

Patented



## **Kattex**

*Multiuse portable hydraulic tools  
for the incising  
and locking of tubes*



MADE IN ITALY

## KattexCut

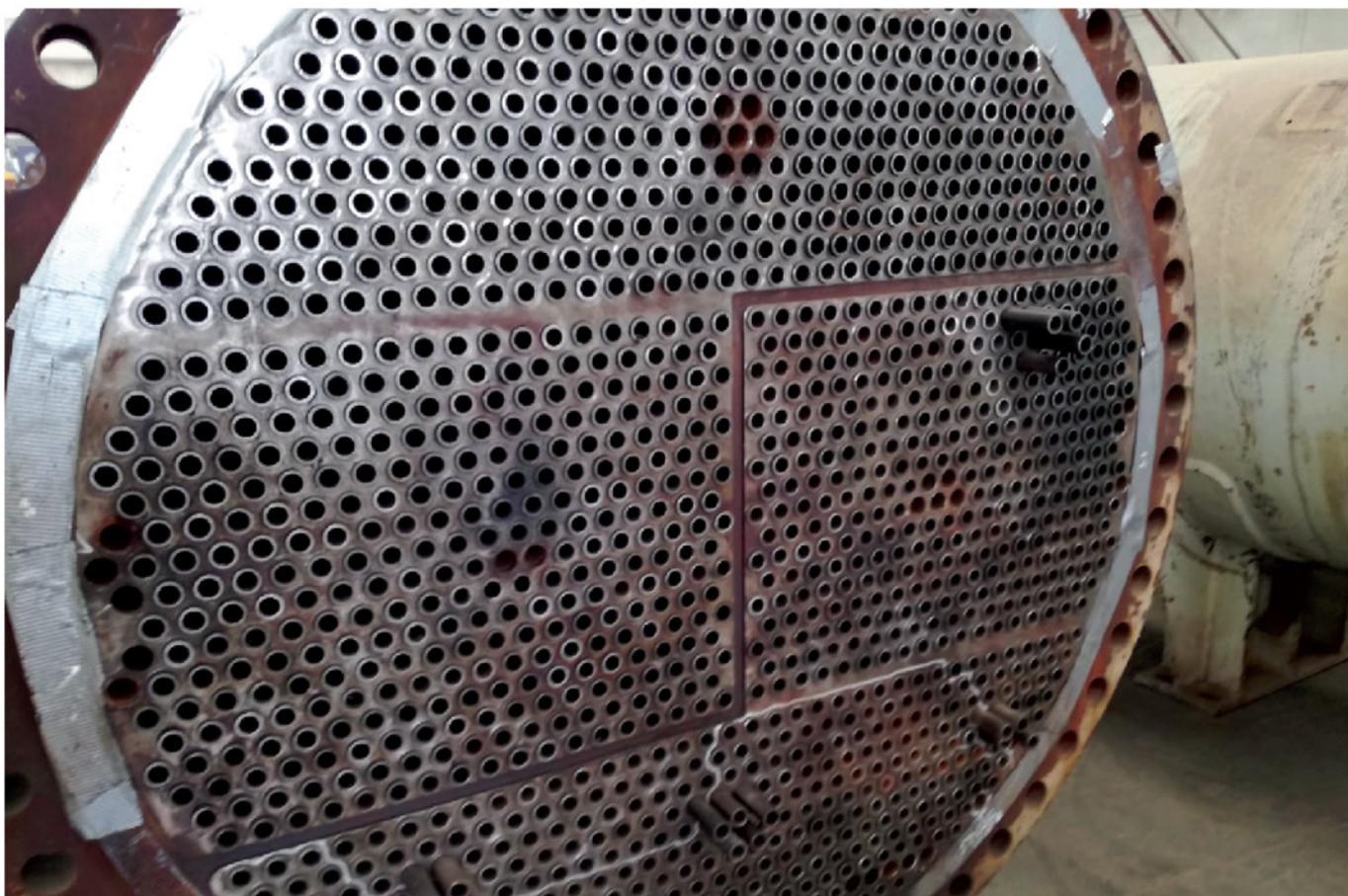
KA-12

*Ensures the rapid recovery of the tubesheet  
by facilitating tube extraction*

MAUS ITALIA has solved the problem of **tubesheet safeguarding and recovery during the dismantling of heat exchangers**.

The **KattexCut**, a patented MAUS ITALIA product, **instantly cuts the tubes from the tube bundle from the inside, without the production of swarf**, thus facilitating subsequent operations, such as:

- the extraction of the tube pieces with **Grippul** series extractors
- the extraction of the tubes with **Rupul** series continuous extractors



## KattexFix

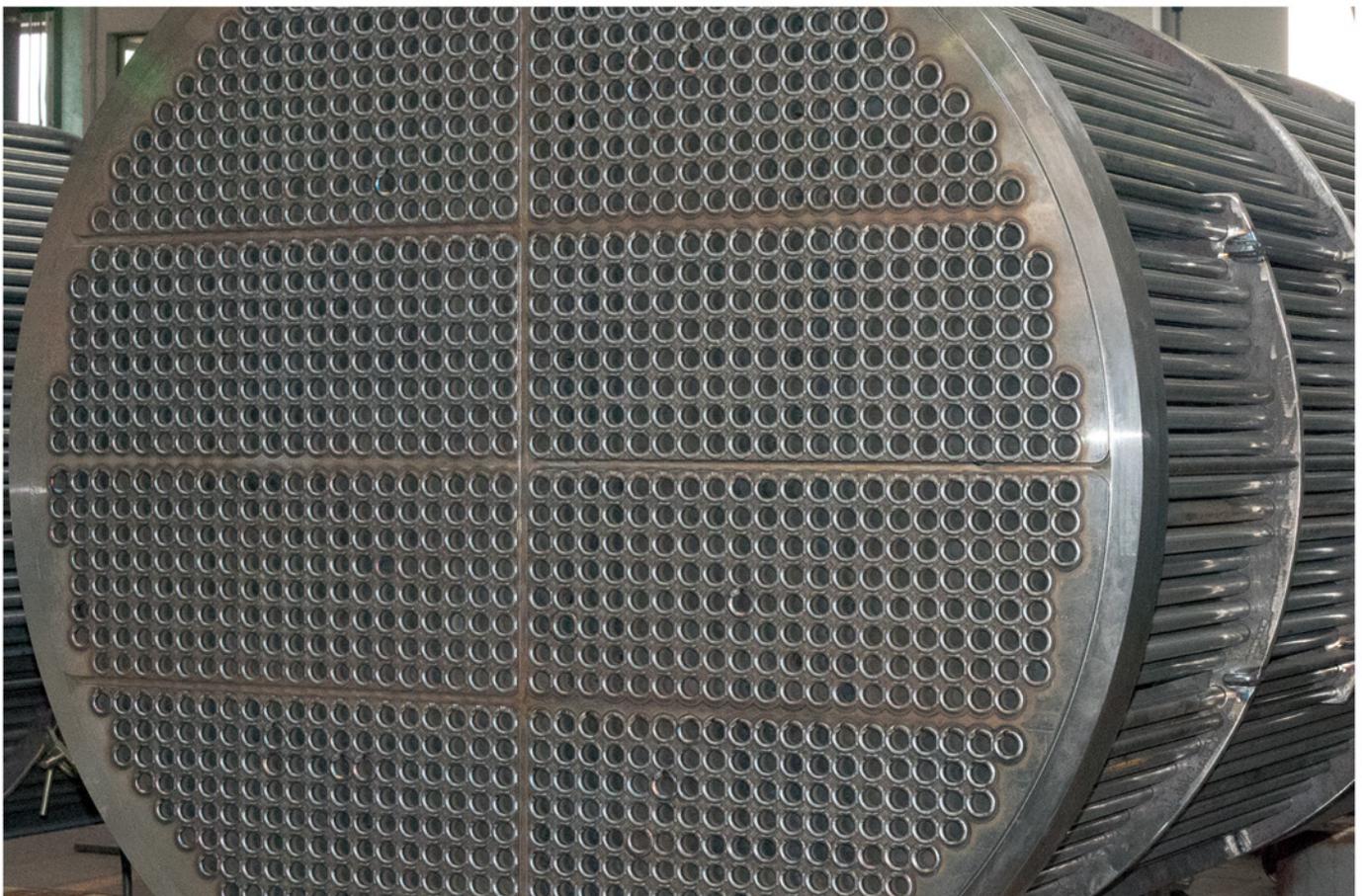
KA-18

### *Ensures precise tube/tubesheet hole centring with controlled locking of the tube (pre-welding)*

MAUS ITALIA has solved the problem of **centring and locking tubes to the tubesheet before orbital TIG welding during the assembly of heat exchangers.**

The **KattexFix**, a MAUS ITALIA patented product, **instantly expands tubes in the tube bundle from the inside**, (*controlled mechanical expansion or "tack expansion"*), **replacing it at the weld point**, thus facilitating the subsequent operation of:

- TIG orbital welding with **Giotto** series equipment



# KattexCut

KA-12



Instantaneous

## Instant

Using **hydraulic drive** the **KattexCut** device gives the tools a **radial expansion by incising the tube thickness creating the breaking point, ensuring high productivity.**



Clean results

## Swarf-free cutting

The **KattexCut**, thanks to its patented cutting system, **does not leave any metallic residue inside the tube**, giving a result which is always "clean".



Wide Range

## Wide range of application

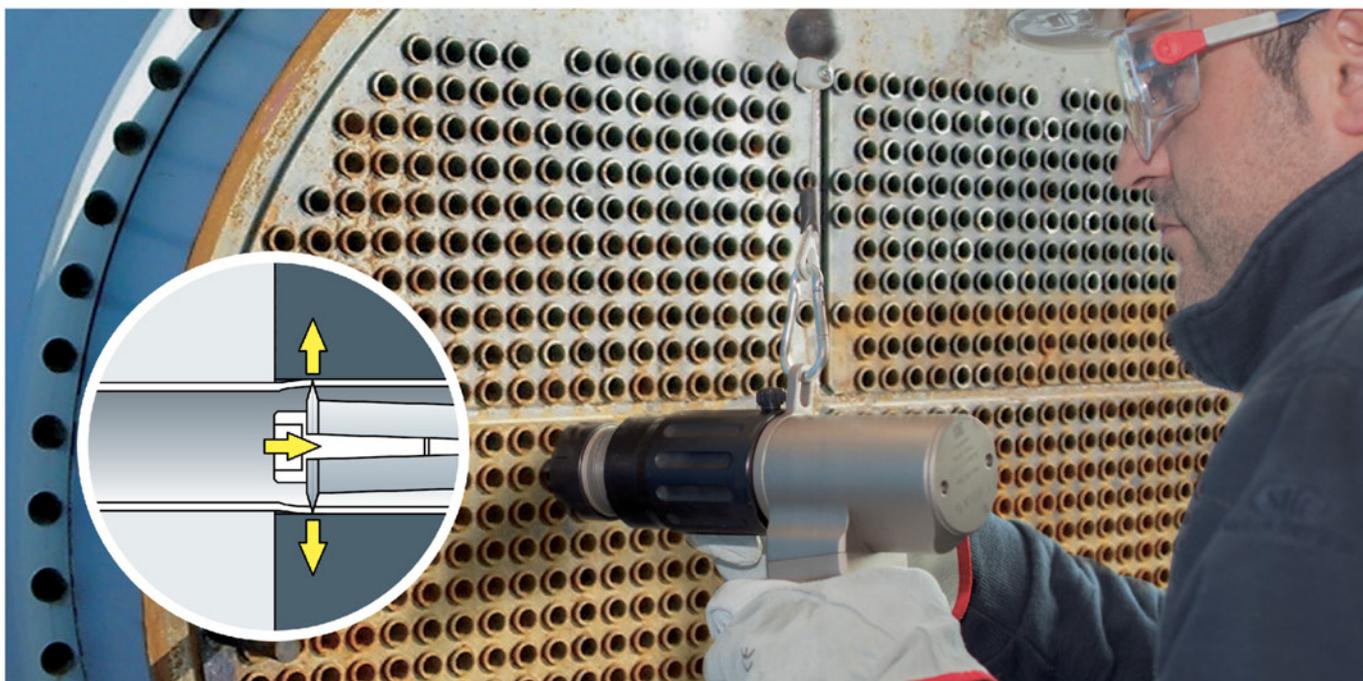
Thanks to the two different sizes of **Kattex**, the **KattexCut** device allows the intervention on tubes up to 4" (101,60 mm) for the production of industrial boilers.



Multi-power

## Different power supplies

The **KattexCut**'s hydraulic drive is given by using the the MAUS ITALIA **TP2** series hydraulic power units in either the **Electric** or **Pneumatic** versions.



# KattexFix

KA-18



Instantaneous

## Instant

Using **hydraulic drive**, the **KattexFix** gives the tools an **instant radial expansion** guaranteeing **high productivity**.



Tack expansion

## Controlled tube locking (tack expansion)

Thanks to the innovative tools designed by MAUS ITALIA's technical staff, the radially-expanded tube is centred in the tubesheet hole and is locked, giving optimal conditions for the next weld.



Timer

## Controlled work times

The new dedicated **TP2EQ2** hydraulic power unit integrates control of the entire work period (expansion/permanence time and release/stop time), allowing a high level of repeatability.



Wide Range

## Wide range of application

Thanks to the two different sizes of **Kattex**, the **KattexFix** device allows the intervention on pipes up to 4.1/4" (107,95 mm) for the production of industrial boilers.



Multi-power

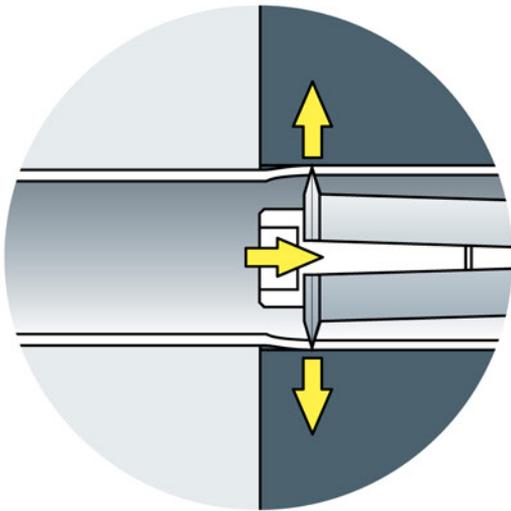
## Alternative power supplies

The **KattexFix**'s hydraulic drive is given by using the the MAUS ITALIA **TP2** series hydraulic power units in either the **E**lectric or **P**neumatic versions.



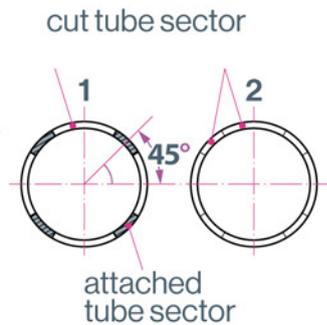
# KattexCut

KA-12

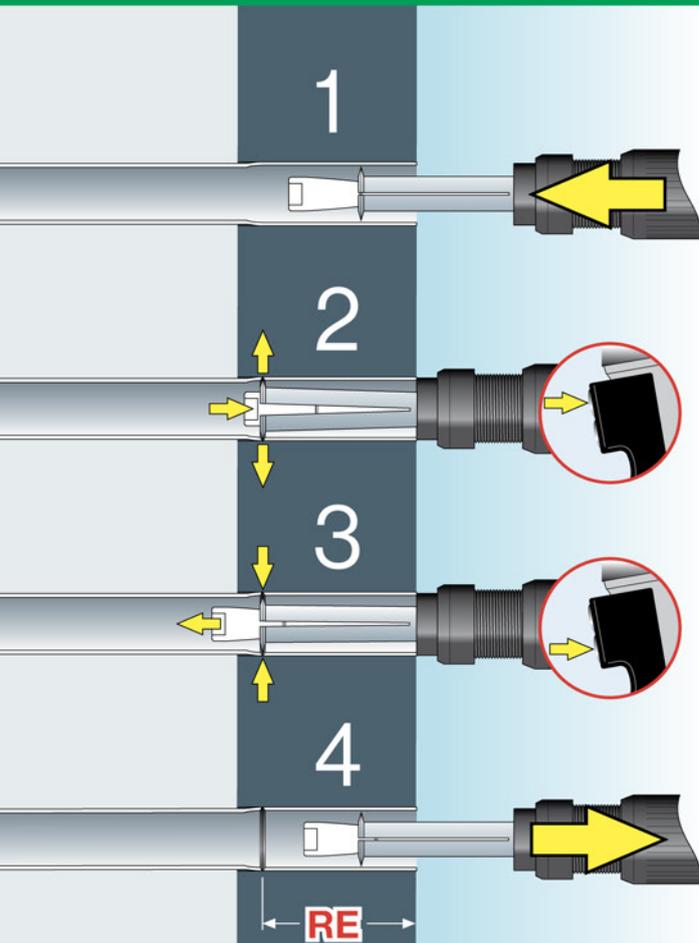


The **KattexCut** works on **the inside of the tube to be cut** and, thanks to the hydraulic force from its dedicated power unit, expands the incisor/cutter (**K5K** or **K12K**) that penetrates the thickness of the tube. The incising of the tube is sufficient to create a breaking point and facilitate subsequent extraction operations.

*If necessary, for a complete cutting of the tube, repeat the operation by rotating the device (example opposite shows 4 sectors on the side).*

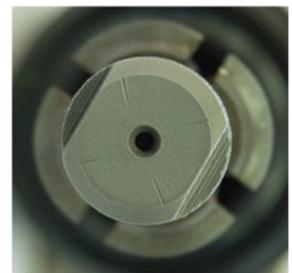


## Work procedure



### Insertion

Insert the **KattexCut** into the tube as far as the thrust collar



### Instant cutting

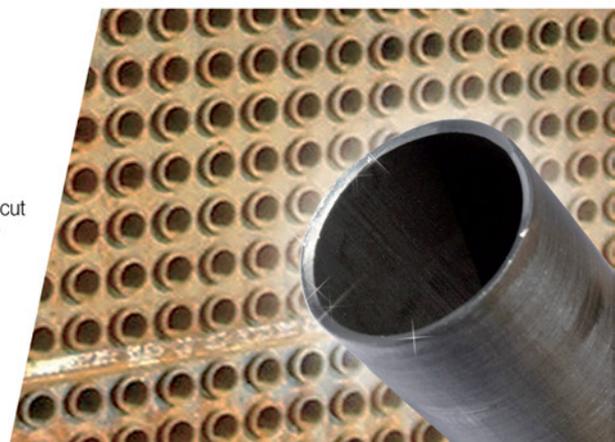
Press the button until the tube is incised

### Release

Press the button until the tool unlocks and the tube is released

### Removal

Extract the **KattexCut** from the cut tube and proceed with cutting or with the extraction of the tube stub with a **Grippul** series extractor





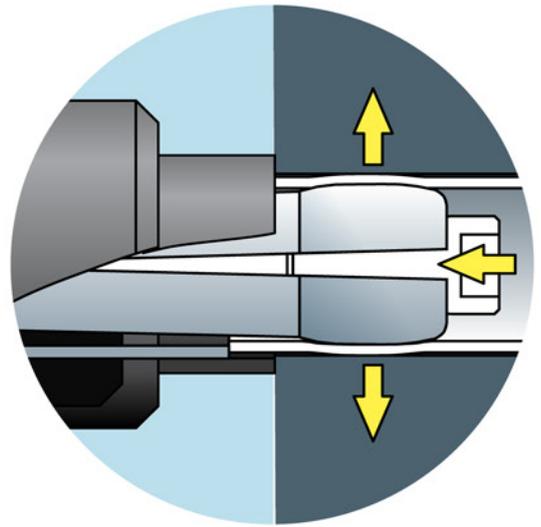
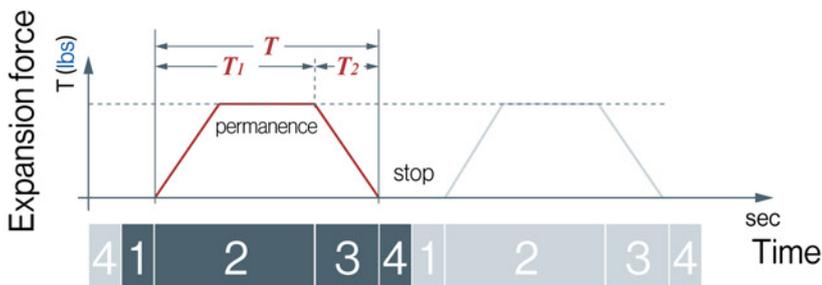
# "tack expansion" pre-weld

## KattexFix

KA-18

The **KattexFix**, works on **the inside of the tube** and, thanks to the hydraulic force from its dedicated power unit, expands the locking tool (**K5PS** or **K12PS**) for tube expansion.

The centring of the tube in the tubesheet hole is achieved through the expansion of the tool.



## Work procedure

### Automatic cycle

Press and release button 1

#### Instant locking

$T_1$  achievement of the programmed expansion from the hydraulic power unit and permanence of the expansion force until the tube is locked

#### Release

$T_2$  Unlocking of the tool and complete release from the tube

Button 2 stops the automatic cycle as and when needed

### Insertion

Insert the **KattexFix** into the tube as far as the thrust collar.

### Instant locking

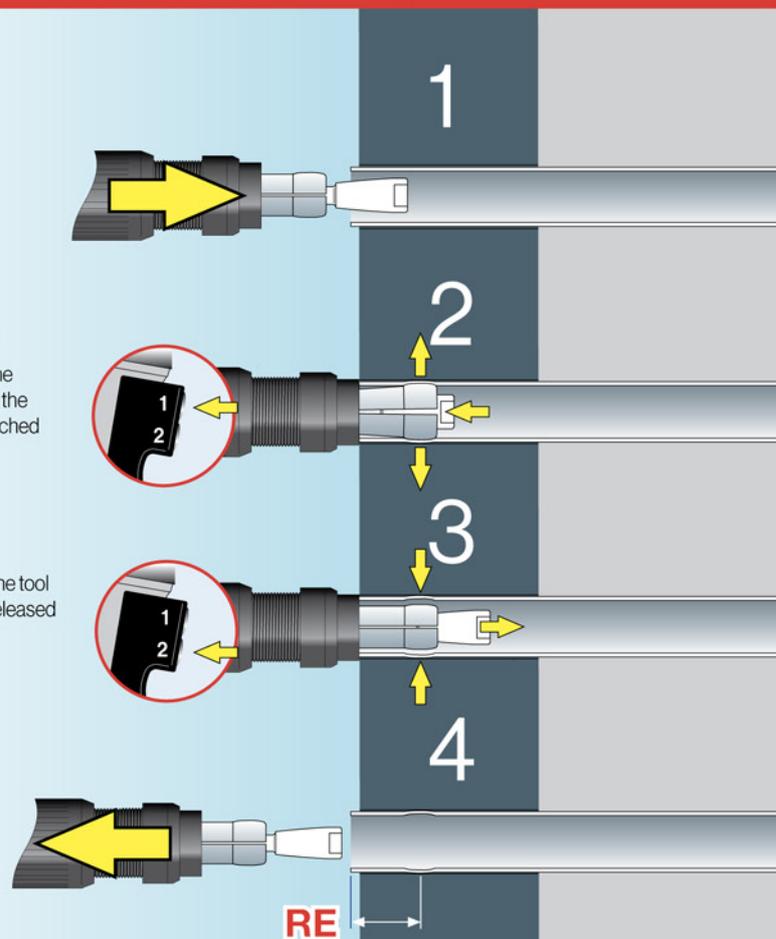
Hold down button 1 until the pressure programmed on the hydraulic power unit is reached

### Release

Hold down button 2 until the tool unlocks and completely released

### Removal

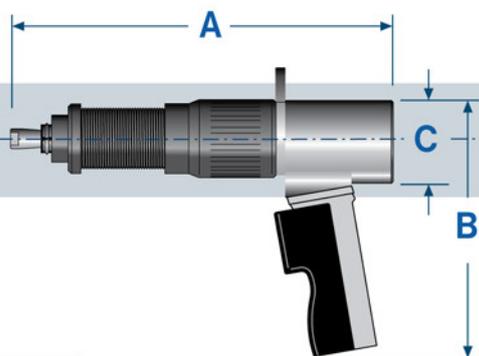
Extract the **KattexFix** from the locked tube and proceed with the next locking operation





The image is purely representative and does not constitute a product offering.

**Kattex6E**  
**Kattex12E**



Technical features			Kattex6E	Kattex12E
Max work pressure		bar (psi)	350 (5000)	350 (5000)
Max expansion force		T (lbs)	6 (13200)	12 (26400)
<b>Cycle time</b> (expansion + return)		sec	5	14
Weight		kg (lbs)	3,5 (7,7)	7,0 (15,4)
Level of protection		IP	55	55
Controls - Low voltage (handgrip)		V.C.A.	24	24
Ø tubes max	<b>OD</b>	mm (inches)	38,10 (1.1/2")	107,95 (4.1/4")
Length	<b>A</b>	mm (inches)	290 (11.4")	309 (12.2")
Width	<b>B</b>	mm (inches)	220 (8.6)	320 (12.6)
Height (Ø)	<b>C</b>	mm (inches)	67 (2.6)	89 (3.5)
Vibrations		m/s <sup>2</sup>	0.413	0.413
Colours			Al OX - Black	Al OX - Black
Recommended balancer			<b>TPB-1</b>	<b>TPB-2</b>



# Electric

## Standard supply

- Hydraulic tool: **Kattex6E** or **Kattex12E**
- Set of cone reducer couplings
- Set of cutter reducer couplings
- Set of service wrenches
- Thrust collar extension
- Multipole electric cable (with TEAFLEX conduit) - Length 6 m (19.7 ft)
- 2No. R8 - 1/4 hydraulic hoses (oil supply and return) - Length 6 m (19.7 ft)
- Instruction manual
- Carry case

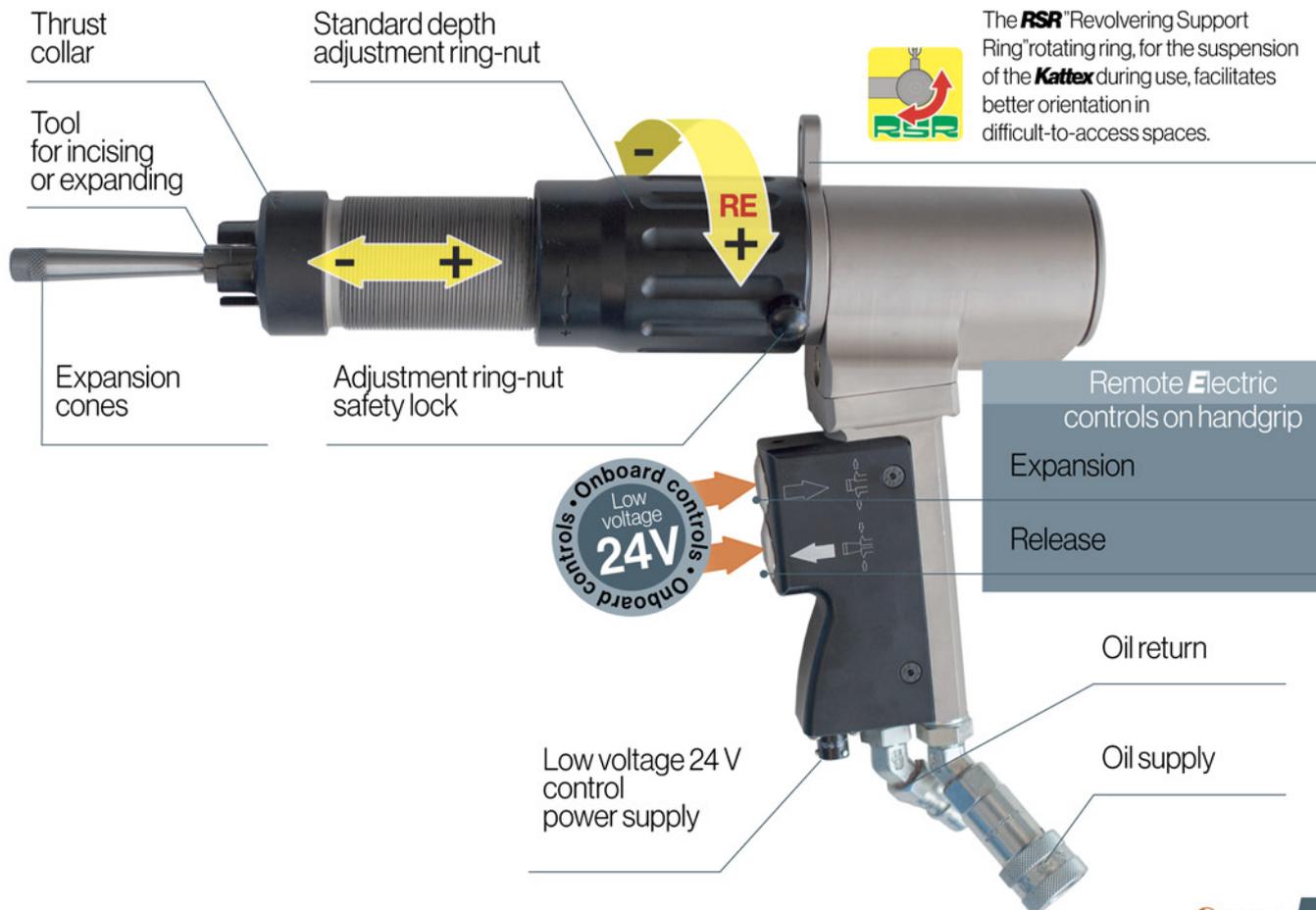
# Kattex6E Kattex12E

Multiuse **Electric** hydraulic tools.



MAUS ITALIA **TP2** series **Electric** hydraulic power unit recommended for use with **Kattex6E** and **Kattex12E**

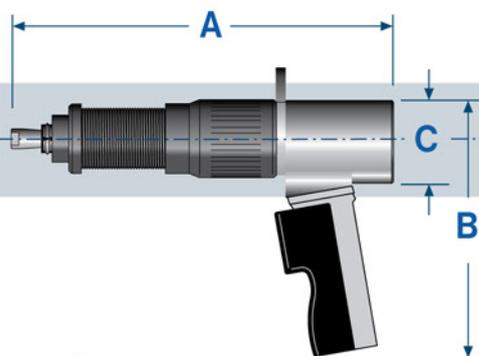
**TP2E** KA-33  
**TP2EQ2** KA-32





The image is purely representative and does not constitute a product offering.

# Kattex6P Kattex12P



Technical features		Kattex6P	Kattex12P
Max work pressure	bar (psi)	350 (5000)	350 (5000)
Max expansion force	T (lbs)	6 (13200)	12 (26400)
Cycle time (expansion + return)	sec	5	14
Weight	kg (lbs)	3,5 (7.7)	7,0 (15.4)
Max tube Ø	OD	mm (inches)	mm (inches)
Length	A	290 (11.4")	309 (12.2")
Width	B	220 (8.6)	320 (12.6)
Height (Ø)	C	67 (2.6)	89 (3.5)
Vibrations	m/s <sup>2</sup>	0.413	0.413
Colours		Al OX - Black	Al OX - Black
Recommended balancer		TPB-1	TPB-2

# Kattex6P Kattex12P

Multiuse **Pneumatic** hydraulic tools.

# Pneumatic

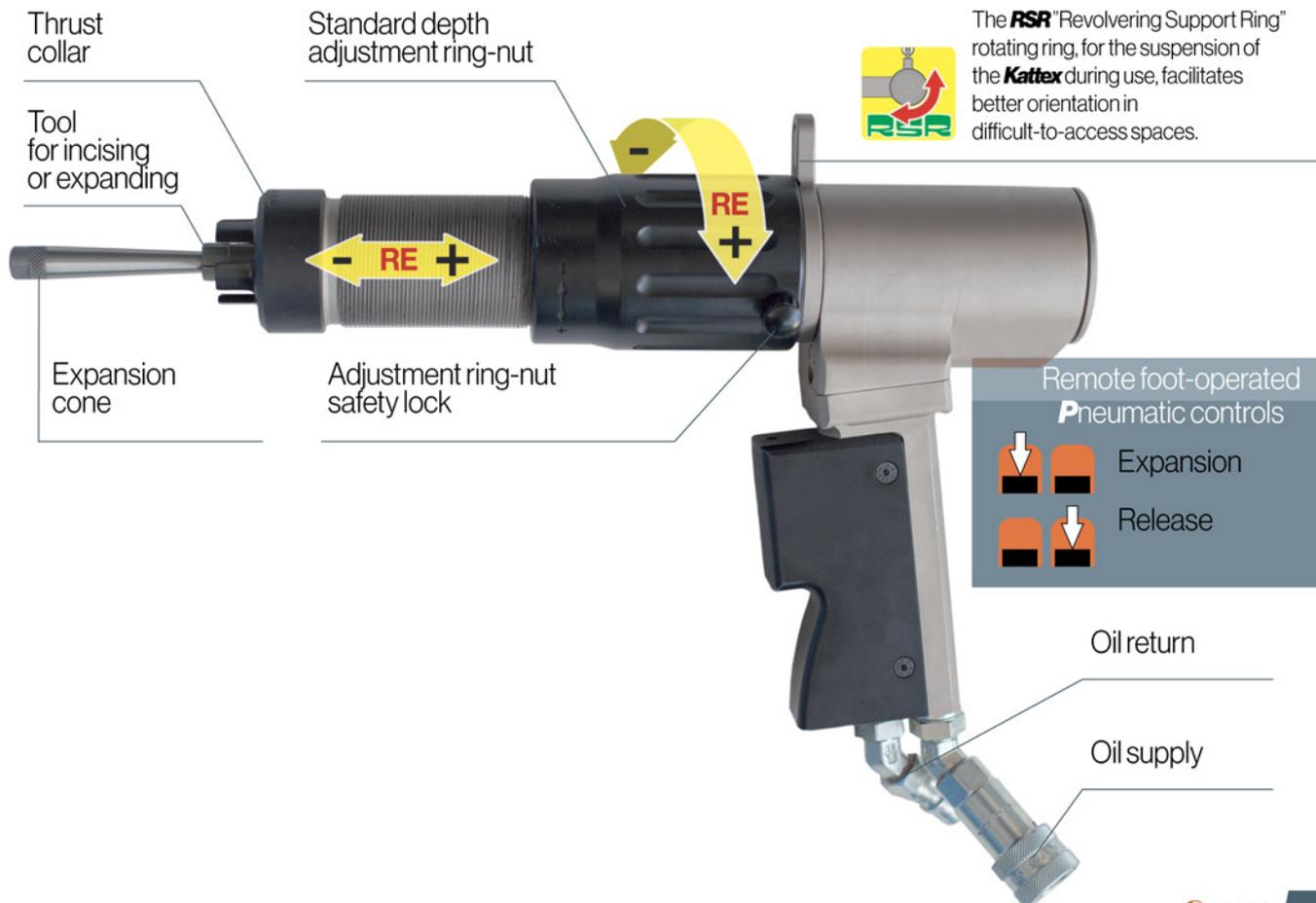
## Standard supply

- Hydraulic tool: **Kattex 6 P** or **Kattex 12 P** ■
- Set of cone reducer couplings ■
- Set of cutter reducer couplings ■
- Set of service wrenches ■
- Thrust collar extension ■
- 2No. R8 - 1/4 hydraulic hoses (oil supply and return) - Length 6 m (19.7 ft) ■
- Instruction manual ■
- Carry case ■

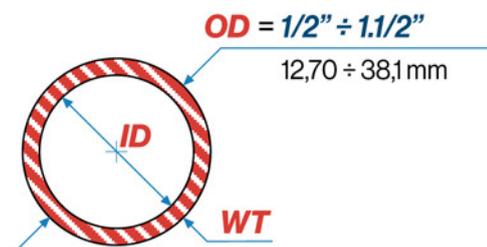
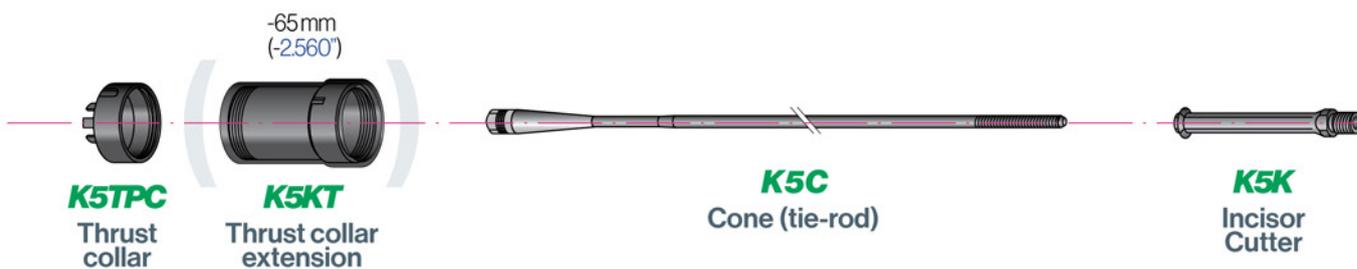


MAUS ITALIA **TP2** series **Pneumatic** hydraulic power unit recommended for use with **Kattex 6 P** and **Kattex 12 P**

**TP2P** KA-34



# Tool assembly diagram for tube incising and cutting



## KattexCut6

Tube dimensions							Gr.	Incisor Cutter		
inches	OD		WT		ID		N.	K5K Cod.	Expansion	
	mm	B.W.G.	mm	inches	mm	inches			mm	inches
1/2"	12,70	16	1,65	0.065	9,4	0.370	1	K5K-1	9,0÷12,5	0.354÷0.492
		18÷24	1,24±0,56	0.049±0.022	10,2÷11,6	0.402±0.456	2	K5K-2	9,8÷13,3	0.386±0.524
5/8"	15,87	14	2,11	0.083	11,7	0.459	3	K5K-3	11,1±15,3	0.437±0.602
		16÷24	1,65±0,56	0.065±0.022	12,6÷14,8	0.495±0.583	4	K5K-4	12,1±16,3	0.476±0.642
3/4"	19,05	12	2,77	0.109	13,4	0.532	5	K5K-5	12,8±18,1	0.504±0.713
		14÷24	2,11±0,56	0.083±0.022	14,8±17,9	0.584±0.766	6	K5K-6	14,2±19,5	0.559±0.768
7/8"	22,22	10	3,40	0.134	15,4	0.607	7	K5K-7	14,6±20,6	0.575±0.811
		13÷24	2,41±0,56	0.095±0.022	17,4±21,1	0.685±0.831	8	K5K-8	16,7±22,7	0.675±0.894
1"	25,40	10	3,40	0.134	18,6	0.732	9	K5K-9	17,8±24,8	0.701±0.976
		12÷24	2,77±0,56	0.109±0.022	19,8±24,2	0.782±0.956	10	K5K-10	19,1±26,1	0.752±1.027
1.1/4"	31,75	10	3,40	0.134	25,0	0.982	11	K5K-11	24,0±31,0	0.945±1.220
		12÷24	2,77±0,56	0.109±0.022	24,2±30,7	1.032±1.206	12	K5K-12	25,3±32,3	0.996±1.272
1.1/2"	38,10	10	3,40	0.134	31,1	1.232	13	K5K-13	30,3±37,3	1.193±1.468
		12÷24	2,77±0,56	0.109±0.022	32,5±37,0	1.282±1.456	14	K5K-14	31,7±38,7	1.248±1.524

The table is just an introduction to the selection of tools available. For more details, please refer to the documentation supplied with the device.

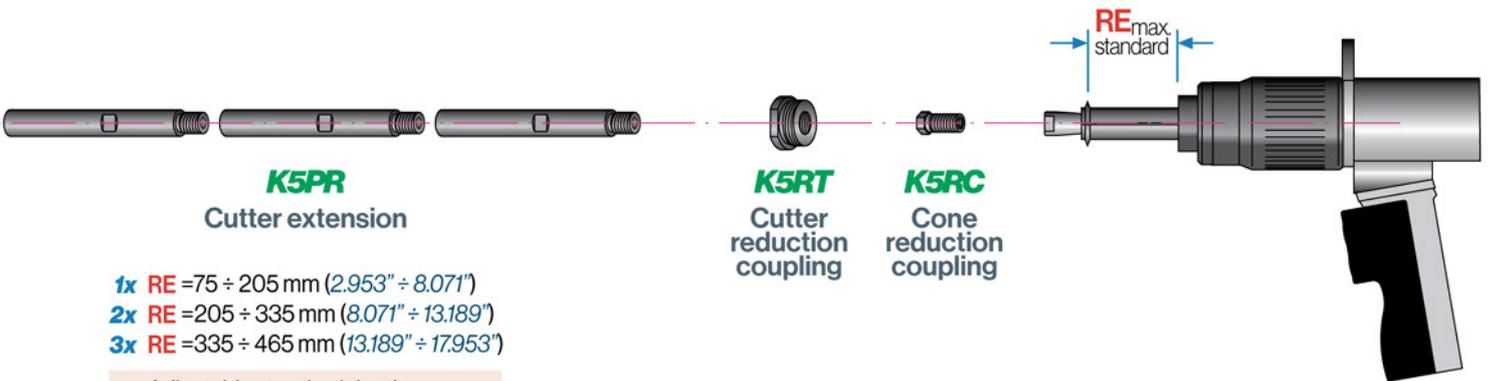
Incision only  
Complete cutting



Work without  
metallic residues

# KattexCut 6

Instant hydraulic internal incisor for  
tube with **OD** from **1/2"** (12,70 mm)  
up to **1.1/2"** (38,10 mm)



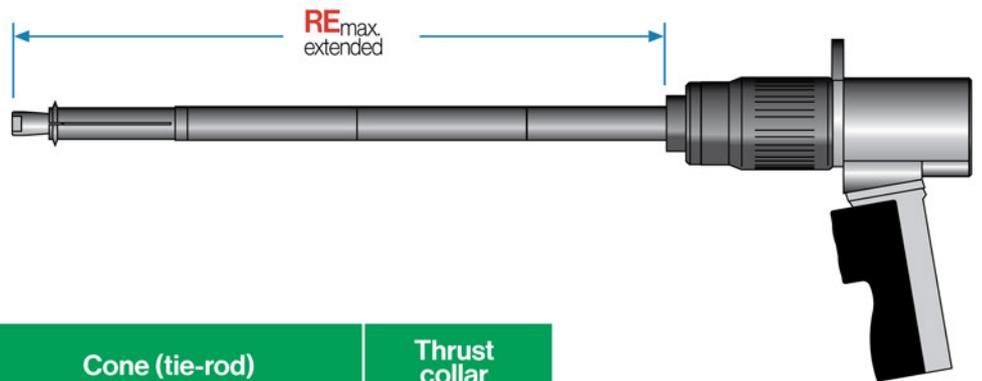
**K5PR**  
Cutter extension

**K5RT**  
Cutter reduction coupling

**K5RC**  
Cone reduction coupling

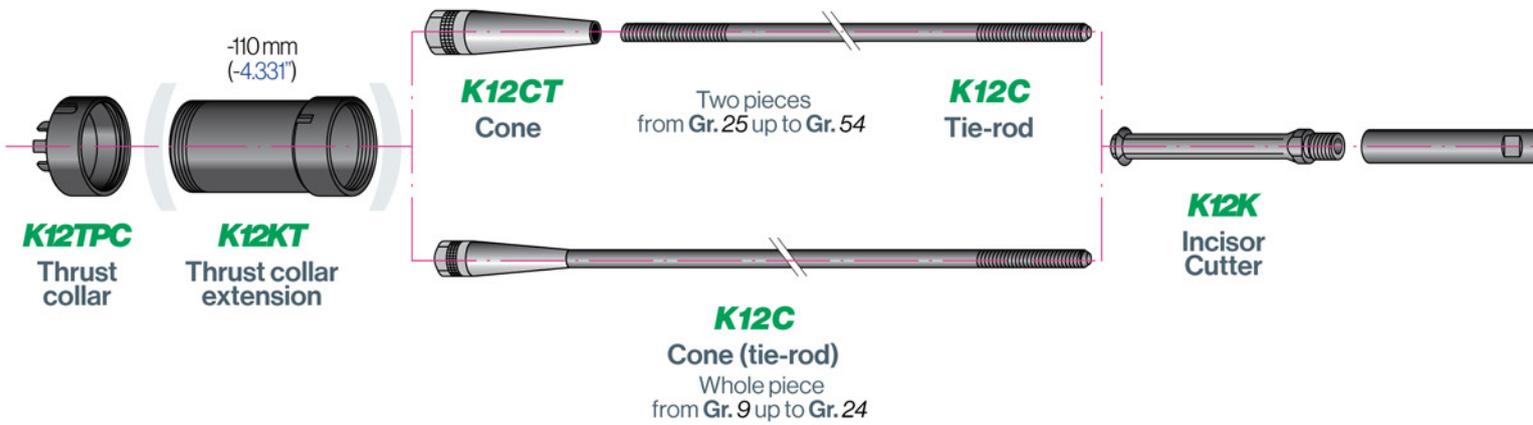
- 1x RE = 75 ÷ 205 mm (2.953" ÷ 8.071")
- 2x RE = 205 ÷ 335 mm (8.071" ÷ 13.189")
- 3x RE = 335 ÷ 465 mm (13.189" ÷ 17.953")

Adjustable standard depth  
RE=10 ÷ 75 mm (0.394" ÷ 2.953")



Cone reduction coupling	Cutter reduction coupling	Cone (tie-rod)		Thrust collar
<b>K5RC</b> Cod.	<b>K5RT</b> Cod.	<b>K5C</b> Cod.	Max. pressure bar    psi	<b>K5TPC</b> Cod.
K5RC-1-2	K5RT-1-2	K5C-1-2	50    725	K5TPC-14
K5RC-3-4	K5RT-3-4	K5C-3-4	80    1160	K5TPC-18
K5RC-5-6	K5RT-5-6	K5C-5-6	105    1520	K5TPC-21
K5RC-7-8	K5RT-7-8	K5C-7-8	155    2250	K5TPC-25
K5RC-9-10	K5RT-9-10	K5C-9-10	200    2900	K5TPC-28
-	K5RT-11-12	K5C-11-12	350    5075	K5TPC-34
-	K5RT-13-14	K5C-13-14	350    5075	K5TPC-41

# Tool assembly diagram for tube incising and cutting



## Kattex Cut 12

Tube dimensions							Gr.	Incisor Cutter		
inches	OD		WT		ID		N.	K12K Cod.	Expansion	
	mm	B.W.G.	mm	inches	mm	inches			mm	inches
1"	25,40	10	3,40	0.134	18,60	0.732	9	K12K-9 #	17,8÷26,2	0.700÷1.031
		12	2,77	0.109	19,86	0.782	10	K12K-10	19,2÷27,6	0.756÷1.087
1.1/8"	28,57	10	3,40	0.134	21,77	0.857	10/A	K12K-10/A #	20,9÷29,3	0.823÷1.153
		12	2,77	0.109	23,03	0.907	10/B	K12K-10/B	22,3÷30,7	0.878÷1.208
1.1/4"	31,75	10	3,40	0.134	24,95	0.982	11	K12K-11 #	24,0÷32,4	0.945÷1.275
		12	2,77	0.109	26,21	1.032	12	K12K-12	25,3÷33,7	0.996÷1.327
1.3/8"	34,92	10	3,40	0.134	28,12	1.107	12/A	K12K-12/A	27,2÷35,6	1.071÷1.401
		12	2,77	0.109	29,38	1.157	12/B	K12K-12/B	28,5÷36,9	1.122÷1.453
1.1/2"	38,10	10	3,40	0.134	31,30	1.232	13	K12K-13	30,3÷38,7	1.193÷1.524
		12	2,77	0.109	32,56	1.282	14	K12K-14	31,8÷40,2	1.252÷1.583
1.5/8"	41,27	8	4,19	0.165	32,89	1.295	15	K12K-14	31,8÷40,2	1.252÷1.583
		10	3,40	0.134	34,47	1.357	16	K12K-16	33,5÷41,9	1.319÷1.649
1.3/4"	44,45	8	4,19	0.165	36,07	1.420	17	K12K-17	35,0÷43,4	1.378÷1.708
		10	3,40	0.134	37,65	1.428	18	K12K-18	36,8÷45,2	1.449÷1.779

The table is just an introduction to the selection of tools available. For more details, please refer to the documentation supplied with the device.

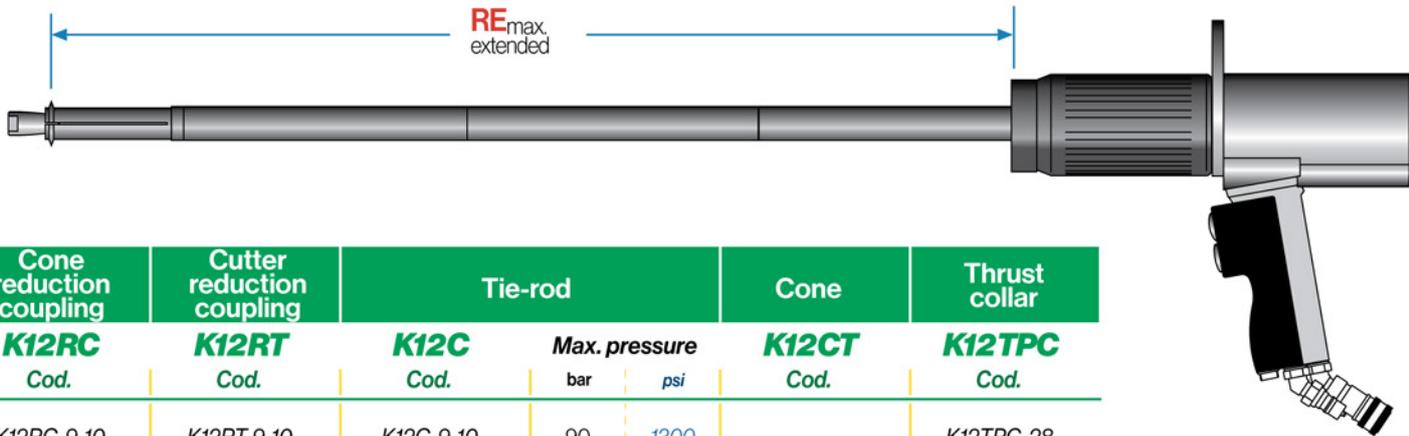
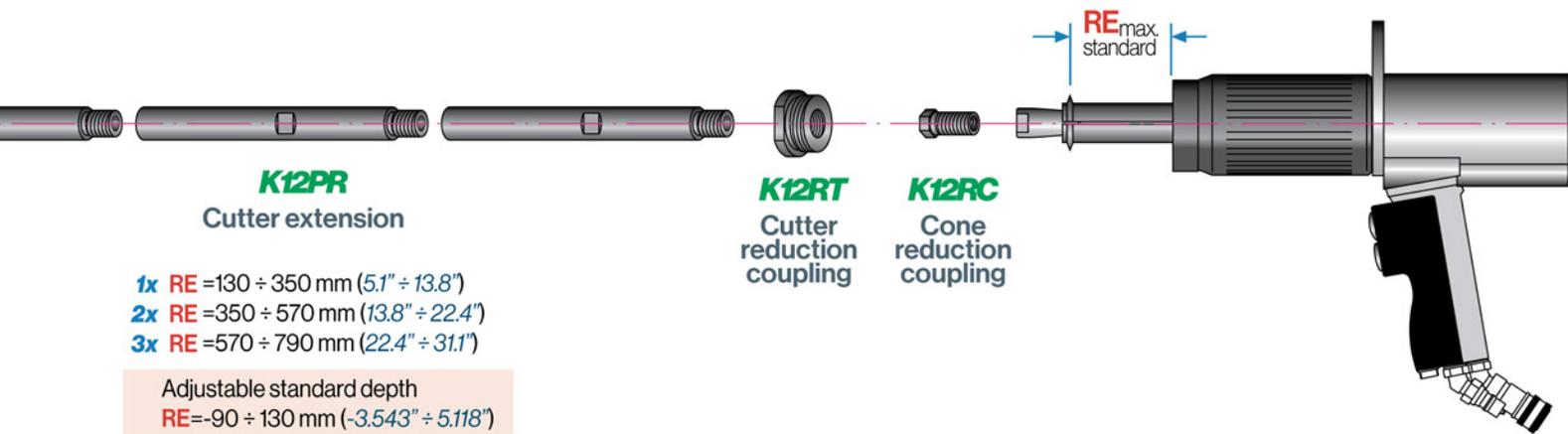
Incision only  
Complete cutting



Work without  
metallic residues

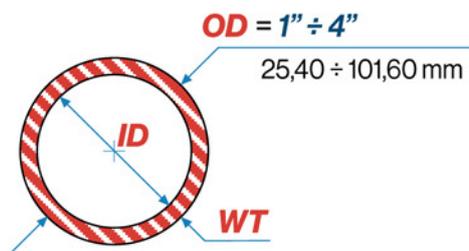
# KattexCut 12

Instant hydraulic internal incisor for  
tube with **OD** from **1"** (25,40 mm)  
up to **4"** (101,60 mm)



Cone reduction coupling	Cutter reduction coupling	Tie-rod		Cone	Thrust collar
<b>K12RC</b>	<b>K12RT</b>	<b>K12C</b>	Max. pressure		<b>K12CT</b>
Cod.	Cod.	Cod.	bar	psi	Cod.
K12RC-9-10	K12RT-9-10	K12C-9-10	90	1300	-
K12RC-10/A-10/B	K12RT-10/A-10/B	K12C-10A-10B	130	1885	-
K12RC-11-12/B	K12RT-11-12/B	K12C-11-12B	230	3335	-
K12RC-11-12/B	K12RT-11-12/B	K12C-11-12B	350	5075	-
K12RC-13-16	K12RT-13-16	K12C-13-16	350	5075	-
K12RC-13-16	K12RT-13-16	K12C-13-16	350	5075	-
-	K12RC-17-20	K12C-17-20	350	5075	-
					<b>K12TPC</b>
					Cod.
					K12TPC-28
					K12TPC-31
					K12TPC-35
					K12TPC-38
					K12TPC-41
					K12TPC-44
					K12TPC-48

Continue



## KattexCut 12

Tube dimensions							Gr.	Incisor Cutter		
inches	OD		WT		ID		N.	K12K Cod.	Expansion	
	mm	B.W.G.	mm	inches	mm	inches			mm	inches
1.7/8"	47,62	8	4,19	0.165	39,24	1.545	19	K12K-19	38,2÷46,6	1.504÷1.835
		10	3,40	0.134	40,82	1.607	20	K12K-20	39,8÷48,2	1.567÷1.897
2"	50,80	8	4,19	0.165	42,42	1.670	21	K12K-21	41,4÷49,8	1.630÷1.961
		10	3,40	0.134	44,00	1.732	22	K12K-22	43,0÷51,4	1.693÷2.024
2.1/8"	53,97	8	4,19	0.165	45,59	1.795	23	K12K-23	44,5÷52,9	1.752÷2.083
		10	3,40	0.134	47,17	1.857	24	K12K-24	46,2÷54,6	1.819÷2.149
2.1/4"	57,15	8	4,19	0.165	48,77	1.920	25	K12K-25	47,6÷56,0	1.874÷2.205
		10	3,40	0.134	50,35	1.982	26	K12K-26	49,5÷57,9	1.949÷2.280
2.3/8"	60,32	8	4,19	0.165	51,94	2.045	27	K12K-27	50,8÷59,2	2.000÷2.331
		10	3,40	0.134	53,52	2.107	28	K12K-28	52,5÷60,9	2.067÷2.397
2.1/2"	63,50	8	4,19	0.165	55,12	2.170	29	K12K-29	54,0÷62,4	2.126÷2.457
		10	3,40	0.134	56,70	2.232	30	K12K-30	55,7÷64,1	2.193÷2.524
2.5/8"	66,67	8	4,19	0.165	58,29	2.295	31	K12K-31	57,0÷65,4	2.244÷2.575
		10	3,40	0.134	59,87	2.357	32	K12K-32	58,5÷66,9	2.303÷2.634
2.3/4"	69,85	8	4,19	0.165	61,47	2.420	33	K12K-33	60,0÷68,4	2.362÷2.693
		10	3,40	0.134	63,05	2.482	34	K12K-34	62,0÷70,4	2.441÷2.771
2.7/8"	73,02	8	4,19	0.165	64,64	2.545	35	K12K-35	63,5÷71,9	2.500÷2.831
		10	3,40	0.134	66,22	2.607	36	K12K-36	65,0÷73,4	2.559÷2.890
3"	76,20	8	4,19	0.165	67,82	2.670	37	K12K-37	66,5÷74,9	2.618÷2.950
		10	3,40	0.134	69,40	2.732	38	K12K-38	68,0÷76,4	2.677÷3.008
3.1/8"	79,37	8	4,19	0.165	70,99	2.795	39	K12K-39	69,5÷77,9	2.736÷3.067
		10	3,40	0.134	72,57	2.857	40	K12K-40	71,5÷79,9	2.815÷3.145
3.1/4"	82,55	8	4,19	0.165	74,17	2.920	41	K12K-41	72,5÷80,9	2.854÷3.185
		10	3,40	0.134	75,75	2.982	42	K12K-42	74,5÷82,9	2.933÷3.264
3.3/8"	85,72	8	4,19	0.165	77,34	3.045	43	K12K-43	76,0÷84,4	2.992÷3.323
		10	3,40	0.134	78,92	3.107	44	K12K-44	77,5÷85,9	3.051÷3.382
3.1/2"	88,90	8	4,19	0.165	80,52	3.170	45	K12K-45	79,0÷87,4	3.110÷3.441
		10	3,40	0.134	82,10	3.232	46	K12K-46	81,0÷89,4	3.189÷3.520
3.5/8"	92,07	8	4,19	0.165	83,69	3.295	47	K12K-47	82,0÷90,4	3.228÷3.559
		10	3,40	0.134	85,27	3.357	48	K12K-48	84,0÷92,4	3.307÷3.638
3.3/4"	95,25	8	4,19	0.165	86,87	3.420	49	K12K-49	85,5÷93,9	3.366÷3.697
		10	3,40	0.134	88,45	3.482	50	K12K-50	87,0÷95,4	3.425÷3.756
3.7/8"	98,42	8	4,19	0.165	90,04	3.545	51	K12K-51	88,5÷96,9	3.484÷3.815
		10	3,40	0.134	91,62	3.607	52	K12K-52	90,5÷98,9	3.563÷3.894
4"	101,60	8	4,19	0.165	93,22	3.670	53	K12K-53	92,0÷100,4	3.622÷3.953
		10	3,40	0.134	94,80	3.732	54	K12K-54	93,5÷101,9	3.681÷4.012

The table is just an introduction to the selection of tools available. For more details, please refer to the documentation supplied with the device.

Incision only

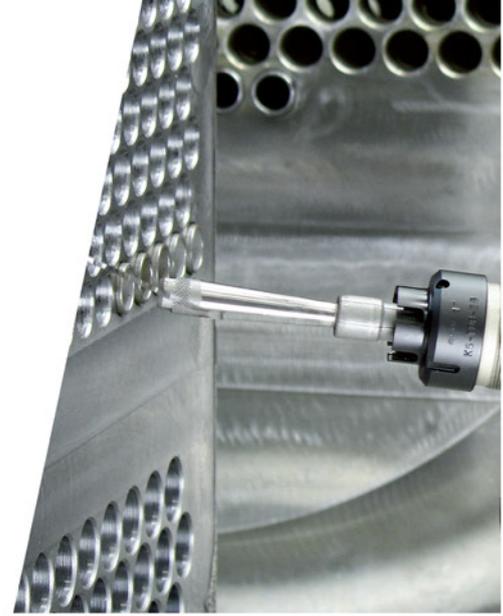
Complete cutting



## KattexCut 12

Instant hydraulic internal incisor for tube with **OD** from **1"** (25,40 mm) up to **4"** (101,60 mm).

Cone reduction coupling	Cutter reduction coupling	Tie-rod		Cone	Thrust collar	
<b>K12RC</b>	<b>K12RT</b>	<b>K12C</b>	Max. pressure		<b>K12CT</b>	<b>K12TPC</b>
Cod.	Cod.	Cod.	bar	psi	Cod.	Cod.
-	K12RT-17-20	K12C-17-20	350	5075	-	K12TPC-51
-	K12RT-21-22	K12C-21-22	350	5075	-	K12TPC-54
-	K12RT-23-26	K12C-23-24	350	5075	-	K12TPC-57
-	K12RT-23-26	K12C-25-54	350	5075	K12CT-25-26	K12TPC-60
-	-	K12C-25-54	350	5075	K12CT-27-28	K12TPC-63
-	-	K12C-25-54	350	5075	K12CT-29-32	K12TPC-66
-	-	K12C-25-54	350	5075	K12CT-29-32	K12TPC-70
-	-	K12C-25-54	350	5075	K12CT-33-36	K12TPC-73
-	-	K12C-25-54	350	5075	K12CT-33-36	K12TPC-76
-	-	K12C-25-54	350	5075	K12CT-37-54	K12TPC-80
-	-	K12C-25-54	350	5075	K12CT-37-54	K12TPC-82
-	-	K12C-25-54	350	5075	K12CT-37-54	K12TPC-85
-	-	K12C-25-54	350	5075	K12CT-37-54	K12TPC-90
-	-	K12C-25-54	350	5075	K12CT-37-54	K12TPC-92
-	-	K12C-25-54	350	5075	K12CT-37-54	K12TPC-96
-	-	K12C-25-54	350	5075	K12CT-37-54	K12TPC-99
-	-	K12C-25-54	350	5075	K12CT-37-54	K12TPC-102
-	-	K12C-25-54	350	5075	K12CT-37-54	K12TPC-105



# Tool assembly diagram for tube locking



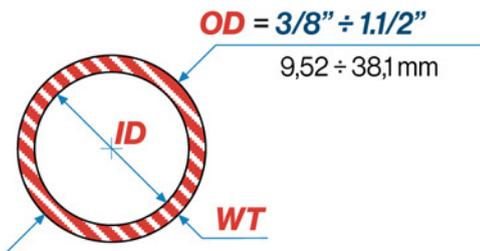
**K5TDB**  
Thrust collar



**K5C**  
Cone (tie-rod)



**K5PS**  
Tool



## KattexFix6

Rapid and precise

High repeatability  
thanks to controlled  
expansion time

Tube dimensions							Gr.	Locking tool				
inches	OD		WT		ID		N.	K5PS Cod.	Expansion		Useful length	
	mm	B.W.G.	mm	inches	mm	inches			mm	inches	mm	inches
3/8"	9,52	19	1,07	0.042	7,3	0.287	021	<b>K5PS-021</b>	7,0÷9,0	0,276÷0,354	3,0	0.118
		20	0,89	0.035	7,7	0.303	020	<b>K5PS-020</b>	7,2÷9,2	0,283÷0,362	3,0	0.118
		20	0,89	0.035	7,7	0.303	019	<b>K5PS-019</b>	7,4÷9,4	0,291÷0,370	3,0	0.118
		21	0,81	0.032	7,9	0.311	018	<b>K5PS-018</b>	7,6÷9,6	0,299÷0,378	3,0	0.118
		22	0,71	0.028	8,1	0.319	017	<b>K5PS-017</b>	7,8÷9,8	0,307÷0,386	3,0	0.118
		23	0,64	0.025	8,2	0.323	016	<b>K5PS-016</b>	8,0÷10,0	0,315÷0,394	3,0	0.118
		24	0,56	0.022	8,4	0.331	015	<b>K5PS-015</b>	8,2÷10,2	0,323÷0,402	3,0	0.118
1/2"	12,7	14	2,11	0.083	8,5	0.335	016	<b>K5PS-016</b>	8,0÷10,0	0,315÷0,394	3,0	0.118
		14	2,11	0.083	8,5	0.335	015	<b>K5PS-015</b>	8,2÷10,2	0,323÷0,402	3,0	0.118
		15	1,83	0.072	9,0	0.354	014	<b>K5PS-014</b>	8,4÷10,4	0,331÷0,409	3,0	0.118
		15	1,83	0.072	9,0	0.354	013	<b>K5PS-013</b>	8,6÷10,6	0,339÷0,417	3,0	0.118
		16	1,65	0.065	9,4	0.370	012	<b>K5PS-012</b>	8,8÷10,8	0,346÷0,425	3,0	0.118
		16	1,65	0.065	9,4	0.370	011	<b>K5PS-011</b>	9,0÷11,0	0,354÷0,433	3,0	0.118
		17	1,47	0.058	9,7	0.382	010	<b>K5PS-010</b>	9,2÷11,2	0,362÷0,441	3,0	0.118
		17	1,47	0.058	9,7	0.382	09	<b>K5PS-09</b>	9,4÷11,4	0,370÷0,449	3,0	0.118
		18	1,24	0.049	10,2	0.402	00	<b>K5PS-00</b>	9,6÷11,6	0,378÷0,457	3,0	0.118
		20	0,89	0.035	10,9	0.429	00/A	<b>K5PS-00/A</b>	10,1÷13,3	0,398÷0,524	4,0	0.157

The table is just an introduction to the selection of tools available. For more details, please refer to the documentation supplied with the device.

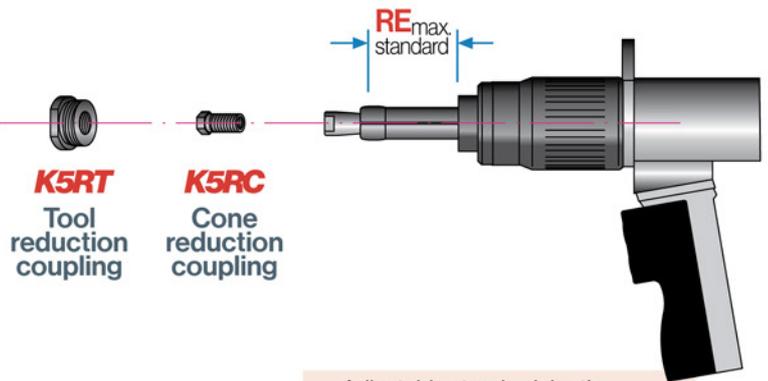


# Pre-weld tack expansion

## KattexFix 6

Instant hydraulic tube locker for tubes with **OD** from **3/8"** (9,52 mm) up to **1.1/2"** (38,10 mm).

Tube locking does not usually require extensions. Special cases will be considered by MAUS ITALIA technical staff for customised construction



Adjustable standard depth  
**RE=10 ÷ 75 mm (0.394" ÷ 2.953")**

Cone reduction coupling	Cutter reduction coupling	Cone (tie-rod)		Thrust collar	
<b>K5RC</b>	<b>K5RT</b>	<b>K5S</b>	<b>Max. pressure</b>		<b>K5TDB</b>
Cod.	Cod.	Cod.	bar	psi	Cod.
K5RC-1-2	K5RT-1-2	K5S-021-018	50	725	K5TDB-12
K5RC-3-4	K5RT-3-4	K5S-017-00	80	1160	
K5RC-3-4	K5RT-3-4	K5S-017-00	80	1160	K5TDB-14
K5RC-5-6	K5RT-5-6	K5S-00/A-02/A	105	1520	

Continue



# KattexFix6

Tube dimensions							Gr.	Locking tool				
OD		B.W.G.	WT		ID		N.	K5PS Cod.	Expansion		Useful length	
inches	mm		mm	inches	mm	inches			mm	inches	mm	inches
5/8"	15,87	12	2,77	0.109	10,3	0.406	00	<b>K5PS-00</b>	9,6÷11,6	0.378÷0.457	3,0	0.118
		12	2,77	0.109	10,3	0.406	00/A	<b>K5PS-00/A</b>	10,1÷13,3	0.398÷0.524	4,0	0.157
		13	2,41	0.095	11,0	0.433	01	<b>K5PS-01</b>	10,6÷13,8	0.417÷0.543	4,0	0.157
		14	2,11	0.083	11,6	0.457	01/A	<b>K5PS-01/A</b>	11,1÷14,3	0.437÷0.563	4,0	0.157
		15	1,83	0.072	12,2	0.480	02	<b>K5PS-02</b>	11,5÷14,7	0.453÷0.579	4,0	0.157
		16	1,65	0.065	12,6	0.496	02/A	<b>K5PS-02/A</b>	12,0÷15,2	0.472÷0.598	4,0	0.157
		17	1,47	0.058	12,9	0.508	03	<b>K5PS-03</b>	12,5÷16,0	0.492÷0.630	5,0	0.197
		18-19	1,24-1,07	0.049-0.042	13,4	0.528	04	<b>K5PS-04</b>	13,0÷16,5	0.512÷0.650	5,0	0.197
		20÷22	0,89÷0,71	0.035÷0.028	14,0	0.551	1	<b>K5PS-1</b>	13,5÷17,0	0.531÷0.669	5,0	0.197
3/4"	19,05	10	3,40	0.134	12,2	0.480	02	<b>K5PS-02</b>	11,5÷14,7	0.453÷0.579	4,0	0.157
		10	3,40	0.134	12,2	0.480	02/A	<b>K5PS-02/A</b>	12,0÷15,2	0.472÷0.598	4,0	0.157
		11	3,05	0.120	12,9	0.508	03	<b>K5PS-03</b>	12,5÷16,0	0.492÷0.630	5,0	0.197
		12	2,77	0.109	13,5	0.531	04	<b>K5PS-04</b>	13,0÷16,5	0.512÷0.650	5,0	0.197
		13	2,41	0.095	14,2	0.559	1	<b>K5PS-1</b>	13,5÷17,0	0.531÷0.669	5,0	0.197
		14	2,11	0.083	14,8	0.583	1/A	<b>K5PS-1/A</b>	14,0÷17,5	0.551÷0.689	5,0	0.197
		15	1,83	0.072	15,4	0.606	2	<b>K5PS-2</b>	14,5÷18,0	0.571÷0.709	5,0	0.197
		16	1,65	0.065	15,7	0.618	2/A	<b>K5PS-2/A</b>	15,0÷18,5	0.591÷0.728	5,0	0.197
		17-18	1,47-1,24	0.058-0.049	16,1	0.634	3	<b>K5PS-3</b>	15,5÷19,0	0.610÷0.748	5,0	0.197
19÷22	1,07÷0,71	0.042÷0.028	16,9	0.665	3/A	<b>K5PS-3/A</b>	16,0÷19,5	0.630÷0.768	5,0	0.197		
7/8"	22,22	10	3,40	0.134	15,4	0.606	2	<b>K5PS-2</b>	14,5÷18,0	0.571÷0.709	5,0	0.197
		10	3,40	0.134	15,4	0.606	2/A	<b>K5PS-2/A</b>	15,0÷18,5	0.591÷0.728	5,0	0.197
		11	3,05	0.120	16,1	0.634	3	<b>K5PS-3</b>	15,5÷19,0	0.610÷0.748	5,0	0.197
		12	2,77	0.109	16,7	0.657	3/A	<b>K5PS-3/A</b>	16,0÷19,5	0.630÷0.768	5,0	0.197
		13	2,41	0.095	17,4	0.685	4	<b>K5PS-4</b>	16,5÷20,0	0.650÷0.787	5,0	0.197
		14	2,11	0.083	18,0	0.709	5	<b>K5PS-5</b>	17,3÷20,8	0.681÷0.819	6,0	0.236
		15	1,83	0.072	18,5	0.728	5/A	<b>K5PS-5/A</b>	17,8÷21,3	0.701÷0.839	6,0	0.236
		16-17	1,65-1,47	0.065-0.058	8,9	0.744	6	<b>K5PS-6</b>	18,3÷21,8	0.720÷0.858	6,0	0.236
		18	1,24	0.049	19,6	0.772	7	<b>K5PS-7</b>	19,0÷22,5	0.748÷0.886	6,0	0.236
		20	0,89	0.035	20,4	0.803	7/A	<b>K5PS-7/A</b>	19,5÷23,5	0.768÷0.925	6,0	0.236
		22	0,71	0.028	20,8	0.819	8	<b>K5PS-8</b>	20,0÷23,5	0.787÷0.925	6,0	0.236
1"	25,4	8	4,19	0.165	17,0	0.669	4	<b>K5PS-4</b>	16,5÷20,0	0.650÷0.787	5,0	0.197
		9	3,76	0.148	17,9	0.705	5	<b>K5PS-5</b>	17,3÷20,8	0.681÷0.819	6,0	0.236
		10	3,40	0.134	18,6	0.732	5/A	<b>K5PS-5/A</b>	17,8÷21,3	0.701÷0.839	6,0	0.236
		11	3,05	0.120	19,3	0.760	6	<b>K5PS-6</b>	18,3÷21,8	0.720÷0.858	6,0	0.236
		12	2,77	0.109	19,8	0.780	7	<b>K5PS-7</b>	19,0÷22,5	0.748÷0.886	6,0	0.236
		12	2,77	0.109	19,8	0.780	7/A	<b>K5PS-7/A</b>	19,5÷23,5	0.768÷0.925	6,0	0.236
		13	2,41	0.095	20,6	0.811	8	<b>K5PS-8</b>	20,0÷23,5	0.787÷0.925	6,0	0.236
		14	2,11	0.083	21,2	0.835	8/A	<b>K5PS-8/A</b>	20,5÷24,0	0.807÷0.945	6,0	0.236
		15	1,83	0.072	21,7	0.854	9	<b>K5PS-9</b>	21,0÷24,5	0.827÷0.965	6,0	0.236
		16	1,65	0.065	22,1	0.870	9/A	<b>K5PS-9/A</b>	21,5÷25,0	0.846÷0.984	6,0	0.236
		17-18	1,47-1,24	0.058-0.049	22,5	0.886	10	<b>K5PS-10</b>	22,0÷25,5	0.866÷1.004	6,0	0.236
		20÷22	0,89÷0,71	0.035÷0.028	23,6	0.929	11	<b>K5PS-11</b>	23,0÷26,5	0.906÷1.043	6,0	0.236

The table is just an introduction to the selection of tools available. For more details, please refer to the documentation supplied with the device.

Cone reduction coupling	Cutter reduction coupling	Cone (tie-rod)		Thrust collar	
<b>K5RC</b>	<b>K5RT</b>	<b>K5S</b>	<b>Max. pressure</b>		<b>K5TDB</b>
Cod.	Cod.	Cod.	bar	psi	Cod.
K5RC-1-2	K5RT-3-4	K5S 017-00	80	1160	K5TDB-18
K5RC-5-6	K5RT-5-6	K5S 00/A-02/A	105	1520	
K5RC-9-10	K5RT-9-10	K5S 03-4	200	2900	
K5RC-5-6	K5RT-5-6	K5S 00/A-02/A	105	1520	K5TDB-21
K5RC-9-10	K5RT-9-10	K5S 03-4	200	2900	
K5RC-9-10	K5RT-9-10	K5S 03-4	200	2900	
-	K5RT-11-12	K5S 5-10	350	5100	K5TDB-25
K5RC-9-10	K5RT-9-10	K5S 03-4	200	2900	
-	K5RT-11-12	K5S 5-10	350	5100	K5TDB-28
-	K5RT-13-14	K5S 11-14	350	5100	



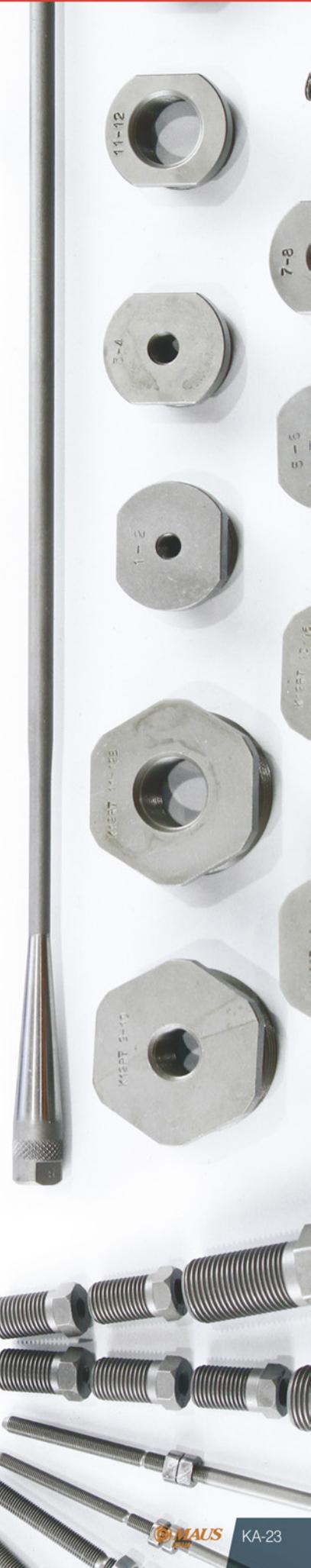
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## Kattex Fix 6

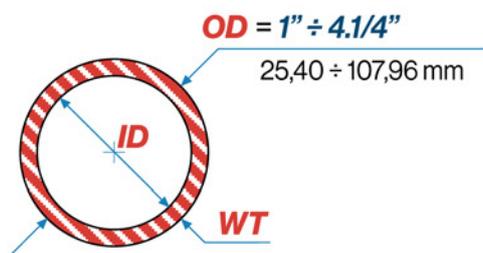
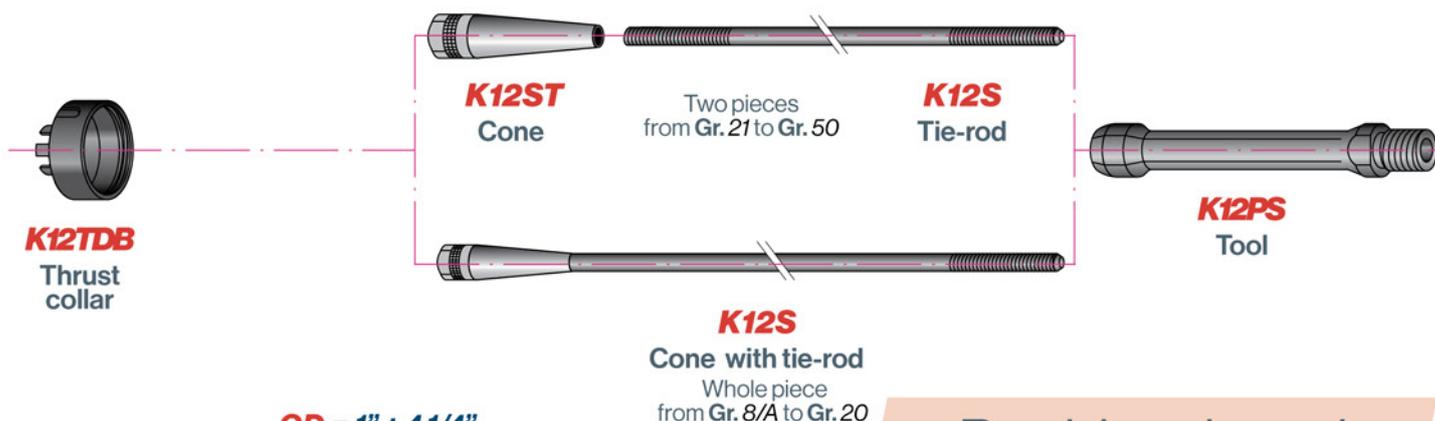
Tube dimensions							Gr.	Locking tool				
inches	OD		WT		ID		N.	K5PS Cod.	Expansion		Useful length	
	mm	B.W.G.	mm	inches	mm	inches			mm	inches	mm	inches
1.1/8"	28,57	8	4,19	0.165	202	0.795	7	<b>K5PS-7</b>	19,0÷22,5	0.748÷0.886	6,0	0.236
		8	4,19	0.165	202	0.795	7/A	<b>K5PS-7/A</b>	19,5÷23,5	0.768÷0.925	6,0	0.236
		9	3,76	0.148	212	0.835	8	<b>K5PS-8</b>	20,0÷23,5	0.787÷0.925	6,0	0.236
		9	3,76	0.148	212	0.835	8/A	<b>K5PS-8/A</b>	20,5÷24,0	0.807÷0.945	6,0	0.236
		10	3,40	0.134	217	0.854	9	<b>K5PS-9</b>	21,0÷24,5	0.827÷0.965	6,0	0.236
		11	3,05	0.120	224	0.882	9/A	<b>K5PS-9/A</b>	21,5÷25,0	0.846÷0.984	6,0	0.236
		12	2,77	0.109	230	0.906	10	<b>K5PS-10</b>	22,0÷25,5	0.866÷1.004	6,0	0.236
		13-14	2,41-2,11	0.095-0.083	237	0.933	11	<b>K5PS-11</b>	23,0÷26,5	0.906÷1.043	6,0	0.236
		15-16	1,83-1,65	0.072-0.065	249	0.980	12	<b>K5PS-12</b>	24,0÷27,5	0.945÷1.083	6,0	0.236
		18	1,24	0.049	261	1.028	12/A	<b>K5PS-12/A</b>	25,0÷28,5	0.984÷1.122	6,0	0.236
1.1/4"	31,75	8	4,19	0.165	234	0.921	10	<b>K5PS-10</b>	22,0÷25,5	0.866÷1.004	6,0	0.236
		9	3,76	0.148	242	0.953	11	<b>K5PS-11</b>	23,0÷26,5	0.906÷1.043	6,0	0.236
		10-11	3,40-3,05	0.134-0.120	249	0.980	12	<b>K5PS-12</b>	24,0÷27,5	0.945÷1.083	6,0	0.236
		12	2,77	0.109	262	1.031	12/A	<b>K5PS-12/A</b>	25,0÷28,5	0.984÷1.122	6,0	0.236
		13-14	2,41-2,11	0.095-0.083	269	1.059	13	<b>K5PS-13</b>	26,0÷29,5	1.024÷1.161	6,0	0.236
		15÷18	1,83÷1,24	0.072÷0.049	281	1.106	13/A	<b>K5PS-13/A</b>	27,0÷30,5	1.063÷1.201	6,0	0.236
1.3/8"	34,92	8	4,19	0.165	265	1.043	12/A	<b>K5PS-12/A</b>	25,0÷28,5	0.984÷1.122	6,0	0.236
		9	3,76	0.148	274	1.079	13	<b>K5PS-13</b>	26,0÷29,5	1.024÷1.161	6,0	0.236
		10	3,40	0.134	281	1.106	13/A	<b>K5PS-13/A</b>	27,0÷30,5	1.063÷1.201	6,0	0.236
		11-12	3,05-2,77	0.120-0.109	288	1.134	14	<b>K5PS-14</b>	28,0÷31,5	1.102÷1.240	6,0	0.236
		13-14	2,41-2,11	0.095-0.083	303	1.193	14/A	<b>K5PS-14/A</b>	29,0÷32,5	1.142÷1.280	6,0	0.236
		15-16	1,83-1,65	0.072÷0.065	312	1.228	15	<b>K5PS-15</b>	30,0÷33,5	1.181÷1.319	6,0	0.236
1.1/2"	38,10	8-9	4,19-3,76	0.165-0.148	297	1.169	14/A	<b>K5PS-14/A</b>	29,0÷32,5	1.142÷1.280	6,0	0.236
		10	3,40	0.134	312	1.228	15	<b>K5PS-15</b>	30,0÷33,5	1.181÷1.319	6,0	0.236
		11-12	3,05-2,77	0.120-0.109	320	1.260	15/A	<b>K5PS-15/A</b>	31,0÷34,5	1.220÷1.358	6,0	0.236
		13-14	2,41-2,11	0.095-0.083	333	1.311	16	<b>K5PS-16</b>	32,0÷35,5	1.260÷1.398	6,0	0.236
		15÷20	1,83-0,89	0.072÷0.035	343	1.350	16/A	<b>K5PS-16/A</b>	33,5÷37,0	1.319÷1.457	6,0	0.236

The table is just an introduction to the selection of tools available. For more details, please refer to the documentation supplied with the device.



Cone reduction coupling <b>K5RC</b> Cod.	Cutter reduction coupling <b>K5RT</b> Cod.	Cone (tie-rod) <b>K5S</b> Cod.	Max. pressure		Thrust collar <b>K5TDB</b> Cod.
			bar	psi	
-	K5RT-11-12	K5S-5-10	350	5100	K5TDB-31
-	K5RT-13-14	K5S-11-14	350	5100	
-	K5RT-11-12	K5S-5-10	350	5100	
-	K5RT-13-14	K5S-11-14	350	5100	K5TDB-34
-	K5RT-13-14	K5S-11-14	350	5100	K5TDB-37
-	-	K5S-14/A-16/A	350	5100	
-	-	K5S-14/A-16/A	350	5100	K5TDB-41

# Tool assembly diagram for tube locking



## Kattex Fix12

Rapid and precise

High repeatability  
thanks to controlled  
expansion time

Tube dimensions							Gr.	Locking tool				
inches	OD		WT		ID		N.	K12PS Cod.	Expansion		Useful length	
	mm	B.W.G.	mm	inches	mm	inches			mm	inches	mm	inches
1"	25,40	14	2,11	0.083	21,2	0.835	8/A	<b>K12PS-8/A</b>	20,5÷25,7	0.807÷1.012	6,0	0.236
		16	1,65	0.065	22,1	0.870	9	<b>K12PS-9</b>	21,0÷26,2	0.827÷1.031	6,0	0.236
		17	1,47	0.058	22,4	0.882	9/A	<b>K12PS-9/A</b>	21,5÷26,7	0.846÷1.051	6,0	0.236
1.1/8"	28,57	12	2,77	0.109	23,0	0.905	10	<b>K12PS-10</b>	22,0÷27,2	0.866÷1.071	6,0	0.236
		14	2,11	0.083	24,3	0.957	11	<b>K12PS-11</b>	23,0÷28,2	0.905÷1.110	6,0	0.236
		16	1,65	0.065	25,3	0.996	12	<b>K12PS-12</b>	24,0÷29,2	0.945÷1.149	6,0	0.236
1.1/4"	31,75	12	2,77	0.109	26,2	1.031	12/A	<b>K12PS-12/A</b>	25,0÷30,2	0.984÷1.189	6,0	0.236
		14	2,11	0.083	27,5	1.083	13	<b>K12PS-13</b>	26,0÷31,2	1.024÷1.228	6,0	0.236
		16	1,65	0.065	28,5	1.122	13/A	<b>K12PS-13/A</b>	27,0÷32,2	1.063÷1.268	6,0	0.236
1.3/8"	34,92	12	2,77	0.109	29,4	1.157	14	<b>K12PS-14</b>	28,0÷33,2	1.102÷1.307	6,0	0.236
		14	2,11	0.083	30,7	1.208	14/A	<b>K12PS-14/A</b>	29,0÷34,2	1.142÷1.346	6,0	0.236
		16	1,65	0.065	31,6	1.244	15	<b>K12PS-15</b>	30,0÷35,2	1.181÷1.386	6,0	0.236
1.1/2"	38,10	12	2,77	0.109	32,5	1.279	15/A	<b>K12PS-15/A</b>	31,0÷36,2	1.220÷1.425	6,0	0.236
		14	2,11	0.083	33,9	1.335	16	<b>K12PS-16</b>	32,0÷37,2	1.260÷1.464	6,0	0.236
		16	1,65	0.065	34,8	1.370	16/A	<b>K12PS-16/A</b>	33,5÷38,7	1.319÷1.524	6,0	0.236
		18	1,24	0.049	35,6	1.401	17	<b>K12PS-17</b>	34,5÷39,7	1.358÷1.563	6,0	0.236

The table is just an introduction to the selection of tools available. For more details, please refer to the documentation supplied with the device.

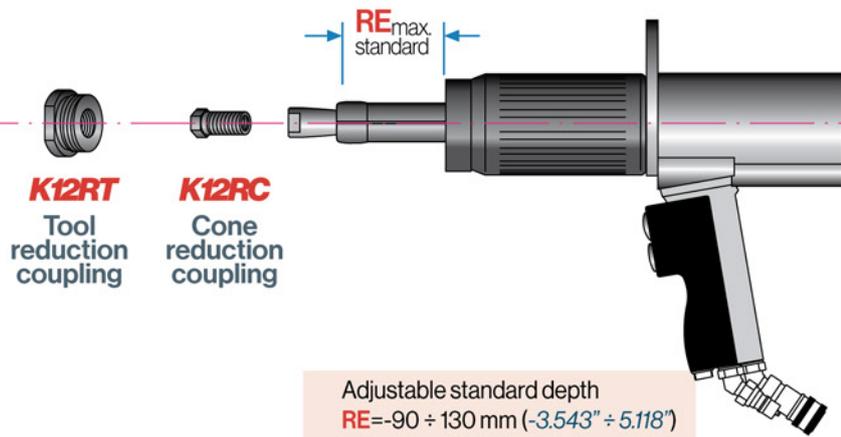


# Pre-weld tack expansion

## KattexFix 12

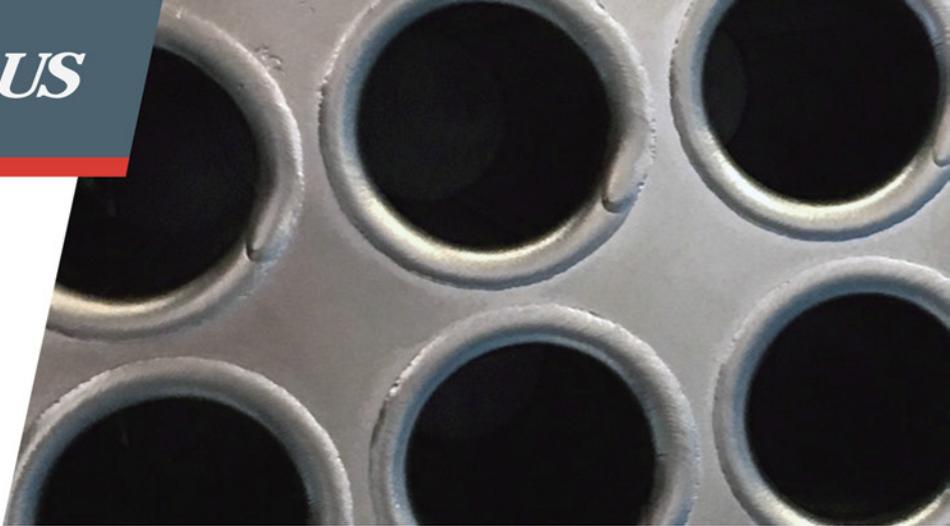
Instant hydraulic tube locker for tubes with **OD** from **1"** (25,40 mm) up to **4.1/4"** (107,95 mm).

Tube locking does not usually require extensions. Special cases will be considered by MAUS ITALIA technical staff for customised construction



Cone reduction coupling	Cutter reduction coupling	Cone (tie-rod)		Cone	Thrust collar	
<b>K12RC</b>	<b>K12RT</b>	<b>K12S</b>	Max. pressure		<b>K12ST</b>	<b>K12TDB</b>
Cod.	Cod.	Cod.	bar	psi	Cod.	Cod.
K12RC-11-12/B	K12RT-11-12/B	K12S-8/A-10	240	3480	-	K12TDB-28
K12RC-11-12/B	K12RT-11-12/B	K12S-8/A-10	240	3480	-	K12TDB-31
K12RC-13-16	K12RT-13-16	K12S-11-14	320	4641	-	K12TDB-34
K12RC-13-16	K12RT-13-16	K12S-11-14	320	4641	-	K12TDB-37
-	K12RT-17-20	KS12-14/A-16/A	350	5076	-	K12TDB-42
-	K12RT-17-20	KS12-14/A-16/A	350	5076	-	
	K12RT-21-22	KS12-17-20	350	5076		

Continue



## Kattex Fix 12

Tube dimensions							Gr.	Locking tool				
inches	OD		WT		ID		N.	K12PS Cod.	Expansion		Useful length	
	mm	B.W.G.	mm	inches	mm	inches			mm	inches	mm	inches
1"	25,40	14	2,11	0.083	21,2	0.835	8/A	<b>K12PS-8/A</b>	20,5÷25,7	0.807÷1.012	6,0	0.236
		16	1,65	0.065	22,1	0.870	9	<b>K12PS-9</b>	21,0÷26,2	0.827÷1.031	6,0	0.236
		17	1,47	0.058	22,4	0.882	9/A	<b>K12PS-9/A</b>	21,5÷26,7	0.846÷1.051	6,0	0.236
1.1/8"	28,57	12	2,77	0.109	23,0	0.905	10	<b>K12PS-10</b>	22,0÷27,2	0.866÷1.071	6,0	0.236
		14	2,11	0.083	24,3	0.957	11	<b>K12PS-11</b>	23,0÷28,2	0.905÷1.110	6,0	0.236
		16	1,65	0.065	25,3	0.996	12	<b>K12PS-12</b>	24,0÷29,2	0.945÷1.149	6,0	0.236
1.1/4"	31,75	12	2,77	0.109	26,2	1.031	12/A	<b>K12PS-12/A</b>	25,0÷30,2	0.984÷1.189	6,0	0.236
		14	2,11	0.083	27,5	1.083	13	<b>K12PS-13</b>	26,0÷31,2	1.024÷1.228	6,0	0.236
		16	1,65	0.065	28,5	1.122	13/A	<b>K12PS-13/A</b>	27,0÷32,2	1.063÷1.268	6,0	0.236
1.3/8"	34,92	12	2,77	0.109	29,4	1.157	14	<b>K12PS-14</b>	28,0÷33,2	1.102÷1.307	6,0	0.236
		14	2,11	0.083	30,7	1.208	14/A	<b>K12PS-14/A</b>	29,0÷34,2	1.142÷1.346	6,0	0.236
		16	1,65	0.065	31,6	1.244	15	<b>K12PS-15</b>	30,0÷35,2	1.181÷1.386	6,0	0.236
1.1/2"	38,10	12	2,77	0.109	32,5	1.279	15/A	<b>K12PS-15/A</b>	31,0÷36,2	1.220÷1.425	6,0	0.236
		14	2,11	0.083	33,9	1.335	16	<b>K12PS-16</b>	32,0÷37,2	1.260÷1.464	6,0	0.236
		16	1,65	0.065	34,8	1.370	16/A	<b>K12PS-16/A</b>	33,5÷38,7	1.319÷1.524	6,0	0.236
		18	1,24	0.049	35,6	1.401	17	<b>K12PS-17</b>	34,5÷39,7	1.358÷1.563	6,0	0.236
1.3/4"	44,45	10	3,40	0.134	37,6	1.480	18	<b>K12PS-18</b>	36,0÷41,2	1.417÷1.622	6,0	0.236
		12	2,77	0.109	38,8	1.527	18/A	<b>K12PS-18/A</b>	37,0÷42,2	1.456÷1.661	6,0	0.236
		13	2,41	0.095	39,6	1.559	19	<b>K12PS-19</b>	38,0÷43,2	1.496÷1.701	6,0	0.236
		14	2,11	0.083	40,2	1.583	19/A	<b>K12PS-19/A</b>	39,0÷44,2	1.535÷1.740	6,0	0.236
2"	50,80	8	4,19	0.165	42,4	1.669	20	<b>K12PS-20</b>	40,0÷45,2	1.575÷1.779	6,0	0.236
		10	3,40	0.134	44,0	1.732	21	<b>K12PS-21</b>	42,0÷47,2	1.653÷1.858	6,0	0.236
		14	2,11	0.083	46,6	1.834	22	<b>K12PS-22</b>	44,0÷49,2	1.732÷1.937	6,0	0.236
		16	1,65	0.065	47,5	1.870	23	<b>K12PS-23</b>	46,0÷51,2	1.811÷2.016	6,0	0.236
2.1/4"	57,15	10	3,40	0.134	50,4	1.984	24	<b>K12PS-24</b>	48,0÷53,2	1.890÷2.094	6,0	0.236
		12	2,77	0.109	51,6	2.031	25	<b>K12PS-25</b>	50,0÷55,2	1.968÷2.173	6,0	0.236
		14	2,11	0.083	53,0	2.086	26	<b>K12PS-26</b>	52,0÷57,2	2.047÷2.252	6,0	0.236
2.1/2"	63,50	10	3,40	0.134	56,7	2.232	27	<b>K12PS-27</b>	54,0÷59,2	2.126÷2.331	7,0	0.276
		12	2,77	0.109	57,9	2.279	28	<b>K12PS-28</b>	56,0÷61,2	2.205÷2.409	7,0	0.276
		14	2,11	0.083	59,3	2.334	29	<b>K12PS-29</b>	58,0÷63,2	2.283÷2.488	7,0	0.276
2.3/4"	69,85	10	3,40	0.134	63,0	2.480	30	<b>K12PS-30</b>	60,0÷65,2	2.362÷2.567	7,0	0.276
		12	2,77	0.109	64,2	2.527	31	<b>K12PS-31</b>	62,0÷67,2	2.441÷2.645	7,0	0.276
		14	2,11	0.083	65,6	2.583	32	<b>K12PS-32</b>	64,0÷69,2	2.520÷2.724	7,0	0.276
3"	76,20	8	4,19	0.165	67,8	2.669	33	<b>K12PS-33</b>	66,0÷71,2	2.598÷2.803	7,0	0.276
		12	2,77	0.109	70,6	2.779	34	<b>K12PS-34</b>	68,0÷73,2	2.677÷2.882	7,0	0.276
		14	2,11	0.083	72,0	2.834	35	<b>K12PS-35</b>	70,0÷75,2	2.756÷2.961	7,0	0.276

The table is just an introduction to the selection of tools available. For more details, please refer to the documentation supplied with the device.

Cone reduction coupling	Cutter reduction coupling	Cone (tie-rod)	Max. pressure		Cone	Thrust collar
<b>K12RC</b>	<b>K12RT</b>	<b>K12S</b>	bar	psi	<b>K12ST</b>	<b>K12TDB</b>
Cod.	Cod.	Cod.			Cod.	Cod.
K12RC-11-12/B	K12RT-11-12/B	K12S-8/A-10	240	3480	-	K12TDB-28
K12RC-11-12/B	K12RT-11-12/B	K12S-8/A-10	240	3480	-	K12TDB-31
K12RC-13-16	K12RT-13-16	K12S-11-14	320	4641	-	K12TDB-34
K12RC-13-16	K12RT-13-16	K12S-11-14	320	4641	-	K12TDB-37
-	K12RT-17-20	K12S-14/A-16/A	350	5076	-	K12TDB-42
-	K12RT-17-20	K12S-14/A-16/A	350	5076	-	K12TDB-48
-	K12RT-21-22	K12S-17-20	350	5076	-	K12TDB-54
-	K12RT-21-22	K12S-17-20	350	5076	-	K12TDB-61
-	K12RT-23-26	K12S-25-54	350	5076	K12ST-21-26	K12TDB-68
-	K12RT-23-26	K12S-25-54	350	5076	K12ST-21-26	K12TDB-75
-	-	K12S-25-54	350	5076	K12ST-27-50	K12TDB-81
-	-	K12S-25-54	350	5076	K12ST-27-50	K12TDB-81
-	-	K12S-25-54	350	5076	K12ST-27-50	K12TDB-81

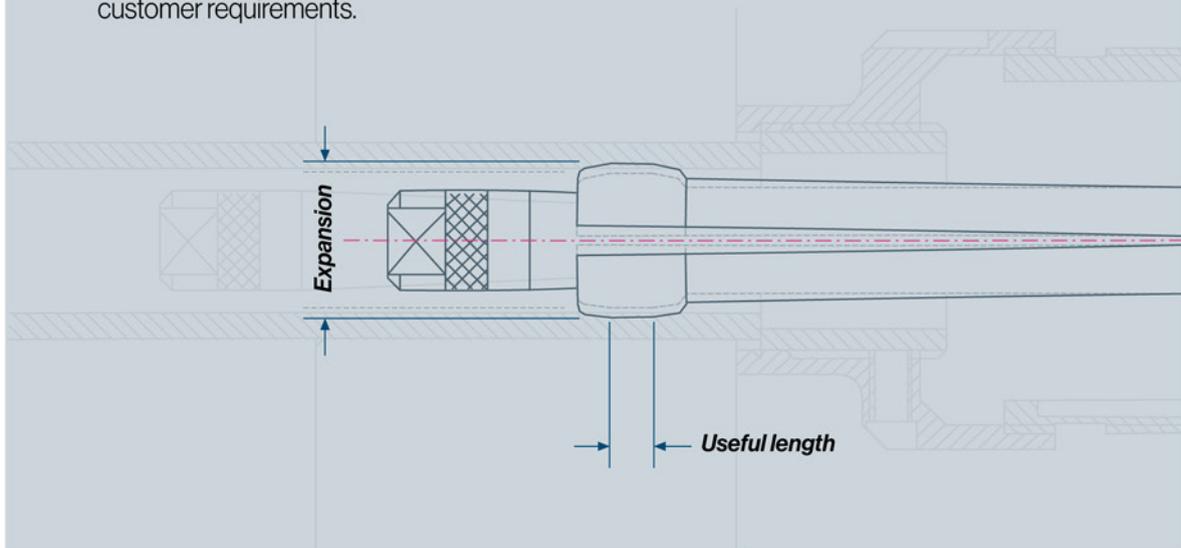
Continue



## Tool **K5PS** and **K12PS**

The MAUS ITALIA technical staff have designed for each size **Gr.** the ideal shape and **length** of the tool to ensure **optimal surface contact during expansion (tack expansion)** inside the tube.

MAUS ITALIA can supply tools which are completely customised according to customer requirements.



## Kattex**Fix12**

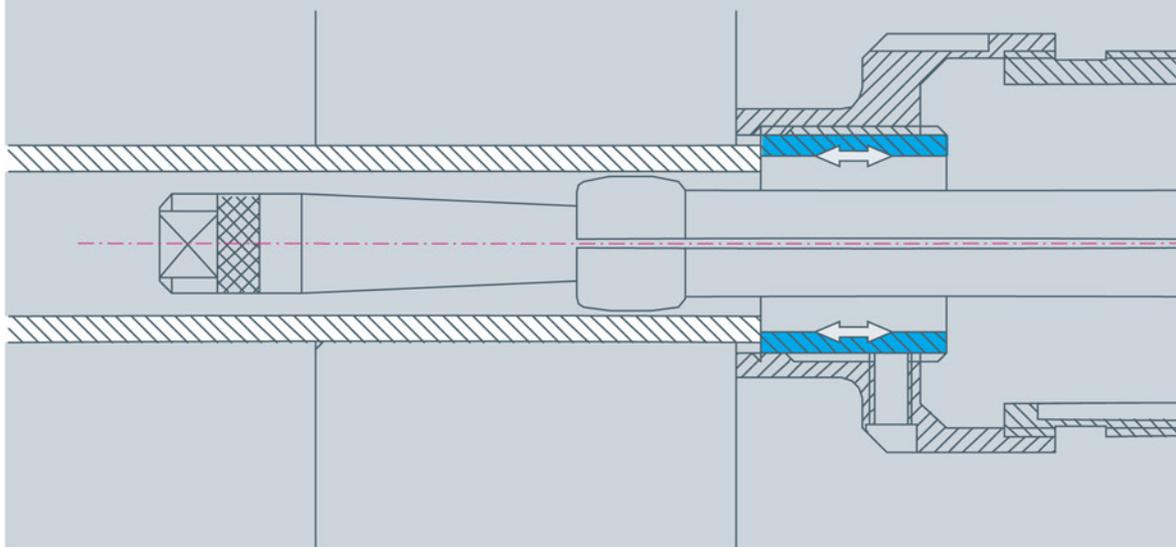
Tube dimensions							Gr.	Locking tool				
inches	OD		WT		ID		N.	<b>K12PS</b> Cod.	Expansion		Useful length	
	mm	B.W.G.	mm	inches	mm	inches			mm	inches	mm	inches
<b>3.1/4"</b>	82,55	8	4,19	0,165	74,2	2,921	36	<b>K12PS-36</b>	72,0÷77,2	2,834÷3,039	7,0	0,276
		10	3,40	0,134	75,8	2,984	37	<b>K12PS-37</b>	74,0÷79,2	2,913÷3,118	7,0	0,276
		12	2,77	0,109	77,0	3,031	38	<b>K12PS-38</b>	76,0÷81,2	2,992÷3,197	7,0	0,276
<b>3.1/2"</b>	88,90	8	4,19	0,165	80,5	3,169	39	<b>K12PS-39</b>	78,0÷83,2	3,071÷3,275	7,0	0,276
		10	3,40	0,134	82,1	3,232	40	<b>K12PS-40</b>	80,0÷85,2	3,149÷3,354	7,0	0,276
		12	2,77	0,109	83,3	3,279	41	<b>K12PS-41</b>	82,0÷87,2	3,228÷3,433	7,0	0,276
<b>3.3/4"</b>	95,25	8	4,19	0,165	86,8	3,417	42	<b>K12PS-42</b>	84,0÷89,2	3,307÷3,512	7,0	0,276
		10	3,40	0,134	88,4	3,480	43	<b>K12PS-43</b>	86,0÷91,2	3,386÷3,590	7,0	0,276
		12	2,77	0,109	89,6	3,527	44	<b>K12PS-44</b>	88,0÷93,2	3,464÷3,669	7,0	0,276
<b>4"</b>	101,60	8	4,19	0,165	93,2	3,669	45	<b>K12PS-45</b>	90,0÷95,2	3,543÷3,748	7,0	0,276
		10	3,40	0,134	94,8	3,732	46	<b>K12PS-46</b>	92,0÷97,2	3,622÷3,827	7,0	0,276
		12	2,77	0,109	96,0	3,778	47	<b>K12PS-47</b>	94,0÷99,2	3,701÷3,905	7,0	0,276
<b>4.1/4"</b>	107,95	8	4,19	0,165	99,6	3,921	48	<b>K12PS-48</b>	96,0÷101,2	3,779÷3,984	7,0	0,276
		10	3,40	0,134	101,2	3,984	49	<b>K12PS-49</b>	98,0÷103,2	3,858÷4,063	7,0	0,276
		12	2,77	0,109	102,4	4,031	50	<b>K12PS-50</b>	100,0÷105,2	3,937÷4,142	7,0	0,276

The table is just an introduction to the selection of tools available. For more details, please refer to the documentation supplied with the device.

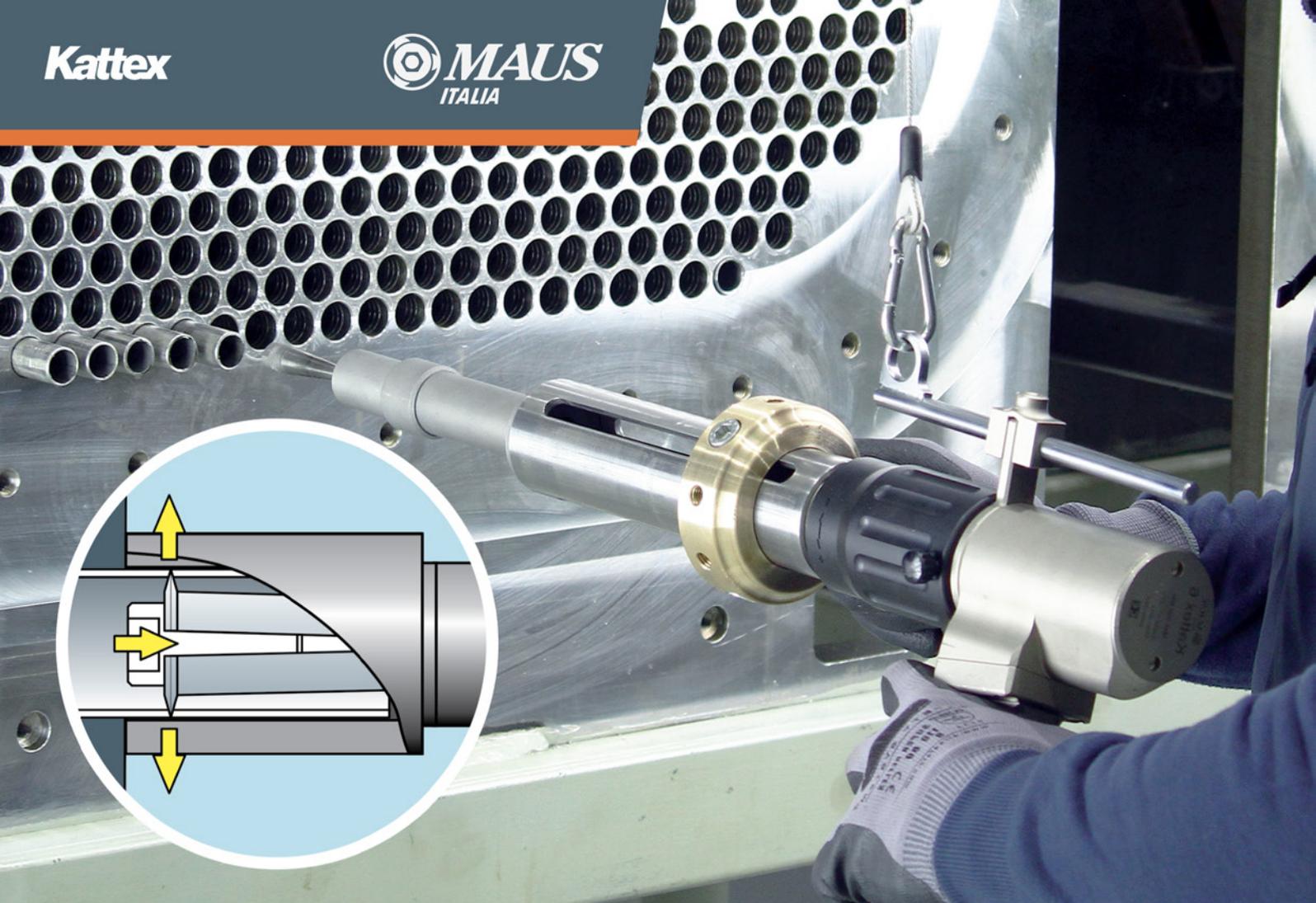
## Driving head **K5TDB** and **K12TDB**

The thrust collar in contact with the surface of the tubesheet defines the expansion depth.

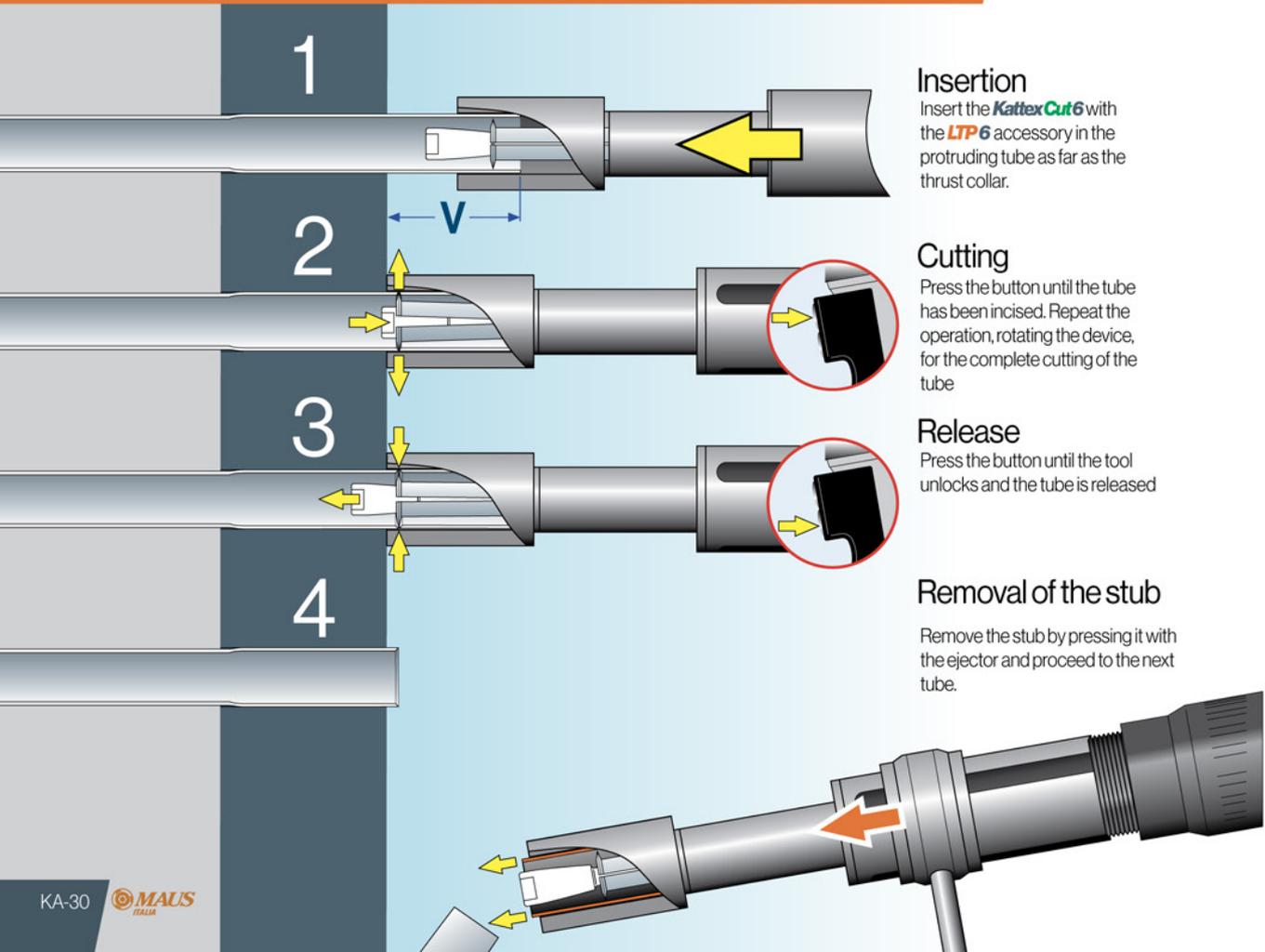
An **internal ring-nut** establishes and maintains the correct protrusion of the tube during locking with the **KattexFix**

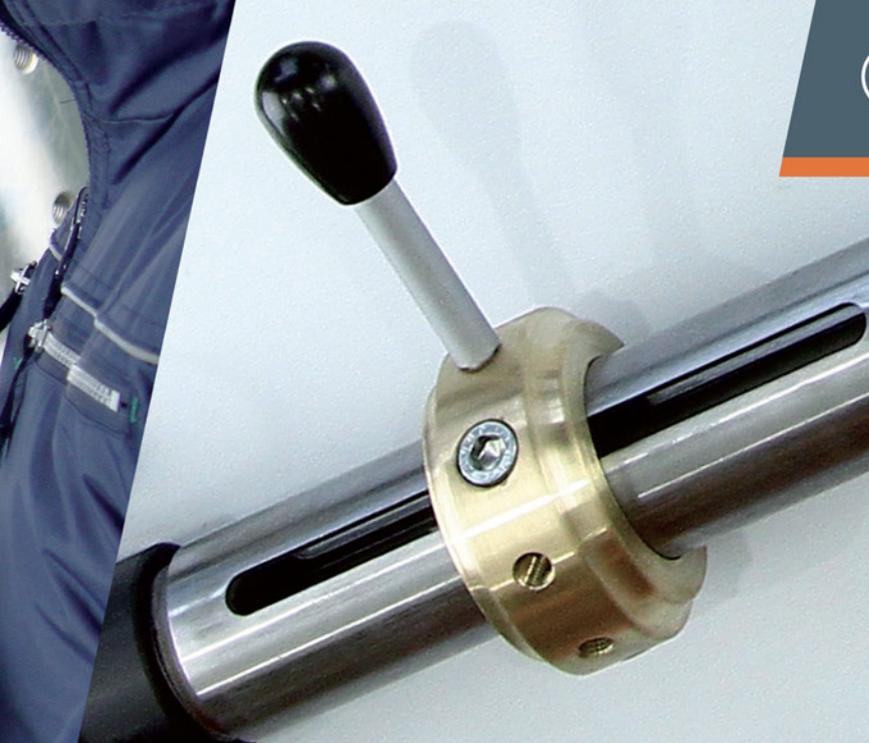


Cone reduction coupling	Cutter reduction coupling	Cone (tie-rod)	Max. pressure		Cone	Thrust collar
<b>K12RC</b>	<b>K12RT</b>	<b>K12S</b>	bar	psi	<b>K12ST</b>	<b>K12TDB</b>
Cod.	Cod.	Cod.			Cod.	Cod.
-	-	K12S-25-54	350	5076	K12ST-27-50	K12TDB-87
-	-	K12S-25-54	350	5076	K12ST-27-50	K12TDB-93
-	-	K12S-25-54	350	5076	K12ST-27-50	K12TDB-100
-	-	K12S-25-54	350	5076	K12ST-27-50	K12TDB-106
-	-	K12S-25-54	350	5076	K12ST-27-50	K12TDB-112



## Work procedure





**LTP6**

**Optional**  
accessory for the  
**KattexCut6**  
for the removal of  
surplus tube with a  
protrusion "V"  
up to 150 mm (≈6").



Tube protrusion

*Ensures the removal of the protruding tube as a whole, speeding up end-facing with a consequent reduction in wear of the tools.*



**LTP6**

For tubes with an external diameter **OD**  
from 12,7 to 38,1 mm (1/2"÷1 1/2")

**LTP6/90**

Protrusion "V" up to 90 mm (≈3.5")

**LTP6/150**

Protrusion "V" up to 150 mm (≈6")

*Indicated for applications on systems where limited access to the tube does not permit traditional external cutting*



# TP2E

## Electric hydraulic power unit.

The **TP2E** electric hydraulic power unit is a lightweight and economic piece of equipment, designed and manufactured by MAUS ITALIA to power hydraulic **Kattex** devices.

Male 1/4" quick coupling

Solenoid valve

Distribution unit

Female 1/4" quick coupling



Multipole connection cable

Emergency stop button

Pump switch

Electric motor

Oil pressure manometer

Oil level indicator

Oil tank cap

Electric power cable



Maximum work pressure regulation valve

### Power supply

		TP2E
Voltage	V-ph	400-3
Frequency	Hz	50/60
Installed power	kW	1,1
Voltage for commands	V	24

### Dimensions

Length (depth)	mm	<i>inches</i>	370	14.5
Width	mm	<i>inches</i>	280	11.0
Height	mm	<i>inches</i>	650	25.6
Weight (No-oil)	kg	<i>lbs</i>	33	73
Weight (full load - oil)	kg	<i>lbs</i>	40	88
Noise level	dB		<70 (A)	
Level of protection	IP		55	
Colours	RAL		7035-9005	

### Work capacity

Max oil flow rate	l/min	<i>USgpm</i>	1,8	0.47
Min pressure	bar	<i>psi</i>	40	580
Max pressure	bar	<i>psi</i>	320	4641
Tank capacity	l	<i>USGal</i>	8	2.1
Hydraulic oil	ISO		H46	

# Automatic cycle

## TP2EQ2

Electric hydraulic power unit with **work cycle control** for **KattexFix**

Controlled expansion times



An evolution of the **TP2E** entry level model, the **TP2EQ2** has been designed and manufactured by MAUS ITALIA to power **KattexFix** devices where sensitivity and control in the locking of tubes (tack expansion) is fundamental.

An adjustable timer allows you to set the **two expansion control times** (**T<sub>1</sub>** expansion+permanence and **T<sub>2</sub>** return time) to guarantee the **sure repetition of the "T" work cycle** with a significant increase in efficiency

For all components for the **TP2EQ2**, please refer to the configuration alongside **TP2E**

### TP2EQ2

400-3

50/60

1,1

24

520 20.4

330 12.9

815 32.0

47 103

61 134

<70 (A)

55

7035-9005

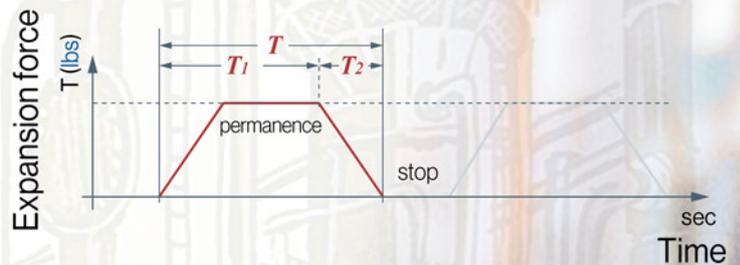
18 0.47

40 580

320 4641

16 4.2

H46



# TP2P

## Pneumatic hydraulic power unit

The **TP2P** hydraulic power unit is a lightweight and economic piece of equipment, designed and manufactured by MAUS ITALIA to power hydraulic **Kattex** devices in the machining for the internal cutting of tubes.

Comes supplied with a foot-controlled pneumatic remote control for controlling the loading/return of oil during use.

Male 1/4" quick coupling

Pneumatic valve

Work pressure regulation valve

Maximum pressure valve

Pneumatic motor

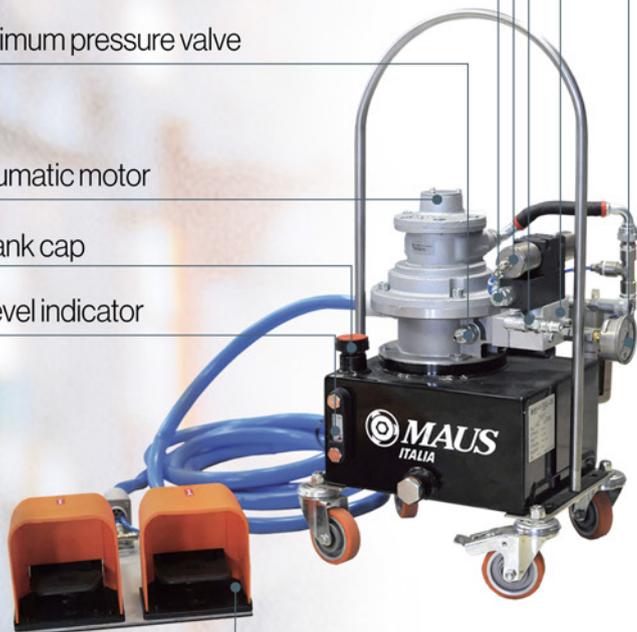
Oil tank cap

Oil level indicator

Pneumatic footboard

Distribution unit

Oil pressure manometer



## TP2P

Power supply			TP2P	
Pressure	bar	psi	5-7	72-101
Absorbed power	kW		3	
Air consumption	l/min	USgpm	3000	792
Dimensions				
Length (depth)	A mm	inches	370	14.6
Width	B mm	inches	280	11.0
Height	C mm	inches	650	25.6
Weight (No-oil)	kg	lbs	36	79.3
Weight (full load - oil)	kg	lbs	43	94.7
Noise level	dB		87 (A)	
Colours	RAL		9005	
Work capacity				
Max oil flow rate	l/min	USgpm	1,8	0,47
Min pressure	bar	psi	40	580
Max pressure	bar	psi	290	4205
Tank capacity	l	USGal	8	2,1
Hydraulic oil	ISO		H46	





**Multiuse device**

**Electric**

**Pneumatic**



**OD**  
12,7 ÷ 38,1 mm  
(1/2" ÷ 1 1/2")

**OD**  
25,4 ÷ 63,5 mm  
(1" ÷ 2 1/2")

**OD**  
12,7 ÷ 38,1 mm  
(1/2" ÷ 1 1/2")

**OD**  
25,4 ÷ 63,5 mm  
(1" ÷ 2 1/2")

**Kattex6E**  
Electric

**Kattex12E**  
Electric

**Kattex6P**  
Pneumatic

**Kattex12P**  
Pneumatic

**KattexCut6E**



**KattexCut12E**



**KattexCut6P**



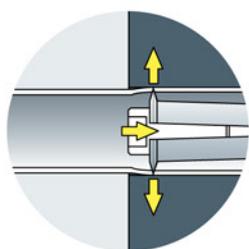
**KattexCut12P**



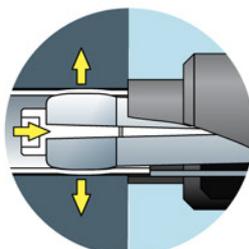
**KattexFix6E**



**KattexFix12E**



Incision / cutting



Locking

Power supply			Support		Other power supplies	
Electric		Pneumatic				
						
<b>TP2E</b> Electric	<b>TP2EQ2</b> Electric+Timer	<b>TP2P</b> Pneumatic	<b>TPB1</b> Balancer	<b>TPB2</b> Balancer	<b>TP10E</b> Electric	<b>TP10P</b> Pneumatic
✓	✓	✗	✓	✗	✓	✗
✓	✓	✗	✗	✓	✓	✗
✗	✗	✓	✓	✗	✗	✓
✗	✗	✓	✗	✓	✗	✓
✓	✓	✗	✓	✗	✓	✗
✓	✓	✗	✗	✓	✓	✗



Recommended



Possible

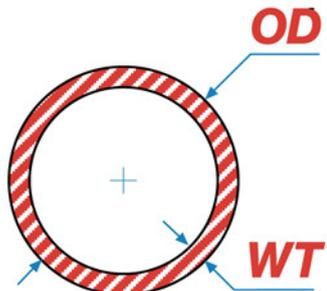


Not possible

Please refer to the relevant prospectus

# BWG

OD " mm	00 BWG		0 BWG		1 BWG		2 BWG		3 BWG		4 BWG		5 BWG		6 BWG		7 BWG		8 BWG		9 BWG		10 BWG		11 BWG			
	"	mm	"	mm	"	mm	"	mm	"	mm	"	mm	"	mm	"	mm	"	mm	"	mm	"	mm	"	mm	"	mm		
<b>WT</b> →	0.380	9,65	0.340	8,64	0.300	7,62	0.284	7,21	0.259	6,58	0.238	6,05	0.220	5,59	0.203	5,16	0.180	4,57	0.165	4,19	0.148	3,76	0.134	3,40	0.120	3,05		
1/4" (6,3)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3/8" (9,5)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1/2" (12,7)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5/8" (15,9)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3/4" (19,0)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.482	12,2	0.510	12,9	-	-
7/8" (22,2)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.607	15,4	0.635	16,1	-	-
1" (25,4)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.670	17,0	0.704	17,9	0.732	18,6	0.760	19,3	-	-	-	-
1.1/4" (31,8)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.890	22,6	0.920	23,4	0.954	24,3	0.982	25,0	1.010	25,7	-	-
1.1/2" (38,1)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.140	28,9	1.170	29,7	1.204	30,6	1.232	31,3	1.260	32,0	-	-
1.3/4" (44,4)	-	-	-	-	-	-	-	-	-	-	1.310	33,2	1.344	34,1	1.390	35,2	1.420	36,0	1.454	36,9	1.482	37,6	1.510	38,3	-	-	-	-
2" (50,8)	-	-	-	-	-	-	-	-	-	-	1.524	38,7	1.560	39,6	1.594	40,5	1.640	41,6	1.670	42,4	1.704	43,3	1.732	44,0	1.760	44,7	-	-
2.1/4" (57,1)	1.490	37,8	1.570	39,8	1.650	41,8	1.682	42,7	1.732	43,9	1.774	45,0	1.810	45,9	1.844	46,8	1.890	47,9	1.920	48,7	1.954	49,6	1.982	50,3	2.010	51,0	-	-
2.1/2" (63,5)	1.740	44,2	1.820	46,2	1.900	48,2	1.932	49,1	1.982	50,3	2.024	51,4	2.060	52,3	2.094	53,2	2.140	54,3	2.170	55,1	2.204	56,0	2.232	56,7	2.260	57,4	-	-
2.3/4" (69,8)	1.990	50,5	2.070	52,5	2.150	54,5	2.182	55,3	2.232	56,6	2.274	57,7	2.310	58,6	2.344	59,5	2.390	60,6	2.420	61,4	2.454	62,3	2.482	63,0	2.510	63,7	-	-
3" (76,2)	2.240	56,9	2.320	58,9	2.400	60,9	2.432	61,8	2.482	63,0	2.524	64,1	2.560	65,0	2.594	65,9	2.640	67,0	2.670	67,8	2.704	68,7	2.732	69,4	2.760	70,1	-	-
3.1/4" (82,6)	2.490	63,3	2.570	65,3	2.650	67,3	2.682	68,2	2.732	69,4	2.774	70,5	2.810	71,4	2.844	72,3	2.890	73,4	2.920	74,2	2.954	75,1	2.982	75,8	3.010	76,5	-	-
3.1/2" (88,9)	2.740	69,6	2.820	71,6	2.900	73,6	2.932	74,5	2.982	75,7	3.024	76,8	3.060	77,7	3.094	78,6	3.140	79,7	3.170	80,5	3.204	81,4	3.232	82,1	3.260	82,8	-	-
3.3/4" (95,2)	2.990	75,9	3.070	77,9	3.150	79,9	3.182	80,8	3.232	82,0	3.274	83,1	3.310	84,0	3.344	84,9	3.390	86,0	3.420	86,8	3.454	87,7	3.482	88,4	3.510	89,1	-	-
4" (101,6)	3.240	82,3	3.320	84,3	3.400	86,3	3.432	87,2	3.482	88,4	3.524	89,5	3.560	90,4	3.594	91,3	3.640	92,4	3.670	93,2	3.704	94,1	3.732	94,8	3.760	95,5	-	-
4.1/4" (108,0)	3.490	88,7	3.570	90,7	3.650	92,7	3.682	93,6	3.732	94,8	3.774	95,9	3.810	96,8	3.844	97,7	3.890	98,8	3.920	99,6	3.954	100,5	3.982	101,2	4.010	101,9	-	-
4.1/2" (114,3)	3.740	95,0	3.820	97,0	3.900	99,0	3.932	99,9	3.982	101,1	4.024	102,2	4.060	103,1	4.094	104,0	4.140	105,1	4.170	105,9	4.204	106,8	4.232	107,5	4.260	108,2	-	-



12 BWG		13 BWG		14 BWG		15 BWG		16 BWG		17 BWG		18 BWG		19 BWG		20 BWG		21 BWG		22 BWG		23 BWG		24 BWG		OD mm ← WT
“	mm	“	mm	“	mm	“	mm	“	mm	“	mm	“	mm													
0.109	2,77	0.095	2,41	0.083	2,11	0.072	1,83	0.065	1,65	0.058	1,47	0.049	1,24	0.042	1,07	0.035	0,89	0.032	0,81	0.028	0,71	0.025	0,64	0.022	0,56	1/4" (6,3)
-	-	-	-	-	-	-	-	-	-	-	-	0.152	3,8	0.166	4,1	0.180	4,5	0.186	4,7	0.194	4,9	0.200	5,0	0.206	5,2	3/8" (9,5)
-	-	-	-	0.209	5,3	0.231	5,8	0.245	6,2	0.259	6,5	0.277	7,0	0.291	7,3	0.305	7,7	0.311	7,9	0.319	8,1	0.325	8,2	0.331	8,4	1/2" (12,7)
-	-	0.310	7,9	0.334	8,5	0.356	9,0	0.370	9,4	0.384	9,7	0.402	10,2	0.416	10,5	0.430	10,9	0.436	11,1	0.444	11,3	0.450	11,4	0.456	11,6	5/8" (15,9)
0.407	10,3	0.435	11,1	0.459	11,7	0.481	12,2	0.495	12,6	0.509	12,9	0.527	13,4	0.541	13,7	0.555	14,1	0.561	14,3	0.569	14,5	0.575	14,6	0.581	14,8	3/4" (19,0)
0.532	13,4	0.560	14,2	0.584	14,8	0.606	15,3	0.620	15,7	0.634	16,0	0.652	16,5	0.666	16,8	0.680	17,2	0.686	17,4	0.694	17,6	0.700	17,7	0.706	17,9	7/8" (22,2)
0.657	16,6	0.685	17,4	0.709	18,0	0.731	18,5	0.745	18,9	0.759	19,2	0.777	19,7	0.791	20,0	0.805	20,4	0.811	20,6	0.819	20,8	0.825	20,9	0.831	21,1	1" (25,4)
0.782	19,8	0.810	20,6	0.834	21,2	0.856	21,7	0.870	22,1	0.884	22,4	0.902	22,9	0.916	23,2	0.930	23,6	0.936	23,8	0.944	24,0	0.950	24,1	0.956	24,3	1 1/4" (31,8)
1.032	26,2	1.060	27,0	1.084	27,6	1.106	28,1	1.120	28,5	1.134	28,8	1.152	29,3	1.166	29,6	1.180	30,0	1.186	30,2	1.194	30,4	1.200	30,5	1.206	30,7	1 1/2" (38,1)
1.282	32,5	1.310	33,3	1.334	33,9	1.356	34,4	1.370	34,8	1.384	35,1	1.402	35,6	1.416	35,9	1.430	36,3	1.436	36,5	1.444	36,7	1.450	36,8	1.456	37,0	1 3/4" (44,4)
1.532	38,8	1.560	39,6	1.584	40,2	1.606	40,7	1.620	41,1	1.634	41,4	1.652	41,9	1.666	42,2	1.680	42,6	1.686	42,8	1.694	43,0	1.700	43,1	1.706	43,3	2" (50,8)
1.782	45,2	1.810	46,0	1.834	46,6	1.856	47,1	1.870	47,5	1.884	47,8	1.902	48,3	1.916	48,6	1.930	49,0	1.936	49,2	1.944	49,4	1.950	49,5	1.956	49,7	2 1/4" (57,1)
2.032	51,5	2.060	52,3	2.084	52,9	2.106	53,4	2.120	53,8	2.134	54,1	2.152	54,6	-	-	-	-	-	-	-	-	-	-	-	-	2 1/2" (63,5)
2.282	57,9	2.310	58,7	2.334	59,3	2.356	59,8	2.370	60,2	2.384	60,5	2.402	61,0	-	-	-	-	-	-	-	-	-	-	-	-	2 3/4" (69,8)
2.532	64,2	2.560	65,0	2.584	65,6	2.606	66,1	2.620	66,5	2.634	66,8	2.652	67,3	-	-	-	-	-	-	-	-	-	-	-	-	3" (76,2)
2.782	70,6	2.810	71,4	2.834	72,0	2.856	72,5	2.870	72,9	2.884	73,2	2.902	73,7	-	-	-	-	-	-	-	-	-	-	-	-	3 1/4" (82,6)
3.032	77,0	3.060	77,8	3.084	78,4	3.106	78,9	3.120	79,3	3.134	79,6	3.152	80,1	-	-	-	-	-	-	-	-	-	-	-	-	3 1/2" (88,9)
3.282	83,3	3.310	84,1	3.334	84,7	3.356	85,2	3.370	85,6	3.384	85,9	3.402	86,4	-	-	-	-	-	-	-	-	-	-	-	-	3 3/4" (95,2)
3.532	89,6	3.560	90,4	3.584	91,0	3.606	91,5	3.620	91,9	3.634	92,2	3.652	92,7	-	-	-	-	-	-	-	-	-	-	-	-	4" (101,6)
3.782	96,0	3.810	96,8	3.834	97,4	3.856	97,9	3.870	98,3	3.884	98,6	3.902	99,1	-	-	-	-	-	-	-	-	-	-	-	-	4 1/4" (108,0)
4.032	102,4	4.060	103,2	4.084	103,8	4.106	104,3	4.120	104,7	4.134	105,0	4.152	105,5	-	-	-	-	-	-	-	-	-	-	-	-	4 1/2" (114,3)



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