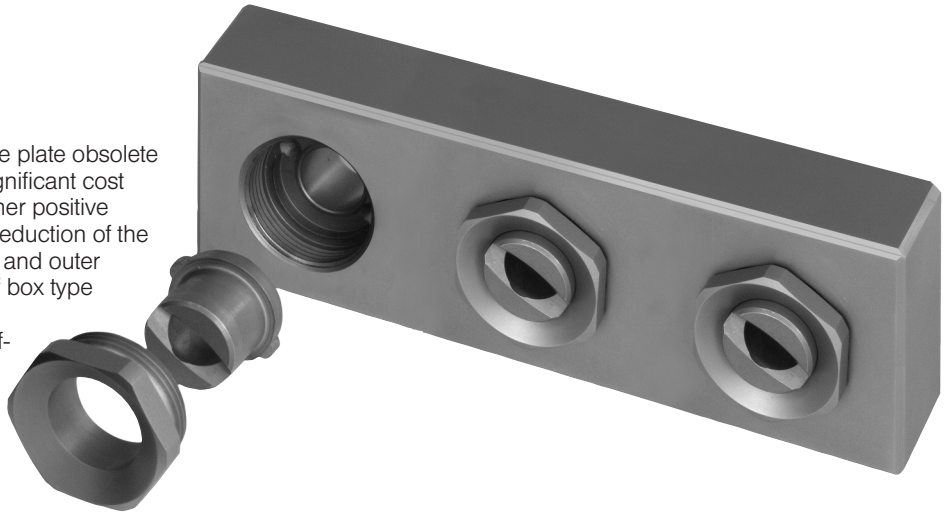
6 E SERIES

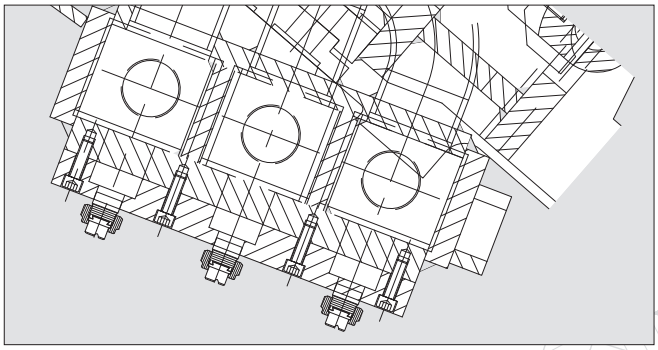
ROLL COOLING FLAT JET NOZZLE

NEW !
Patent Pending

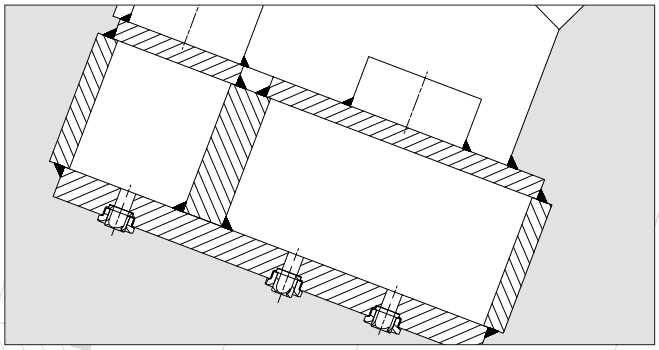


The correct alignment of the roll cooling nozzles on the spray header is essential for optimal roll cooling. Flat jets are the preferred spray pattern for roll cooling, therefore only a self aligning nozzle design provides the operation safety required in a modern rolling mill.
All flat jet nozzles of the Lechler series 6E4 and 6E5 come with an automatic self aligning feature which ensures that every nozzle will always be installed under the correct spray offset angle towards the roll center line.

mediate nozzle plate obsolete resulting in significant cost savings. Another positive aspect is the reduction of the overall weight and outer dimensions of box type headers.
The correct offset angle is machined directly into the header front plate and does not depend on the nozzle tip. The two keys on the nozzle tip are always in line with the flat jet spray axis.



Example of conventional box type header



Example of new box type header with 6E series nozzle

No welding nipple is required for the 6E nozzle series because the tip geometry can be machined directly into a front plate of a box type spray header. A hollow nozzle nut holds the nozzle tip in place. This simple but innovative design does make all the welding nipples and the inter-

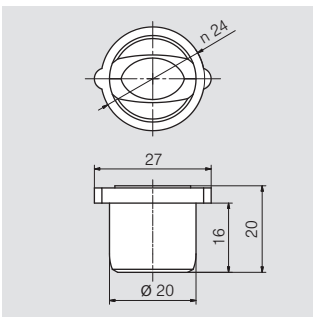
This prevents wrong fabrication caused by design mistakes.

The nozzle tip seals metallically against the bottom of the header plate machined surface.

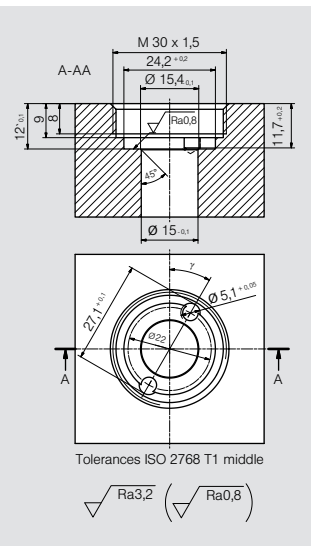
The Spray has a parabolic liquid distribution which is ideal for a multi nozzle header arrangement

- Parabolic liquid distribution
- Automatic nozzle alignment
- High operation safety
- No welding nipples required
- Simplifies the design of boxtype headers because:
  - No welding nipples required
  - Reduces header weight
  - Reduces outer header dimension
  - Reduces header costs significantly

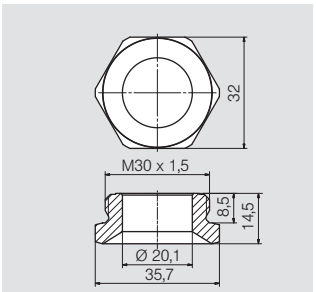
Nozzle series 6E4/6E5
Weight: 28 g



Spray width [B] at p=3 bar		
H / B	H 250 mm	H 500 mm
6E4.721 - 6E4.921	100	200
6E4.941 - 6E5.201	115	210
6E4.722 - 6E4.962	150	300
6E4.982 - 6E5.202	160	310
6E4.723 - 6E4.963	220	440
6E4.983 - 6E5.203	250	490
6E4.724 - 6E4.964	330	630
6E5.984 - 6E5.204	340	640



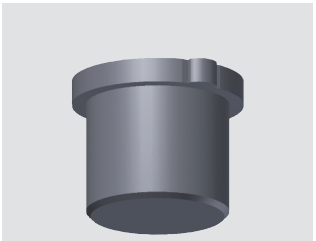
Hollow-core screw
Weight: 41 g



Hollow-core screw

Ordering-no.
06E. 400. 11 (AISI 430 F)
06E. 400. 17 (316 SS)
06E. 400. 30 (brass)

Material AISI 430 F:
Non austenitic stainless steel



Blind tip for pressure testing

Ordering-no. **06E.490.1Y**

Ordering no. Type ∢ 20°	∢ 30°	∢ 45°	∢ 60°	Mat. no. 17 316 SS	30 Brass	E Ø [mm]	V̇ [l/min] p [bar] 0,5	1,0	2,0	40* psi	3,0	5,0	7,0	10,0
6E4. 721	**6E4. 722**	**6E4. 723**	**6E4. 724**	○	○	2,1 - 2,5	3,15	4,45	6,30	1,95	7,72	9,96	11,79	14,09
6E4. 761	**6E4. 762**	**6E4. 763**	**6E4. 764**	○	○	2,3 - 2,8	4,00	5,66	8,00	2,48	9,80	12,65	14,97	17,89
6E4. 801	**6E4. 802**	**6E4. 803**	**6E4. 804**	○	○	2,6 - 3,2	5,00	7,07	10,00	3,10	12,25	15,81	18,71	22,36
6E4. 841	**6E4. 842**	**6E4. 843**	**6E4. 844**	○	○	3,0 - 3,6	6,25	8,84	12,50	3,88	15,31	19,67	23,39	27,95
6E4. 881	**6E4. 882**	**6E4. 883**	**6E4. 884**	○	○	3,4 - 4,0	8,00	11,31	16,00	4,96	19,60	25,30	29,93	35,78
6E4. 921	**6E4. 922**	**6E4. 923**	**6E4. 924**	○	○	4,1 - 4,4	10,00	14,14	20,00	6,20	24,49	31,62	37,42	44,72
6E4. 941	**6E4. 942**	**6E4. 943**	**6E4. 944**	○	○	4,6 - 5,0	11,20	15,84	22,40	6,94	27,44	35,42	41,91	50,09
6E4. 961	**6E4. 962**	**6E4. 963**	**6E4. 964**	○	○	4,2 - 5,3	12,50	17,68	25,00	7,75	30,62	39,53	46,77	55,90
6E4. 981	**6E4. 982**	**6E4. 983**	**6E4. 984**	○	○	4,2 - 5,1	14,00	19,80	28,00	8,68	34,29	44,27	52,38	62,61
6E5. 001	**6E5. 002**	**6E5. 003**	**6E5. 004**	○	○	4,8 - 5,6	15,75	22,27	31,50	9,76	38,57	49,80	58,92	70,43
6E5. 011	**6E5. 012**	**6E5. 013**	**6E5. 014**	○	○	4,9 - 5,8	16,75	23,69	33,50	10,40	41,03	52,97	62,67	74,91
6E5. 041	**6E5. 042**	**6E5. 043**	**6E5. 044**	○	○	5,5 - 6,6	20,00	28,28	40,00	12,41	48,99	63,25	74,83	89,44
6E5. 061	**6E5. 062**	**6E5. 063**	**6E5. 064**	○	○	5,8 - 6,7	22,50	31,84	45,00	13,96	55,15	71,20	84,24	100,69
6E5. 081	**6E5. 082**	**6E5. 083**	**6E5. 084**	○	○	6,6 - 7,4	25,00	35,36	50,00	15,50	61,24	79,06	93,54	111,80
6E5. 121	**6E5. 122**	**6E5. 123**	**6E5. 124**	○	○	7,4 - 8,3	31,50	44,55	63,00	19,56	77,16	99,61	117,86	140,87
6E5. 161	**6E5. 162**	**6E5. 163**	**6E5. 164**	○	○	8,3 - 8,4	40,00	56,57	80,00	24,80	97,99	126,50	149,68	178,90
6E5. 181	**6E5. 182**	**6E5. 183**	**6E5. 184**	○	○	8,9 - 10,3	28,50	63,64	90,00	27,90	110,23	142,30	168,37	201,24
6E5. 201	**6E5. 202**	**6E5. 203**	**6E5. 204**	○	○	9,6 - 10,5	50,00	70,71	100,00	31,04	127,47	158,11	187,08	223,61

E = Narrowest free cross section. * US gal/min.

Subject to technical modifications.

Example for Ordering: **Type** **6E4. 721** + **Material-no.** **17** = **Ordering no.** **6E4. 721. 17**

Conversional formula for the above series: $\dot{V}_2 = \dot{V}_1 * \sqrt{\frac{p_2}{p_1}}$