

## Per caldaie e scambiatori con piastre tubiere di grosso spessore

For boilers and exchangers with thick tube-sheets

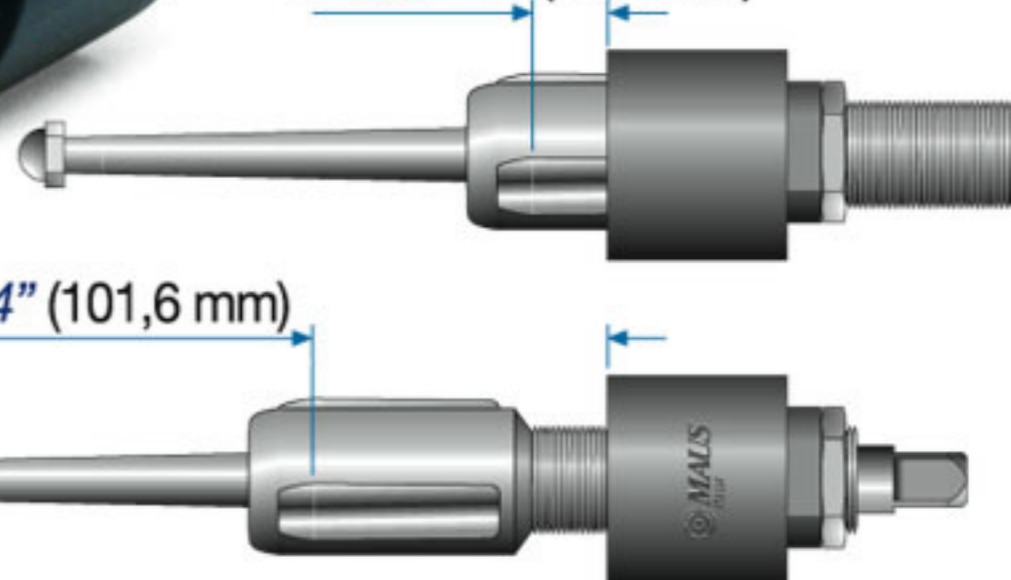
Pour chaudières et échangeurs avec plaques tubulaires de forte épaisseur

Für Kessel und Wärmetauscher mit Rohrböden großer Stärke

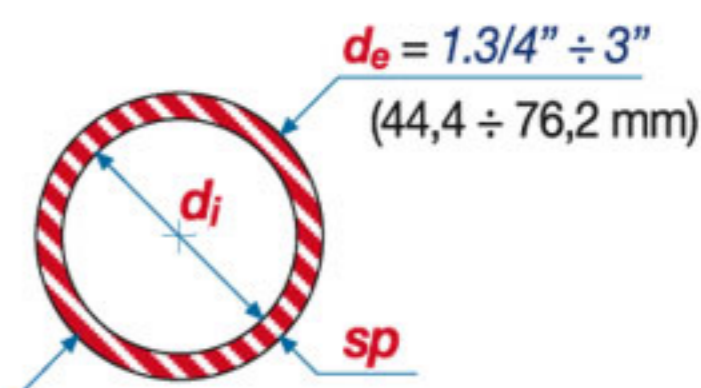


$RE_{min} = 1" (25,4 \text{ mm})$

$RE_{max} = 4" (101,6 \text{ mm})$

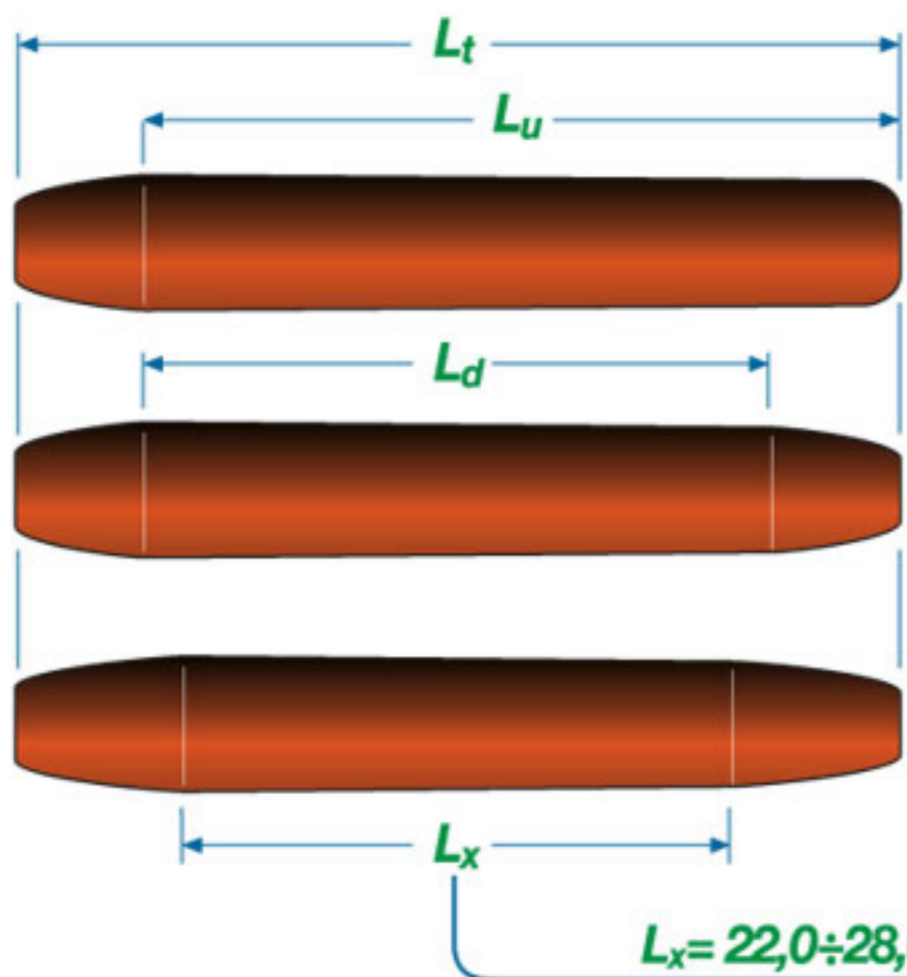


Rulli Rolls Galets Rollen	L <sub>t</sub>		L <sub>u</sub>		L <sub>d</sub>		L <sub>x</sub>	
	inches	mm	inches	mm	inches	mm	inches	mm
17/A ÷ 21	2.441	62,0	2.165	55,0	1.890	48,0	1.654 ÷ 1.969	42,0 ÷ 50,0
22 ÷ 33	2.677	68,0	2.401	61,0	2.126	54,0	1.890 ÷ 2.205	48,0 ÷ 56,0



### Codice d'esempio per ordinazione mandrini

Sample code for ordering tube expanders  
Code d'exemple pour commande dudgeons  
Bestellnr. Bestellbeispiel Rohrwalze



$d_e 2" - 12 \text{ B.W.G.}$

**STD** → R41.#-21/A

**DLS** → R41.#-21/A-DLS

**DLX** → R41.#-21/A-DLX-L<sub>x</sub>

$L_x = 22,0 \div 28,0 \text{ mm } 0.866" \div 1.102"$

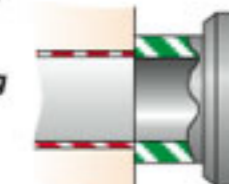
### Testa di battuta

Thrust collar  
Tête de butée  
Anschlagkopf



### a battuta piana

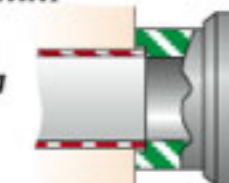
with plane shoulder  
a butée plane  
mit flachem Anschlag



V=0

### con incavo a 3 mm

with 3 mm recess  
avec entaille à 3 mm  
mit 3 mm Eindrehung



V=3 mm  
(0.118")

### con incavo profondo

with deep recess  
avec entaille profonde  
mit tiefer Eindrehung



17/A ÷ 21  
V=30 mm  
22 ÷ 33 (1.181")  
V=35 mm  
(1.378")

Tubo  
Tube  
Tube  
Rohr

d <sub>e</sub> inches mm	B.W.G.	sp		d <sub>i</sub>	
		inches	mm	inches	mm
1.3/4" (44,4)	8	0.165	4,19	1.420	36,0
	9	0.148	3,76	1.454	36,9
	10	0.134	3,40	1.482	37,6
	11	0.120	3,05	1.510	38,3
	12	0.109	2,77	1.532	38,8
	13	0.095	2,41	1.560	39,6
	14	0.083	2,11	1.584	40,2

Espansione  
Expansion  
Expansion  
Walzbereich

inches	mm
1.378 ÷ 1.555	34,5 ÷ 39,5
1.417 ÷ 1.614	36,0 ÷ 41,0
1.456 ÷ 1.653	37,0 ÷ 42,0
1.496 ÷ 1.693	38,0 ÷ 43,0

Mandrino  
Tube expander  
Dudgeon  
Rohrwalzen

Cod.
R41.#-17/A
R41.#-18
R41.#-18/A
R41.#-19

Rulli  
Rolls  
Galets  
Rollen

Cod.
17/A-E
18-E
18/A-E
19-E

Spina  
Mandrel  
Broche  
Dorn

Cod.
3-17/A ÷ 21

### Mandrinerie consigliate

Suggested rolling machines  
Dudgeonneuses conseillées  
Empfohlene Rohrreinwalzanlagen

Elettriche  
Electrical  
Electriques  
elektrisch



Pneumatiche  
Pneumatic  
Pneumatiques  
pneumatisch





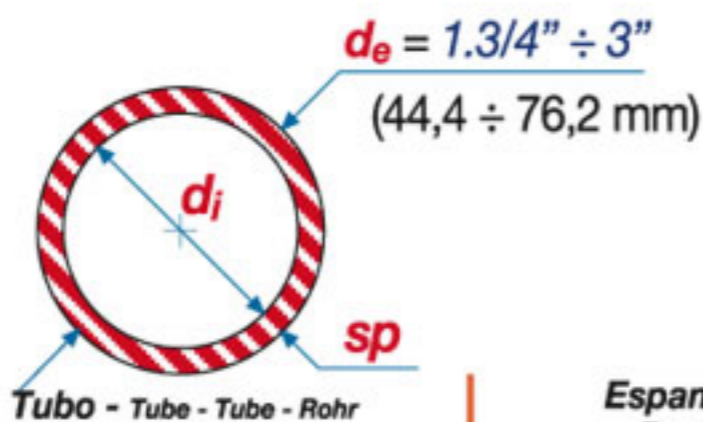
# R/41

## Mandrinatrici consigliate

Suggested rolling machines  
Dudgeonneuses conseillées  
Empfohlene Rohreinwalzanlagen

de inches mm	Tubo - Tube - Tube - Rohr				Espansione Expansion Expansion Walzbereich		Mandrino Tube expander Dudgeon Rohrwalzen	Rulli Rolls Galets Rollen	Spina Mandrel Broche Dorn	inches mm	Elektrische Electrical Electriques elektrisch	Pneumatiche Pneumatic Pneumatiques pneumatisch			
	B.W.G.	inches	mm	inches	mm	inches	mm	Cod.	Cod.		Cod.	F90 MG/49 M4/L	Macrol 130 Masterol 180		
2" (50,8)	6	0.203	5,16	1.594	40,5	1.535 ÷ 1.732	39,0 ÷ 44,0	R41.#-19/A	19/A-E	3-17/A÷21	3/4" (19,0)	Matex			
	7	0.180	4,57	1.640	41,6										
	8	0.165	4,19	1.670	42,4	1.574 ÷ 1.772	40,0 ÷ 45,0	R41.#-20	20-E						
	9	0.148	3,76	1.704	43,3	1.614 ÷ 1.811	41,0 ÷ 46,0	R41.#-20/A	20/A-E						
	10	0.134	3,40	1.732	44,0	1.653 ÷ 1.850	42,0 ÷ 47,0	R41.#-21	21-E						
	11	0.120	3,05	1.760	44,7	1.693 ÷ 1.929	43,0 ÷ 49,0	R41.#-21/A	21/A-E						
	12	0.109	2,77	1.782	45,2										
	13	0.095	2,41	1.810	46,0	1.732 ÷ 1.968	44,0 ÷ 50,0	R41.#-22	22-E	3-21/A÷23					
	14	0.083	2,11	1.834	46,6										
	15	0.072	1,83	1.856	47,1										
	16	0.065	1,65	1.870	47,5										
	17	0.058	1,47	1.884	47,8										
	18	0.049	1,24	1.902	48,3										
	2 1/4" (57,2)	6	0.203	5,16	1.884	46,9	1.771 ÷ 2.008	45,0 ÷ 51,0	R41.#-22/A	22/A-E			3-21/A÷23	3/4" (19,0)	MG/49 MG/36
		7	0.180	4,57	1.890	48,0									
		8	0.165	4,19	1.920	48,8	1.810 ÷ 2.047	46,0 ÷ 52,0	R41.#-23	23-23/A-E					
		9	0.148	3,76	1.954	49,7	1.850 ÷ 2.126	47,0 ÷ 54,0	R41.#-23/A	23-23/A-E					
		10	0.134	3,40	1.982	50,4	1.890 ÷ 2.165	48,0 ÷ 55,0	R41.#-24	24-E					
11		0.120	3,05	2.010	51,1										
12		0.109	2,77	2.032	51,6	1.929 ÷ 2.205	49,0 ÷ 56,0	R41.#-24/A	24/A-E	3-23/A÷26					
13		0.095	2,41	2.060	52,4										
14		0.083	2,11	2.084	53,0										
15		0.072	1,83	2.106	53,5										
16	0.065	1,65	2.120	53,9											
2 1/2" (63,5)	5	0.220	5,59	2.060	52,3	1.968 ÷ 2.244	50,0 ÷ 57,0	R41.#-25	25-E	3-23/A÷26	3/4" (19,0)	MG/49 MG/36			
	6	0.203	5,16	2.094	53,2										
	7	0.180	4,57	2.140	54,3	2.008 ÷ 2.283	51,0 ÷ 58,0	R41.#-25/A	25/A-26/A-E						
	8	0.165	4,19	2.170	55,1	2.047 ÷ 2.323	52,0 ÷ 59,0	R41.#-26	26-27-E						
	9	0.148	3,76	2.204	56,0	2.087 ÷ 2.362	53,0 ÷ 60,0	R41.#-26/A	25/A-26/A-E						
	10	0.134	3,40	2.232	56,7	2.126 ÷ 2.400	54,0 ÷ 61,0	R41.#-27	26-27-E						
	11	0.120	3,05	2.260	57,4										
	12	0.109	2,77	2.282	57,9	2.165 ÷ 2.441	55,0 ÷ 62,0	R41.#-27/A	27/A-E	3-26/A÷29					
	13	0.095	2,41	2.310	58,7										
	14	0.083	2,11	2.334	59,3										
	15	0.072	1,83	2.356	59,8										
	16	0.065	1,65	2.370	60,2	2.205 ÷ 2.460	56,0 ÷ 62,5	R41.#-28	28-E						
	17	0.058	1,47	2.384	60,5										
	18	0.049	1,24	2.402	61,0										
	2 3/4" (69,8)	6	0.203	5,16	2.344	59,5	2.244 ÷ 2.520	57,0 ÷ 64,0	R41.#-28/A	28/A-29/A-E			3-26/A÷29	3/4" (19,0)	MG/36 MG/49
		7	0.180	4,57	2.390	60,6									
		8	0.165	4,19	2.420	61,4	2.283 ÷ 2.560	58,0 ÷ 65,0	R41.#-29	29-E					
		9	0.148	3,76	2.454	62,3	2.323 ÷ 2.638	59,0 ÷ 67,0	R41.#-29/A	28/A-29/A-E					
10		0.134	3,40	2.482	63,0	2.362 ÷ 2.677	60,0 ÷ 68,0	R41.#-30	30-E						
11		0.120	3,05	2.510	63,7										
12		0.109	2,77	2.532	64,2	2.401 ÷ 2.716	61,0 ÷ 69,0	R41.#-30/A	30/A-E	3-29/A÷33					
13		0.095	2,41	2.560	65,0										
14		0.083	2,11	2.584	65,6										
15		0.072	1,83	2.606	66,1										
16	0.065	1,65	2.620	66,5											

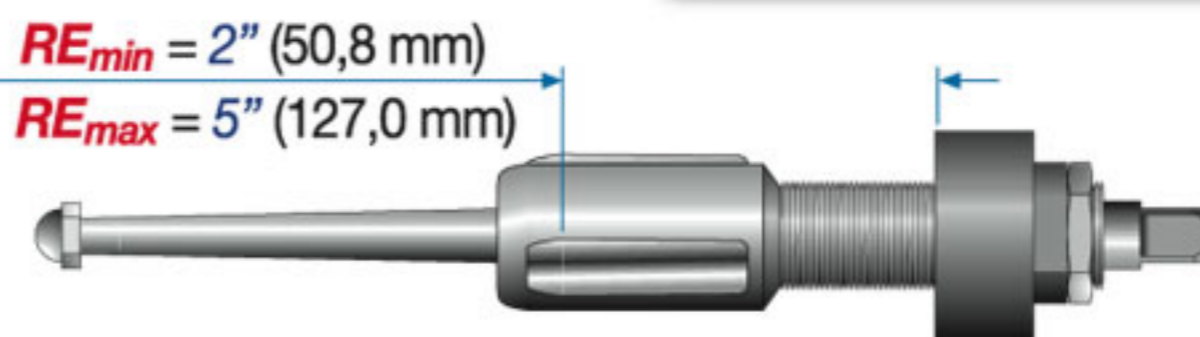
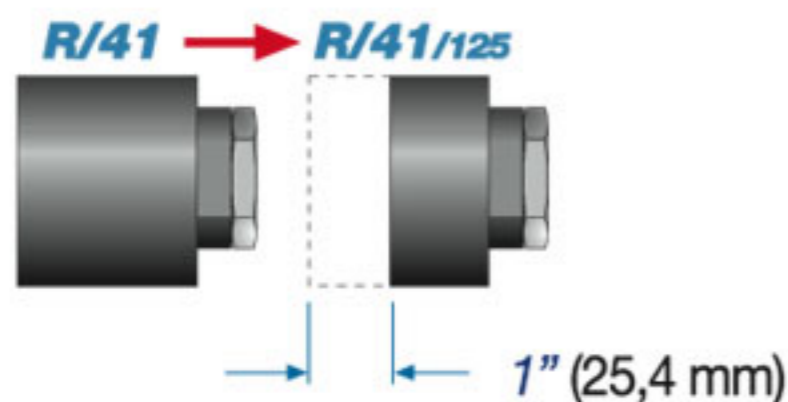




<b>de</b> inches mm	<b>B.W.G.</b>	<b>sp</b>		<b>di</b>		<b>Espansione</b> Expansion Expansion Walzbereich		<b>Mandrino</b> Tube expander Dudgeon Rohrwalzen	<b>Rulli</b> Rolls Galets Rollen	<b>Spina</b> Mandrel Broche Dorn	<b>Mandrinatrici consigliate</b> Suggested rolling machines Dudgeonneuses conseillées Empfohlene Rohreinwalzanlagen		
		inches	mm	inches	mm	inches	mm	<b>Cod.</b>	<b>Cod.</b>	<b>Cod.</b>	<b>Electriche</b> Electrical Electriques elektrisch	<b>Pneumatiche</b> Pneumatic Pneumatiques pneumatisch	
<b>3"</b> (76,2)	4	0.238	6,05	2.524	64,1	2.441 ÷ 2.756	62,0 ÷ 70,0	<b>R41.#-31</b>	31-E	3-29/A÷33	3/4" (19,0)	<b>F90 + MG/30</b>	
	5	0.220	5,59	2.560	65,0								
	6	0.203	5,16	2.594	65,9								
	7	0.180	4,57	2.640	67,0								
	8	0.165	4,19	2.670	67,8	2.559 ÷ 2.913	65,0 ÷ 74,0	<b>R41.#-32/A</b>	32/A-E				
	9	0.148	3,76	2.704	68,7								
	10	0.134	3,40	2.732	69,4	2.598 ÷ 2.953	66,0 ÷ 75,0	<b>R41.#-33</b>	33-E				<b>F90</b> MG/36 MG/49
	11	0.120	3,05	2.760	70,1								
	12	0.109	2,77	2.782	70,6								
	13	0.095	2,41	2.810	71,4								
	14	0.083	2,11	2.834	72,0								
	15	0.072	1,83	2.856	72,5								
	16	0.065	1,65	2.870	72,9								
	17	0.058	1,47	2.884	73,2								
	18	0.049	1,24	2.902	73,7								

## Testa di battuta accorciata

Shortened thrust collar  
Butée raccourcie  
verkürzter Anschlagkopf



# R/41/125

# R/41/180 R/41/260 R/41/360

**R/41/180**  $RE_{min} = 1" (25,4 \text{ mm})$   $RE_{max} = 7" (177,8 \text{ mm})$   
**R/41/260**  $RE_{min} = 3.1/8" (79,4 \text{ mm})$   $RE_{max} = 10.1/4" (260,4 \text{ mm})$   
**R/41/360**  $RE_{min} = 7" (177,8 \text{ mm})$   $RE_{max} = 14.1/4" (362,0 \text{ mm})$



**Codice d'esempio per ordinazione mandrini**  
Sample code for ordering tube expanders  
Code d'exemple pour commande dudgeons  
Bestellnr. Bestellbeispiel Rohrwalze

**de 2.1/2" - 14 B.W.G.**

$RE_{max}$   
**R41.1 / 360 -28**  
**R41.1 / 360 -28-DLS**

**Esempio codice per ordinazione spina**  
Sample code for ordering mandrels  
Exemple code pour commande broche  
Bestellnr. Bestellbeispiel Dorn

**3 / 360 -26/A÷29**