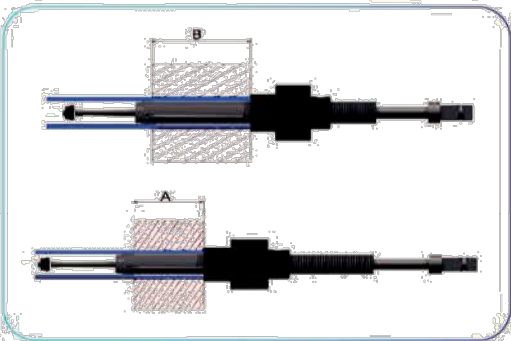


- OD tube: 1/2"-1,3/4" (12.7-33.8 mm)
- ID tube: 0.333"-1.406" (8.45-35.7mm)
- For Long Expansion We Recommend To Use Our Step By Step Expanders. The Type S Tools (roller length 3" 76.2mm) The number of expander operation passes can be reduced by 35%.

Tube sheet thickness	A	B
Expanders with 1,1/2"rollenght	1" 25.4 mm	3" 76.2 mm
Expanders with 2,1/4"rollenght	1,1/2" 38.1 mm	
Expanders with 3"rollenght	2" 50.8 mm	

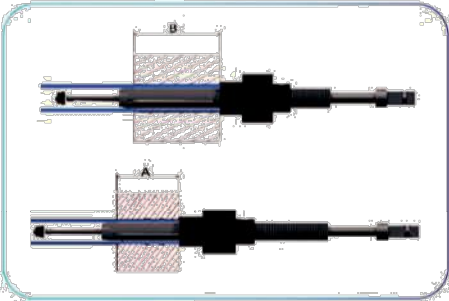


TUBE	G.A		EXPANTION RANGE Inch		EXPANTION RANGE mm		Expander With 1,1/2" (38.1 mm)Rolls		Expander With 2,1/4" (57.1 mm)Rolls			Expander With 3" (76.2 mm)Rolls			size square
	O.D.	bwg					Expantin With 1,1/2" (38.1 mm)	Roll Set No.	Expander No.	RII Set No.	Mandrel NO.	Expander No.	RII Set No.	Mandrel NO.	
1/2" (12.7mm)	14	2.03	0.333	0.375	8.45	9.52	797	R-797			M-797				3/8 inch (9.5 mm)
	15	1.83	0.344	0.394	8.74	10	800	R-1			M-0				
	16	1.63	0.360	0.410	9.14	10.41	801	R-1			M-1				
	17	1.42	0.374	0.424	9.5	10.77	803	R-2			M-1				
	18	1.22	0.392	0.447	9.96	11.35	805	R-3			M-2				
5/8" (15.88mm)	12	2.64	0.392	0.447	9.96	11.35	805	R-3			M-2				
	13	2.34	0.425	0.480	10.79	12.19	807	R-4			M-3				
	14	2.03	0.449	0.509	11.4	12.93	809	R-4	810	R-4-A	M-4				
	15	1.83	0.471	0.536	11.96	13.61	811	R-5	812	R-5-A	M-5				
	16	1.63	0.485	0.550	12.32	13.97	813	R-6	814	R-6-A	M-5				
	17	1.42	0.499	0.564	12.67	14.33	815	R-6	816	R-6-A	M-6				
	18	1.22	0.517	0.572	13.13	14.53	817	R-7	818	R-7-A	M-7				
3/4" (19.05mm)	10	3.25	0.471	0.536	11.96	13.61	811	R-5	812	R-5-A	M-5				
	11	2.95	0.499	0.564	12.67	14.33	815	R-6	816	R-6-A	M-6				
	12	2.64	0.522	0.582	13.26	14.78	819	R-7	820	R-7-A	M-6				
	13	2.34	0.550	0.615	13.97	15.62	821	R-8	822	R-8-A	M-8	822-S	R-8-S	M-8-S	
	14	2.03	0.574	0.639	14.58	16.23	823	R-9	824	R-9-A	M-8	824-S	R-9-S	M-8-S	
	15	1.83	0.596	0.661	15.14	16.79	825	R-10	826	R-10-A	M-8	826-S	R-10-S	M-8-S	
	16	1.63	0.605	0.685	15.37	17.4	827	R-10	828	R-10-A	M-9	828-S	R-10-S	M-9-S	
	17	1.42	0.619	0.699	15.72	17.75	829	R-11	830	R-11-A	M-9	830-S	R-11-S	M-9-S	
	18	1.22	0.619	0.699	15.72	17.75	829	R-11	830	R-11-A	M-9	830-S	R-11-S	M-9-S	
7/8" (22.23mm)	10	3.25	0.596	0.661	15.14	16.79	825	R-10	826	R-10-A	M-8	826-S	R-10-S	M-8-S	
	11	2.95	0.619	0.699	15.72	17.75	829	R-11	830	R-11-A	M-9	830-S	R-11-S	M-9-S	
	12	2.64	0.642	0.722	16.3	18.34	831	R-12	832	R-12-A	M-9	832-S	R-8-S	M-9-S	
	13	2.34	0.670	0.750	17.02	19.05	833	R-13	834	R-13-A	M-10	834-S	R-13-S	M-0-S	
	14	2.03	0.685	0.774	17.4	19.66	835	R-14	836	R-14-A	M-11	836-S	R-14-S	M-1-S	
	15	1.83	0.712	0.801	18.08	20.35	837	R-15	838	R-15-A	M-11	838-S	R-15-S	M-1-S	
	16	1.63	0.726	0.815	18.44	20.70	839	R-15	840	R-15-A	M-12	840-S	R-15-S	M-2-S	

800 For Condensers and Heat Exchangers

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Tube sheet thickness	A	B
Expanders with 1 1/2" roll length	1" 25.4 mm	3" 76.2 mm
Expanders with 2 1/4" roll length	1 1/2" 38.1 mm	
Expanders with 3" roll length	2" 50.8 mm	

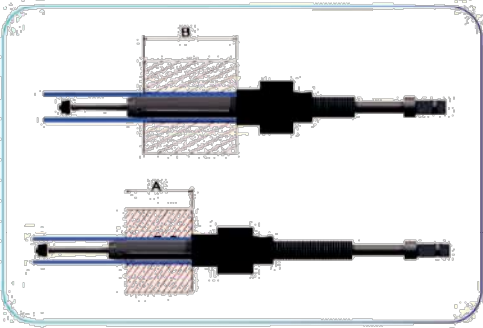


TUBE	G.A		EXPANTION RANGE Inch		EXPANTION RANGE mm		Expander With 1,1/2" (38.1 mm)Rolls		Expander With 2,1/4" (57.1 mm)Rolls			Expander With 3" (76.2 mm)Rolls			size square □
O.D.	bwg	mm					Expantin With 1,1/2" (38.1 mm)	Roll Set No.	Expander No.	Rll Set No.	Mandrel NO.	Expander No.	Rll Set No.	Mandrel NO.	
1" (25.4mm)	8	4.06	0.655	0.735	16.64	18.67	841	R-13	842	R-13-A	M-9	842-S	R-13-S	M-9-S	3/8 inch (9.5 mm)
	9	3.66	0.685	0.774	17.4	19.66	835	R-14	836	R-14-A	M-11	836-S	R-14-S	M-11-S	
	10	3.25	0.712	0.801	18.08	20.35	837	R-15	838	R-15-A	M-11	838-S	R-15-S	M-11-S	
	11	2.95	0.740	0.829	18.8	21.06	843	R-16	844	R-16-A	M-12	844-S	R-16-S	M-12-S	
	12	2.64	0.763	0.852	19.58	21.64	845	R-17	846	R-17-A	M-12	846-S	R-17-S	M-12-S	
	13	2.34	0.791	0.880	20.1	22.35	847	R-18	848	R-18-A	M-12	848-S	R-18-S	M-12-S	
	14	2.03	0.810	0.909	20.57	23.09	849	R-18	850	R-18-A	M-13	850-S	R-18-S	M-13-S	
	15	1.83	0.837	0.936	21.26	23.77	851	R-19	852	R-19-A	M-13	852-S	R-19-S	M-13-S	
	16	1.63	0.837	0.936	21.26	23.77	851	R-19	852	R-19-A	M-13	852-S	R-19-S	M-13-S	
1 1/8" (28.58mm)	8	4.06	0.776	0.875	19.71	22.23	853	R-20	854	R-20-A	M-13	854-S	R-20-S	M-13-S	1/2 inch (12.7 mm)
	9	3.66	0.810	0.909	20.57	23.09	849	R-18	850	R-18-A	M-13	850-S	R-18-S	M-13-S	
	10	3.25	0.837	0.936	21.26	23.77	851	R-19	852	R-19-A	M-13	852-S	R-19-S	M-13-S	
	11	2.95	0.865	0.964	21.97	24.48	855	R-21	856	R-21-A	M-13	856-S	R-21-S	M-13-S	
	12	2.64	0.883	0.982	22.43	24.97	857	R-21	858	R-21-A	M-14	858-S	R-21-S	M-14-S	
	13	2.34	0.916	1.015	23.27	25.78	859	R-22	860	R-22-A	M-14	860-S	R-22-S	M-14-S	
	14	2.03	0.935	1.044	23.75	26.52	861	R-23	862	R-23-A	M-15	862-S	R-23-S	M-15-S	
	15	1.83	0.962	1.071	24.43	27.2	863	R-24	862	R-24-A	M-15	862-S	R-24-S	M-15-S	
	16	1.63	0.962	1.071	24.43	27.2	863	R-24	864	R-24-A	M-15	864-S	R-24-S	M-15-S	
1 1/4" (31.75mm)	8	4.06	0.901	1.010	22.89	25.65	865	R-25	866	R-25-A	M-15	866-S	R-25-S	M-15-S	1/2 inch (12.7 mm)
	9	3.66	0.935	1.044	23.75	26.52	861	R-23	862	R-23-A	M-15	862-S	R-23-S	M-15-S	
	10	3.25	0.962	1.071	24.43	27.2	863	R-24	864	R-24-A	M-15	864-S	R-24-S	M-15-S	
	11	2.95	0.990	1.099	25.15	27.91	867	R-26	868	R-26-A	M-16	868-S	R-26-S	M-16-S	
	12	2.64	1.013	1.122	25.73	28.49	869	R-27	870	R-27-A	M-16	870-S	R-27-S	M-16-S	
	13	2.34	1.041	1.150	26.44	29.21	871	R-28	872	R-28-A	M-17	872-S	R-28-S	M-17-S	
	14	2.03	1.060	1.169	26.92	29.70	873	R-29	874	R-29-A	M-17	874-S	R-29-S	M-17-S	
	15	1.83	1.087	1.196	27.61	30.38	875	R-30	876	R-30-A	M-17	876-S	R-30-S	M-17-S	
	16	1.63	1.087	1.196	27.61	30.38	875	R-30	876	R-30-A	M-17	876-S	R-30-S	M-17-S	

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TUBE	G.A		EXPANTION RANGE Inch		EXPANTION RANGE mm		Expander With 1 1/2" (38.1 mm)Rolls		Expander With 2 1/4" (57.1 mm)Rolls			Expander With 3" (76.2 mm)Rolls			size square
	O.D.	bwg					Expantin With 1 1/2" (38.1 mm)	Roll Set No.	Expander No.	Roll Set No.	Mandrel NO.	Expander No.	Roll Set No.	Mandrel NO.	
1 3/8 (34.93mm)	8	4.06	1.026	1.135	26.06	28.83	877	R-31	878	R-31-A	M-17	878-S	R-31-S	M-17-S	1/2 inch (12.7 mm)
	9	3.66	1.06	1.169	26.92	29.7	873	R-29	874	R-29-A	M-17	874-S	R-29-S	M-17-S	
	10	3.25	1.087	1.196	27.61	30.38	875	R-30	876	R-30-A	M-17	876-S	R-30-S	M-17-S	
	11	2.95	1.115	1.224	28.12	31.09	879	R-30	880	R-30-A	M-18	880-S	R-30-S	M-18-S	
	12	2.64	1.133	1.242	28.78	31.55	881	R-32	882	R-32-A	M-18	882-S	R-32-S	M-18-S	
	13	2.34	1.16	1.275	29.46	32.38	883	R-33	884	R-33-A	M-19	884-S	R-33-S	M-19-S	
	14	2.03	1.179	1.294	29.95	32.87	885	R-34	886	R-34-A	M-20	886-S	R-34-S	M-20-S	
	15	1.83	1.206	1.321	30.63	33.55	887	R-35	888	R-35-A	M-20	888-S	R-35-S	M-20-S	
1 1/2 (38.1mm)	8	4.06	1.145	1.26	29.08	32	889	R-34	890	R-34-A	M-19	890-S	R-34-S	M-19-S	
	9	3.66	1.179	1.294	29.95	32.87	885	R-34	886	R-34-A	M-20	886-S	R-34-S	M-20-S	
	10	3.25	1.206	1.321	30.63	33.55	887	R-35	888	R-35-A	M-20	888-S	R-35-S	M-20-S	
	11	2.95	1.235	1.35	31.39	34.29	891	R-36	892	R-36-A	M-20	892-S	R-36-S	M-20-S	
	12	2.64	1.257	1.372	31.93	34.85	893	R-37	894	R-37-A	M-20	894-S	R-37-S	M-20-S	
	13	2.34	1.285	1.4	32.64	35.56	895	R-37	896	R-37-A	M-21	896-S	R-37-S	M-21-S	
	14	2.03	1.285	1.4	32.64	35.56	895	R-37	896	R-37-A	M-21	896-S	R-37-S	M-21-S	
	15	1.83	1.331	1.446	33.81	36.73	897	R-38	898	R-38-A	M-21	898-S	R-38-S	M-21-S	
1 3/4"	8	4.06	1.406	1.531	35.7	38.9	899	R-38	899RL	R-38-A	M-22	899RL-S	R-38-S	M-22-S	