

R/30

Per piastre tubiere di piccolo spessore

For low thickness tube-sheets

Pour plaques tubulaires de petite épaisseur

Für Rohrböden mit geringer Stärke



$RE_{min} = 3/8'' (9,5 \text{ mm})$

$RE_{max} = 1.1/4'' (31,8 \text{ mm})$

Testa di battuta

Thrust collar
Tête de butée
Anschlagkopf



.0
a battuta piana
with plane shoulder
a butée plane
mit flachem Anschlag



017 ÷ 16/A
V = 0

.1
con incavo a 3 mm
with 3 mm recess
avec entaille à 3 mm
mit 3 mm Eindrehung



011 ÷ 16/A
V = 3 mm
(0.118")

.2
con incavo profondo
with deep recess
avec entaille profonde
mit tiefer Eindrehung

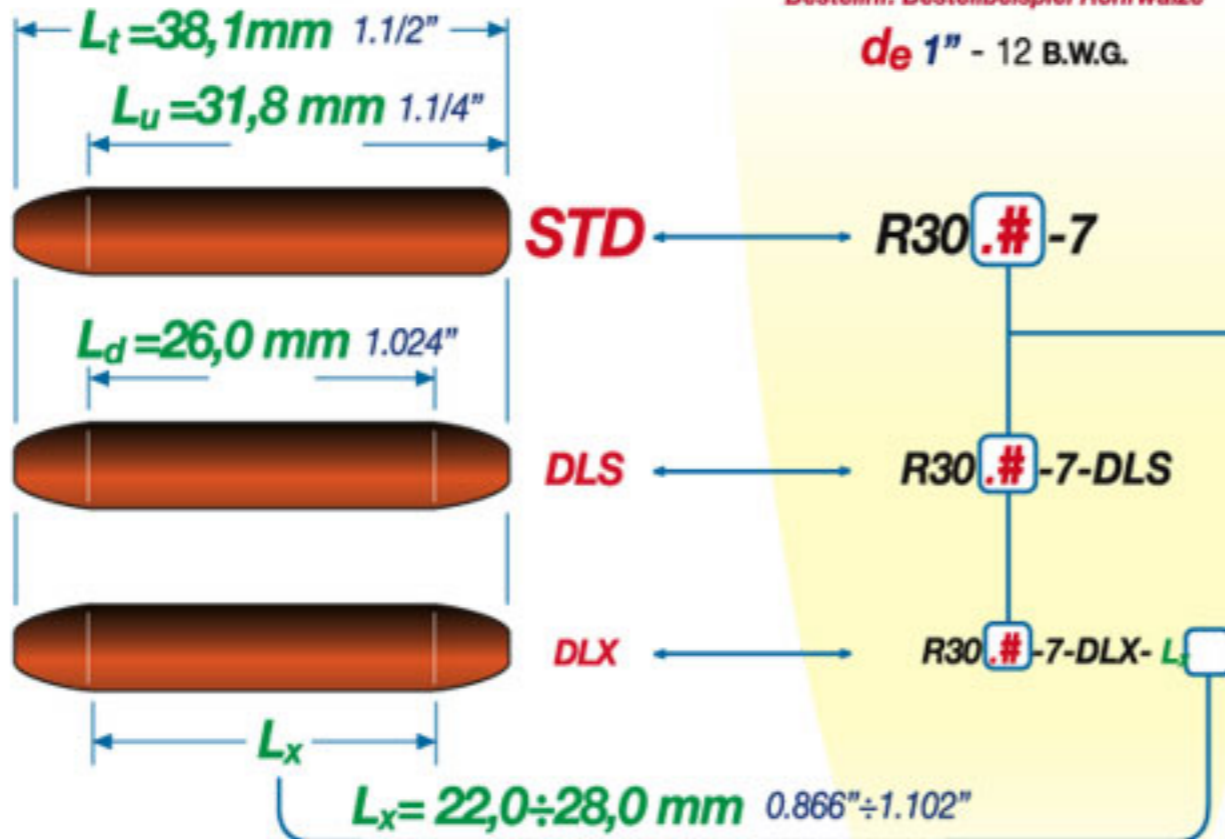


011 ÷ 3/B
Vmax = 15 mm
5 ÷ 11 (0.590")
Vmax = 20 mm
(0.787")
12 ÷ 16/A
Vmax = 26 mm
(1.024")

Codice d'esempio per ordinazione mandrini

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

$d_e 1'' - 12 \text{ B.W.G.}$



Tubo
Tube
Rohr

Mandrinatori consigliati

Suggested rolling machines
Dudgeonneuses conseillées
Empfohlene Rohrwalzanlagen

d_e inches mm	B.W.G.	s_p		d_i		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
		inches	mm	inches	mm	inches	mm	Cod.	Cod.	Cod.			
1/2'' (12,7)	14	0.083	2,11	0.315	8,0	0.307 ÷ 0.354	7,8 ÷ 9,0	R30.0-017	017-C	4-017÷012	3/8'' (9,5)	F90 MS/40 M4/V MS/60	Macrol 750
				0.323	8,2	0.315 ÷ 0.362	8,0 ÷ 9,2	R30.0-016	016-C				
				0.334	8,4	0.323 ÷ 0.370	8,2 ÷ 9,4	R30.0-015	015-C				
				0.342	8,7	0.331 ÷ 0.378	8,4 ÷ 9,6	R30.0-014	014-C				
				0.356	9,0	0.338 ÷ 0.386	8,6 ÷ 9,8	R30.0-013	013-011-C				
				0.362	9,2	0.346 ÷ 0.393	8,8 ÷ 10,0	R30.0-012	012-010-C				
	15	0.072	1,83	0.370	9,4	0.354 ÷ 0.409	9,0 ÷ 10,4	R30.#-011	013-011-C	4-011÷09	F90 MP/2 M4/V MS/60	Minirol 500 Macrol 1350	
				0.378	9,6	0.362 ÷ 0.417	9,2 ÷ 10,6	R30.#-010	012-010-C				
				0.384	9,7	0.370 ÷ 0.425	9,4 ÷ 10,8	R30.#-09	09-C				
				0.402	10,2	0.378 ÷ 0.441	9,6 ÷ 11,2	R30.#-00	00-C				
				0.430	10,9	0.397 ÷ 0.460	10,1 ÷ 11,7	R30.#-00/A	00/A-C				
				0.444	11,3	0.417 ÷ 0.480	10,6 ÷ 12,2	R30.#-01	01-C				
5/8'' (15,9)	12	0.109	2,77	0.407	10,3	0.378 ÷ 0.441	9,6 ÷ 11,2	R30.#-00-M	00-C	4-00	F90 MS/40 M4/V MS/60	Macrol 750	
				0.421	10,7	0.397 ÷ 0.460	10,1 ÷ 11,7	R30.#-00/A-M	00/A-C				
	13	0.095	2,41	0.435	11,1	0.417 ÷ 0.480	10,6 ÷ 12,2	R30.#-01-M	01-C	4-01	F90 MS/40 M4/V MS/60	Macrol 750	
													0.437 ÷ 0.500
	14	0.083	2,11	0.459	11,7	0.437 ÷ 0.500	11,1 ÷ 12,7	R30.#-01/A-M	01/A-C	4-01/A	F90 MS/40 M4/V MS/60	Macrol 750	
													0.452 ÷ 0.523
	15	0.072	1,83	0.481	12,2	0.452 ÷ 0.523	11,5 ÷ 13,3	R30.#-02-M	02-C	4-02÷02/A	F90 MP/2 M4/V MS/60	Minirol 500 Macrol 1350	
													0.472 ÷ 0.543
	16	0.065	1,65	0.495	12,6	0.472 ÷ 0.543	12,0 ÷ 13,8	R30.#-02/A-M	02/A-C	4-03÷1	F90 MP/2 M4/V MS/60	Minirol 500 Macrol 1350	
													0.492 ÷ 0.571
17	0.058	1,47	0.509	12,9	0.492 ÷ 0.571	12,5 ÷ 14,5	R30.#-03-M	03-C	4-03÷1	F90 MP/2 M4/V MS/60	Minirol 500 Macrol 1350		
												0.512 ÷ 0.590	13,0 ÷ 15,0
18	0.049	1,24	0.527	13,4	0.512 ÷ 0.590	13,0 ÷ 15,0	R30.#-04-M	04-C	4-03÷1	F90 MP/2 M4/V MS/60	Minirol 500 Macrol 1350		
												0.531 ÷ 0.610	13,5 ÷ 15,5
19	0.042	1,07	0.541	13,7	0.531 ÷ 0.610	13,5 ÷ 15,5	R30.#-1-M	1-1/A-C	4-03÷1	F90 MP/2 M4/V MS/60	Minirol 500 Macrol 1350		
												0.555	14,1
20	0.035	0,89	0.555	14,1	0.555 ÷ 0.634	14,1 ÷ 16,2	R30.#-1-M	1-1/A-C	4-03÷1	F90 MP/2 M4/V MS/60	Minirol 500 Macrol 1350		
												0.569	14,5
22	0.028	0,71	0.569	14,5	0.569 ÷ 0.648	14,5 ÷ 16,6	R30.#-1-M	1-1/A-C	4-03÷1	F90 MP/2 M4/V MS/60	Minirol 500 Macrol 1350		
												0.583	14,9



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Siehe 5R/70

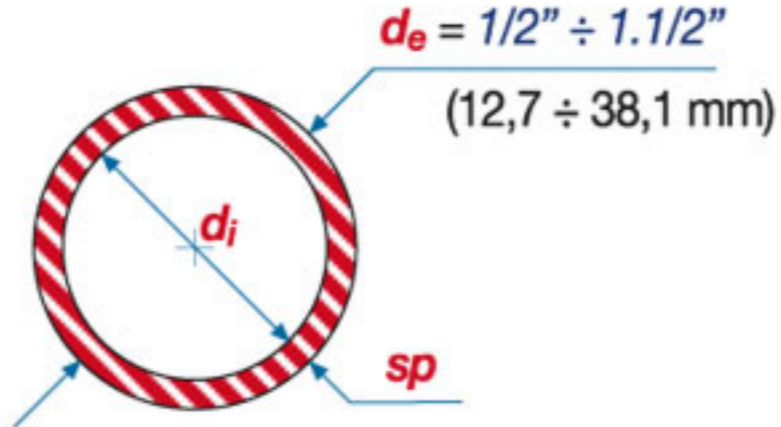


Consigliate
Suggested
Conseillées
Empfehlung



Possibili
Possible
Possibles
Variationsmöglichkeiten



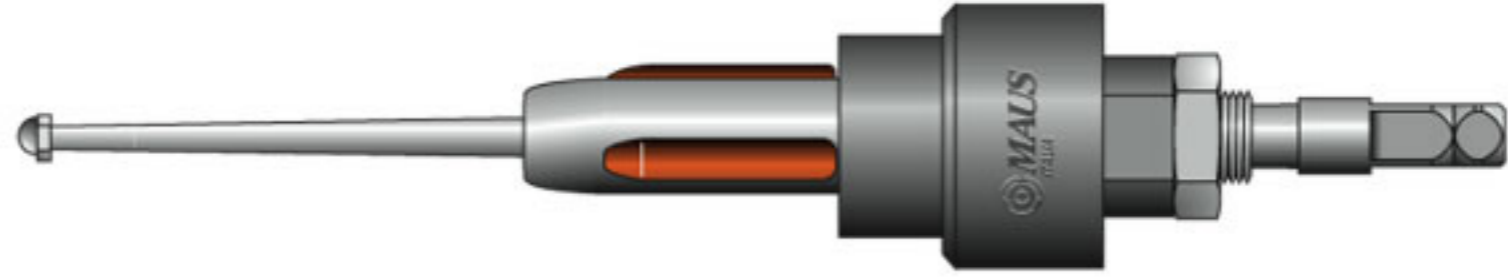


Tubo
Tube
Tube
Rohr

Mandrinatrici consigliate
Suggested rolling machines
Dudgeonneuses conseillées
Empfohlene Rohreinwalzanlagen

d_e inches mm	sp		d_i		Espansione Expansion Expansion Walzbereich		Mandrino Tube expander Dudgeon Rohrwalzen Cod.	Rulli Rolls Galets Rollen Cod.	Spina Mandrel Broche Dom Cod.	$\frac{\square}{\text{inches}}$ mm	Elettriche Electrical Electriques elektrisch	Pneumatiche Pneumatic Pneumatiques pneumatisch	
	B.W.G.	inches	mm	inches	mm	inches	mm						
3/4" (19,0)	10	0.134	3,40	0.482	12,2	0.452 ÷ 0.523	11,5 ÷ 13,3	R30.#-02	02-C	4-02÷02/A	F90 M4/V M4/L MS/40	Macrol 450	
				0.492	12,5	0.472 ÷ 0.543	12,0 ÷ 13,8	R30.#-02/A	02/A-C				
	11	0.120	3,05	0.510	12,9	0.492 ÷ 0.571	12,5 ÷ 14,5	R30.#-03	03-C				
				0.532	13,4	0.512 ÷ 0.590	13,0 ÷ 15,0	R30.#-04	04-C	4-03÷1	Matex		
	12	0.109	2,77	0.560	14,2	0.531 ÷ 0.610	13,5 ÷ 15,5	R30.#-1	1-1/A-C				
				0.584	14,8	0.551 ÷ 0.639	14,0 ÷ 16,2	R30.#-1/A	1-1/A-C	4-1/A	Matex		
	13	0.095	2,41	0.606	15,3	0.570 ÷ 0.669	14,5 ÷ 17,0	R30.#-2	2-C				
				0.620	15,7	0.590 ÷ 0.689	15,0 ÷ 17,5	R30.#-2/A	2/A-C	4-2÷3/B	F90 M4/V MP/1 MS/60	Macrol 750	
	14	0.083	2,11	0.634	16,0	0.610 ÷ 0.709	15,5 ÷ 18,0	R30.#-3	3-C				
	15	0.072	1,83	0.652	16,5	0.630 ÷ 0.728	16,0 ÷ 18,5	R30.#-3/A	3/A-C				
16	0.065	1,65	0.680	17,2	0.650 ÷ 0.748	16,5 ÷ 19,0	R30.#-3/B	3/B-C					
7/8" (22,2)	10	0.134	3,40	0.607	15,4	0.570 ÷ 0.669	14,5 ÷ 17,0	R30.#-2-M	2-C	4-2÷3/B	F90 M4/V M4/L MS/40	Macrol 450	
				0.635	16,1	0.610 ÷ 0.709	15,5 ÷ 18,0	R30.#-3-M	3-C				
	11	0.120	3,05	0.657	16,6	0.630 ÷ 0.728	16,0 ÷ 18,5	R30.#-3/A-M	3/A-C				
				0.669	17,0	0.650 ÷ 0.748	16,5 ÷ 19,0	R30.#-3/B-M	3/B-C	4-5÷6	Matex		
	12	0.109	2,77	0.685	17,4	0.681 ÷ 0.799	17,3 ÷ 20,3	R30.#-5-M	5-C				
				0.709	18,0	0.700 ÷ 0.812	17,8 ÷ 20,8	R30.#-5/A-M	5/A-C	4-7÷8/A	F90 M4/V M4/L MS/60 MP/1	Macrol 750	
	13	0.095	2,41	0.720	18,3	0.720 ÷ 0.838	18,3 ÷ 21,3	R30.#-6-M	6-7-C				
	14	0.083	2,11	0.745	18,9	0.748 ÷ 0.866	19,0 ÷ 22,0	R30.#-7-M	6-7-C				
	15	0.072	1,83	0.777	19,7	0.777 ÷ 0.895	19,7 ÷ 22,7	R30.#-8-M	8-C				
				0.805	20,4	0.791	20,0	0.767 ÷ 0.886	19,5 ÷ 22,5	R30.#-7/A	7/A-C	4-7÷8/A	Matex
16	0.065	1,65	0.811	20,6	0.748 ÷ 0.866	19,0 ÷ 22,0	R30.#-7-M	6-7-C					
17	0.058	1,47	0.819	20,8	0.827 ÷ 0.964	21,0 ÷ 24,5	R30.#-9	9-C	4-9÷11	F90 M4/V M4/L MS/60	Macrol 750		
18	0.049	1,24	0.834	21,2	0.807 ÷ 0.925	20,5 ÷ 23,5	R30.#-8/A	8/A-C					
19	0.042	1,07	0.856	21,7	0.846 ÷ 0.984	21,5 ÷ 25,0	R30.#-9/A	9/A-C					
20	0.035	0,89	0.884	22,4	0.866 ÷ 1.004	22,0 ÷ 25,5	R30.#-10	10-C					
1" (25,4)	8	0.165	4,19	0.670	17,0	0.650 ÷ 0.748	16,5 ÷ 19,0	R30.#-3/B-S	3/B-C	4-2÷3/B	F90 M4/L MS/30 M4/V	Macrol 450	
				0.685	17,4	0.681 ÷ 0.799	17,3 ÷ 20,3	R30.#-5	5-C				
	9	0.148	3,76	0.704	17,9	0.700 ÷ 0.812	17,8 ÷ 20,8	R30.#-5/A	5/A-C				
				0.732	18,6	0.720 ÷ 0.838	18,3 ÷ 21,3	R30.#-6	6-7-C	4-5÷6	Matex		
	10	0.134	3,40	0.760	19,3	0.748 ÷ 0.866	19,0 ÷ 22,0	R30.#-7	6-7-C				
				0.782	19,8	0.767 ÷ 0.886	19,5 ÷ 22,5	R30.#-7/A	7/A-C	4-7÷8/A	F90 M4/V M4/L MS/60	Macrol 750	
	11	0.120	3,05	0.791	20,0	0.787 ÷ 0.905	20,0 ÷ 23,0	R30.#-8	8-C				
	12	0.109	2,77	0.810	20,6	0.807 ÷ 0.925	20,5 ÷ 23,5	R30.#-8/A	8/A-C				
	13	0.095	2,41	0.834	21,2	0.827 ÷ 0.964	21,0 ÷ 24,5	R30.#-9	9-C				
				0.856	21,7	0.846 ÷ 0.984	21,5 ÷ 25,0	R30.#-9/A	9/A-C	4-9÷11	Matex		
	14	0.083	2,11	0.884	22,4	0.866 ÷ 1.004	22,0 ÷ 25,5	R30.#-10	10-C				
	15	0.072	1,83	0.902	22,9	0.930	23,6	0.930	23,6				
16	0.065	1,65	0.936	23,8	0.936	23,8	0.936	23,8					
17	0.058	1,47	0.944	24,0	0.944	24,0	0.944	24,0					
18	0.049	1,24											
19	0.042	1,07											
20	0.035	0,89											
21	0.032	0,81											
22	0.028	0,71											





de inches mm	Tubo Tube Rohr		Espansione Expansion Walzbereich		Mandrino Tube expander Dudgeon Rohrwalzen Cod.	Rulli Rolls Galets Rollen Cod.	Spina Mandrel Broche Dorn Cod.	inches mm	Mandrinatrici consigliate Suggested rolling machines Dudgeonneuses conseillées Empfohlene Rohreinwalzanlagen	
	B.W.G.	sp inches mm	dj inches mm	inches					mm	Elettriche Electrical Electriques elektrisch
1.1/8" (28,5)	11	0.120 3,05	0.885 22,4	0.846 ÷ 0.984 21,5 ÷ 25,0	R30.#-9/A-M	9/A-C	4-9÷11	3/8" (9,5)	F90 + M4/L MS/40 M4/V	Macrol 450
	12	0.109 2,77	0.907 22,9	0.866 ÷ 1.004 22,0 ÷ 25,5	R30.#-10-M	10-C				
	13	0.095 2,41	0.935 23,7	0.905 ÷ 1.043 23,0 ÷ 26,5	R30.#-11-M	11-C				
	14	0.083 2,11	0.959 24,3	0.945 ÷ 1.102 24,0 ÷ 28,0	R30.#-12-M	12-C	4-12÷14/A	1/2" (12,7)	F90 + M4/V MS/60 M4/L Matex	Macrol 750
	16	0.065 1,65	0.995 25,2	0.984 ÷ 1.142 25,0 ÷ 29,0	R30.#-12/A-M	12/A-C				
	18	0.049 1,24	1.027 26,0							
	20	0.035 0,89	1.055 26,7							
22	0.028 0,71	1.069 27,1								
1.1/4" (31,8)	9	0.148 3,76	0.954 24,3	0.905 ÷ 1.043 23,0 ÷ 26,5	R30.#-11	11-C	4-9÷11	3/8" (9,5)	F90 + M4/L M4/V	Macrol 200
	10	0.134 3,40	0.982 25,0	0.945 ÷ 1.102 24,0 ÷ 28,0	R30.#-12	12-C				
	11	0.120 3,05	1.010 25,7	0.984 ÷ 1.142 25,0 ÷ 29,0	R30.#-12/A	12/A-C				
	12	0.109 2,77	1.032 26,2	1.027 ÷ 1.181 26,0 ÷ 30,0	R30.#-13	13-C	4-12÷14/A	1/2" (12,7)	F90 + M4/L M4/V Matex	Macrol 450
	13	0.095 2,41	1.060 27,0	1.063 ÷ 1.220 27,0 ÷ 31,0	R30.#-13/A	13/A-C				
	14	0.083 2,11	1.084 27,6							
	16	0.065 1,65	1.120 28,5							
	17	0.058 1,47	1.134 28,8							
	18	0.049 1,24	1.152 29,3							
20	0.035 0,89	1.180 30,0	1.102 ÷ 1.260 28,0 ÷ 32,0	R30.#-14	14-15-C					
22	0.028 0,71	1.194 30,4								
1.3/8" (34,9)	12	0.109 2,77	1.157 29,3	1.102 ÷ 1.260 28,0 ÷ 32,0	R30.#-14-M	14-15-C	4-12÷14/A	1/2" (12,7)	F90 + M4/L M4/V	Macrol 200
	14	0.083 2,11	1.209 30,7	1.142 ÷ 1.299 29,0 ÷ 33,0	R30.#-14/A-M	14/A-15/A-C				
	16	0.065 1,65	1.245 31,6	1.181 ÷ 1.338 30,0 ÷ 34,0	R30.#-15-M	14-15-C	4-15÷16/A	1/2" (12,7)	F90 + M4/L M4/V Matex	Macrol 450
	18	0.049 1,24	1.277 32,4	1.220 ÷ 1.378 31,0 ÷ 35,0	R30.#-15/A-M	14/A-15/A-C				
	20	0.035 0,89	1.305 33,1	1.260 ÷ 1.417 32,0 ÷ 36,0	R30.#-16-M	16-C				
	22	0.028 0,71	1.319 33,5							
1.1/2" (38,1)	8	0.165 4,19	1.170 29,7	1.142 ÷ 1.299 29,0 ÷ 33,0	R30.#-14/A	14/A-15/A-C	4-12÷14/A	1/2" (12,7)	F90 + M4/L M4/V	Macrol 200
	9	0.148 3,76	1.204 30,6	1.181 ÷ 1.338 30,0 ÷ 34,0	R30.#-15	14-15-C				
	10	0.134 3,40	1.232 31,3	1.220 ÷ 1.378 31,0 ÷ 35,0	R30.#-15/A	14/A-15/A-C	4-15÷16/A	1/2" (12,7)	F90 + M4/L M4/V Matex	Macrol 450
	11	0.120 3,05	1.260 32,0	1.260 ÷ 1.417 32,0 ÷ 36,0	R30.#-16	16-C				
	12	0.109 2,77	1.282 32,5							
	13	0.095 2,41	1.310 33,3							
	14	0.083 2,11	1.334 33,9							
	15	0.072 1,83	1.356 34,4							
	16	0.065 1,65	1.370 34,8							
	17	0.058 1,47	1.384 35,1							
	18	0.049 1,24	1.402 35,6	1.319 ÷ 1.476 33,5 ÷ 37,5	R30.#-16/A	16/A-C				
	20	0.035 0,89	1.430 36,3							
22	0.028 0,71	1.444 36,7								