

[www.thomasklein.de](http://www.thomasklein.de)

*Precision Wire Guide Tubes for the Coil Winding Industry*

**THOMAS KLEIN**

**Eurotubes™**



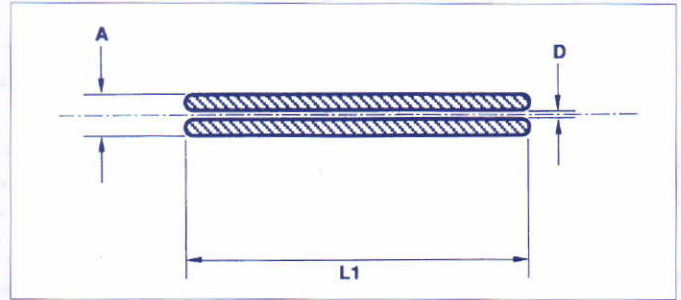
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# Precision Wire Guide Tubes for the Co

Thomas Klein will gladly produce wire guide tubes to a customer's own special requirement. Small quantities and samples are also catered for.

Non standard tubes can be supplied with hole sizes from 0,2 ! mm and the outside diameter to 20 mm.



## Part No. A D L1 B L2 2.00 Diameter Tubes

TK-0001	2.00	0.35	25.00	--	--
TK-0002	2.00	0.35	30.00	--	--
TK-0004	2.00	0.35	40.00	--	--
TK-0005	2.00	0.35	35.00	0.80	8.00
TK-0006	2.00	0.35	35.00	1.20	10.00
TK-0007	2.00	0.35	35.00	1.60	10.00
TK-0008	2.00	0.50	25.00	--	--
TK-0009	2.00	0.50	30.00	--	--
TK-0010	2.00	0.50	35.00	--	--
TK-0011	2.00	0.50	40.00	--	--
TK-0012	2.00	0.50	35.00	1.20	8.00
TK-0013	2.00	0.50	35.00	1.40	10.00
TK-0014	2.00	0.50	35.00	1.60	10.00
TK-0015	2.00	0.50	40.00	1.60	10.00
TK-0016	2.00	0.50	50.00	1.60	10.00
TK-0017	2.00	0.60	25.00	--	--
TK-0018	2.00	0.60	30.00	--	--
TK-0019	2.00	0.60	35.00	--	--
TK-0020	2.00	0.60	40.00	--	--
TK-0021	2.00	0.60	50.00	--	--
TK-0022	2.00	0.60	25.00	1.40	8.00
TK-0023	2.00	0.60	35.00	1.40	10.00
TK-0024	2.00	0.60	35.00	1.50	8.00
TK-0025	2.00	0.60	35.00	1.60	10.00
TK-0026	2.00	0.60	40.00	1.50	10.00
TK-0027	2.00	0.60	45.00	1.60	10.00
TK-0028	2.00	0.60	50.00	1.60	10.00
TK-0029	2.00	0.80	25.00	--	--
TK-0030	2.00	0.80	30.00	--	--
TK-0031	2.00	0.80	35.00	--	--
TK-0032	2.00	0.80	40.00	--	--
TK-0033	2.00	0.80	50.00	--	--
TK-0034	2.00	0.80	25.00	1.50	8.00
TK-0035	2.00	0.80	30.00	1.60	8.00
TK-0036	2.00	0.80	35.00	1.60	10.00
TK-0037	2.00	0.80	40.00	1.60	10.00
TK-0038	2.00	0.80	45.00	1.60	10.00
TK-0039	2.00	0.80	50.00	1.60	10.00
TK-0040	2.00	1.00	30.00	--	--
TK-0041	2.00	1.00	35.00	--	--
TK-0042	2.00	1.00	40.00	--	--
TK-0043	2.00	1.00	45.00	--	--
TK-0044	2.00	1.00	50.00	--	--

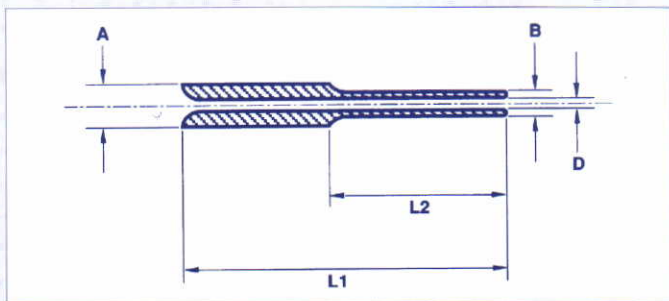


## Part No. A D L1 B L2 2.50 Diameter Tubes

TK-0045	2.50	0.80	25.00	--	--
TK-0046	2.50	0.80	30.00	--	--
TK-0047	2.50	0.80	35.00	--	--
TK-0048	2.50	0.80	40.00	--	--
TK-0049	2.50	0.80	45.00	--	--
TK-0050	2.50	0.80	50.00	--	--
TK-0051	2.50	0.80	30.00	1.50	8.00
TK-0052	2.50	0.80	35.00	2.00	10.00
TK-0053	2.50	0.80	40.00	2.00	10.00
TK-0054	2.50	0.80	50.00	2.00	10.00
TK-0055	2.50	1.00	25.00	--	--
TK-0056	2.50	1.00	30.00	--	--
TK-0057	2.50	1.00	35.00	--	--
TK-0058	2.50	1.00	40.00	--	--
TK-0059	2.50	1.00	45.00	--	--
TK-0060	2.50	1.00	50.00	--	--
TK-0061	2.50	1.00	25.00	1.80	8.00
TK-0062	2.50	1.00	35.00	1.80	10.00
TK-0063	2.50	1.00	30.00	2.00	10.00
TK-0064	2.50	1.00	35.00	2.00	10.00
TK-0065	2.50	1.00	45.00	2.00	10.00
TK-0066	2.50	1.00	55.00	2.00	15.00
TK-0067	2.50	1.20	35.00	--	--
TK-0068	2.50	1.20	45.00	--	--
TK-0069	2.50	1.20	55.00	--	--
TK-0070	2.50	1.50	35.00	--	--
TK-0071	2.50	1.50	45.00	--	--
TK-0072	2.50	1.50	55.00	--	--

## 3.00 Diameter Tubes

TK-0073	3.00	0.30	22.00	--	--
TK-0074	3.00	0.30	25.00	--	--
TK-0075	3.00	0.30	30.00	--	--
TK-0076	3.00	0.30	35.00	--	--
TK-0077	3.00	0.30	22.00	0.80	6.00
TK-0078	3.00	0.30	22.00	0.80	8.00
TK-0079	3.00	0.30	25.00	0.80	8.00
TK-0080	3.00	0.30	25.00	0.80	10.00
TK-0081	3.00	0.30	30.00	0.80	10.00
TK-0082	3.00	0.30	35.00	0.80	10.00
TK-0083	3.00	0.30	45.00	0.80	10.00
TK-0084	3.00	0.30	22.00	1.00	10.00
TK-0085	3.00	0.30	25.00	1.00	10.00
TK-0086	3.00	0.30	30.00	1.00	8.00
TK-0087	3.00	0.30	35.00	1.00	10.00
TK-0088	3.00	0.30	45.00	1.00	10.00



Part No.	A	D	L1	B	L2
TK-0089	3.00	0.40	22.00	--	--
TK-0090	3.00	0.40	25.00	--	--
TK-0091	3.00	0.40	30.00	--	--
TK-0092	3.00	0.40	35.00	--	--
TK-0093	3.00	0.40	22.00	1.00	10.00
TK-0094	3.00	0.40	25.00	1.00	10.00
TK-0095	3.00	0.40	30.00	1.00	10.00
TK-0096	3.00	0.40	35.00	1.00	10.00
TK-0097	3.00	0.40	45.00	1.00	12.00
TK-0098	3.00	0.40	22.00	1.20	10.00
TK-0099	3.00	0.40	25.00	1.20	10.00
TK-0100	3.00	0.40	30.00	1.20	10.00
TK-0101	3.00	0.40	35.00	1.20	10.00
TK-0102	3.00	0.40	45.00	1.20	10.00
TK-0103	3.00	0.40	25.00	1.50	10.00
TK-0104	3.00	0.40	30.00	1.50	10.00
TK-0105	3.00	0.40	35.00	1.50	10.00
TK-0106	3.00	0.40	45.00	1.50	15.00
TK-0107	3.00	0.50	22.00	--	--
TK-0108	3.00	0.50	25.00	--	--
TK-0109	3.00	0.50	30.00	--	--
TK-0110	3.00	0.50	35.00	--	--
TK-0111	3.00	0.50	40.00	--	--
TK-0112	3.00	0.50	45.00	--	--
TK-0113	3.00	0.50	22.00	1.20	10.00
TK-0114	3.00	0.50	25.00	1.20	10.00
TK-0115	3.00	0.50	30.00	1.20	10.00
TK-0116	3.00	0.50	35.00	1.20	10.00
TK-0117	3.00	0.50	40.00	1.20	10.00
TK-0118	3.00	0.50	45.00	1.20	15.00
TK-0119	3.00	0.50	22.00	1.60	8.00
TK-0120	3.00	0.50	25.00	1.60	10.00
TK-0121	3.00	0.50	30.00	1.60	10.00
TK-0122	3.00	0.50	35.00	1.60	10.00
TK-0123	3.00	0.50	40.00	1.60	12.00
TK-0124	3.00	0.50	45.00	1.60	15.00
TK-0125	3.00	0.60	22.00	--	--
TK-0126	3.00	0.60	25.00	--	--
TK-0127	3.00	0.60	30.00	--	--
TK-0128	3.00	0.60	35.00	--	--
TK-0129	3.00	0.60	40.00	--	--
TK-0130	3.00	0.60	45.00	--	--
TK-0131	3.00	0.60	22.00	1.40	8.00
TK-0132	3.00	0.60	25.00	1.40	10.00
TK-0133	3.00	0.60	35.00	1.40	10.00
TK-0134	3.00	0.60	40.00	1.40	10.00
TK-0135	3.00	0.60	45.00	1.40	12.00
TK-0136	3.00	0.60	25.00	1.60	10.00

Part No.	A	D	L1	B	L2
TK-0137	3.00	0.60	30.00	1.60	10.00
TK-0138	3.00	0.60	35.00	1.60	10.00
TK-0139	3.00	0.60	40.00	1.60	10.00
TK-0140	3.00	0.60	45.00	1.60	12.00
TK-0141	3.00	0.80	25.00	--	--
TK-0142	3.00	0.80	30.00	--	--
TK-0143	3.00	0.80	35.00	--	--
TK-0144	3.00	0.80	40.00	--	--
TK-0145	3.00	0.80	45.00	--	--
TK-0146	3.00	0.80	25.00	1.60	8.00
TK-0147	3.00	0.80	30.00	1.60	10.00
TK-0148	3.00	0.80	35.00	1.60	10.00
TK-0149	3.00	0.80	40.00	1.60	10.00
TK-0150	3.00	0.80	45.00	1.60	12.00
TK-0151	3.00	0.80	25.00	2.00	8.00
TK-0152	3.00	0.80	30.00	2.00	10.00
TK-0153	3.00	0.80	35.00	2.00	10.00
TK-0154	3.00	0.80	40.00	2.00	10.00
TK-0155	3.00	0.80	45.00	2.00	12.00
TK-0156	3.00	0.80	45.00	2.00	15.00
TK-0157	3.00	1.00	25.00	--	--
TK-0158	3.00	1.00	30.00	--	--
TK-0159	3.00	1.00	35.00	--	--
TK-0160	3.00	1.00	40.00	--	--
TK-0161	3.00	1.00	45.00	--	--
TK-0162	3.00	1.00	25.00	1.60	8.00
TK-0163	3.00	1.00	30.00	1.60	10.00
TK-0164	3.00	1.00	35.00	1.60	10.00
TK-0165	3.00	1.00	40.00	1.60	10.00
TK-0166	3.00	1.00	45.00	1.60	10.00
TK-0167	3.00	1.00	25.00	2.00	8.00
TK-0168	3.00	1.00	30.00	2.00	10.00
TK-0169	3.00	1.00	35.00	2.00	10.00
TK-0170	3.00	1.00	40.00	2.00	10.00
TK-0171	3.00	1.00	45.00	2.00	12.00
TK-0172	3.00	1.30	25.00	--	--
TK-0173	3.00	1.30	30.00	--	--
TK-0174	3.00	1.30	35.00	--	--
TK-0175	3.00	1.30	40.00	--	--
TK-0176	3.00	1.30	45.00	--	--
TK-0177	3.00	1.30	25.00	2.00	8.00
TK-0178	3.00	1.30	30.00	2.00	10.00
TK-0179	3.00	1.30	35.00	2.00	10.00
TK-0180	3.00	1.30	40.00	2.00	10.00
TK-0181	3.00	1.30	45.00	2.00	10.00



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The selection of material from which to produce the tubes is of paramount importance.

Bearing steel EN31 has been selected as the ideal material due to its resistance to wear and stability during heat treatment. The use of induction heating equipment also allows selected areas of the tubes to be hardened and tempered.

Our method of production offers our clients total flexibility in the design of the tube required.

## TUBE FEATURES

1. Extreme tip hardness.
2. A mirror finish on the tube tips and a smooth bore.
3. Consistency of dimensions, hardness and tube straightness.

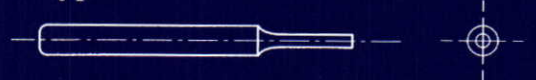
Each tube is 100% inspected using radii profile equipment and microscopes to ensure the quality of every wire guide tube.

As shown below special features are also catered for and we are always happy to discuss any queries you may have.

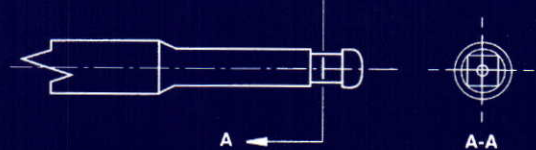
Type "P"



Type "S"



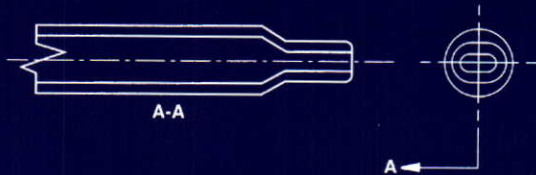
Type "CT-1" A



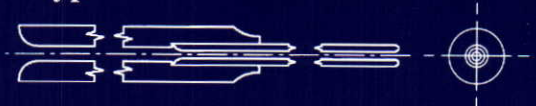
Type "CT-2"



Type "Bifilar" or "Trifilar" A



Type "TPT"



**THOMAS KLEIN**

**Eurotubes™**

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**PRÄZISIONS-DRAHTFÜHRER FÜR AUTOMATISCHE  
WICKELMASCHINEN**

PRECISE WIRE GUIDE TUBE FOR AUTOMATIC MULTI-SPINDLE WINDING MACHINERY

**Parallel Type**

A \_\_\_\_\_  
 D \_\_\_\_\_  
 L1 \_\_\_\_\_

Ø D  
 Ø A

Best.-Nr.: \_\_\_\_\_ Kunden Ref.: \_\_\_\_\_  
 Item No : \_\_\_\_\_ Clients Ref.: \_\_\_\_\_

**AUSWAHL DES HÄRTEGRADES / PLEASE SELECT HARDNESS**

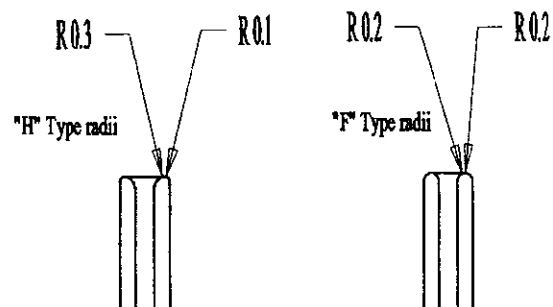
<input type="radio"/>	STANDARD	~ 64 HRC
<input type="radio"/>	SOFT	~ 40 HRC (WIE ROSTFREIER STAHL/LIKE STAINLESS STEEL)
<input type="radio"/>	M P S	~ 68 HRC (RADIEN HART; MITTELTEIL WEICH/ ONLY ON TIPS, MIDDLE PART SOFT)
<input type="radio"/>	BRT/BRITTLE	~ 68 HRC (GLASHART; WIE HARTMETALL/ LIKE TUNGSTEN CARBIDE)

RADIEN SIND HOCHGLANZPOLIERT  
VERRUNDET.  
TUBE RADII MIRROR FINISH POLISHED

**DIMENSION TOLERANCES**

A +0.0 - 0.025 mm  
L1 ± 0.10 mm  
D ± 0.05 mm

**EIN- UND AUSLAUF "H" oder "F" Radius**  
TUBE INPUT & OUTPUT Full or half radius



**PRÄZISIONS-DRAHTFÜHRER FÜR AUTOMATISCHE  
WICKELMASCHINEN**

PRECISE WIRE GUIDE TUBE FOR AUTOMATIC MULTI-SPINDLE WINDING MACHINERY

**Nozzle Type**

Best.-Nr.: \_\_\_\_\_ Kunden Ref.: \_\_\_\_\_  
Item No : \_\_\_\_\_ Clients Ref.: \_\_\_\_\_

AUSWAHL DES HÄRTEGRADES / PLEASE SELECT HARDNESS

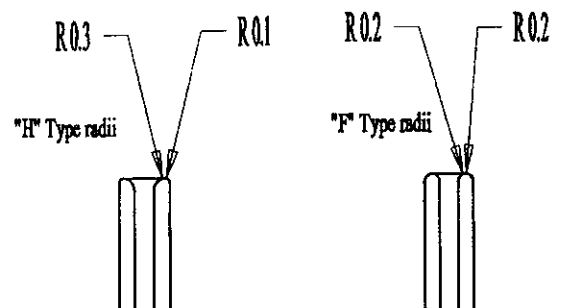
<input type="radio"/>	STANDARD	~ 64 HRC
<input type="radio"/>	SOFT	~ 40 HRC (WIE ROSTFREIER STAHL/LIKE STAINLESS STEEL)
<input type="radio"/>	M P S	~ 68 HRC (RADIEN HART; MITTELTEIL WEICH/ ONLY ON TIPS, MIDDLE PART SOFT)
<input type="radio"/>	BRT/BRITTLE	~ 68 HRC (GLASHART, WIE HARTMETALL/ LIKE TUNGSTEN CARBIDE)

EIN- UND AUSLAUF "H" oder "F" Radius  
TUBE INPUT & OUTPUT Full or half radius

RADIEN SIND HOCHGLANZPOLIERT  
VERRUNDET.  
TUBE RADII MIRROR FINISH POLISHED

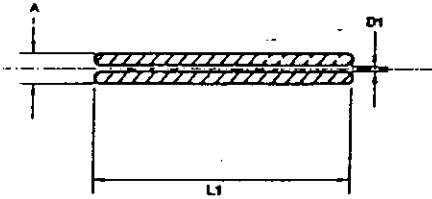
**DIMENSION TOLERANCES**

A	+0.0 - 0.025 mm
B	± 0.05 mm
L1	± 0.10 mm
L2	+0.0 - 0.10 mm
D1	± 0.05 mm

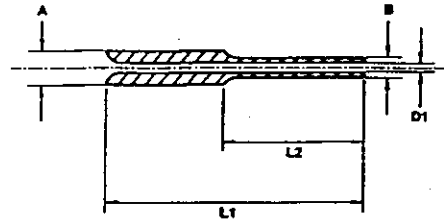


WIRE GUIDE TUBE T Y P E S

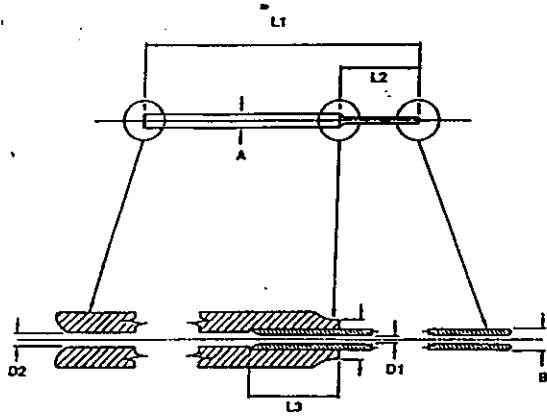
Parallel Tube "Type P"



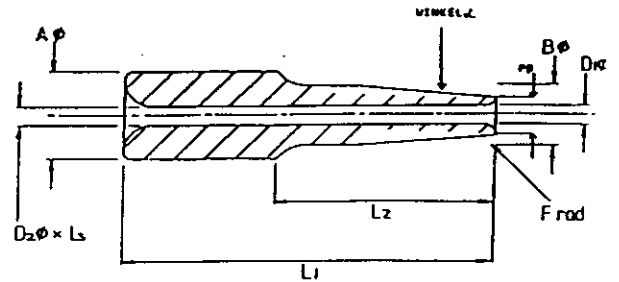
Nozzle Tube "Type S"



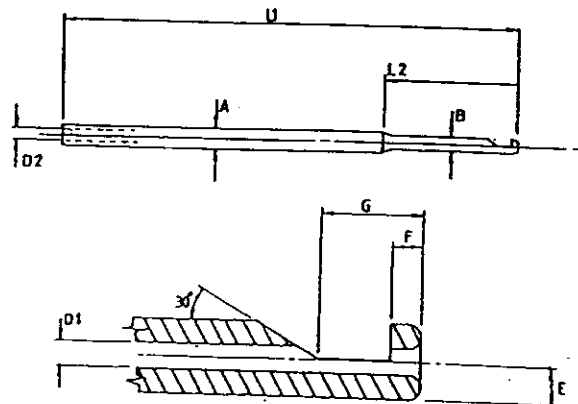
Two Part Tube "Type S2"  
minimum bore on max. outer diameters.



Nozzle Tube "Type S-Angle"  
Grinded to extreme rejuvenate diam  
on max. material strength.

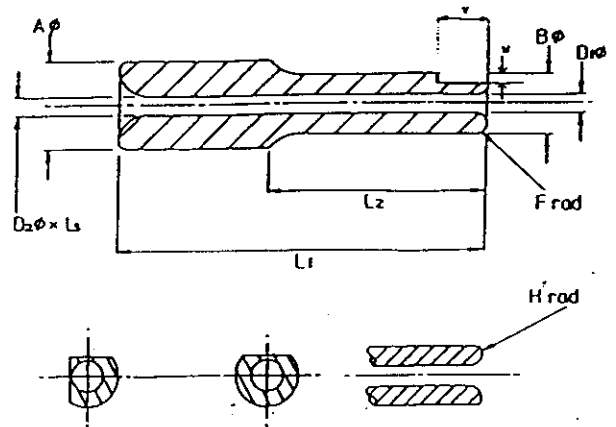


Nozzle Tubes "Type Slot"



(Outer cutter for slot tubes also available!)

Nozzle Tube "Type Cutter 1"  
Flat grinded to max. 4 side cutter



All Tubes Type S also as Type P available. Special Tubes on request.