

CONDENSER TUBE EXPANDER



Manufacturer & Exporter of:
Tube Cleaners, Tube Expanders, Tube Tools,
Construction Equipments, Concrete Vibrators, Flexible shaft
Grinders & Accessories.

CONDENSER TUBE EXPANDER

MODEL NO.	TUBE OD	PAGE NO.
B800	1/2" to 1.1/2"	2-3
B800-5	5/8" to 1.1/2"	4-5
B1200.	1/2" to 1.1/2"	6-7
B1200-5	3/4" to 1.1/2"	8
BAN	1/4" to 3/8"	9
B900	1/4" to 3/8"	10
B8012	1.3/4" to 5"	11-12
B1300	3/8"	13

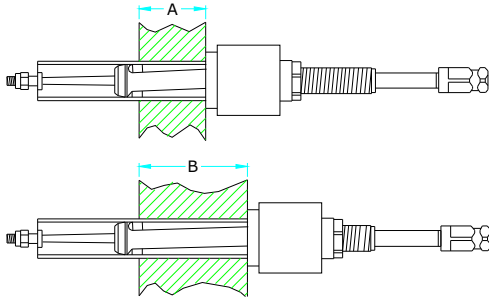
CONDENSER TUBE EXPANDER



'B800' SERIES Tube O. D. 1/2"- 1.1/2"

FEATURES:

- Use -This is the most popular expander for use on heat exchanger and condensers with tubes of 1/2"- 1.1/2" O.D.



TUBE EXPANDERS FITTED WITH ROLLER LENGTH	FOR TUBE SHEET ADJUSTABLE RANGE	
	MINIMUM A	MAXIMUM B
(38.1mm) 1.1/2"	(12.7mm) 1/2"	(38.1mm) 1.1/2"
(57.1mm) 2.1/4"	(31.7mm) 1.1/4"	(57.1mm) 2.1/4"

Tube O.D. (Mm)	Tube Thickness		Tube I. D.		Minimum I. D. Tool Enters		Maximum Expansion of Tool		EXPANDER with (38.10mm) 1.1/2" Long rollers			EXPANDER with (57.15mm) Set No. 2.1/4" Long rollers			Ratchet Size Square Inch		
	inch	Bwg	Inch	Mm	Inch	Mm	Inch	Mm	Inch	Mm	Complete Tool No.	Roller No.	Mandrel No.	Complete Tool No.		Roller No.	Mandrel No.
(12.70)	1/2	14	.083	2.10	.407	8.4	.324	8.2	.374	9.5	B797	797	797	-	-	-	3/8
		15	.072	1.82	.435	9.0	.348	8.8	.398	10.1	B799	R-1	799	-	-	-	
		16	.065	1.65	.459	9.4	.360	9.2	.410	10.4	B801	R-1	M-1	-	-	-	
		17	.058	1.47	.481	9.7	.374	9.5	.424	10.7	B803	R-2	M-1	-	-	-	3/8
		18	.049	1.24	.491	10.2	.392	9.9	.447	11.3	B805	R-3	M-2	-	-	-	
20	.035	0.88	.430	10.9	.406	10.3	.461	11.7	B805 S	R-3	M-3	-	-	-			
(15.88)	5/8	12	.109	2.76	.407	10.3	.392	9.9	.447	11.3	B805	R-3	M-2	B806	R-3-A	M-2	3/8
		13	.095	2.41	.435	11.0	.425	10.8	.480	12.1	B807	R-4	M-3	B808	R-4-A	M-3	
		14	.083	2.10	.459	11.6	.449	11.4	.509	12.9	B809	R-4	M-4	B810	R-4-A	M-4	
		15	.072	1.82	.481	12.2	.471	11.9	.536	13.6	B811	R-5	M-5	B812	R-5-A	M-5	
		16	.065	1.65	.495	12.5	.485	12.3	.550	13.9	B813	R-6	M-5	B814	R-6-A	M-5	3/8
		17	.058	1.47	.509	12.9	.499	12.6	.564	14.3	B815	R-6	M-6	B816	R-6-A	M-6	
		18	.049	1.24	.527	13.3	.517	13.1	.572	14.5	B817	R-7	M-7	B818	R-7-A	M-7	
		19	.042	1.06	.541	13.7	.522	13.2	.582	14.7	B819	R-7	M-6	B820	R-7-A	M-6	3/8
		20	.035	0.88	.555	14.1	.536	13.6	.596	15.1	B819S	R-7	M-8	B820S	R-7-A	M-8	
		21	.032	0.81	.561	14.2	.536	13.6	.596	15.1	B819S	R-7	M-8	B820S	R-7-A	M-8	
22	.028	0.71	.569	14.4	.536	13.6	.596	15.1	B819S	R-7	M-8	B820S	R-7-A	M-8			
(19.05)	3/4	10	.134	3.40	.482	12.2	.471	11.9	.536	13.6	B811	R-5	M-5	B812	R-5-A	M-5	3/8
		11	.120	3.04	.510	12.9	.499	12.6	.564	14.3	B815	R-6	M-6	B816	R-6-A	M-6	
		12	.109	2.76	.532	13.5	.522	13.2	.582	14.7	B819	R-7	M-6	B820	R-7-A	M-6	
		13	.095	2.41	.560	14.2	.550	13.9	.615	15.6	B821	R-8	M-8	B822	R-8-A	M-8	3/8
		14	.083	2.10	.584	14.8	.574	14.5	.639	16.2	B823	R-9	M-8	B824	R-9-A	M-8	
		15	.072	1.82	.606	15.3	.596	15.1	.661	16.7	B825	R-10	M-8	B826	R-10-A	M-8	
		16	.065	1.65	.620	15.7	.605	15.3	.685	17.4	B827	R-10	M-9	B828	R-10-A	M-9	3/8
		17	.058	1.47	.630	16.1	.619	15.7	.699	17.7	B829	R-11	M-9	B830	R-11-A	M-9	
		18	.049	1.24	.652	16.5	.619	15.7	.699	17.7	B829	R-11	M-9	B830	R-11-A	M-9	
		19	.042	1.06	.666	16.9	.642	16.3	.722	18.3	B831	R-12	M-9	B832	R-12-A	M-9	3/8
20	.035	0.88	.680	17.2	.642	16.3	.722	18.3	B831	R-12	M-9	B832	R-12-A	M-9			
21	.032	0.81	.686	17.4	.642	16.3	.722	18.3	B831	R-12	M-9	B832	R-12-A	M-9			
22	.028	0.71	.694	17.6	.642	16.3	.722	18.3	B831	R-12	M-9	B832	R-12-A	M-9			
10	.134	3.40	.607	15.4	.596	15.1	.661	16.7	B825	R-10	M-8	B826	R-10-A	M-8	3/8		
11	.120	3.04	.635	16.1	.619	15.7	.699	17.7	B829	R-11	M-9	B830	R-11-A	M-9			
12	.109	2.76	.657	16.6	.642	16.3	.722	18.3	B831	R-12	M-9	B832	R-12-A	M-9			
(22.22)	7/8	13	.095	2.41	.685	17.4	.670	17.0	.750	19.0	B833	R-13	M-10	B834	R-13-A	M-10	3/8
		14	.083	2.10	.709	18.0	.685	17.4	.774	19.6	B835	R-14	M-11	B836	R-14-A	M-11	
		15	.072	1.82	.731	18.5	.712	18.0	.801	20.3	B837	R-15	M-11	B838	R-15-A	M-11	
		16	.065	1.65	.745	18.9	.726	18.4	.815	20.7	B839	R-15	M-12	B840	R-15-A	M-12	3/8
		17	.058	1.47	.759	19.2	.740	18.8	.829	21.0	B843	R-16	M-12	B844	R-16-A	M-12	
		18	.049	1.24	.777	19.7	.740	18.8	.829	21.0	B843	R-16	M-12	B844	R-16-A	M-12	

CONDENSER TUBE EXPANDER



'B800' SERIES Tube O. D. 1 1/2" - 1.1/2"

Tube O.D. (Mm) inch	Tube Thickness			Tube I. D.		Minimum I. D. Tool Enters		Maximum Expansion of Tool		EXPANDER with (38.10mm) 1.1/2" Long rollers			EXPANDER with (57.15mm) 2.1/4" Long rollers			Ratchet Size Square Inch		
	Bwg	Inch	Mm	Inch	Mm	Inch	Mm	Inch	Mm	Complete Tool No.	Roller Set No.	Mandrel No.	Complete Tool No.	Roller Set No.	Mandrel No.			
1 (25.40)	8	.165	4.19	.669	17.0	.654	16.6	.732	18.6	B841	R-13	M-9	B842	R-13-A	M-9	3/8		
	9	.148	3.75	.701	17.8	.685	17.4	.772	19.6	B835	R-14	M-11	B836	R-14-A	M-11			
	10	.134	3.40	.728	18.5	.709	18.0	.799	20.3	B837	R-15	M-11	B836	R-15-A	M-11			
	3/8	11	.120	3.04	.760	19.3	.760	19.3	.827	21.0	B843	R-16	M-12	B844	R-16-A	M-12	3/8	
		12	.109	2.76	.787	20.0	.787	20.0	.850	21.6	B845	R-17	M-12	B846	R-17-A	M-12		
		13	.095	2.41	.807	20.5	.807	20.5	.878	22.3	B847	R-18	M-12	B848	R-18-A	M-12		
	3/8	14	.083	2.10	.831	21.1	.835	21.2	.906	23.0	B849	R-18	M-13	B850	R-18-A	M-13	3/8	
		15	.072	1.82	.854	21.7	.835	21.2	.933	23.7	B851	R-19	M-13	B852	R-19-A	M-13		
		16	.065	1.65	.870	22.1	.862	21.9	.933	23.7	B851	R-19	M-13	B852	R-19-A	M-13		
		17	.058	1.47	.882	22.4	.862	21.9	.961	24.4	B855	R-21	M-13	B856	R-21-A	M-13		
	1.1/8 (28.58)	18	.049	1.24	.902	22.9	.862	21.9	.961	24.4	B855	R-21	M-13	B856	R-21-A	M-13	3/8	
		19	.042	1.06	.913	23.2	.862	21.9	.961	24.4	B855	R-21	M-13	B856	R-21-A	M-13		
20		.035	0.88	.929	23.6	.862	21.9	.961	24.4	B855	R-21	M-13	B856	R-21-A	M-13			
1.1/4 (31.75)		8	.165	4.19	.791	20.1	.776	19.7	.874	22.2	B853	R-20	M-13	B854	R-20-A	M-13	3/8	
		9	.148	3.75	.827	21.0	.807	20.5	.906	23.0	B849	R-18	M-13	B850	R-18-A	M-13		
		10	.134	3.40	.854	21.7	.835	21.2	.933	23.7	B851	R-19	M-13	B852	R-19-A	M-13		
		1/2	11	.120	3.04	.882	22.4	.862	21.9	.961	24.4	B855	R-21	M-13	B856	R-21-A	M-13	1/2
			12	.109	2.76	.906	23.0	.882	22.4	.980	24.9	B857	R-21	M-14	B858	R-21-A	M-14	
			13	.095	2.41	.933	23.7	.913	23.7	1.012	25.7	B859	R-22	M-14	B860	R-22-A	M-14	
			14	.083	2.10	.957	24.3	.961	24.4	1.043	26.5	B861	R-23	M-15	B862	R-23-A	M-15	
		1/2	15	.072	1.82	.980	24.9	.961	24.4	1.071	27.2	B863	R-24	M-15	B864	R-24-A	M-15	1/2
			16	.065	1.65	.992	25.2	.988	21.9	1.071	27.2	B863	R-24	M-15	B864	R-24-A	M-15	
	17		.058	1.47	1.01	25.6	.988	21.9	1.098	27.9	B867	R-26	M-16	B868	R-26-A	M-16		
	18		.049	1.24	1.03	26.0	.988	21.9	1.098	27.9	B867	R-26	M-16	B868	R-26-A	M-16		
	1.3/8 (34.92)	8	.165	4.19	.920	23.3	.901	22.8	1.010	25.6	B865	R-25	M-15	B866	R-25-A	M-15	1/2	
9		.148	3.75	.954	24.2	.935	23.7	1.044	26.5	B861	R-23	M-15	B862	R-23-A	M-15			
10		.134	3.40	.982	24.9	.962	24.4	1.071	27.2	B863	R-24	M-13	B864	R-24-A	M-13			
1/2		11	.120	3.04	1.010	25.6	.990	25.1	1.099	27.9	B867	R-26	M-16	B868	R-26-A	M-16	1/2	
		12	.109	2.76	1.032	26.2	1.013	25.7	1.122	28.5	B869	R-27	M-16	B870	R-27-A	M-16		
		13	.095	2.41	1.060	26.9	1.039	26.4	1.150	29.2	B871	R-28	M-17	B872	R-28-A	M-17		
		14	.083	2.10	1.084	27.5	1.060	26.9	1.169	29.6	B873	R-29	M-17	B874	R-29-A	M-17		
1/2		15	.072	1.82	1.106	28.0	1.087	27.6	1.196	30.3	B875	R-30	M-17	B876	R-30-A	M-17	1/2	
		16	.065	1.65	1.120	28.4	1.087	27.6	1.196	30.3	B875	R-30	M-17	B876	R-30-A	M-17		
		17	.058	1.47	1.134	28.8	1.115	28.3	1.224	31.0	B879	R-30	M-18	B880	R-30-A	M-18		
		18	.049	1.24	1.152	29.2	1.115	28.3	1.224	31.0	B879	R-30	M-18	B880	R-30-A	M-18		
1.1/2 (38.10)		8	.165	4.19	1.045	26.5	1.026	26.0	1.135	28.8	B877	R-31	M-17	B878	R-31-A	M-17	1/2	
	9	.148	3.75	1.079	27.4	1.060	26.9	1.169	29.6	B873	R-29	M-17	B874	R-29-A	M-17			
	10	.134	3.40	1.107	28.1	1.087	27.6	1.196	30.3	B875	R-30	M-17	B876	R-30-A	M-17			
	1/2	11	.120	3.04	1.135	28.8	1.115	28.3	1.224	31.0	B879	R-30	M-18	B880	R-30-A	M-18	1/2	
		12	.109	2.76	1.157	29.3	1.133	28.7	1.242	31.5	B881	R-32	M-18	B882	R-32-A	M-18		
		13	.095	2.41	1.185	30.1	1.160	29.4	1.275	32.3	B883	R-33	M-19	B884	R-33-A	M-19		
		14	.083	2.10	1.209	30.7	1.179	29.9	1.294	32.8	B885	R-34	M-20	B886	R-34-A	M-20		
	1/2	15	.072	1.82	1.231	31.2	1.206	30.6	1.321	33.5	B887	R-35	M-20	B888	R-35-A	M-20	1/2	
		16	.065	1.65	1.245	31.6	1.206	30.6	1.321	33.5	B887	R-35	M-20	B888	R-35-A	M-20		
		8	.165	4.19	1.170	29.7	1.145	29.0	1.260	32.0	B889	R-34	M-19	B890	R-34-A	M-19		1/2
		9	.148	3.75	1.204	30.5	1.177	29.9	1.290	32.8	B885	R-34	M-20	B886	R-34-A	M-20		
	10	.134	3.40	1.232	31.2	1.206	30.6	1.321	33.5	B887	R-35	M-20	B888	R-35-A	M-20			
1.1/2	11	.120	3.04	1.260	32.0	1.235	31.3	1.350	34.2	B891	R-36	M-20	B892	R-36-A	M-20	1/2		
	12	.109	2.76	1.282	32.5	1.257	31.9	1.372	34.8	B893	R-37	M-20	B894	R-37-A	M-20			
	13	.095	2.41	1.310	33.2	1.285	32.6	1.400	35.5	B895	R-37	M-21	B896	R-37-A	M-21			
	1/2	14	.083	2.10	1.334	33.8	1.285	32.6	1.400	35.5	B895	R-37	M-21	B896	R-37-A	M-21	1/2	
		15	.072	1.82	1.356	34.4	1.331	33.8	1.446	36.7	B897	R-38	M-21	B898	R-38-A	M-21		
		16	.065	1.65	1.370	34.8	1.331	33.8	1.446	36.7	B897	R-38	M-21	B898	R-38-A	M-21		
		17	.058	1.47	1.384	35.1	1.331	33.8	1.472	37.3	B899	R-38	M-22	B900	R-38-A	M-22		
	1/2	18	.049	1.24	1.402	35.6	1.331	33.8	1.472	37.3	B899	R-38	M-22	B900	R-38-A	M-22	1/2	
19		.042	1.06	1.416	35.9	1.331	33.8	1.472	37.3	B899	R-38	M-22	B900	R-38-A	M-22			
20		.035	0.88	1.430	35.3	1.331	33.8	1.472	37.3	B899	R-38	M-22	B900	R-38-A	M-22			

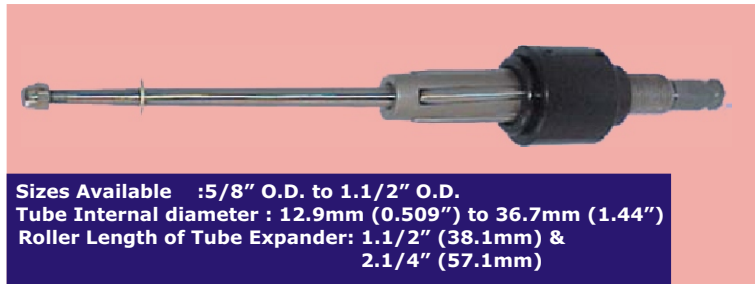
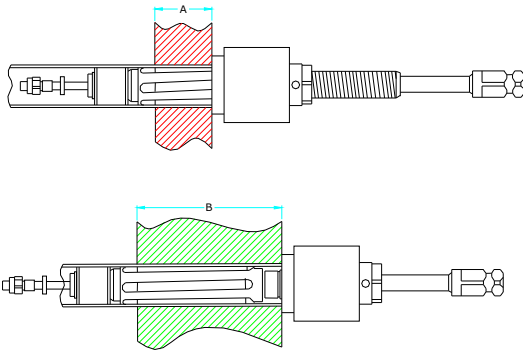
CONDENSER TUBE EXPANDER



✦ **B800-5 Series** Tube O. D. 5/8"-1.1/2"

FIVE ROLLER FOR THIN WALL FEATURES:

- Use -This is recommended for use on thin walled tubes (19 thru 22 gauge walls) of stainless steel, Titanium, & other exotic materials in thick tube sheets.
- Advantages: It gives a more concentric and even expansion when expanding thin walled tubes vs conventional 3 roller tube expander and reduces tube spring back effect.



For Tube Internal Diameter
 From (12.9mm) 0.509" to (36.7mm) 1.44"

TUBE EXPANDERS FITTED WITH ROLLER LENGTH		FOR TUBE SHEET ADJUSTABLE RANGE	
		MINIMUM A	MAXIMUM B
2.1/4" (57.1mm)	STD. REACH	(12.7mm) 1/2"	(101.4mm) 4"
	6" REACH	(12.7mm) 1/2"	(152.4mm) 6"
	8" REACH	(12.7mm) 1/2"	(203.2mm) 8"

Tube O.D. (Mm) inch	Tube Thickness		Tube I. D.		Minimum I. D. Tool Enters		Maximum Expansion of Tool		EXPANDER with (38.10mm) 1.1/2" Long rollers			EXPANDER with (57.15mm) 2.1/4" Long rollers			
	Bwg	Inch	Mm	Inch	Mm	Inch	Mm	Inch	Mm	Complete Tool No.	Roller Set No.	Mandrel No.	Complete Tool No.	Roller Set No.	Mandrel No.
(15.88) 5/8	17	.058	1.47	.509	12.9	.499	12.6	.564	14.3	B815-5	R-4-5	816-5	B816-5	R-4-A-5	816-5
	18	.049	1.24	.527	13.4	.517	13.1	.576	14.6	B817-5	R-4-5	M-9	-	-	-
	19	.042	1.06	.541	13.7	.522	13.3	.582	14.8	B819-5	R-4-5	820-5	B820-5	R-4-A-5	820-5
	20	.035	0.88	.555	14.1	.536	13.6	.596	15.1	B819-5 S	R-4-5	820-5 S	B820-5 S	R-4-A-5	820-5 S
	21	.032	0.81	.561	14.2	.536	13.6	.596	15.1	B819-5 S	R-4-5	820-5 S	B820-5 S	R-4-A-5	820-5 S
	22	.028	0.71	.569	14.5	.536	13.6	.596	15.1	B819-5 S	R-4-5	820-5 S	B820-5 S	R-4-A-5	820-5 S
(19.05) 3/4	13	.095	2.41	.560	14.2	.550	13.9	.615	15.6	B821-5	R-5-5	822-5	B822-5	R-5-A-5	822-5
	14	.083	2.10	.584	14.8	.574	14.5	.629	15.9	B823-5	R-6-5	824-5	B824-5	R-6-A-5	824-5
	15	.072	1.82	.606	15.3	.596	15.1	.661	16.8	B825-5	R-7-5	826-5	B826-5	R-7-A-5	826-5
	16	.065	1.65	.620	15.7	.605	15.3	.680	17.2	B827-5	R-7-5	M-13	B828-5	R-7-A-5	M-13
	17	.058	1.47	.630	16.1	.619	15.7	.699	17.8	B829-5	R-7-5	830-5	B830-5	R-7-A-5	830-5
	18	.049	1.24	.652	16.5	.619	15.7	.699	17.8	B829-5	R-7-5	830-5	B830-5	R-7-A-5	830-5
	19	.042	1.06	.666	16.9	.642	16.3	.729	18.5	B831-5	R-9-5	M-13	B832-5	R-7-A-5	M-13
	20	.035	0.88	.680	17.2	.642	16.3	.729	18.5	B831-5	R-9-5	M-13	B832-5	R-7-A-5	M-13
	21	.032	0.81	.686	17.4	.642	16.3	.729	18.5	B831-5	R-9-5	M-13	B832-5	R-7-A-5	M-13
	22	.028	0.71	.694	17.6	.642	16.3	.729	18.5	B831-5	R-9-5	M-1	B832-5	R-7-A-5	M-13
	23	.025	0.64	.700	17.8	.670	17.0	.747	18.9	B833-5	R-9-5	M-14-3/8	B834-5	R-7-A-5	M-14-3/8
	24	.022	0.56	.706	17.9	.670	17.0	.747	18.9	B833-5	R-9-5	M-14-3/8	B834-5	R-7-A-5	M-14-3/8
	25	.020	0.51	.710	18.0	.685	17.4	.750	19.0	B835-5	R-10-5	840-5	B836-5	R-7-A-5	M-840-5

CONDENSER TUBE EXPANDER



B800-5 Series

**Tube O. D.
5/8"-1.1/2"**

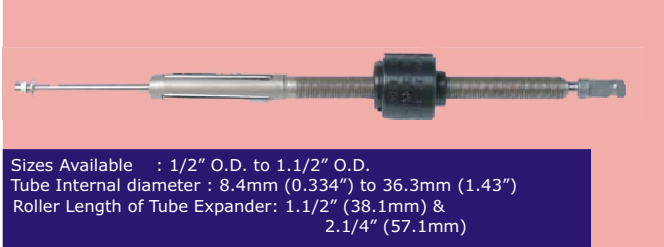
Tube O.D. (Mm) inch	Tube Thickness			Tube I. D.		Minimum I. D. Tool Enters		Maximum Expansion of Tool		EXPANDER with (38.10mm) 1.1/2" Long rollers			EXPANDER with (57.15mm) 2.1/4" Long rollers		
	Bwg	Inch	Mm	Inch	Mm	Inch	Mm	Inch	Mm	Complete Tool No.	Roller Set No.	Mandrel No.	Complete Tool No.	Roller Set No.	Mandrel No.
(22.22) 7/8	13	.095	2.41	.685	17.4	.670	17.0	.747	18.9	B833-5	R-9-5	M-14-3/8	B834-5	R-9-A-5	M-14-3/8
	14	.083	2.10	.709	18.0	.685	17.4	.750	19.0	B835-5	R-10-5	M-15-3/8	B836-5	R-10-A-5	M-15-3/8
	16	.065	1.65	.745	18.9	.726	18.4	.800	20.3	B839-5	R-11-5	840-5	B840-5	R-11-A-5	840-5
	17	.058	1.47	.759	19.2	.740	18.8	.824	20.9	B843-5	R-11-5	M-17-3/8	B844-5	R-11-A-5	M-17-3/8
	18	.049	1.24	.777	19.7	.740	18.8	.824	20.9	B843-5	R-11-5	M-17-3/8	B844-5	R-11-A-5	M-17-3/8
	19	.042	1.06	.791	20.1	.763	19.4	.851	21.6	B845-5	R-11-5	M-18-3/8	B846-5	R-11-A-5	M-18-3/8
	20	.035	0.88	.805	20.4	.763	19.4	.851	21.6	B845-5	R-11-5	M-18-3/8	B846-5	R-11-A-5	M-18-3/8
	21	.032	0.81	.811	20.6	.763	19.4	.851	21.6	B845-5	R-11-5	M-18-3/8	B846-5	R-11-A-5	M-18-3/8
	22	.028	0.71	.819	20.8	.763	19.4	.851	21.6	B845-5	R-11-5	M-18-3/8	B846-5	R-11-A-5	M-18-3/8
	23	.025	0.64	.825	20.9	.791	20.1	.880	22.4	B847-5	R-13-5	M-18-3/8	B848-5	R-13-A-5	M-18-3/8
	24	.022	0.56	.831	21.1	.791	20.1	.880	22.4	B847-5	R-13-5	M-18-3/8	B848-5	R-13-A-5	M-18-3/8
	(25.40) 1	12	.109	2.76	.782	19.8	.763	19.4	.852	21.6	B845-5	R-11-5	M-18-3/8	B846-5	R-11-A-5
13		.095	2.41	.810	20.5	.791	20.1	.880	22.4	B847-5	R-13-5	M-18-3/8	B848-5	R-13-A-5	M-18-3/8
14		.083	2.10	.834	21.2	.810	20.5	.879	22.3	B879-5	R-12-5	850-5	B850-5	R-12-A-5	M-18-3/8
15		.072	1.82	.856	21.7	.837	21.3	.936	23.8	B851-5	R-13-5	852-5	B852-5	R-13-A-5	852-5
16		.065	1.65	.870	22.0	.837	21.3	.936	23.8	B851-5	R-13-5	852-5	B852-5	R-13-A-5	852-5
17		.058	1.47	.884	22.4	.865	22.0	.965	24.5	B855-5	R-13-5	856-6	B856-5	R-13-A-5	856-5
18		.049	1.24	.902	22.9	.865	22.0	.965	24.5	B855-5	R-13-5	856-7	B856-5	R-13-A-5	856-5
19		.042	1.06	.916	23.2	.865	22.0	.965	24.5	B855-5	R-13-5	856-6	B856-5	R-13-A-5	856-5
20		.035	0.88	.930	23.6	.865	22.0	.965	24.5	B855-5	R-13-5	856-8	B856-5	R-13-A-5	856-5
21		.032	0.81	.936	23.8	.883	22.4	.997	25.3	B857-5	R-15-5	M-21-3/8	B858-5	R-15-A-5	M-21-3/8
22		.028	0.71	.944	24.0	.883	22.4	.997	25.3	B857-5	R-15-5	M-21-3/8	B858-5	R-15-A-5	M-21-3/8
23		.025	0.64	.950	24.1	.883	22.4	.997	25.3	B857-5	R-15-5	M-21-3/8	B858-5	R-15-A-5	M-21-3/8
24		.022	0.56	.956	24.3	.883	22.4	.997	25.3	B857-5	R-15-5	M-21-3/8	B858-5	R-15-A-5	M-21-3/8
25		.020	0.51	.960	24.4	.883	22.4	.997	25.3	B857-5	R-15-5	M-21-3/8	B858-5	R-15-A-5	M-21-3/8
(28.58) 1.1/8		12	.109	2.76	.907	23.0	.883	22.4	.997	25.3	B857-5	R-15-5	M-21-3/8	B858-5	R-15-A-5
	13	.095	2.41	.935	23.7	.916	23.2	1.000	25.4	B859-5	R-16-5	860-5	B960-5	R-16-A-5	860-5
	14	.083	2.10	.959	24.3	.935	23.7	1.039	26.4	B861-5	R-17-5	862-5	B862-5	R-17-A-5	862-5
	22	.028	0.71	1.069	27.2	1.039	26.4	1.157	29.4	B871-5	R-19-5	872-5	B872-5	R-19-A-5	872-5
	24	.022	0.56	1.081	27.5	1.039	26.4	1.157	29.4	B871-5	R-19-5	872-5	B872-5	R-19-A-5	872-5
(31.75) 1.1/4	15	.072	1.82	1.106	28.1	1.087	27.6	1.196	30.4	B875-5	R-21-5	876-5	B876-5	R-21-A-5	876-5
	16	.065	1.65	1.120	28.4	1.087	27.6	1.196	30.4	B875-5	R-21-5	876-5	B876-5	R-21-A-5	876-5
	17	.058	1.47	1.134	28.8	1.115	28.3	1.231	31.3	B879-5	R-21-5	880-5	B880-5	R-21-A-5	880-5
	18	.049	1.24	1.152	29.3	1.115	28.3	1.231	31.3	B879-5	R-21-5	880-5	B880-5	R-21-A-5	880-5
	19	.042	1.06	1.166	29.6	1.115	28.3	1.231	31.3	B879-5	R-21-5	880-5	B880-5	R-21-A-5	880-5
	20	.035	0.88	1.180	30.0	1.115	28.3	1.231	31.3	B879-5	R-21-5	880-5	B880-5	R-21-A-5	880-5
	21	.032	0.81	1.186	30.1	1.115	28.3	1.231	31.3	B879-5	R-21-5	880-5	B880-5	R-21-A-5	880-5
	22	.028	0.71	1.194	30.3	1.115	28.3	1.231	31.3	B879-5	R-21-5	880-5	B880-5	R-21-A-5	880-5
	23	.025	0.64	1.200	30.5	1.133	28.8	1.242	31.5	B881-5	R-21-5	882-5	B882-5	R-21-A-5	880-5
(34.92) 1.3/8	12	.109	2.76	1.154	29.3	1.133	28.8	1.242	31.5	B881-5	R-21-5	882-5	B880-5	R-15-A-5	880-5
	14	.083	2.11	1.209	30.7	1.179	29.9	1.296	32.9	B885-5	R-23-5	882-5	B882-5	R-16-A-5	882-5
	20	.035	0.88	1.305	33.2	1.257	31.9	1.385	35.2	B893-5	R-26-5	894-5	B894-5	R-17-A-5	894-5
	22	.028	0.71	1.319	33.5	1.285	32.6	1.417	36.0	B895-5	R-26-5	896-5	B896-5	R-19-A-5	896-5
	24	.022	0.56	1.331	33.8	1.285	32.6	1.417	36.0	B895-5	R-26-5	896-5	B896-5	R-19-A-5	896-5
	17	.058	1.47	1.384	35.1	1.331	33.8	1.489	37.8	B899-5	R-29-5	900-5	B900-5	R-29-A-5	900-5
	18	.049	1.24	1.402	35.6	1.331	33.8	1.489	37.8	B843-5	R-29-5	900-5	B900-5	R-29-A-5	900-5
	19	.042	1.06	1.416	36.0	1.331	33.8	1.489	37.8	B845-5	R-29-5	900-5	B900-5	R-29-A-5	900-5
	20	.035	0.88	1.430	36.3	1.331	33.8	1.489	37.8	B845-5	R-29-5	900-5	B900-5	R-29-A-5	900-5
	21	.032	0.81	1.436	36.5	1.331	33.8	1.489	37.8	B845-5	R-29-5	900-5	B900-5	R-29-A-5	900-5
	22	.028	0.71	1.444	36.7	1.331	33.8	1.489	37.8	B845-5	R-29-5	900-5	B900-5	R-29-A-5	900-5
	23	.025	0.64	1.450	36.8	1.331	33.8	1.489	37.8	B847-5	R-29-5	900-5	B900-5	R-29-A-5	900-5
	24	.022	0.56	1.456	37.0	1.331	20.1	1.489	37.8	B847-5	R-29-5	900-5	B900-5	R-29-A-5	900-5

CONDENSER TUBE EXPANDER

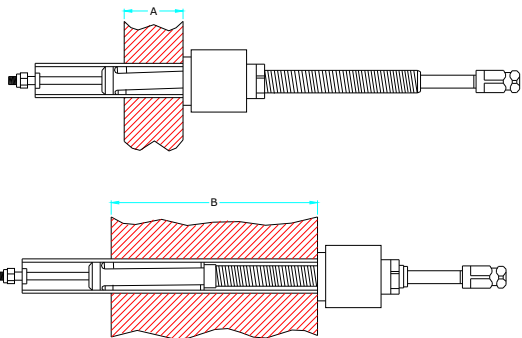
'B1200' SERIES FEATURES:

Tube O. D.
1 1/2" - 1.1/2"

- Use - This is recommended for heat exchanger & condenser with tubes of 5/8" - 1.1/2" O.D. & thick tube sheets.



Sizes Available : 1/2" O.D. to 1.1/2" O.D.
Tube Internal diameter : 8.4mm (0.334") to 36.3mm (1.43")
Roller Length of Tube Expander: 1.1/2" (38.1mm) & 2.1/4" (57.1mm)



TUBE EXPANDERS FITTED WITH ROLLER LENGTH		FOR TUBE SHEET ADJUSTABLE RANGE	
		MINIMUM A	MAXIMUM B
(38.1mm) 1.1/2"	STD. REACH	(38.1mm) 1.1/2"	(152.4mm) 6"
	"A" REACH	(38.1mm) 1.1/2"	(203.2mm) 8"
	"B" REACH	(38.1mm) 1.1/2"	(253.8mm) 10"
	"C" REACH	(38.1mm) 1.1/2"	(304.6mm) 12"
	"D" REACH	(38.1mm) 1.1/2"	(355.6mm) 14"
(57.1mm) 2.1/4"	STD. REACH	(57.1mm) 2.1/4"	(171.4mm) 6.3/4"
	"A" REACH	(57.1mm) 2.1/4"	(222.1mm) 8.3/4"
	"B" REACH	(57.1mm) 2.1/4"	(272.8mm) 10.3/4"
	"C" REACH	(57.1mm) 2.1/4"	(323.6mm) 12.3/4"
	"D" REACH	(57.1mm) 2.1/4"	(374.6mm) 14.3/4"

Tube O.D. (Mm) inch	Tube Thickness		Tube I. D.		Minimum I. D. Tool Enters		Maximum Expansion of Tool		EXPANDER with (38.10mm) 1.1/2" Long rollers			EXPANDER with (57.15mm) 2.1/4" Long rollers			Ratchet Size Square Inch	
	Bwg	Inch	Mm	Inch	Mm	Inch	Mm	Inch	Mm	Complete Tool No.	Roller Set No.	Mandrel No.	Complete Tool No.	Roller Set No.		Mandrel No.
(12.70) 1/2	14	.083	2.10	.407	8.4	.324	8.2	.374	9.5	B1197	797	1197	-	-	-	3/8
	15	.072	1.82	.435	9.0	.348	8.8	.398	10.1	B1199	R-1	1199	-	-	-	
	16	.065	1.65	.459	9.4	.360	9.2	.410	10.4	B1201	R-1	M-51	-	-	-	
	17	.058	1.47	.481	9.7	.374	9.5	.424	10.7	B1203	R-2	M-51	-	-	-	3/8
	18	.049	1.24	.491	10.2	.392	9.9	.447	11.3	B1205	R-3	M-52	-	-	-	
	20	.035	0.88	.430	10.9	.406	10.3	.461	11.7	B1205 S	R-3	M-53	-	-	-	
(15.88) 5/8	12	.109	2.76	.407	10.3	.392	9.9	.447	11.3	B1205	R-3	M-2	-	-	-	3/8
	13	.095	2.41	.435	11.0	.425	10.8	.480	12.1	B1207	R-4	M-3	-	-	-	
	14	.083	2.10	.459	11.6	.449	11.4	.509	12.9	B1209	R-4	M-4	B1210	R-4-A	M-4	
	15	.072	1.82	.481	12.2	.471	11.9	.536	13.6	B1211	R-5	M-5	B1212	R-5-A	M-5	3/8
	16	.065	1.65	.495	12.5	.485	12.3	.550	13.9	B1213	R-6	M-5	B1214	R-6-A	M-5	
	17	.058	1.47	.509	12.9	.499	12.6	.564	14.3	B1215	R-6	M-6	B1216	R-6-A	M-6	
	18	.049	1.24	.527	13.3	.517	13.1	.572	14.5	B1217	R-7	M-7	B1218	R-7-A	M-7	3/8
	19	.042	1.06	.541	13.7	.522	13.2	.582	14.7	B1219	R-7	M-6	B1220	R-7-A	M-6	
	20	.035	0.88	.555	14.1	.536	13.6	.596	15.1	B1219S	R-7	M-8	B1220S	R-7-A	M-8	
	21	.032	0.81	.561	14.2	.536	13.6	.596	15.1	B1219S	R-7	M-8	B1220S	R-7-A	M-8	
22	.028	0.71	.569	14.4	.536	13.6	.596	15.1	B1219S	R-7	M-8	B1220S	R-7-A	M-8		
(19.05) 3/4	10	.134	3.40	.482	12.2	.471	11.9	.536	13.6	B1211	R-5	M-5	B1212	R-5-A	M-5	3/8
	11	.120	3.04	.510	12.9	.499	12.6	.564	14.3	B1215	R-6	M-6	B1216	R-6-A	M-6	
	12	.109	2.76	.532	13.5	.522	13.2	.582	14.7	B1219	R-7	M-6	B1220	R-7-A	M-6	
	13	.095	2.41	.560	14.2	.550	13.9	.615	15.6	B1221	R-8	M-8	B1222	R-8-A	M-8	3/8
	14	.083	2.10	.584	14.8	.574	14.5	.639	16.2	B1223	R-9	M-8	B1224	R-9-A	M-8	
	15	.072	1.82	.606	15.3	.596	15.1	.661	16.7	B1225	R-10	M-8	B1226	R-10-A	M-8	
	16	.065	1.65	.620	15.7	.605	15.3	.685	17.4	B1227	R-10	M-9	B1228	R-10-A	M-9	3/8
	17	.058	1.47	.630	16.1	.619	15.7	.699	17.7	B1229	R-11	M-9	B1230	R-11-A	M-9	
	18	.049	1.24	.652	16.5	.619	15.7	.699	17.7	B1229	R-11	M-9	B1230	R-11-A	M-9	
	19	.042	1.06	.666	16.9	.642	16.3	.722	18.3	B1231	R-12	M-9	B1232	R-12-A	M-9	3/8
20	.035	0.88	.680	17.2	.642	16.3	.722	18.3	B1231	R-12	M-9	B1232	R-12-A	M-9		
21	.032	0.81	.686	17.4	.642	16.3	.722	18.3	B1231	R-12	M-9	B1232	R-12-A	M-9		
22	.028	0.71	.694	17.6	.642	16.3	.722	18.3	B1231	R-12	M-9	B1232	R-12-A	M-9		
(22.22) 7/8	10	.134	3.40	.607	15.4	.596	15.1	.661	16.7	B1225	R-10	M-8	B1226	R-10-A	M-8	3/8
	11	.120	3.04	.635	16.1	.619	15.7	.699	17.7	B1229	R-11	M-9	B1230	R-11-A	M-9	
	12	.109	2.76	.657	16.6	.642	16.3	.722	18.3	B1231	R-12	M-9	B1232	R-12-A	M-9	
	13	.095	2.41	.685	17.4	.670	17.0	.750	19.0	B1233	R-13	M-10	B1234	R-13-A	M-10	3/8
	14	.083	2.10	.709	18.0	.685	17.4	.774	19.6	B1235	R-14	M-11	B1236	R-14-A	M-11	
	15	.072	1.82	.731	18.5	.712	18.0	.801	20.3	B1237	R-15	M-11	B1238	R-15-A	M-11	
	16	.065	1.65	.745	18.9	.726	18.4	.815	20.7	B1239	R-15	M-12	B1240	R-15-A	M-12	3/8
	17	.058	1.47	.759	19.2	.740	18.8	.829	21.0	B1243	R-16	M-12	B1244	R-16-A	M-12	
18	.049	1.24	.777	19.7	.740	18.8	.829	21.0	B1243	R-16	M-12	B1244	R-16-A	M-12		

CONDENSER TUBE EXPANDER



★ 'B1200' SERIES

Tube O. D.
1 / 2" - 1.1/2"

Tube O.D. (Mm) inch	Tube Thickness			Tube I. D.		Minimum I. D. Tool Enters		Maximum Expansion of Tool		EXPANDER with (38.10mm) 1.1/2" Long rollers			EXPANDER with (57.15mm) 2.1/4" Long rollers			Ratchet Size Square Inch	
	Bwg	Inch	Mm	Inch	Mm	Inch	Mm	Inch	Mm	Complete Tool No.	Roller Set No.	Mandrel No.	Complete Tool No.	Roller Set No.	Mandrel No.		
1 (25.40)	8	.165	4.19	.669	17.0	.654	16.6	.732	18.6	B1241	R-13	M-59	B1242	R-13-A	M-59	3/8	
	9	.148	3.75	.701	17.8	.685	17.4	.772	19.6	B1235	R-14	M-61	B1236	R-14-A	M-61		
	10	.134	3.40	.728	18.5	.709	18.0	.799	20.3	B1237	R-15	M-61	B1238	R-15-A	M-61		
	3/8	11	.120	3.04	.760	19.3	.760	19.3	.827	21.0	B1243	R-16	M-62	B1244	R-16-A	M-62	
		12	.109	2.76	.787	20.0	.787	20.0	.850	21.6	B1245	R-17	M-62	B1246	R-17-A	M-62	
		13	.095	2.41	.807	20.5	.807	20.5	.878	22.3	B1247	R-18	M-62	B1248	R-18-A	M-62	
	3/8	14	.083	2.10	.831	21.1	.835	21.2	.906	23.0	B1249	R-18	M-63	B1250	R-18-A	M-63	
		15	.072	1.82	.854	21.7	.835	21.2	.933	23.7	B1251	R-19	M-63	B1252	R-19-A	M-63	
		16	.065	1.65	.870	22.1	.862	21.9	.933	23.7	B1251	R-19	M-63	B1252	R-19-A	M-63	
	3/8	17	.058	1.47	.882	22.4	.862	21.9	.961	24.4	B1255	R-21	M-63	B1256	R-21-A	M-63	
		18	.049	1.24	.902	22.9	.862	21.9	.961	24.4	B1255	R-21	M-63	B1256	R-21-A	M-63	
		19	.042	1.06	.913	23.2	.862	21.9	.961	24.4	B1255	R-21	M-63	B1256	R-21-A	M-63	
		20	.035	0.88	.929	23.6	.862	21.9	.961	24.4	B1255	R-21	M-63	B1256	R-21-A	M-63	
	1.1/8 (28.58)	8	.165	4.19	.791	20.1	.776	19.7	.874	22.2	B1253	R-20	M-63	B1254	R-20-A	M-63	3/8
		9	.148	3.75	.827	21.0	.807	20.5	.906	23.0	B1249	R-18	M-63	B1250	R-18-A	M-63	
		10	.134	3.40	.854	21.7	.835	21.2	.933	23.7	B1251	R-19	M-63	B1252	R-19-A	M-63	
		1/2	11	.120	3.04	.882	22.4	.862	21.9	.961	24.4	B1255	R-21	M-63	B1256	R-21-A	M-63
			12	.109	2.76	.906	23.0	.882	22.4	.980	24.9	B1257	R-21	M-64	B1258	R-21-A	M-64
			13	.095	2.41	.933	23.7	.913	23.7	1.012	25.7	B1259	R-22	M-64	B1260	R-22-A	M-64
		1/2	14	.083	2.10	.957	24.3	.961	24.4	1.043	26.5	B1261	R-23	M-65	B1262	R-23-A	M-65
15			.072	1.82	.980	24.9	.961	24.4	1.071	27.2	B1263	R-24	M-65	B1264	R-24-A	M-65	
1/2		16	.065	1.65	.992	25.2	.988	21.9	1.071	27.2	B1263	R-24	M65	B1264	R-24-A	M-65	
		17	.058	1.47	1.01	25.6	.988	21.9	1.098	27.9	B1267	R-26	M-66	B1268	R-26-A	M-66	
1/2		18	.049	1.24	1.03	26.0	.988	21.9	1.098	27.9	B1267	R-26	M-66	B1268	R-26-A	M-66	
		1.1/4 (31.75)	8	.165	4.19	.920	23.3	.901	22.8	1.010	25.6	B1265	R-25	M-65	B1266	R-25-A	M-65
9	.148		3.75	.954	24.2	.935	23.7	1.044	26.5	B1261	R-23	M-65	B1262	R-23-A	M-65		
10	.134		3.40	.982	24.9	.962	24.4	1.071	27.2	B1263	R-24	M-65	B1264	R-24-A	M-65		
1/2	11		.120	3.04	1.010	25.6	.990	25.1	1.099	27.9	B1267	R-26	M-66	B1268	R-26-A	M-66	
	12		.109	2.76	1.032	26.2	1.013	25.7	1.122	28.5	B1269	R-27	M-66	B1270	R-27-A	M-66	
	13		.095	2.41	1.060	26.9	1.039	26.4	1.150	29.2	B1271	R-28	M-67	B1272	R-28-A	M-67	
1/2	14		.083	2.10	1.084	27.5	1.060	26.9	1.169	29.6	B1273	R-29	M-67	B1274	R-29-A	M-67	
	15		.072	1.82	1.106	28.0	1.087	27.6	1.196	30.3	B1275	R-30	M-67	B1276	R-30-A	M-67	
1/2	16	.065	1.65	1.120	28.4	1.087	27.6	1.196	30.3	B1275	R-30	M-67	B1276	R-30-A	M-67		
1.3/8 (34.92)	8	.165	4.19	1.045	26.5	1.026	26.0	1.135	28.8	B1277	R-31	M-67	B1278	R-31-A	M-67	1/2	
	9	.148	3.75	1.079	27.4	1.060	26.9	1.169	29.6	B1273	R-29	M-67	B1274	R-29-A	M-67		
	10	.134	3.40	1.107	28.1	1.087	27.6	1.196	30.3	B1275	R-30	M-67	B1276	R-30-A	M-67		
	1/2	11	.120	3.04	1.135	28.8	1.115	28.3	1.224	31.0	B1279	R-30	M-68	B1280	R-30-A	M-68	
		12	.109	2.76	1.157	29.3	1.133	28.7	1.242	31.5	B1281	R-32	M-68	B1282	R-32-A	M-68	
		13	.095	2.41	1.185	30.1	1.160	29.4	1.275	32.3	B1283	R-33	M-69	B1284	R-33-A	M-69	
	1/2	14	.083	2.10	1.209	30.7	1.179	29.9	1.294	32.8	B1285	R-34	M-70	B1286	R-34-A	M-70	
		15	.072	1.82	1.231	31.2	1.206	30.6	1.321	33.5	B1287	R-35	M-70	B1288	R-35-A	M-70	
	1/2	16	.065	1.65	1.245	31.6	1.206	30.6	1.321	33.5	B1287	R-35	M-70	B1288	R-35-A	M-70	
	1.1/2 (38.10)	8	.165	4.19	1.170	29.7	1.145	29.0	1.260	32.0	B1289	R-34	M-69	B1290	R-34-A	M-69	1/2
		9	.148	3.75	1.204	30.5	1.177	29.9	1.290	32.8	B1285	R-34	M-70	B1286	R-34-A	M-70	
		10	.134	3.40	1.232	31.2	1.206	30.6	1.321	33.5	B1287	R-35	M-70	B1288	R-35-A	M-70	
1/2		11	.120	3.04	1.260	32.0	1.235	31.3	1.350	34.2	B1291	R-36	M-70	B1292	R-36-A	M-70	
		12	.109	2.76	1.282	32.5	1.257	31.9	1.372	34.8	B1293	R-37	M-70	B1294	R-37-A	M-70	
		13	.095	2.41	1.310	33.2	1.285	32.6	1.400	35.5	B1295	R-37	M-71	B1296	R-37-A	M-71	
1/2		14	.083	2.10	1.334	33.8	1.285	32.6	1.400	35.5	B1295	R-37	M-71	B1296	R-37-A	M-71	
		15	.072	1.82	1.356	34.4	1.331	33.8	1.446	36.7	B1297	R-38	M-71	B1298	R-38-A	M-71	
1/2		16	.065	1.65	1.370	34.8	1.331	33.8	1.446	36.7	B1297	R-38	M-71	B1298	R-38-A	M-71	
1/2		17	.058	1.47	1.384	35.1	1.331	33.8	1.472	37.3	B1299	R-38	M-72	B1300	R-38-A	M-72	
		18	.049	1.24	1.402	35.6	1.331	33.8	1.472	37.3	B1299	R-38	M-72	B1300	R-38-A	M-72	
		19	.042	1.06	1.416	35.9	1.331	33.8	1.472	37.3	B1299	R-38	M-72	B1300	R-38-A	M-72	
	20	.035	0.88	1.430	35.3	1.331	33.8	1.472	37.3	B1299	R-38	M-72	B1300	R-38-A	M-72		

CONDENSER TUBE EXPANDER



Tube O. D.
3/4" - 1.1/2"

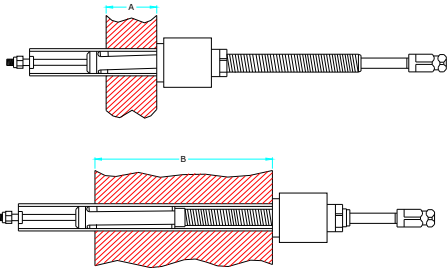
'B1200-5' SERIES 1200-5 Series Rollers For Thin Wall Tubes

FEATURES:

- Advantage: it gives more concentric & even expansion when expanding thin walled tubes vs. A conventional 3 roller expander & reduces spring back effect of the tubes
- Use - Highly recommended for use on thin walled tubes (19thru 22 gage walls) of stainless steel, Titanium Incoloy, & other exotic materials in thick tube sheets
- Expanders for tube sizes not listed below are also available. Please enquire



Sizes Available : 1/2" O.D. to 1.1/2" O.D.
Tube Internal diameter : 8.4mm (0.334") to 36.3mm (1.43")
Roller Length of Tube Expander: 1.1/2" (38.1mm) & 2.1/4" (57.1mm)



TUBE EXPANDERS FITTED WITH ROLLER LENGTH		FOR TUBE SHEET ADJUSTABLE RANGE	
		MINIMUM A	MAXIMUM B
(38.1mm) 1.1/2"	STD. REACH	(38.1mm) 1.1/2"	(152.4mm) 6"
	"A" REACH	(38.1mm) 1.1/2"	(203.2mm) 8"
	"B" REACH	(38.1mm) 1.1/2"	(253.8mm) 10"
	"C" REACH	(38.1mm) 1.1/2"	(304.6mm) 12"
(57.1mm) 2.1/4"	STD. REACH	(57.1mm) 2.1/4"	(171.4mm) 6.3/4"
	"A" REACH	(57.1mm) 2.1/4"	(222.1mm) 8.3/4"
	"B" REACH	(57.1mm) 2.1/4"	(272.8mm) 10.3/4"
	"C" REACH	(57.1mm) 2.1/4"	(323.6mm) 12.3/4"
(57.1mm) 2.1/4"	STD. REACH	(57.1mm) 2.1/4"	(374.6mm) 14.3/4"
	"A" REACH	(57.1mm) 2.1/4"	(374.6mm) 14.3/4"
	"B" REACH	(57.1mm) 2.1/4"	(374.6mm) 14.3/4"
	"C" REACH	(57.1mm) 2.1/4"	(374.6mm) 14.3/4"

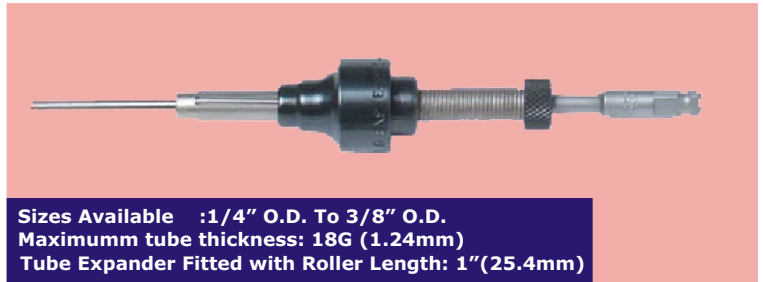
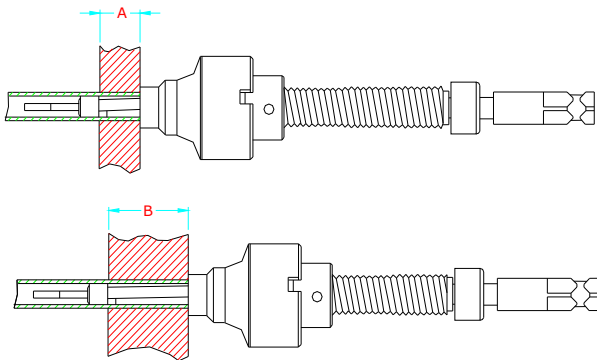
Tube O.D. (Mm) inch	Tube Thickness		Tube I. D.		Minimum I. D. Tool Enters		Maximum Expansion of Tool		EXPANDER with (38.10mm) 1.1/2" Long rollers			EXPANDER with (57.15mm) 2.1/4" Long rollers			Ratchet Size Square Inch	
	Bwg	Inch	Mm	Inch	Mm	Inch	Mm	Inch	Mm	Complete Tool No.	Roller Set No.	Mandrel No.	Complete Tool No.	Roller Set No.		Mandrel No.
(19.05) 3/4	14	.083	2.10	.584	14.8	.574	14.5	.639	16.2	B1225	R-6-5	1224-5	1224-5	R-6-A-5	1224-5	3/8
	15	.072	1.82	.606	15.3	.596	15.1	.661	16.7	B1225	R-7-5	1226-5	1226-5	R-7-A-5	1226-5	
	16	.065	1.65	.620	15.7	.605	15.3	.685	17.4	B1225	R-7-5	M-63	1228-5	R-7-A-5	M-63	
	17	.058	1.47	.630	16.1	.619	15.7	.699	17.7	B1225	R-7-5	1230-5	1230-5	R-7-A-5	1230-5	3/8
	18	.049	1.24	.652	16.5	.619	15.7	.699	17.7	B1225	R-7-5	1230-5	1230-5	R-7-A-5	1230-5	
	19	.042	1.06	.666	16.9	.642	16.3	.722	18.3	B1235	R-9-5	M-63	1232-5	R-9-A-5	M-63	
20	.035	0.88	.680	17.2	.642	16.3	.722	18.3	B1235	R-9-5	M-63	1232-5	R-9-A-5	M-63	3/8	
21	.032	0.81	.686	17.4	.642	16.3	.722	18.3	B1235	R-9-5	M-63	1232-5	R-9-A-5	M-63		
22	.028	0.71	.694	17.6	.642	16.3	.722	18.3	B1235	R-9-5	M-63	1232-5	R-9-A-5	M-63		
(25.40) 1	14	.083	2.10	.831	21.1	.810	20.5	.909	23.0	1249-5	R-6-5	1224-5	1224-5	R-6-A-5	1224-5	3/8
	15	.072	1.82	.854	21.7	.837	21.2	.936	23.7	1251-5	R-7-5	1226-5	1226-5	R-7-A-5	1226-5	
	16	.065	1.65	.870	22.1	.837	21.2	.936	23.7	1251-5	R-7-5	M-63	1228-5	R-7-A-5	M-63	
	17	.058	1.47	.882	22.4	.865	21.9	.964	24.4	1255-5	R-7-5	1230-5	1230-5	R-7-A-5	1230-5	3/8
	18	.049	1.24	.902	22.9	.865	21.9	.964	24.4	1255-5	R-7-5	1230-5	1230-5	R-7-A-5	1230-5	
	19	.042	1.06	.913	23.2	.865	21.9	.964	24.4	1255-5	R-9-5	M-63	1232-5	R-9-A-5	M-63	
20	.035	0.88	.929	23.6	.865	21.9	.964	24.4	1255-5	R-9-5	M-63	1232-5	R-9-A-5	M-63	3/8	
21	.032	0.81	.936	23.8	.883	22.4	.982	24.9	1257-5	R-9-5	M-63	1232-5	R-9-A-5	M-63		
22	.028	0.71	.944	24.0	.883	22.4	.982	24.9	1257-5	R-9-5	M-63	1232-5	R-9-A-5	M-63		
(28.58) 1.1/8	12	.109	2.76	.907	23.0	.883	22.4	.982	24.9	1255-5	R-9-5	M-63	1232-5	R-9-A-5	M-63	3/8
	15	.072	1.82	.981	24.9	.962	24.4	1.071	27.2	1257-5	R-9-5	M-63	1232-5	R-9-A-5	M-63	1/2
	16	.065	1.65	.995	25.2	.962	24.4	1.071	27.2	1257-5	R-9-5	M-63	1232-5	R-9-A-5	M-63	
(38.10) 1.1/2	17	.058	1.47	1.384	35.1	1.331	37.3	1.472	37.3	1255-5	R-7-5	1230-5	1230-5	R-7-A-5	1230-5	1/2
	18	.049	1.24	1.402	35.6	1.331	37.3	1.472	37.3	1255-5	R-7-5	1230-5	1230-5	R-7-A-5	1230-5	
	19	.042	1.06	1.416	36.0	1.331	37.3	1.472	37.3	1255-5	R-9-5	M-63	1232-5	R-9-A-5	M-63	
	20	.035	0.88	1.430	36.3	1.331	37.3	1.472	37.3	1255-5	R-9-5	M-63	1232-5	R-9-A-5	M-63	

CONDENSER TUBE EXPANDER

✦ 'BAN' SERIES FEATURES:

Tube O. D.
1/4" - 3/8"

- Increased feed angle makes it the fastest operating tool on the market, ideal for high production environment.
- Advantage: Captive mandrel- eliminates nut on mandrel tip which prevents scratching of tube I. D.
- Use - Oil coolers, Radiators, & other apparatus with small diameter tubes..
- NOTE: All 'BAN' series expanders come with 1/4" square mandrel drives. Round mandrel drives are optional.



Sizes Available : 1/4" O.D. To 3/8" O.D.
Maximum tube thickness: 18G (1.24mm)
Tube Expander Fitted with Roller Length: 1" (25.4mm)

For Tube Inside Diameter
From (3.8mm) .152" to (8.4mm) .331"

TUBE EXPANDERS FITTED WITH ROLLER LENGTH	FOR TUBE SHEET ADJUSTABLE RANGE	
	MINIMUM A	MAXIMUM B
(25.4mm) 1"	(6.35mm) 1/4"	(25.4mm) 1"

Tube O.D. (Mm) inch	Tube Thickness		Tube I. D.		Minimum I. D. Tool Enters		Maximum Expansion of Tool		EXPANDER with (25.40) 1" Long rollers			Ratchet Size Square Inch		
	Bwg	Inch	Mm	Inch	Mm	Inch	Mm	Inch	Mm	Complete Tool No.	Roller Set No.		Mandrel No.	
(6.35) 1/4	18	.049	1.24	.152	3.8	.148	3.7	.167	4.2	B-25018	R-20018	M-21819	1/4	
	19	.042	1.06	.166	4.2	.160	4.0	.180	4.5	B-25019	R-21920	M-21819		
	20	.035	0.88	.180	4.5	.175	4.4	.196	4.9	B-25020	R-21920	M-22021		
	1/4	21	.032	0.81	.186	4.7	.180	4.5	.202	5.1	B-25021	R-22124	M-22021	1/4
		22	.028	0.71	.194	4.9	.190	4.8	.213	5.4	B-25022	R-22124	M-22022	
		23	.025	0.63	.194	5.0	.195	4.9	.216	5.5	B-25023	R-21920	M-22324	
		24	.022	0.55	.200	5.2	.201	5.1	.224	5.7	B-25024	R-22124	M-22324	
		28	.014	0.35	.206	5.6	.217	5.4	.243	6.1	B-25028	R-22830	M-22830	
		29	.013	0.33	.224	5.7	.217	5.4	.243	6.1	B-25028	R-22830	M-22830	
		30	.012	0.30	.226	5.7	.217	5.4	.243	6.1	B-25028	R-22830	M-22830	
(9.53) 3/8	14	.083	2.10	.209	5.3	.204	5.1	.230	5.8	B-37514	R-21920	M-22830	1/4	
	15	.072	1.82	.231	5.8	.225	5.6	.265	6.6	B-37515	R-31516	M-22830		
	16	.065	1.65	.245	6.2	.238	6.0	.278	7.0	B-37516	R-31516	R-31617		
	3/8	17	.058	1.47	.259	6.5	.253	6.4	.293	7.4	B-37517	R-31720	R-31617	1/4
		18	.049	1.24	.277	7.0	.270	6.8	.310	7.8	B-37518	R-31720	R-30018	
		19	.042	1.06	.291	7.3	.285	7.1	.325	8.1	B-37519	R-31720	R-30019	
		20	.035	0.88	.305	7.7	.295	7.4	.335	8.4	B-37520	R-31720	R-32021	
		21	.032	0.81	.311	7.9	.305	7.5	.345	8.6	B-37521	R-32122	R-32021	
		22	.028	0.71	.319	8.1	.312	7.9	.353	8.9	B-37522	R-32122	R-32122	
		23	.025	0.63	.325	8.2	.318	8.1	.363	9.2	B-37523	R-32324	R-32324	
24	.022	0.55	.331	8.4	.318	8.1	.363	9.2	B-37524	R-32324	R-32324			

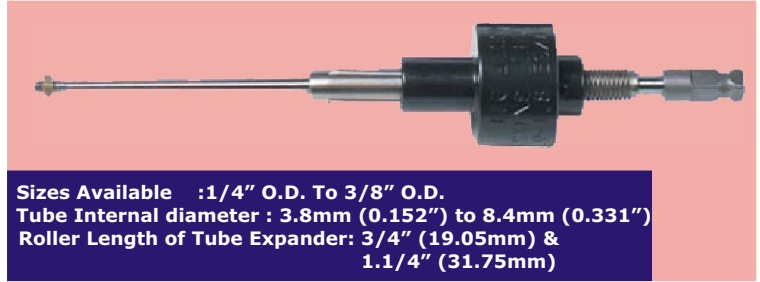
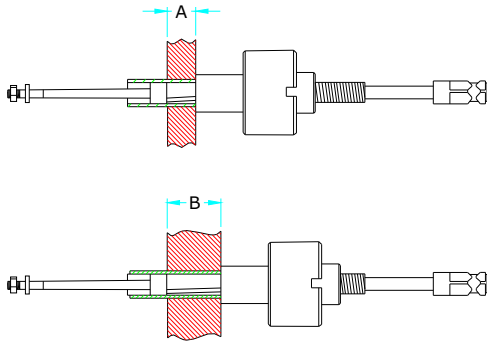
CONDENSER TUBE EXPANDER



✦ 'B900' SERIES FEATURES:

Tube O. D.
1/4" - 3/8"

- This tool has been the work horse for several years for use on small diameter tubes.
- Use - Oil coolers, Radiators, & other apparatus with small.



Sizes Available : 1/4" O.D. To 3/8" O.D.
Tube Internal diameter : 3.8mm (0.152") to 8.4mm (0.331")
Roller Length of Tube Expander: 3/4" (19.05mm) & 1.1/4" (31.75mm)

TUBE EXPANDERS FITTED WITH ROLLER LENGTH	FOR TUBE SHEET ADJUSTABLE RANGE	
	MINIMUM A	MAXIMUM B
(19.05mm) 3/4"	(6.35mm) 1/4"	(19.05mm) 3/4"
(31.75mm) 1.1/4"	(19.05mm) 3/4"	(31.75mm) 1.1/4"

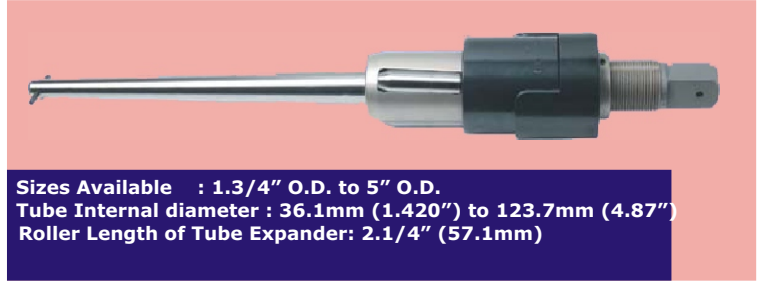
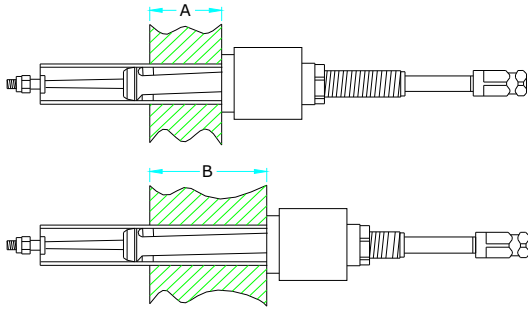
Tube O.D. (Mm) inch	Tube Thickness		Tube I. D.		Minimum I. D. Tool Enters		Maximum Expansion of Tool		EXPANDER with (19.05mm) 3/4" Long rollers			EXPANDER with (31.75mm) 1.1/4" Long rollers			Ratchet Size Square Inch		
	Bwg	Inch	Mm	Inch	Mm	Inch	Mm	Inch	Mm	Complete Tool No.	Roller Set No.	Mandrel No.	Complete Tool No.	Roller Set No.		Mandrel No.	
(6.35) 1/4	18	.049	1.24	.152	3.8	.151	3.8	.167	4.4	B921	921	M-39	-	-	-	1/4	
	19	.042	1.06	.166	4.2	.165	4.1	.180	4.7	B922	922	M-39	-	-	-		
	20	.035	0.88	.180	4.5	.175	4.4	.196	5.1	B923	923	M-40	-	-	-		
	21	.032	0.81	.186	4.7	.180	4.5	.202	5.2	B924	924	M-40	-	-	-	1/4	
	22	.028	0.71	.194	4.9	.190	4.8	.213	5.5	B925	925	M-41	-	-	-		
	23	.025	0.63	.200	5.0	.195	4.9	.216	5.6	B926	926	M-41	-	-	-		
(9.53) 3/8	24	.022	0.55	.206	5.2	.201	5.1	.224	5.8	B927	927	M-41	-	-	-	1/4	
	28	.014	0.35	.222	5.6	.222	5.6	.243	6.0	B928	928	M-41	-	-	-		
	29	.013	0.33	.224	5.7	.222	5.6	.243	6.0	B928	928	M-41	-	-	-		
	14	.083	2.10	.209	5.3	.201	5.1	.232	5.8	B927	927	M-41	-	-	-	1/4	
	15	.072	1.82	.231	5.8	.230	5.8	.265	6.7	B915	915	M-42	-	-	-		
	16	.065	1.65	.245	6.2	.240	6.1	.275	6.9	B916	916	M-36	B916L	916L	M-36L		
	(9.53) 3/8	17	.058	1.47	.259	6.5	.255	6.4	.289	7.3	B918	918	M-38	B920	904	M-38	1/4
		18	.049	1.24	.277	7.0	.272	6.9	.307	7.8	B901	901	M-30	B902	904	M-30	
19		.042	1.06	.291	7.3	.286	7.2	.320	8.1	B903	903	M-31	B904	904	M-31		
20		.035	0.88	.305	7.7	.300	7.6	.334	8.4	B905	905	M-32	B906	908	M-32		
21		.032	0.81	.311	7.9	.306	7.7	.340	8.6	B907	907	M-33	B908	908	M-33	1/4	
22		.028	0.71	.319	8.1	.314	7.9	.349	8.8	B909	909	M-34	B910	910	M-34		
23	.025	0.63	.325	8.2	.320	8.1	.357	9.0	B911	911	M-34	B912	912	M-34			
24	.022	0.55	.331	8.4	.320	8.1	.357	9.0	B911	911	M-34	B912	912	M-34			

CONDENSER TUBE EXPANDER

B8012-Series Tube O. D. 1.3/4" - 5"

FEATURES:

- Use -This is recommended to expand tubes in air heaters boilers , & refinery still tubes. Can be used to expand thick tube sheets (Upto 8")
- Advantages: It gives a more concentric and even expansion when expanding thin walled tubes vs conventional 3 roller tube expander and reduces tube spring back effect.



Sizes Available : 1.3/4" O.D. to 5" O.D.
 Tube Internal diameter : 36.1mm (1.420") to 123.7mm (4.87")
 Roller Length of Tube Expander: 2.1/4" (57.1mm)

For Tube Internal Diameter
 From (36.1mm) 1.420" to (123.7mm) 4.870"

TUBE EXPANDERS FITTED WITH ROLLER LENGTH		FOR TUBE SHEET ADJUSTABLE RANGE	
		MINIMUM A	MAXIMUM B
2.1/4" (57.1mm)	STD. REACH	(12.7mm) 1/2"	(101.4mm) 4"
	-6" REACH	(12.7mm) 1/2"	(152.4mm) 6"
	-8" REACH	(12.7mm) 1/2"	(203.2mm) 8"

Tube O.D. (Mm) inch	Tube Thickness		Tube I. D.		Minimum I. D. Tool Enters		Maximum Expansion of Tool		EXPANDER with (57.15 mm) 2.1/4" Long Rollers Complete			
	Bwg	Inch	Mm	Inch	Mm	Inch	Mm	Inch	Mm	Tool No.	Roller Set No.	Mandrel No.
(44.45) 1.3/4	8	.165	4.19	1.420	36.1	1.368	34.7	1.550	39.3	B8012-1.3/4-8	R-33-A	M-90
	10	.134	3.40	1.482	37.6	1.420	36.0	1.607	40.8	B8012-1.3/4-10	R-37-A	M-90
	11	.120	3.04	1.510	38.3	1.454	36.9	1.635	41.5	B8012-1.3/4-11	R-42	M-90
	12	.19	2.76	1.532	38.9	1.482	37.6	1.657	42.0	B8012-1.3/4-12	R-44	M-90
	13	.095	2.41	1.560	39.6	1.510	38.3	1.685	42.7	B8012-1.3/4-13	R-46	M-90
	14	.083	2.10	1.584	40.2	1.532	38.9	1.709	43.4	B8012-1.3/4-14	R-48	M-90
(50.80) 2	8	.165	4.19	1.670	42.4	1.595	40.5	1.795	45.6	B8012-2-8	R-48	M-91
	10	.134	3.40	1.732	43.9	1.640	41.6	1.857	47.1	B8012-2-10	R-50	M-91
	11	.120	3.04	1.760	44.7	1.670	42.4	1.885	47.8	B8012-2-11	R-52	M-91
	12	.109	2.76	1.782	45.2	1.704	43.2	1.907	48.4	B8012-2-12	R-54	M-91
	13	.095	2.41	1.810	45.9	1.732	43.9	1.956	49.6	B8012-2-13-18	R-56	M-91
	14	.083	2.10	1.834	46.5	1.732	43.9	1.956	49.6	B8012-2-13-18	R-56	M-91
	15	.072	1.83	1.856	47.1	1.732	43.9	1.956	49.6	B8012-2-13-18	R-56	M-91
	16	.065	1.65	1.870	47.4	1.732	43.9	1.956	49.6	B8012-2-13-18	R-56	M-91
	17	.058	1.47	1.884	47.9	1.732	43.9	1.956	49.6	B8012-2-13-18	R-56	M-92
18	.049	1.24	1.902	48.3	1.732	43.9	1.956	49.6	B8012-2-13-18	R-56	M-92	
(57.15) 2.1/4	10	.134	3.40	1.982	50.3	1.890	48.0	2.107	53.5	B8012-2.1/4-10	R-56	M-92
	11	.120	3.04	2.010	51.0	1.920	48.7	2.135	54.2	B8012-2.1/4-11	R-58	M-92
	12	.109	2.76	2.032	51.6	1.954	49.6	2.157	54.7	B8012-2.1/4-12	R-60	M-92
	13	.095	2.41	2.060	52.3	1.982	50.3	2.185	55.4	B8012-2.1/4-13-16	R-62	M-92
	14	.083	2.10	2.084	52.9	1.982	50.3	2.185	55.4	B8012-2.1/4-13-16	R-62	M-92
	15	.072	1.83	2.106	53.4	1.982	50.3	2.185	55.4	B8012-2.1/4-13-16	R-62	M-92
(63.50) 2.1/2	10	.134	3.40	2.232	56.6	2.140	54.3	2.407	61.1	B8012-2.1/2-10-12	R-64	M-93
	11	.120	3.04	2.260	57.4	2.140	54.3	2.407	61.1	B8012-2.1/2-10-12	R-64	M-93
	12	.109	2.76	2.282	57.9	2.140	54.3	2.407	61.1	B8012-2.1/2-10-12	R-64	M-93
	13	.095	2.41	2.310	58.6	2.232	56.6	2.450	62.2	B8012-2.1/2-13-18	R-64	M-94
	14	.083	2.10	2.334	59.2	2.232	56.6	2.450	62.2	B8012-2.1/2-13-18	R-64	M-94
	15	.072	1.83	2.356	59.8	2.232	56.6	2.450	62.2	B8012-2.1/2-13-18	R-64	M-94
	16	.065	1.65	2.370	60.1	2.232	56.6	2.450	62.2	B8012-2.1/2-13-18	R-64	M-94
	17	.058	1.47	2.384	60.6	2.232	56.6	2.450	62.2	B8012-2.1/2-13-18	R-64	M-94
	18	.049	1.24	2.402	61.0	2.232	56.6	2.450	62.2	B8012-2.1/2-13-18	R-64	M-94

CONDENSER TUBE EXPANDER



B8012-Series

**Tube O. D.
1.3/4" - 5"**

Tube O.D. (Mm) inch	Tube Thickness			Tube I. D.		Minimum I. D. Tool Enters		Maximum Expansion of Tool		EXPANDER with (57.15 mm) 2.1/4" Long Rollers			
	Bwg	Inch	Mm	Inch	Mm	Inch	Mm	Inch	Mm	Complete Tool No.	Roller Set No.	Mandrel No.	
(69.85) 2.3/4	10	.134	3.40	2.482	63.0	2.390	60.7	2.702	68.6	B8012-2.3/4-10-16	R-66	M-96	
	11	.120	3.04	2.510	63.7	2.390	60.7	2.702	68.6	B8012-2.3/4-10-16	R-66	M-96	
	12	.109	2.76	2.532	64.3	2.390	60.7	2.702	68.8	B8012-2.3/4-10-16	R-66	M-96	
	13	.095	2.41	2.560	65.0	2.390	60.7	2.702	68.6	B8012-2.3/4-10-16	R-66	M-96	
	14	.083	2.10	2.584	65.6	2.390	60.7	2.702	68.8	B8012-2.3/4-10-16	R-66	M-96	
	15	.072	1.82	2.606	66.1	2.390	60.7	2.702	68.8	B8012-2.3/4-10-16	R-66	M-96	
(76.20) 3	8	.165	4.19	2.670	67.8	2.560	65.0	2.829	71.8	B8012-3-8-9	R-67	M-97	
	9	.148	3.75	2.704	68.6	2.560	65.0	2.829	71.8	B8012-3-8-9	R-67	M-97	
	10	.134	3.40	2.732	69.3	2.640	67.0	2.952	74.9	B8012-3-10-18	R-67	M-96	
	11	.120	3.04	2.760	70.1	2.640	67.0	2.952	74.9	B8012-3-10-18	R-67	M-96	
	12	.109	2.76	2.782	70.6	2.640	67.0	2.952	74.9	B8012-3-10-18	R-67	M-96	
	13	.095	2.41	2.810	71.3	2.640	67.0	2.952	74.9	B8012-3-10-18	R-67	M-96	
(88.9) 3.1/2	14	.083	2.10	2.834	71.9	2.640	67.0	2.952	74.9	B8012-3-10-18	R-67	M-96	
	15	.072	1.82	2.856	72.5	2.640	67.0	2.952	74.9	B8012-3-10-18	R-67	M-96	
	16	.065	1.65	2.870	72.8	2.640	67.0	2.952	74.9	B8012-3-10-18	R-67	M-96	
	17	.058	1.47	2.884	73.3	2.640	67.0	2.952	74.9	B8012-3-10-18	R-67	M-96	
	18	.049	1.24	2.902	73.7	2.640	67.0	2.952	74.9	B8012-3-10-18	R-67	M-96	
	(101.6) 4	13	.095	2.41	3.311	84.1	3.190	81.0	3.464	88.0	B8012-3.1/2-10-18	R-70	M-99
14		.083	2.10	3.334	84.7	3.190	81.0	3.464	88.0	B8012-3.1/2-10-18	R-70	M-99	
15		.072	1.83	3.354	85.2	3.190	81.0	3.464	88.0	B8012-3.1/2-10-18	R-70	M-99	
16		.065	1.65	3.370	85.6	3.190	81.0	3.464	88.0	B8012-3.1/2-10-18	R-70	M-99	
17		.058	1.47	3.385	86.0	3.190	81.0	3.464	88.0	B8012-3.1/2-10-18	R-70	M-99	
18		.049	1.24	3.401	86.4	3.190	81.0	3.464	88.0	B8012-3.1/2-10-18	R-70	M-99	
(114.3) 4.1/2	3	.259	6.60	3.480	88.4	3.425	87.0	3.780	96.0	B8012-4-3-4	R-71	M-100	
	4	.236	6.00	3.527	89.6	3.425	87.0	3.780	96.0	B8012-4-3-4	R-71	M-100	
	8	.165	4.19	3.670	93.2	3.582	91.0	3.940	100.0	B8012-4-8-9	R-71	M-101	
	9	.148	3.75	3.704	94.1	3.582	91.0	3.940	100.0	B8012-4-8-9	R-71	M-101	
	10	.134	3.40	3.732	94.8	3.661	93.0	3.960	100.6	B8012-4-10-18	R-72	M-101	
	11	.120	3.04	3.760	95.5	3.661	93.0	3.960	100.6	B8012-4-10-18	R-72	M-101	
	12	.109	2.76	3.783	96.1	3.661	93.0	3.960	100.6	B8012-4-10-18	R-72	M-101	
	13	.095	2.41	3.811	96.8	3.661	93.0	3.960	100.6	B8012-4-10-18	R-72	M-101	
	14	.083	2.10	3.834	97.4	3.661	93.0	3.960	100.6	B8012-4-10-18	R-72	M-101	
	16	.065	1.65	3.870	98.3	3.661	93.0	3.960	100.6	B8012-4-10-18	R-72	M-101	
	(114.3) 4.1/2	3	.259	6.60	3.980	101.1	3.940	100.0	4.291	109.0	B8012-4.1/2-3-4	R-73	M-102
		4	.236	6.00	4.030	102.3	3.940	100.0	4.291	109.0	B8012-4.1/2-3-4	R-73	M-102
8		.165	4.19	4.170	105.9	4.020	102.0	4.370	111.0	B8012-4.1/2-8-9	R-73	M-102	
9		.148	3.75	4.204	106.8	4.020	102.0	4.370	111.0	B8012-4.1/2-8-9	R-74	M-102	
10		.134	3.40	4.232	107.5	4.100	104.0	4.450	113.0	B8012-4.1/210-18	R-74	M-103	
11		.109	2.76	4.283	108.8	4.100	104.0	4.450	113.0	B8012-4.1/210-18	R-74	M-103	
(127.0) 5	16	.065	1.65	4.370	111.0	4.100	104.0	4.450	113.0	B8012-4.1/210-18	R-74	M-103	
	3	.259	6.60	4.480	113.8	4.410	112.0	3.780	121.0	B8012-5-3-4	R-76	M-105	
	4	.236	6.00	4.527	115.0	4.410	112.0	3.780	121.0	B8012-5-3-4	R-76	M-105	
	8	.165	4.19	4.670	118.6	4.566	116.0	3.940	125.0	B8012-5-8-9	R-77	M-105	
	9	.148	3.75	4.704	119.5	4.566	116.0	3.940	125.0	B8012-5-8-9	R-77	M-105	
	10	.134	3.40	4.732	120.2	4.606	117.0	3.960	126.0	B8012-5-10-18	R-78	M-105	
	11	.120	3.04	4.763	121.0	4.606	117.0	3.960	126.0	B8012-5-10-18	R-78	M-105	
	12	.109	2.76	4.783	121.5	4.606	117.0	3.960	126.0	B8012-5-10-18	R-78	M-105	
14	.083	2.10	4.834	122.8	4.606	117.0	3.960	126.0	B8012-5-10-18	R-78	M-105		
16	.065	1.65	4.870	123.7	4.606	117.0	3.960	126.0	B8012-5-10-18	R-78	M-105		

CONDENSER TUBE EXPANDER

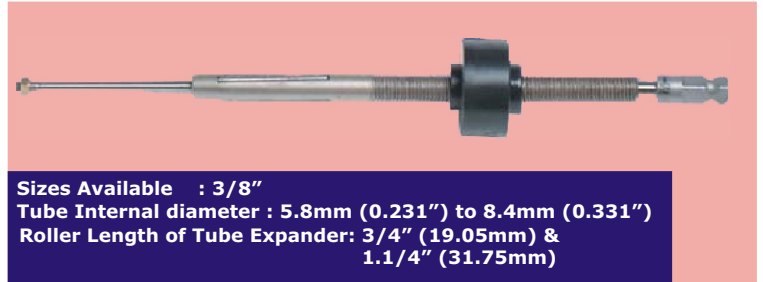
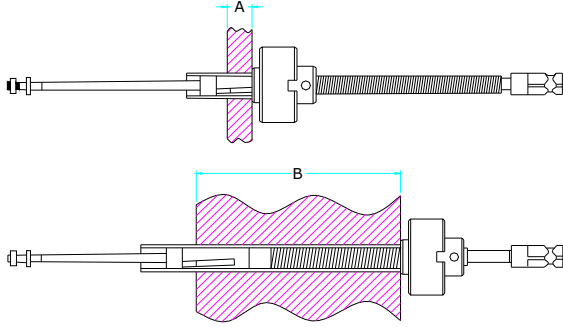


'B1300' SERIES

Tube O. D.
3/8"

FEATURES:

- Use - Oil coolers, Radiators, & other apparatus with small diameters tubes & thick tube sheets.



TUBE EXPANDERS FITTED WITH ROLLER LENGTH	FOR TUBE SHEET ADJUSTABLE RANGE	
	MINIMUM A	MAXIMUM B
(19.05mm) 3/4"	(19.05mm) 3/4"	(76.20mm) 3"
(31.75mm) 1.1/4"	(31.75mm) 1.1/4"	(88.90mm) 3.1/2"

Tube O.D. (Mm) inch	Tube Thickness		Tube I. D.		Minimum I. D. Tool Enters		Maximum Expansion of Tool		EXPANDER with (19.05mm) 3/4" Long rollers			EXPANDER with (31.75mm) 1.1/4" Long rollers			Ratchet Size Square Inch	
	Bwg	Inch	Mm	Inch	Mm	Inch	Mm	Inch	Mm	Complete Tool No.	Roller Set No.	Mandrel No.	Complete Tool No.	Roller Set No.		Mandrel No.
(9.53) 3/8	15	.072	1.82	.231	5.8	.230	5.8	.265	6.7	B1315	1315	M-86	B1316	1316	M-86	1/4
	16	.065	1.65	.245	6.2	.240	6.1	.275	6.9	B1319	1319	M-86	B1320	1320	M-86	
	17	.058	1.47	.259	6.5	.255	6.4	.289	7.3	B1317	903	M-88	B1318	904	M-88	
	1/4	18	.049	1.24	.277	7.0	.272	6.9	.307	7.8	B1301	903	M-80	B1302	904	M-80
		19	.042	1.06	.291	7.3	.286	7.2	.320	8.1	B1303	903	M-81	B1304	904	M-81
		20	.035	0.88	.305	7.7	.300	7.6	.334	8.4	B1305	907	M-82	B1306	908	M-82
	1/4	21	.032	0.81	.311	7.9	.306	7.7	.340	8.6	B1307	907	M-83	B1308	908	M-83
		22	.028	0.71	.319	8.1	.314	7.9	.349	8.8	B1309	909	M-83	B1310	910	M-83
		23	.025	0.63	.325	8.2	.320	8.1	.357	9.0	B1311	911	M-83	B1312	912	M-83
	24	.022	0.55	.331	8.4	.320	8.1	.357	9.0	B1311	911	M-83	B1312	912	M-83	

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