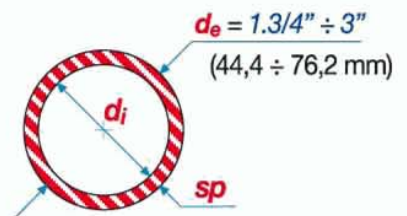


Per caldaie e scambiatori con piastre tubiere di grosso spessore

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



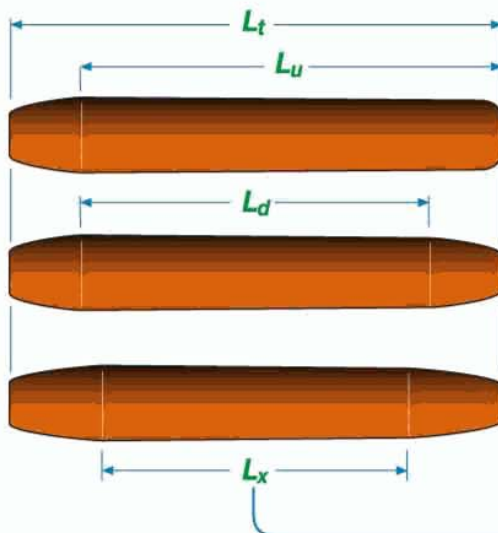
Rulli Rolls Galets Rollen	L _t		STD L _u		DLS L _d		DLX L _x	
	inches	mm	inches	mm	inches	mm	inches	mm
17/A ÷ 21	2.441	62,0	2.165	55,0	1.890	48,0	1.654 ÷ 1.969	42,0 ÷ 50,0
22 ÷ 33	2.677	68,0	2.401	61,0	2.126	54,0	1.890 ÷ 2.205	48,0 ÷ 56,0



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 B.W.G.



STD → R41.#-21/A
DLS → R41.#-21/A-DLS
DLX → R41.#-21/A-DLX-L_x

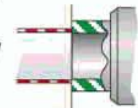
Testa di battuta

Thrust collar
 Tête de butée
 Anschlagkopf



a battuta piana

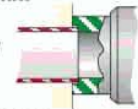
with plane shoulder
 a butée plane
 mit flachem Anschlag



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 _e	sp		d _i		
inches mm	B.W.G.	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

Mandrino
 Tube expander
 Dudgeon
 Rohrwalzen

Rulli
 Rolls
 Galets
 Rollen

Spina
 Mandrel
 Broche
 Dorn

Mandrinatrici consigliate

Suggested rolling machines
 Dudgeonneuses conseillées
 Empfohlene Rohrreinwalzanlagen

Elektrische
 Electrical
 Electricques
 elektrisch

Pneumatiche
 Pneumatic
 Pneumatiques
 pneumatisch

inches	mm	inches	mm	Cod.	Cod.
1.378 ÷ 1.555	34,5 ÷ 39,5	R41.#-17/A	17/A-E		
1.417 ÷ 1.614	36,0 ÷ 41,0	R41.#-18	18-E		
1.456 ÷ 1.653	37,0 ÷ 42,0	R41.#-18/A	18/A-E		
1.496 ÷ 1.693	38,0 ÷ 43,0	R41.#-19	19-E		

3-17/A ÷ 21

3/4"
 (19,0)

F90

MG/49 M4/L

Matex

Masterrol 180

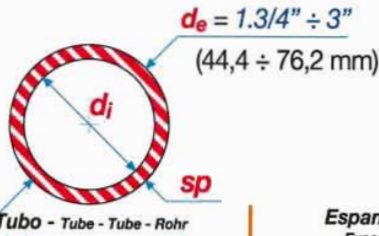
Macrol 130

R/41

Mandrinatrici consigliate
Suggested rolling machines
Dudgeonneuses conseillées
Empfohlene Rohreinwalzanlagen

de inches mm	Tubo - Tube - Tube - Rohr sp di				Espansione Expansion Expansion Walzbereich		Mandrino Tube expander Dudgeon Rohrwalzen	Rulli Rolls Galets Rollen	Spina Mandrel Broche Dorn	inches mm	Elettriche Electrical Electriques elektrisch	Pneumatiche Pneumatic Pneumatiques pneumatisch		
	B.W.G.	inches	mm	inches	mm	inches	mm	Cod.	Cod.				Cod.	
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)	F90 MG/49 MG/L Matex Macro 130 Masterol 180		
	7	0.180	4,57	1.640	41,6			1.574 ÷ 1.772	40,0 ÷ 45,0				R41.#-20	20-E
	8	0.165	4,19	1.670	42,4			1.614 ÷ 1.811	41,0 ÷ 46,0				R41.#-20/A	20/A-E
	9	0.148	3,76	1.704	43,3	1.653 ÷ 1.850	42,0 ÷ 47,0	R41.#-21	21-E					
	10	0.134	3,40	1.732	44,0	1.693 ÷ 1.929	43,0 ÷ 49,0	R41.#-21/A	21/A-E					
	11	0.120	3,05	1.760	44,7			1.732 ÷ 1.968	44,0 ÷ 50,0				R41.#-22	22-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	3/4" (19,0)	F90 MG/49 MG/L Matex Macro 130 Masterol 180		
	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)	F90 MG/49 MG/38 Masterol 180	
		7	0.180	4,57	1.890	48,0			1.810 ÷ 2.047	46,0 ÷ 52,0				R41.#-23
		8	0.165	4,19	1.920	48,8	1.850 ÷ 2.126	47,0 ÷ 54,0	R41.#-23/A	23-23/A-E				
		9	0.148	3,76	1.954	49,7	1.890 ÷ 2.165	48,0 ÷ 55,0	R41.#-24	24-E				
		10	0.134	3,40	1.982	50,4								
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	3/4" (19,0)	F90 MG/49 MG/38 Masterol 180		
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)	F90 MG/49 MG/38 Masterol 90 Masterol 180		
	6	0.203	5,16	2.094	53,2			2.008 ÷ 2.283	51,0 ÷ 58,0				R41.#-25/A	25/A-26/A-E
	7	0.180	4,57	2.140	54,3	2.047 ÷ 2.323	52,0 ÷ 59,0	R41.#-26	26-27-E					
	8	0.165	4,19	2.170	55,1	2.087 ÷ 2.362	53,0 ÷ 60,0	R41.#-26/A	25/A-26/A-E					
	9	0.148	3,76	2.204	56,0	2.126 ÷ 2.400	54,0 ÷ 61,0	R41.#-27	26-27-E					
	10	0.134	3,40	2.232	56,7									
	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	3/4" (19,0)	F90 MG/49 MG/38 Masterol 90 Masterol 180		
	13	0.095	2,41	2.310	58,7									
	14	0.083	2,11	2.334	59,3	2.205 ÷ 2.460	56,0 ÷ 62,5	R41.#-28	28-E					
	15	0.072	1,83	2.356	59,8									
	16	0.065	1,65	2.370	60,2									
	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)	F90 MG/36 MG/49 Masterol 90		
	7	0.180	4,57	2.390	60,6			2.283 ÷ 2.560	58,0 ÷ 65,0				R41.#-29	29-E
	8	0.165	4,19	2.420	61,4	2.323 ÷ 2.638	59,0 ÷ 67,0	R41.#-29/A	28/A-29/A-E					
	9	0.148	3,76	2.454	62,3	2.362 ÷ 2.677	60,0 ÷ 68,0	R41.#-30	30-E					
	10	0.134	3,40	2.482	63,0									
	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	3/4" (19,0)	F90 MG/36 MG/49 Masterol 90		
	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										

R/41



d_e	sp		d_i		
	inches	mm	inches	mm	
3" (76,2)	B.W.G.				
	4	0.238	6,05	2.524	64,1
	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
	9	0.148	3,76	2.704	68,7
	10	0.134	3,40	2.732	69,4
	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

Espansione Expansion Expansion Walzbereich		Mandrino Tube expander Dudgeon Rohrwalzen	Rulli Rolls Galets Rollen
inches	mm	Cod.	Cod.
2.441 ÷ 2.756	62,0 ÷ 70,0	R41.#-31	31-E
2.480 ÷ 2.795	63,0 ÷ 71,0	R41.#-31/A	31/A-E
2.519 ÷ 2.874	64,0 ÷ 73,0	R41.#-32	32-E
2.559 ÷ 2.913	65,0 ÷ 74,0	R41.#-32/A	32/A-E
2.598 ÷ 2.953	66,0 ÷ 75,0	R41.#-33	33-E

Mandrinatrici consigliate
Suggested rolling machines
Dudgeonneuses conseillées
Empfohlene Rohrwalzanlagen

Spina
Mandrel
Broche
Dorn
Cod.

Elettriche
Electrical
Electriques
elektrisch

Pneumatiche
Pneumatic
Pneumatiques
pneumatisch

3-29/A÷33

3/4" (19,0)

F90 + MG/30

F90

MG/36 MG/49

Masterrol 90

Testa di battuta accorciata

Shortened thrust collar
Butée raccourcie
verkürzter Anschlagkopf

R/41 → R/41/125



1" (25,4 mm)

$RE_{min} = 2"$ (50,8 mm)
 $RE_{max} = 5"$ (127,0 mm)



R/41/125

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

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



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

d_e 2.1/2" - 14 B.W.G.

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