	58***	81	78	7	71	93	90	8	82	103	99	9	90	128	124	10	114
200	**207**	89	86	9	77	106	102	10	92	122	118	10	108	134	129	13	116	168	162	15	147
250	**259**	111	107	11	96	132	128	10	118	151	146	15	131	166	160	15	145	209	202	15	187

* Only **MiniSCALEMASTER ECO+** with hexagon socket nut.
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*** Only with hexagon socket nut.
Dimensions in table apply for 15° offset angle only.