

FOR TUBES INTERNAL DIAMETER
From 0.324" (8.4 mm) to 1.430 (36.3 mm)

FEATURES OF "800" SERIES TUBE EXPANDERS :

- Most popular tool worldwide for use on heat exchangers and condensers with tubes of 1/2"-1.1/2" O.D.

Tube Expander Fitted With Roller Length	Minimum A	Maximum B
1.1/2" (38.1mm)	1/2" (12.7mm)	1.1/2" (38.1mm)
2.1/4" (57.1mm)	1.1/4" (31.75mm)	2.1/4" (57.1mm)

TUBE EXPANDERS SPECIFICATION

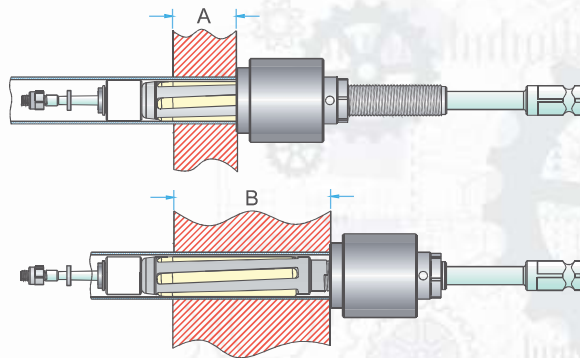
TUBE OD (mm) Inch	Tube Thickness			Tube I.D.		Tube I.D. Tool Enters		Maximum Expansion of Tool		EXPANDER with(38.10mm) 1.1/2 " Long Rollers			EXPANDER with(57.10 mm) 2.1/4" Long Rollers		
	BWG	mm	inch	mm	inch	Mm	inch	Mm	inch	Tool No	Mandrel	Roller	Tool No	Mandrel	Roller
12.70 1/2 "	14	2.1	0.083	8.4	0.334	8.2	0.324	9.5	0.374	797	797	797	-	-	-
	15	1.82	0.072	9.0	0.356	8.8	0.348	10.1	0.398	799	799	R- 1	-	-	-
	16	1.65	0.065	9.4	0.370	9.1	0.360	10.4	0.410	801	M- 1	R- 1	-	-	-
	17	1.47	0.058	9.7	0.384	9.5	0.374	10.7	0.424	803	M- 1	R- 2	-	-	-
	18	1.24	0.049	10.2	0.402	9.9	0.392	11.3	0.447	805	M- 2	R- 3	-	-	-
	20	0.88	0.035	10.9	0.430	10.3	0.406	11.7	0.461	805 S	M- 3	R- 3	-	-	-
15.88 5/8 "	12	2.76	0.109	10.3	0.407	9.9	0.392	11.3	0.447	805	M- 2	R- 3	806	M- 2	R- 3 A
	13	2.41	0.095	11.0	0.435	10.8	0.425	12.1	0.480	807	M- 3	R- 4	808	M- 3	R- 4 A
	14	2.10	0.083	11.6	0.459	11.4	0.449	12.9	0.509	809	M4	R- 4	810	M4	R- 4 A
	15	1.82	0.072	12.2	0.481	11.9	0.471	13.6	0.536	811	M- 5	R- 5	812	M- 5	R- 5 A
	16	1.65	0.065	12.5	0.495	12.3	0.485	13.9	0.550	813	M- 5	R- 6	814	M- 5	R- 6 A
	17	1.47	0.058	12.9	0.509	12.6	0.499	14.3	0.564	815	M- 6	R- 6	816	M- 6	R- 6 A
	18	1.24	0.049	13.3	0.527	13.1	0.517	14.5	0.572	817	M- 7	R- 7	818	M- 7	R- 7 A
	19	1.06	0.042	13.7	0.541	13.2	0.522	14.7	0.582	819	M- 6	R- 7	820	M- 6	R- 7 A
	20	0.88	0.035	14.1	0.555	13.6	0.536	15.1	0.596	819S	M- 8	R- 7	820S	M- 8	R- 7 A
	21	0.81	0.032	14.2	0.561	13.6	0.536	15.1	0.596	819S	M- 8	R- 7	820S	M- 8	R- 7 A
	22	0.71	0.028	14.4	0.569	13.6	0.536	15.1	0.596	819S	M- 8	R- 7	820S	M- 8	R- 7 A
	22	0.71	0.028	14.4	0.569	13.6	0.536	15.1	0.596	819S	M- 8	R- 7	820S	M- 8	R- 7 A
19.05 3/4 "	10	3.40	0.134	12.2	0.482	11.9	0.471	13.6	0.536	811	M- 5	R- 5	812	M- 5	R- 5 A
	11	3.04	0.120	12.9	0.510	12.6	0.499	14.3	0.564	815	M- 6	R- 6	816	M- 6	R- 6 A
	12	2.76	0.109	13.5	0.532	13.2	0.522	14.7	0.582	819	M- 6	R- 7	820	M- 6	R- 7 A
	13	2.41	0.095	14.2	0.560	13.9	0.550	15.6	0.615	821	M- 8	R- 8	822	M- 8	R- 8 A
	14	2.10	0.083	14.8	0.584	14.5	0.574	16.2	0.639	823	M- 8	R- 9	824	M- 8	R- 9 A
	15	1.82	0.072	15.3	0.606	15.1	0.596	16.7	0.661	825	M- 8	R- 10	826	M- 8	R- 10 A
	16	1.65	0.065	15.7	0.620	15.3	0.605	17.4	0.685	827	M- 9	R- 10	828	M- 9	R- 10 A
	17	1.47	0.058	16.1	0.634	15.7	0.619	17.7	0.699	829	M- 9	R- 11	830	M- 9	R- 11 A
	18	1.24	0.049	16.5	0.652	15.7	0.619	17.7	0.699	829	M- 9	R- 11	830	M- 9	R- 11 A
	19	1.06	0.042	16.9	0.666	16.3	0.642	18.3	0.722	831	M- 9	R- 12	832	M- 9	R- 12 A
	20	0.88	0.035	17.2	0.680	16.3	0.642	18.3	0.722	831	M- 9	R- 12	832	M- 9	R- 12 A
	21	0.81	0.032	17.4	0.686	16.3	0.642	18.3	0.722	831	M- 9	R- 12	832	M- 9	R- 12 A
	22	0.71	0.028	17.6	0.694	16.3	0.642	18.3	0.722	831	M- 9	R- 12	832	M- 9	R- 12 A
	22	0.71	0.028	17.6	0.694	16.3	0.642	18.3	0.722	831	M- 9	R- 12	832	M- 9	R- 12 A
22.22 7/8 "	10	3.40	0.134	15.4	0.607	15.1	0.596	16.7	0.661	825	M- 8	R- 10	826	M- 8	R- 10 A
	11	3.04	0.120	16.1	0.635	15.7	0.619	17.7	0.699	829	M- 9	R- 11	830	M- 9	R- 11 A
	12	2.76	0.109	16.6	0.657	16.3	0.642	18.3	0.722	831	M- 9	R- 12	832	M- 9	R- 12 A
	13	2.41	0.095	17.4	0.685	17.0	0.670	19.0	0.87 0	833	M- 10	R- 13	834	M- 10	R- 13 A
	14	2.10	0.083	18.0	0.709	17.4	0.685	19.6	0.774	835	M- 11	R- 14	836	M- 11	R- 14 A
	15	1.82	0.072	18.5	0.731	18.0	0.712	20.3	0.801	837	M- 11	R- 15	838	M- 11	R- 15 A
	16	1.65	0.065	18.9	0.745	18.4	0.726	20.7	0.815	839	M- 12	R- 15	840	M- 12	R- 15 A
	17	1.47	0.058	19.2	0.87 9	18.8	0.740	21.0	0.829	843	M- 12	R- 16	844	M- 12	R- 16 A
	18	1.24	0.049	19.7	0.777	18.8	0.740	21.0	0.829	843	M- 12	R- 16	844	M- 12	R- 16 A
	18	1.24	0.049	19.7	0.777	18.8	0.740	21.0	0.829	843	M- 12	R- 16	844	M- 12	R- 16 A

TUBE EXPANDER 800 SERIES

TUBE OD (mm) Inch	Tube Thickness			Tube I.D.		Tube I.D. Tool Enters		Maximum Expansion of Tool		EXPANDER with(38.10mm) 1.1/2 " Long Rollers			EXPANDER with(57.10 mm) 2.1/4" Long Rollers		
	BWG	mm	inch	mm	inch	Mm	inch	Mm	inch	Tool No	Mandrel	Roller	Tool No	Mandrel	Roller
25.40 1"	8	4.19	0.165	17.0	0.670	16.6	0.655	18.6	0.735	841	M- 9	R- 13	842	M- 9	R- 13 A
	9	3.87	0.148	17.8	0.704	17.4	0.685	19.6	0.774	835	M- 11	R- 14	836	M- 11	R- 14 A
	10	3.40	0.134	18.5	0.732	18.0	0.712	20.3	0.801	837	M- 11	R- 15	838	M- 11	R- 15 A
	11	3.04	0.120	19.3	0.760	18.8	0.740	21.0	0.829	843	M- 12	R- 16	844	M- 12	R- 16 A
	12	2.76	0.109	19.8	0.782	19.3	0.763	21.6	0.852	845	M- 12	R- 17	846	M- 12	R- 17 A
	13	2.41	0.095	20.5	0.810	20.0	0.791	22.3	0.880	847	M- 12	R- 18	848	M- 12	R- 18 A
	14	2.10	0.083	21.1	0.834	20.5	0.810	23.0	0.909	849	M- 13	R- 18	850	M- 13	R- 18 A
	15	1.82	0.072	21.7	0.856	21.2	0.837	23.7	0.936	851	M- 13	R- 19	852	M- 13	R- 19 A
	16	1.65	0.065	22.1	0.870	21.2	0.837	23.7	0.936	851	M- 13	R- 19	852	M- 13	R- 19 A
	17	1.47	0.058	22.4	0.884	21.9	0.865	24.4	0.964	855	M- 13	R- 21	856	M- 13	R- 21 A
	18	1.24	0.049	22.9	0.902	21.9	0.865	24.4	0.964	855	M- 13	R- 21	856	M- 13	R- 21 A
28.58 1.1/8"	8	4.19	0.165	20.1	0.795	19.7	0.776	22.2	0.887	853	M- 13	R- 20	854	M- 13	R- 20 A
	9	3.87	0.148	21.0	0.829	20.5	0.810	23.0	0.909	849	M- 13	R- 18	850	M- 13	R- 18 A
	10	3.40	0.134	21.7	0.857	21.2	0.837	23.7	0.936	851	M- 13	R- 19	852	M- 13	R- 19 A
	11	3.04	0.120	22.4	0.885	21.9	0.865	24.4	0.964	855	M- 13	R- 21	856	M- 13	R- 21 A
	12	2.76	0.109	23.0	0.907	22.4	0.883	24.9	0.982	857	M- 14	R- 21	858	M- 14	R- 21 A
	13	2.41	0.095	23.7	0.935	23.2	0.926	25.7	1.025	859	M- 14	R- 22	860	M- 14	R- 22 A
	14	2.10	0.083	24.3	0.959	23.7	0.935	26.5	1.044	861	M- 15	R- 23	862	M- 15	R- 23 A
	15	1.82	0.072	24.9	0.981	24.4	0.962	27.2	1.071	863	M- 15	R- 24	864	M- 15	R- 24 A
	16	1.65	0.065	25.2	0.995	24.4	0.962	27.2	1.071	863	M- 15	R- 24	864	M- 15	R- 24 A
	17	1.47	0.058	25.6	1.010	25.1	0.990	27.9	1.009	867	M- 16	R- 26	868	M- 16	R- 26 A
	18	1.24	0.049	26.0	1.027	25.1	0.990	27.9	1.009	867	M- 16	R- 26	868	M- 16	R- 26 A
31.87 1.1/4"	8	4.19	0.165	23.3	0.920	22.8	0.901	25.6	1.010	865	M- 15	R- 25	866	M- 15	R- 25 A
	9	3.87	0.148	24.2	0.954	23.7	0.935	26.5	1.044	861	M- 15	R- 23	862	M- 15	R- 23 A
	10	3.40	0.134	24.9	0.992	24.4	0.962	27.2	1.071	863	M- 15	R- 24	864	M- 15	R- 24 A
	11	3.04	0.120	25.6	1.010	25.9	0.990	27.9	1.099	867	M- 16	R- 26	868	M- 16	R- 26 A
	12	2.76	0.109	26.2	1.032	25.7	1.013	28.5	1.122	869	M- 16	R- 27	870	M- 16	R- 27 A
	13	2.41	0.095	26.9	1.060	26.4	1.039	29.2	1.150	871	M- 17	R- 28	872	M- 17	R- 28 A
	14	2.10	0.083	27.5	1.084	26.9	1.060	29.6	1.169	873	M- 17	R- 29	874	M- 17	R- 29 A
	15	1.82	0.072	28.0	1.106	27.6	1.087	30.3	1.196	887	M- 17	R- 30	876	M- 17	R- 30 A
	16	1.65	0.065	28.4	1.120	27.6	1.087	30.3	1.196	887	M- 17	R- 30	876	M- 17	R- 30 A
	17	1.47	0.058	28.8	1.134	28.3	1.115	31.0	1.224	879	M- 18	R- 30	880	M- 18	R- 30 A
	18	1.24	0.049	29.2	1.152	28.3	1.115	31.0	1.224	879	M- 18	R- 30	880	M- 18	R- 30 A
34.92 1.3/8"	8	4.19	0.165	26.5	1.045	26.0	1.026	28.8	1.135	877	M- 17	R- 31	872	M- 17	R- 31 A
	9	3.87	0.148	27.4	1.079	26.9	1.060	29.6	1.169	873	M- 17	R- 29	874	M- 17	R- 29 A
	10	3.40	0.134	28.1	1.107	27.6	1.087	30.3	1.196	887	M- 17	R- 30	876	M- 17	R- 30 A
	11	3.04	0.120	28.8	1.135	28.3	1.115	31.0	1.224	879	M- 18	R- 30	880	M- 18	R- 30 A
	12	2.76	0.109	29.3	1.157	28.7	1.133	31.5	1.242	881	M- 18	R- 32	882	M- 18	R- 32 A
	13	2.41	0.095	30.1	1.185	29.4	1.160	32.3	1.287	883	M- 19	R- 33	884	M- 19	R- 33 A
	14	2.10	0.083	30.7	1.209	29.9	1.179	32.8	1.294	885	M- 20	R- 34	886	M- 20	R- 34 A
	15	1.82	0.072	31.2	1.231	30.6	1.206	33.5	1.321	887	M- 20	R- 35	888	M- 20	R- 35 A
	16	1.65	0.065	31.6	1.245	30.6	1.206	33.5	1.321	887	M- 20	R- 35	888	M- 20	R- 35 A
	17	1.47	0.058	32.1	1.263	31.1	1.228	34.0	1.349	889	M- 21	R- 36	890	M- 21	R- 36 A
	18	1.24	0.049	32.5	1.282	31.9	1.257	34.8	1.372	893	M- 20	R- 37	894	M- 20	R- 37 A
38.10 1.1/2"	8	4.19	0.165	29.7	1.170	29.0	1.145	32.0	1.260	889	M- 19	R- 34	890	M- 19	R- 34 A
	9	3.87	0.148	30.5	1.204	29.9	1.177	32.8	1.294	885	M- 20	R- 34	886	M- 20	R- 34 A
	10	3.40	0.134	31.2	1.232	30.6	1.206	33.5	1.321	887	M- 20	R- 35	888	M- 20	R- 35 A
	11	3.04	0.120	32.0	1.260	31.3	1.235	34.2	1.350	891	M- 20	R- 36	892	M- 20	R- 36 A
	12	2.76	0.109	32.5	1.282	31.9	1.257	34.8	1.372	893	M- 20	R- 37	894	M- 20	R- 37 A
	13	2.41	0.095	33.2	1.310	32.6	1.285	35.5	1.400	895	M- 21	R- 37	896	M- 21	R- 37 A
	14	2.10	0.083	33.8	1.334	32.6	1.285	35.5	1.400	895	M- 21	R- 37	896	M- 21	R- 37 A
	15	1.82	0.072	34.4	1.356	33.8	1.331	36.7	1.446	897	M- 21	R- 38	898	M- 21	R- 38 A
	16	1.65	0.065	34.8	1.370	33.8	1.331	36.7	1.446	897	M- 21	R- 38	898	M- 21	R- 38 A
	17	1.47	0.058	35.1	1.384	33.8	1.331	37.3	1.472	899	M- 22	R- 38	900	M- 22	R- 38 A
	18	1.24	0.049	35.6	1.402	33.8	1.331	37.3	1.472	899	M- 22	R- 38	900	M- 22	R- 38 A
40.00 1.578"	19	1.06	0.042	35.9	1.416	33.8	1.331	37.3	1.472	899	M- 22	R- 38	900	M- 22	R- 38 A
	20	0.88	0.035	36.3	1.430	33.8	1.331	37.3	1.472	899	M- 22	R- 38	900	M- 22	R- 38 A

Model 797-856 Expanders Come With 3/8" Sq Dr & Model 857-900 Expanders
Come With 1/2" Sq Dr Mandrel

An ISO 9001 : 2015 Certified Co.



FEATURES OF "800-5" SERIES TUBE EXPANDERS :

- Use: highly recommended for use on thin wall tubes (19 thru 22 gauge walls) of Stainless Steel, Titanium, Incoloy and other exotic materials.
- Advantages: Gives a more concentric and even expansion when expanding thin walled tubes vs. a conventional 3 roll expander and reduces tube spring back effect.

FOR TUBES INTERNAL DIAMETER

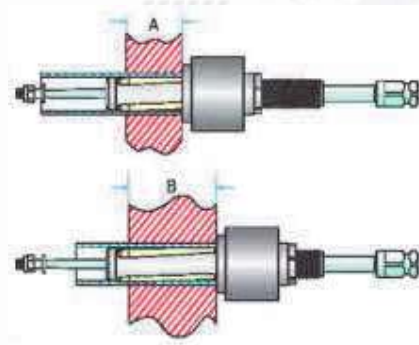
From 0.509" (12.9 mm) to 1.440 (36.7 mm)

Tube Expander Fitted With Roller Length	Minimum A	Maximum B
1.1/2" (38.1mm)	1/2" (12.7mm)	1.1/2" (38.1mm)
2.1/4" (57.1mm)	1.1/4" (31.75mm)	2.1/4" (57.1mm)

TUBE EXPANDERS SPECIFICATION

TUBE OD (mm) Inch	Tube Thickness			Tube I.D.		Tube I.D. Tool Enters		Max. Expansion of Tool		EXPANDER with(38.10mm) 1.1/2" Long Rollers			EXPANDER with(57.10 mm) 2.1/4" Long Rollers		
	BWG	mm	inch	mm	inch	mm	inch	mm	inch	Tool No	Mandrel	Roller	Tool No	Mandrel	Roller
15.88 5/8 "	17	1.47	0.058	12.9	0.509	12.6	0.499	14.3	0.564	815 - 5	816 - 5	R-4 - 5	816 - 5	816 - 5	R-4A - 5
	18	1.24	0.049	13.3	0.527	13.1	0.517	14.5	0.572	817 - 5	M-9	R-4 - 5	818 - 5	M-9	R-4A - 5
	19	1.06	0.042	13.7	0.541	13.2	0.522	14.7	0.582	819 - 5	820 - 5	R-4 - 5	820 - 5	820 - 5	R-4A - 5
	20	0.88	0.035	14.1	0.555	13.6	0.536	15.1	0.596	819S - 5	820 - 5S	R-4 - 5	820S - 5	820 - 5S	R-4A - 5
	21	0.81	0.032	14.2	0.561	13.6	0.536	15.1	0.596	819S - 5	820 - 5S	R-4 - 5	820S - 5	820 - 5S	R-4A - 5
	22	0.71	0.028	14.4	0.569	13.6	0.536	15.1	0.596	819S - 5	820 - 5S	R-4 - 5	820S - 5	820 - 5S	R-4A - 5
19.05 3/4 "	13	2.41	0.095	14.2	0.560	13.9	0.550	15.6	0.615	821 - 5	822 - 5	R-5 - 5	822 - 5	822 - 5	R-5A - 5
	14	2.10	0.083	14.8	0.584	14.5	0.574	16.2	0.639	823 - 5	824 - 5	R-6 - 5	824 - 5	824 - 5	R-6A - 5
	15	1.82	0.072	15.3	0.606	15.1	0.596	16.7	0.661	825 - 5	826 - 5	R-7 - 5	826 - 5	826 - 5	R-7A - 5
	16	1.65	0.065	15.7	0.620	15.3	0.605	17.4	0.685	827 - 5	M-13	R-7 - 5	828 - 5	M-13	R-7A - 5
	17	1.47	0.058	16.1	0.634	15.7	0.619	17.7	0.699	829 - 5	830 - 5	R-7 - 5	830 - 5	830 - 5	R-7A - 5
	18	1.24	0.049	16.5	0.652	15.7	0.619	17.7	0.699	829 - 5	830 - 5	R-7 - 5	830 - 5	830 - 5	R-7A - 5
	19	1.06	0.042	16.9	0.666	16.3	0.642	18.3	0.722	831 - 5	M-13	R-9 - 5	832 - 5	M-13	R-9A - 5
	20	0.88	0.035	17.2	0.680	16.3	0.642	18.3	0.722	831 - 5	M-13	R-9 - 5	832 - 5	M-13	R-9A - 5
	21	0.81	0.032	17.4	0.686	16.3	0.642	18.3	0.722	831 - 5	M-13	R-9 - 5	832 - 5	M-13	R-9A - 5
	22	0.71	0.028	17.6	0.694	16.3	0.642	18.3	0.722	831 - 5	M-13	R-9 - 5	832 - 5	M-13	R-9A - 5
	23	0.64	0.025	17.8	0.700	17.0	0.670	18.9	0.747	833 - 5	M-14 *	R-9 - 5	834 - 5	M-14 *	R-9A - 5
	24	0.56	0.022	17.9	0.706	17.0	0.670	18.9	0.747	833 - 5	M-14 *	R-9 - 5	834 - 5	M-14 *	R-9A - 5
	25	0.51	0.020	18.0	0.710	17.4	0.685	19.0	0.870	835 - 5	M-15 *	R-10 - 5	836 - 5	M-15 *	R-10A - 5
22.22 7/8 "	13	2.41	0.095	17.4	0.685	17.0	0.669	18.9	0.744	833 - 5	M-14 *	R-9 - 5	834 - 5	M-14 *	R-9A - 5
	14	2.11	0.083	18.0	0.709	17.4	0.685	19.0	0.748	835 - 5	M-15 *	R-10 - 5	836 - 5	M-15 *	R-10A - 5
	16	1.47	0.058	19.2	0.876	18.8	0.740	20.9	0.823	839 - 5	840 - 5	R-11 - 5	840 - 5	840 - 5	R-11A - 5
	17	1.24	0.049	19.7	0.776	18.8	0.740	20.9	0.823	843 - 5	M-17 *	R-11 - 5	844 - 5	M-17 *	R-11A - 5
	18	1.07	0.042	20.1	0.791	19.4	0.764	21.6	0.850	843 - 5	M-17 *	R-11 - 5	844 - 5	M-17 *	R-11A - 5
	19	0.89	0.035	20.4	0.803	19.4	0.764	21.6	0.850	845 - 5	M-18 *	R-11 - 5	846 - 5	M-18 *	R-11A - 5
	20	0.81	0.032	20.6	0.811	19.4	0.764	21.6	0.850	845 - 5	M-18 *	R-11 - 5	846 - 5	M-18 *	R-11A - 5
	21	0.71	0.028	20.8	0.819	19.4	0.764	21.6	0.850	845 - 5	M-18 *	R-11 - 5	846 - 5	M-18 *	R-11A - 5
	22	0.64	0.025	20.9	0.823	20.1	0.791	22.4	0.882	845 - 5	M-18 *	R-11 - 5	846 - 5	M-18	R-11A - 5
	23	0.56	0.022	21.0	0.827	20.1	0.791	22.4	0.882	847 - 5	M-18 *	R-13 - 5	846 - 5	M-18	R-13A - 5
24	2.41	0.095	17.4	0.685	17.0	0.669	18.9	0.744	847 - 5	M-18 *	R-13 - 5	848 - 5	M-18	R-13A - 5	

TUBE EXPANDER 800-5 SERIES



800-5 SERIES

TUBE OD (mm) Inch	Tube Thickness			Tube ID.		Tube I.D. Tool Enters		Max Expansion of Tool		EXPANDER with(38.10mm) 1.1/2" Long Rollers			EXPANDER with(57.10 mm) 2.1/4" Long Rollers		
	BWG	mm	inch	mm	inch	mm	inch	mm	inch	Tool No	Mandrel	Roller	Tool No	Mandrel	Roller
25.40 1"	12	2.76	0.109	19.8	0.780	19.4	0.764	21.6	0.850	845 - 5	M- 18 *	R- 11 - 5	846 - 5	M- 18 *	R- 11A - 5
	13	2.41	0.095	20.5	0.807	20.1	0.791	22.4	0.882	847 - 5	M- 18 *	R- 13 - 5	848 - 5	M- 18 *	R- 13A - 5
	14	2.11	0.083	21.2	0.835	20.5	0.807	22.3	0.878	849 - 5	850 - 5	R- 12 - 5	850 - 5	850 - 5	R- 12A - 5
	15	1.82	0.072	21.7	0.854	21.3	0.839	23.8	0.937	851 - 5	852 - 5	R- 13 - 5	852 - 5	852 - 5	R- 13A - 5
	16	1.65	0.065	22.0	0.866	21.3	0.839	23.8	0.937	851 - 5	852 - 5	R- 13 - 5	852 - 5	852 - 5	R- 13A - 5
	17	1.47	0.058	22.4	0.882	22.0	0.866	24.5	0.965	855 - 5	856 - 5	R- 13 - 5	856 - 5	856 - 5	R- 13A - 5
	18	1.24	0.049	22.9	0.902	22.0	0.866	24.5	0.965	855 - 5	856 - 5	R- 13 - 5	856 - 5	856 - 5	R- 13A - 5
	19	1.06	0.042	23.2	0.913	22.0	0.866	24.5	0.965	855 - 5	856 - 5	R- 13 - 5	856 - 5	856 - 5	R- 13A - 5
	20	0.88	0.035	23.6	0.929	22.0	0.866	24.5	0.965	855 - 5	856 - 5	R- 13 - 5	856 - 5	856 - 5	R- 13A - 5
	21	0.81	0.032	23.8	0.937	22.4	0.882	25.3	0.996	857 - 5	M- 21 *	R- 15 - 5	858 - 5	M- 21 *	R- 15A - 5
	22	0.71	0.028	24.0	0.945	22.4	0.882	25.3	0.996	857 - 5	M- 21 *	R- 15 - 5	858 - 5	M- 21 *	R- 15A - 5
	23	0.64	0.025	24.1	0.949	22.4	0.882	25.3	0.996	857 - 5	M- 21 *	R- 15 - 5	858 - 5	M- 21 *	R- 15A - 5
28.58 1.1/8"	12	2.76	0.109	23.0	0.915	22.4	0.889	25.3	1.005	857 - 5	M- 21 *	R- 15 - 5	858 - 5	M- 21 *	R- 15A - 5
	13	2.41	0.095	23.7	0.942	23.2	0.921	25.4	1.009	859 - 5	860 - 5	R- 16 - 5	860 - 5	860 - 5	R- 16A - 5
	14	2.11	0.083	24.3	0.966	23.7	0.940	26.4	1.048	861 - 5	862 - 5	R- 17 - 5	862 - 5	862 - 5	R- 17A - 5
	22	0.71	0.028	27.2	1.082	26.4	1.048	29.4	1.168	871 - 5	872 - 5	R- 19 - 5	872 - 5	872 - 5	R- 19A - 5
	24	0.56	0.022	27.5	1.093	24.4	0.968	29.4	1.168	871 - 5	872 - 5	R- 19 - 5	872 - 5	872 - 5	R- 19A - 5
31.87 1.1/4"	15	1.82	0.072	28.1	1.117	27.6	1.095	30.4	1.207	887 - 5	876 - 5	R- 21 - 5	876 - 5	876 - 5	R- 21A - 5
	16	1.65	0.065	28.4	1.129	27.6	1.095	30.4	1.207	887 - 5	876 - 5	R- 21 - 5	876 - 5	876 - 5	R- 21A - 5
	17	1.47	0.058	28.8	1.145	28.8	1.143	31.3	1.243	879 - 5	880 - 5	R- 21 - 5	880 - 5	880 - 5	R- 21A - 5
	18	1.24	0.049	29.3	1.165	28.8	1.143	31.3	1.243	879 - 5	880 - 5	R- 21 - 5	880 - 5	880 - 5	R- 21A - 5
	19	1.07	0.042	29.6	1.177	28.8	1.143	31.3	1.243	879 - 5	880 - 5	R- 21 - 5	880 - 5	880 - 5	R- 21A - 5
	20	0.88	0.035	30.0	1.193	28.8	1.143	31.3	1.243	879 - 5	880 - 5	R- 21 - 5	880 - 5	880 - 5	R- 21A - 5
	21	0.81	0.032	30.1	1.197	28.8	1.143	31.3	1.243	879 - 5	880 - 5	R- 21 - 5	880 - 5	880 - 5	R- 21A - 5
	22	0.71	0.028	30.3	1.205	28.8	1.143	31.3	1.243	879 - 5	880 - 5	R- 21 - 5	880 - 5	880 - 5	R- 21A - 5
	23	0.64	0.025	30.5	1.213	28.8	1.143	31.5	1.251	881 - 5	882 - 5	R- 21 - 5	882 - 5	882 - 5	R- 21A - 5
34.92 1.3/8"	24	0.56	0.022	30.6	1.217	28.8	1.143	31.5	1.251	881 - 5	882 - 5	R- 21 - 5	882 - 5	882 - 5	R- 21A - 5
	12	2.76	0.109	29.3	1.165	28.8	1.143	31.5	1.251	881 - 5	882 - 5	R- 21 - 5	882 - 5	882 - 5	R- 21A - 5
	14	2.11	0.083	30.7	1.221	29.9	1.187	32.9	1.307	885 - 5	882 - 5	R- 23 - 5	884 - 5	882 - 5	R- 23A - 5
	20	0.88	0.035	33.2	1.320	31.9	1.266	35.2	1.398	893 - 5	894 - 5	R- 26 - 5	894 - 5	894 - 5	R- 26A - 5
	22	0.71	0.028	33.5	1.332	32.6	1.294	36.0	1.430	895 - 5	896 - 5	R- 26 - 5	896 - 5	896 - 5	R- 26A - 5
38.10 1.1/2"	24	0.56	0.022	33.8	1.344	32.6	1.294	36.0	1.430	895 - 5	896 - 5	R- 26 - 5	896 - 5	896 - 5	R- 26A - 5
	17	1.47	0.058	35.1	1.396	33.8	1.341	37.8	1.488	899 - 5	900 - 5	R- 29 - 5	900 - 5	900 - 5	R- 29A - 5
	18	1.24	0.049	35.6	1.416	33.8	1.341	37.8	1.488	899 - 5	900 - 5	R- 29 - 5	900 - 5	900 - 5	R- 29A - 5
	19	1.06	0.042	36.0	1.431	33.8	1.341	37.8	1.488	899 - 5	900 - 5	R- 29 - 5	900 - 5	900 - 5	R- 29A - 5
	20	0.89	0.035	36.3	1.443	33.8	1.341	37.8	1.488	899 - 5	900 - 5	R- 29 - 5	900 - 5	900 - 5	R- 29A - 5
	21	0.81	0.032	36.5	1.451	33.8	1.341	37.8	1.488	899 - 5	900 - 5	R- 29 - 5	900 - 5	900 - 5	R- 29A - 5
	22	0.71	0.028	36.7	1.459	33.8	1.341	37.8	1.488	899 - 5	900 - 5	R- 29 - 5	900 - 5	900 - 5	R- 29A - 5
	23	0.64	0.025	36.8	1.463	33.8	1.341	37.8	1.488	899 - 5	900 - 5	R- 29 - 5	900 - 5	900 - 5	R- 29A - 5
	24	0.56	0.022	37.0	1.471	33.8	1.341	37.8	1.488	899 - 5	900 - 5	R- 29 - 5	900 - 5	900 - 5	R- 29A - 5

Note: * Mandrel Come with 3/8" Square Mandrel Drive

Model 815-5 To 858-5 expanders come with 3/8" Square Mandrel Drive and

Model 859-5 To 900-5 expanders come with 1/2" Square Mandrel Drive.