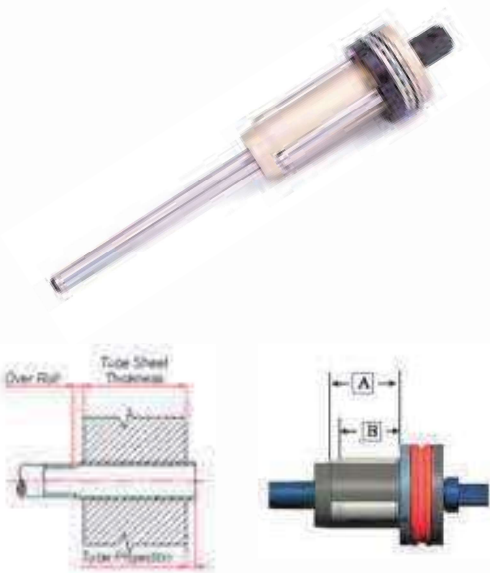


TUBE EXPANDER AB SERIES



Features

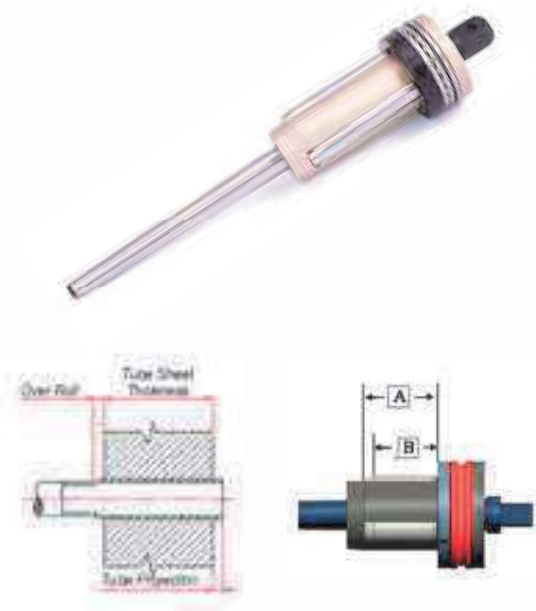
- Similar to A Series Expander.
- Bearing reduces the frictional force & increases the life of tool
- Commonly used tool through-out the world for parallel expansion of tubes..

Tube Sheet Thickness	Roller Length (A)	Effective Rolling Length (B)	When ordering Expander add Prefix
1/2" - 7/8" (12.7 - 22.22mm)	2.1/4" (57.10 mm)	1.1/2" (38.0 mm)	AB - 31/2
3/4" - 1.1/8" (19.05 - 28.58mm)	2.1/2" (63.50 mm)	1.3/4" (45.0 mm)	AB - 31/3
1.1/8" - 1.5/8" (28.58 - 41.30mm)	3" (76.20 mm)	2.1/4" (57.0 mm)	AB - 31/4
1.5/8" - 2.1/8" (41.30 - 54.0mm)	3.1/2" (88.80 mm)	2.3/4" (70.0 mm)	AB - 31/5
2.1/8" - 2.5/8" (54.0 - 66.70mm)	4" (101.50 mm)	3.1/4" (82.5 mm)	AB - 31/6

TUBE EXPANDERS SPECIFICATION

Tube O.D inch	TUBE THICKNESS		Tube O.D inch	TUBE THICKNESS		Min. I.D.		Max. Exp.		Expander Model	Roll Model	Mandrel Model	Mandrel Square Drive
	BWG	inch		BWG	inch	mm	inch	mm	inch				
7/8	15	.072	1	10	.134	18.1	0.713	20.4	0.803	AB - 31	15-RS	DBM - 11	3/8
7/8	16	.065	-	-	-	18.4	0.724	20.7	0.815	AB - 32	15-RS	DBM - 12	3/8
7/8	17	.058	1	11	.120	18.8	0.740	21.1	0.831	AB - 33	16-RS	DBM - 12	3/8
7/8	18	.049	1	12	.109	19.4	0.764	21.6	0.850	AB - 34	20-RS	DBM - 12	3/8
7/8	19-20	.042/.035	1.1/8	8	.165	19.7	0.776	22.3	0.878	AB - 35	17-RS	DBM - 13	3/8
1	13	.095	-	-	-	20.1	0.791	22.4	0.882	AB - 36	18-RS	DBM - 12	3/8
1	14	.083	1.1/8	9	.148	20.6	0.811	23.1	0.909	AB - 37	18-RS	DBM - 13	3/8
1	15-16	.072/.065	1.1/8	10	.134	21.3	0.839	23.8	0.937	AB - 38	19-RS	DBM - 13	3/8
1	17-18	.058/.048	1.1/8	11	.120	22.0	0.866	24.5	0.965	AB - 39	21-RS	DBM - 13	3/8
1	19-20	.042/.035	1.1/8	12	.109	22.4	0.882	25.0	0.984	AB - 40	21-RS	DBM - 14	3/8
1.1/4	8	.165	1.1/8	13	.095	23.3	0.917	25.9	1.020	AB - 41	22-RS	DBM - 14	3/8
1.1/4	9	.148	1.1/8	14	.083	23.8	0.937	26.5	1.043	AB - 42	23-RS	DBM - 15	1/2
1.1/4	10	.134	1.1/8	15-16	.072/.065	24.4	0.961	27.2	1.071	AB - 43	24-RS	DBM - 15	1/2
1.1/4	11	.120	-	-	-	25.2	0.992	28.0	1.102	AB - 44	26-RS	DBM - 16	1/2
1.1/4	12	.109	-	-	-	25.7	1.012	28.5	1.122	AB - 45	27-RS	DBM - 16	1/2
1.1/4	13	.095	1.3/8	8	.165	26.1	1.028	28.8	1.134	AB - 46	31-RS	DBM - 16	1/2
1.1/4	14	.083	-	-	-	26.4	1.039	29.2	1.150	AB - 47	28-RS	DBM - 17	1/2
1.1/4	15	.072	1.3/8	9	.148	26.9	1.059	29.7	1.169	AB - 48	29-RS	DBM - 17	1/2
1.1/4	16	.065	1.3/8	10	.134	27.6	1.087	30.4	1.197	AB - 49	30-RS	DBM - 17	1/2
1.1/2	7	.180	1.3/8	11	.120	28.3	1.114	31.2	1.228	AB - 50	30-RS	DBM - 18	1/2
1.1/2	8	.165	1.3/8	12	.109	28.8	1.134	31.7	1.248	AB - 51	32-RS	DBM - 18	1/2
1.1/2	9	.148	1.3/8	13-14	.095/.083	29.5	1.161	33.4	1.315	AB - 52	28-RS	DBM - 20	1/2
1.1/2	10	.134	1.3/8	15-16	.072/.065	30.0	1.181	34.1	1.343	AB - 53	29-RS	DBM - 20	1/2
1.1/2	11-12	.120/.109	-	-	-	30.6	1.205	34.8	1.370	AB - 54	30-RS	DBM - 20	1/2
1.1/2	13	.095	1.3/4	5	.220	31.4	1.236	35.6	1.402	AB - 55	33-RS	DBM - 20	1/2
1.1/2	14-15	.083/.072	1.3/4	6	.203	32.6	1.283	36.8	1.449	AB - 56	32-RS	DBM - 21	1/2
-	-	-	1.3/4	7	.180	33.4	1.315	38.1	1.500	AB - 57	36-RS	DBM - 21	1/2
-	-	-	1.3/4	8	.165	34.2	1.346	38.7	1.524	AB - 58	37-RS	DBM - 21	1/2
2	3	.259	1.3/4	9-10	.148/.134	35.0	1.378	40.6	1.598	AB - 59	33-RS	DBM - 22	3/4
2	4	.238	1.3/4	11-12	.120/.109	36.6	1.441	42.2	1.661	AB - 60	37-RS	DBM - 22	3/4
2	5-6	.220/.203	1.3/4	13-14	.095/.083	38.2	1.504	43.8	1.724	AB - 61	38-RS	DBM - 22	3/4
2	7-8	.180/.165	1.3/4	15-16	.072/.065	39.8	1.567	45.4	1.787	AB - 62	39-RS	DBM - 22	3/4
2	9-10	.148/.134	2.1/4	3	.259	41.4	1.630	47.0	1.850	AB - 63	40-RS	DBM - 22	3/4
2	11-13	.120/.095	2.1/4	4	.238	42.9	1.689	49.5	1.949	AB - 64	40-RS	DBM - 23	3/4
2	14-16	.083/.065	2.1/4	6-7	.203/.180	44.5	1.752	51.1	2.012	AB - 65	41-RS	DBM - 23	3/4
2	17-18	.058/.049	2.1/4	8-9	.165/.148	46.1	1.815	52.7	2.075	AB - 66	42-RS	DBM - 23	3/4

TUBE EXPANDER AB SERIES



Features

- Similar to A Series Expander.
- Bearing reduces the frictional force & increases the life of tool
- Commonly used tool through-out the world for parallel expansion of tubes.

Tube Sheet Thickness	Roller Length (A)	Effective Rolling Length (B)	When ordering Expander add Prefix
1/2" - 7/8" (12.7 - 22.22mm)	2.1/4" (57.10 mm)	1.1/2" (38.0 mm)	AB - 67/2
3/4" - 1.1/8" (19.05 - 28.58mm)	2.1/2" (63.50 mm)	1.3/4" (45.0 mm)	AB - 67/3
1.1/8" - 1.5/8" (28.58 - 41.30mm)	3" (76.20 mm)	2.1/4" (57.0 mm)	AB - 67/4
1.5/8" - 2.1/8" (41.30 - 54.0mm)	3.1/2" (88.80 mm)	2.3/4" (70.0 mm)	AB - 67/5
2.1/8" - 2.5/8" (54.0 - 66.70mm)	4" (101.50 mm)	3.1/4" (82.5 mm)	AB - 67/6

TUBE EXPANDERS SPECIFICATION

Tube O.D inch	TUBE THICKNESS		Tube O.D inch	TUBE THICKNESS		Min. I.D.		Max. Exp.		Expander Model	Roll Model	Mandrel Model	Mandrel Square Drive
	BWG	inch		BWG	inch	mm	inch	mm	inch				
2.1/2	3	.259	2.1/4	10-11	.134/.120	47.7	1.878	54.3	2.138	AB - 67	43-RS	DBM - 23	3/4
2.1/2	4-5	.238/.220	2.1/4	12-13	.109/.095	49.3	1.941	55.9	2.201	AB - 68	44-RS	DBM - 23	3/4
2.1/2	6-7	.203/.180	2.1/4	14-16	.083/.065	50.8	2.000	57.8	2.276	AB - 69	43-RS	DBM - 24	3/4
2.1/2	8-9	.165/.148	2.3/4	3	.259	52.4	2.063	59.4	2.339	AB - 70	44-RS	DBM - 24	3/4
2.1/2	10-11	.134/.120	2.3/4	4	.238	54.0	2.126	61.0	2.402	AB - 71	45-RS	DBM - 24	3/4
2.1/2	12-14	.109/.083	2.3/4	5-6	.220/.203	55.6	2.189	64.0	2.520	AB - 72	47-RS	DBM - 24	3/4
2.1/2	15-16	.072/.065	2.3/4	7-8	.180/.165	57.2	2.252	65.6	2.583	AB - 73	46-RS	DBM - 25	1
3	3	.259	2.3/4	9-10	.148/.134	58.6	2.307	67.0	2.638	AB - 74	47-RS	DBM - 25	1
3	4	.238	2.3/4	11-13	.120/.095	60.4	2.378	68.8	2.709	AB - 75	48-RS	DBM - 25	1
3	5-6	.220/.203	2.3/4	14-16	.083/.065	62.2	2.449	70.4	2.772	AB - 76	49-RS	DBM - 25	1
3	7-8	.180/.165	-	-	-	63.6	2.504	72.0	2.835	AB - 77	50-RS	DBM - 25	1
3	9-10	.148/.134	3.1/4	3	.259	65.0	2.559	73.4	2.890	AB - 78	51-RS	DBM - 25	1
3	11-13	.120/.095	3.1/4	4	.238	66.6	2.622	75.0	2.953	AB - 79	52-RS	DBM - 25	1
3	14-16	.083/.065	3.1/4	5-6	.220/.203	68.3	2.689	76.9	3.028	AB - 80	51-RS	DBM - 26	1
3.1/2	2	.284	3.1/4	7-8	.180/.165	69.9	2.752	78.5	3.091	AB - 81	52-RS	DBM - 26	1
3.1/2	3	.259	3.1/4	9-10	.148/.134	71.5	2.815	80.1	3.154	AB - 82	53-RS	DBM - 26	1
3.1/2	4	.238	3.1/4	11-13	.120/.095	73.1	2.878	81.7	3.217	AB - 83	54-RS	DBM - 26	1
3.1/2	5-6	.220/.203	3.1/4	14-16	.083/.065	74.6	2.937	84.2	3.315	AB - 84	54-RS	DBM - 26	1
3.1/2	7-8	.180/.165	3.3/4	2	.084	76.2	3.000	85.5	3.366	AB - 85	55-RS	DBM - 27	1
3.1/2	9-11	.148/.120	3.3/4	3	.259	77.8	3.063	87.4	3.441	AB - 86	56-RS	DBM - 27	1
3.1/2	12-6	.109/.065	3.3/4	4	.238	79.4	3.126	89.0	3.504	AB - 87	57-RS	DBM - 27	1
-	-	-	3.3/4	5-6	.220/.203	81.0	3.189	90.6	3.567	AB - 88	58-RS	DBM - 27	1
4	2	.284	3.3/4	7-8	.180/.165	82.6	3.252	92.2	3.630	AB - 89	59-RS	DBM - 27	1
4	3	.259	3.3/4	9-10	.148/.134	84.2	3.315	93.8	3.693	AB - 90	60-RS	DBM - 27	1
4	4	.238	3.3/4	11-13	.120/.095	85.8	3.378	96.2	3.787	AB - 91	59-RS	DBM - 28	1
4	5-6	.220/.203	3.3/4	14-16	.083/.065	87.4	3.441	97.8	3.850	AB - 92	60-RS	DBM - 28	1
4	7-8	.180/.165	4.1/4	2	.084	89.0	3.504	99.4	3.913	AB - 93	61-RS	DBM - 28	1
4	9-11	.148/.120	4.1/4	3	.284	90.4	3.559	100.8	3.969	AB - 94	62-RS	DBM - 28	1
4	12-16	.109/.065	4.1/4	4	.238	92.0	3.622	102.4	4.031	AB - 95	63-RS	DBM - 28	1
-	-	-	4.1/4	5-6	.220/.203	93.4	3.677	103.8	4.087	AB - 96	62-RS	DBM - 29	1
4.1/2	2	.284	4.1/4	7-8	.180/.165	95.0	3.740	105.4	4.150	AB - 97	63-RS	DBM - 29	1
4.1/2	3	.259	4.1/4	9-10	.148/.120	96.6	3.803	107.0	4.213	AB - 98	64-RS	DBM - 29	1
4.1/2	4-5	.238/.220	4.1/4	11-13	.120/.095	98.2	3.866	108.6	4.276	AB - 99	63-RS	DBM - 30	1
4.1/2	6-7	.203/.180	-	-	-	101.2	3.984	110.0	4.331	AB - 100	64-RS	DBM - 30	1
4.1/2	8-9	.165/.148	-	-	-	102.8	4.047	111.6	4.394	AB - 101	65-RS	DBM - 30	1
4.1/2	10-12	.134/.109	-	-	-	104.4	4.110	113.2	4.457	AB - 102	66-RS	DBM - 30	1

TUBE EXPANDER ABF3 SERIES



Features

- Similar to AF3 Series Expander.
- Bearing reduces the frictional force & increases the life of tool
- Commonly used tool through-out the world for parallel expansion of tubes..

Tube Sheet Thickness	Plain Roller Length (A)	Plain Roller Effective Length (B)	When ordering Expander add Prefix
1/2" - 7/8" (12.7 - 22.22mm)	1.1/8" (28.5 mm)	7/8" (22.2 mm)	ABF3 - 31/2
3/4" - 1.1/8" (19.05 - 28.58mm)	1.3/8" (39.5 mm)	1.1/8" (28.5 mm)	ABF3 - 31/3
1.1/8" - 1.5/8" (28.58 - 41.30mm)	1.7/8" (47.5 mm)	1.5/8" (41.0 mm)	ABF3 - 31/4
1.5/8" - 2.1/8" (41.30 - 54.0mm)	2.3/8" (60.0 mm)	2.1/8" (54.0 mm)	ABF3 - 31/5
2.1/8" - 2.5/8" (54.0 - 66.70mm)	2.7/8" (73.0 mm)	2.5/8" (66.5 mm)	ABF3 - 31/6

TUBE EXPANDERS SPECIFICATION

Tube O.D inch	TUBE THICKNESS		Tube O.D inch	TUBE THICKNESS		Min. I.D.		Max. Exp.		Expander Model	Roll Model	Mandrel Model	Mandrel Square Drive
	BWG	inch		BWG	inch	mm	inch	mm	inch				
7/8	15	.072	1	10	.134	18.1	0.713	20.4	0.803	ABF3 - 31	15-F3S	DBM - 11	3/8
7/8	16	.065	-	-	-	18.4	0.724	20.7	0.815	ABF3 - 32	15-F3S	DBM - 12	3/8
7/8	17	.058	1	11	.120	18.8	0.740	21.1	0.831	ABF3 - 33	16-F3S	DBM - 12	3/8
7/8	18	.049	1	12	.109	19.4	0.764	21.6	0.850	ABF3 - 34	20-F3S	DBM - 12	3/8
7/8	19-20	.042/.035	1.1/8	8	.165	19.7	0.776	22.3	0.878	ABF3 - 35	17-F3S	DBM - 13	3/8
1	13	.095	-	-	-	20.1	0.791	22.4	0.882	ABF3 - 36	18-F3S	DBM - 12	3/8
1	14	.083	1.1/8	9	.148	20.6	0.811	23.1	0.909	ABF3 - 37	18-F3S	DBM - 13	3/8
1	15-16	.072/.065	1.1/8	10	.134	21.3	0.839	23.8	0.937	ABF3 - 38	19-F3S	DBM - 13	3/8
1	17-18	.058/.048	1.1/8	11	.120	22.0	0.866	24.5	0.965	ABF3 - 39	21-F3S	DBM - 13	3/8
1	19-20	.042/.035	1.1/8	12	.109	22.4	0.882	25.0	0.984	ABF3 - 40	21-F3S	DBM - 14	3/8
1.1/4	8	.165	1.1/8	13	.095	23.3	0.917	25.9	1.020	ABF3 - 41	22-F3S	DBM - 14	3/8
1.1/4	9	.148	1.1/8	14	.083	23.8	0.937	26.5	1.043	ABF3 - 42	23-F3S	DBM - 15	1/2
1.1/4	10	.134	1.1/8	15-16	.072/.065	24.4	0.961	27.2	1.071	ABF3 - 43	24-F3S	DBM - 15	1/2
1.1/4	11	.120	-	-	-	25.2	0.992	28.0	1.102	ABF3 - 44	26-F3S	DBM - 16	1/2
1.1/4	12	.109	-	-	-	25.7	1.012	28.5	1.122	ABF3 - 45	27-F3S	DBM - 16	1/2
1.1/4	13	.095	1.3/8	8	.165	26.1	1.028	28.8	1.134	ABF3 - 46	31-F3S	DBM - 16	1/2
1.1/4	14	.083	-	-	-	26.4	1.039	29.2	1.150	ABF3 - 47	28-F3S	DBM - 17	1/2
1.1/4	15	.072	1.3/8	9	.148	26.9	1.059	29.7	1.169	ABF3 - 48	29-F3S	DBM - 17	1/2
1.1/4	16	.065	1.3/8	10	.134	27.6	1.087	30.4	1.197	ABF3 - 49	30-F3S	DBM - 17	1/2
1.1/2	7	.180	1.3/8	11	.120	28.3	1.114	31.2	1.228	ABF3 - 50	30-F3S	DBM - 18	1/2
1.1/2	8	.165	1.3/8	12	.109	28.8	1.134	31.7	1.248	ABF3 - 51	32-F3S	DBM - 18	1/2
1.1/2	9	.148	1.3/8	13-14	.095/.083	29.5	1.161	33.4	1.315	ABF3 - 52	28-F3S	DBM - 20	1/2
1.1/2	10	.134	1.3/8	15-16	.072/.065	30.0	1.181	34.1	1.343	ABF3 - 53	29-F3S	DBM - 20	1/2
1.1/2	11-12	.120/.109	-	-	-	30.6	1.205	34.8	1.370	ABF3 - 54	30-F3S	DBM - 20	1/2
1.1/2	13	.095	1.3/4	5	.220	31.4	1.236	35.6	1.402	ABF3 - 55	33-F3S	DBM - 20	1/2
1.1/2	14-15	.083/.072	1.3/4	6	.203	32.6	1.283	36.8	1.449	ABF3 - 56	32-F3S	DBM - 21	1/2
-	-	-	1.3/4	7	.180	33.4	1.315	38.1	1.500	ABF3 - 57	36-F3S	DBM - 21	1/2
-	-	-	1.3/4	8	.165	34.2	1.346	38.7	1.524	ABF3 - 58	37-F3S	DBM - 21	1/2
2	3	.259	1.3/4	9-10	.148/.134	35.0	1.378	40.6	1.598	ABF3 - 59	33-F3S	DBM - 22	3/4
2	4	.238	1.3/4	11-12	.120/.109	36.6	1.441	42.2	1.661	ABF3 - 60	37-F3S	DBM - 22	3/4
2	5-6	.220/.203	1.3/4	13-14	.095/.083	38.2	1.504	43.8	1.724	ABF3 - 61	38-F3S	DBM - 22	3/4
2	7-8	.180/.165	1.3/4	15-16	.072/.065	39.8	1.567	45.4	1.787	ABF3 - 62	39-F3S	DBM - 22	3/4
2	9-10	.148/.134	2.1/4	3	.259	41.4	1.630	47.0	1.850	ABF3 - 63	40-F3S	DBM - 22	3/4
2	11-13	.120/.095	2.1/4	4	.238	42.9	1.689	49.5	1.949	ABF3 - 64	40-F3S	DBM - 23	3/4
2	14-16	.083/.065	2.1/4	6-7	.203/.180	44.5	1.752	51.1	2.012	ABF3 - 65	41-F3S	DBM - 23	3/4
2	17-18	.058/.049	2.1/4	8-9	.165/.148	46.1	1.815	52.7	2.075	ABF3 - 66	42-F3S	DBM - 23	3/4

TUBE EXPANDER ABF3 SERIES



Features

- Similar to AF3 Series Expander.
- Bearing reduces the frictional force & increases the life of tool
- Commonly used tool through-out the world for parallel expansion of tubes..

Tube Sheet Thickness	Plain Roller Length (A)	Plain Roller Effective Length (B)	When ordering Expander add Prefix
1/2" - 7/8" (12.7 - 22.22mm)	1.1/8" (28.5 mm)	7/8" (22.2 mm)	ABF3 - 67/2
3/4" - 1.1/8" (19.05 - 28.58mm)	1.3/8" (39.5 mm)	1.1/8" (28.5 mm)	ABF3 - 67/3
1.1/8" - 1.5/8" (28.58 - 41.30mm)	1.7/8" (47.5 mm)	1.5/8" (41.0 mm)	ABF3 - 67/4
1.5/8" - 2.1/8" (41.30 - 54.0mm)	2.3/8" (60.0 mm)	2.1/8" (54.0 mm)	ABF3 - 67/5
2.1/8" - 2.5/8" (54.0 - 66.70mm)	2.7/8" (73.0 mm)	2.5/8" (66.5 mm)	ABF3 - 67/6

TUBE EXPANDERS SPECIFICATION

Tube O.D inch	TUBE THICKNESS		Tube O.D inch	TUBE THICKNESS		Min. I.D.		Max. Exp.		Expander Model	Roll Model	Mandrel Model	Mandrel Square Drive
	BWG	inch		BWG	inch	mm	inch	mm	inch				
2.1/2	3	.259	2.1/4	10-11	.134/.120	47.7	1.878	54.3	2.138	ABF3 - 67	43-F3S	DBM - 23	3/4
2.1/2	4-5	.238/.220	2.1/4	12-13	.109/.095	49.3	1.941	55.9	2.201	ABF3 - 68	44-F3S	DBM - 23	3/4
2.1/2	6-7	.203/.180	2.1/4	14-16	.083/.065	50.8	2.000	57.8	2.276	ABF3 - 69	43-F3S	DBM - 24	3/4
2.1/2	8-9	.165/.148	2.3/4	3	.259	52.4	2.063	59.4	2.339	ABF3 - 70	44-F3S	DBM - 24	3/4
2.1/2	10-11	.134/.120	2.3/4	4	.238	54.0	2.126	61.0	2.402	ABF3 - 71	45-F3S	DBM - 24	3/4
2.1/2	12-14	.109/.083	2.3/4	5-6	.220/.203	55.6	2.189	64.0	2.520	ABF3 - 72	47-F3S	DBM - 24	3/4
2.1/2	15-16	.072/.065	2.3/4	7-8	.180/.165	57.2	2.252	65.6	2.583	ABF3 - 73	46-F3S	DBM - 25	1
3	3	.259	2.3/4	9-10	.148/.134	58.6	2.307	67.0	2.638	ABF3 - 74	47-F3S	DBM - 25	1
3	4	.238	2.3/4	11-13	.120/.095	60.4	2.378	68.8	2.709	ABF3 - 75	48-F3S	DBM - 25	1
3	5-6	.220/.203	2.3/4	14-16	.083/.065	62.2	2.449	70.4	2.772	ABF3 - 76	49-F3S	DBM - 25	1
3	7-8	.180/.165	-	-	-	63.6	2.504	72.0	2.835	ABF3 - 77	50-F3S	DBM - 25	1
3	9-10	.148/.134	3.1/4	3	.259	65.0	2.559	73.4	2.890	ABF3 - 78	51-F3S	DBM - 25	1
3	11-13	.120/.095	3.1/4	4	.238	66.6	2.622	75.0	2.953	ABF3 - 79	52-F3S	DBM - 25	1
3	14-16	.083/.065	3.1/4	5-6	.220/.203	68.3	2.689	76.9	3.028	ABF3 - 80	51-F3S	DBM - 26	1
3.1/2	2	.284	3.1/4	7-8	.180/.165	69.9	2.752	78.5	3.091	ABF3 - 81	52-F3S	DBM - 26	1
3.1/2	3	.259	3.1/4	9-10	.148/.134	71.5	2.815	80.1	3.154	ABF3 - 82	53-F3S	DBM - 26	1
3.1/2	4	.238	3.1/4	11-13	.120/.095	73.1	2.878	81.7	3.217	ABF3 - 83	54-F3S	DBM - 26	1
3.1/2	5-6	.220/.203	3.1/4	14-16	.083/.065	74.6	2.937	84.2	3.315	ABF3 - 84	54-F3S	DBM - 26	1
3.1/2	7-8	.180/.165	3.3/4	2	.084	76.2	3.000	85.5	3.366	ABF3 - 85	55-F3S	DBM - 27	1
3.1/2	9-11	.148/.120	3.3/4	3	.259	77.8	3.063	87.4	3.441	ABF3 - 86	56-F3S	DBM - 27	1
3.1/2	12-6	.109/.065	3.3/4	4	.238	79.4	3.126	89.0	3.504	ABF3 - 87	57-F3S	DBM - 27	1
-	-	-	3.3/4	5-6	.220/.203	81.0	3.189	90.6	3.567	ABF3 - 88	58-F3S	DBM - 27	1
4	2	.284	3.3/4	7-8	.180/.165	82.6	3.252	92.2	3.630	ABF3 - 89	59-F3S	DBM - 27	1
4	3	.259	3.3/4	9-10	.148/.134	84.2	3.315	93.8	3.693	ABF3 - 90	60-F3S	DBM - 27	1
4	4	.238	3.3/4	11-13	.120/.095	85.8	3.378	96.2	3.787	ABF3 - 91	59-F3S	DBM - 28	1
4	5-6	.220/.203	3.3/4	14-16	.083/.065	87.4	3.441	97.8	3.850	ABF3 - 92	60-F3S	DBM - 28	1
4	7-8	.180/.165	4.1/4	2	.084	89.0	3.504	99.4	3.913	ABF3 - 93	61-F3S	DBM - 28	1
4	9-11	.148/.120	4.1/4	3	.284	90.4	3.559	100.8	3.969	ABF3 - 94	62-F3S	DBM - 28	1
4	12-16	.109/.065	4.1/4	4	.238	92.0	3.622	102.4	4.031	ABF3 - 95	63-F3S	DBM - 28	1
-	-	-	4.1/4	5-6	.220/.203	93.4	3.677	103.8	4.087	ABF3 - 96	62-F3S	DBM - 29	1
4.1/2	2	.284	4.1/4	7-8	.180/.165	95.0	3.740	105.4	4.150	ABF3 - 97	63-F3S	DBM - 29	1
4.1/2	3	.259	4.1/4	9-10	.148/.120	96.6	3.803	107.0	4.213	ABF3 - 98	64-F3S	DBM - 29	1
4.1/2	4-5	.238/.220	4.1/4	11-13	.120/.095	98.2	3.866	108.6	4.276	ABF3 - 99	63-F3S	DBM - 30	1
4.1/2	6-7	.203/.180	-	-	-	101.2	3.984	110.0	4.331	ABF3 - 100	64-F3S	DBM - 30	1
4.1/2	8-9	.165/.148	-	-	-	102.8	4.047	111.6	4.394	ABF3 - 101	65-F3S	DBM - 30	1
4.1/2	10-12	.134/.109	-	-	-	104.4	4.110	113.2	4.457	ABF3 - 102	66-F3S	DBM - 30	1