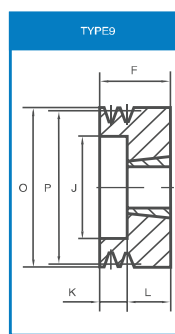
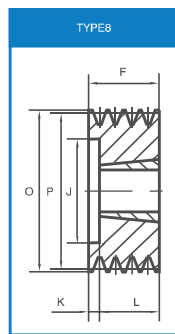
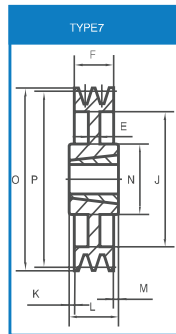
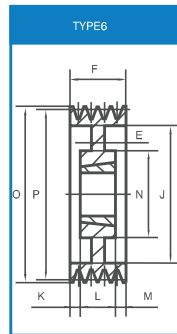
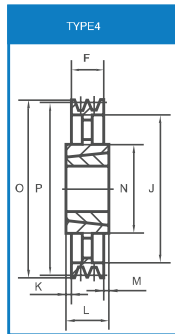
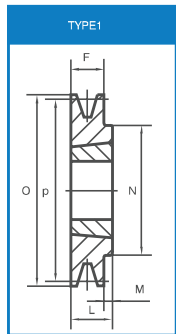


Taper Bore SPA

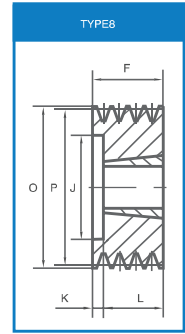
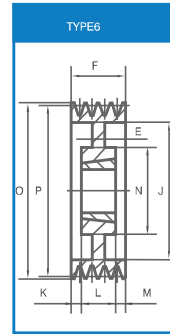
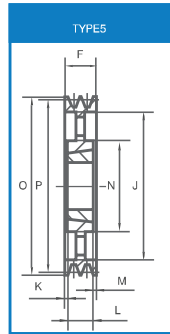
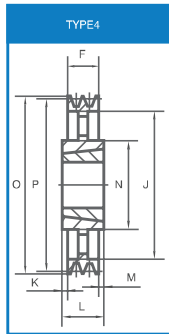
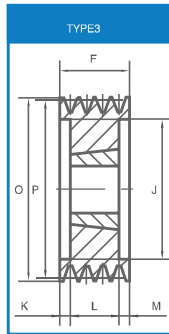
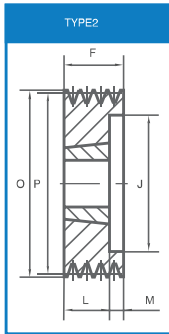
SPA/01	GROOVES	P.D	O.D	TYPE	BUSH	MAX BORE	E	F	J	K	L	M	N
SPA 63-01	1	63.0	68.5	9	1108	28	—	20	—	18	22	—	—
SPA 67-01	1	67.0	72.5	1	1108	28	—	20	—	—	22	2	62
SPA 71-01	1	71.0	76.5	1	1108	28	—	20	—	—	22	2	62
SPA 75-01	1	75.0	80.5	1	1108	28	—	20	—	—	22	2	62
SPA 80-01	1	80.0	85.5	1	1210	32	—	20	—	—	25	5	75
SPA 85-01	1	85.0	90.5	1	1210	32	—	20	—	—	25	5	75
SPA 90-01	1	90.0	95.5	1	1210	32	—	20	—	—	25	5	75
SPA 95-01	1	95.0	100.5	1	1210	32	—	20	—	—	25	5	75
SPA100-01	1	100.0	105.5	1	1610	42	—	20	—	—	25	5	75
SPA106-01	1	106.0	111.5	1	1610	42	—	20	—	—	25	5	75
SPA112-01	1	112.0	117.5	1	1610	42	—	20	—	—	25	5	75
SPA118-01	1	118.0	123.5	1	1610	42	—	20	—	—	25	5	75
SPA125-01	1	125.0	130.5	1	1610	42	—	20	—	—	25	5	75
SPA132-01	1	132.0	137.5	1	1610	42	—	20	—	—	25	5	75
SPA140-01	1	140.0	145.5	1	1610	42	—	20	—	—	25	5	75
SPA150-01	1	150.0	155.5	1	1610	42	—	20	—	—	25	5	75
SPA160-01	1	160.0	165.5	1	1610	42	—	20	—	—	25	5	75
SPA170-01	1	170.0	175.5	7	1610	42	10	20	137	—	25	5	75
SPA180-01	1	180.0	185.5	7	1610	42	10	20	147	—	25	5	75
SPA190-01	1	190.0	195.5	7	1610	42	10	20	157	—	25	5	75
SPA200-01	1	200.0	205.5	7	2012	50	10	20	167	—	32	12	95
SPA212-01	1	212.0	217.5	7	2012	50	10	20	177	—	32	12	100
SPA224-01	1	224.0	229.5	7	2012	50	10	20	190	—	32	12	95
SPA250-01	1	250.0	255.5	4	2012	50	—	20	216	—	32	12	95
SPA280-01	1	280.0	285.5	4	2012	50	—	20	246	—	32	12	95
SPA315-01	1	315.0	320.5	4	2012	50	—	20	281	—	32	12	95
SPA355-01	1	355.0	360.5	4	2012	50	—	20	321	—	32	12	95
SPA400-01	1	400.0	405.5	4	2012	50	—	20	366	—	32	12	95
SPA450-01	1	450.0	455.5	4	2012	50	—	20	416	—	32	12	95
SPA500-01	1	500.0	505.5	4	2517	60	—	20	466	—	45	25	120
SPA630-01	1	630.0	635.5	4	2517	60	—	20	596	—	45	25	120



SPA/02	GROOVES	P.D	O.D	TYPE	BUSH	MAX BORE	E	F	J	K	L	M	N
SPA 63-02	2	63.0	68.5	9	1108	28	—	35	36	33	22	—	—
SPA 67-02	2	67.0	72.5	8	1108	28	—	35	37	13	22	—	—
SPA 71-02	2	71.0	76.5	8	1108	28	—	35	40	13	22	—	—
SPA 75-02	2	75.0	80.5	8	1108	28	—	35	44	10	22	—	—
SPA 80-02	2	80.0	85.5	8	1210	32	—	35	47	10	25	—	—
SPA 85-02	2	85.0	90.5	8	1210	32	—	35	52	10	25	—	—
SPA 90-02	2	90.0	95.5	8	1610	42	—	35	60	10	25	—	—
SPA 95-02	2	95.0	100.5	8	1610	42	—	35	65	10	25	—	—
SPA100-02	2	100.0	105.5	8	1610	42	—	35	70	10	25	—	—
SPA106-02	2	106.0	111.5	8	1610	42	—	35	76	10	25	—	—
SPA112-02	2	112.0	117.5	8	1610	42	—	35	82	10	25	—	—
SPA118-02	2	118.0	123.5	8	1610	42	—	35	88	10	25	—	—
SPA125-02	2	125.0	130.5	8	1610	42	—	35	95	10	25	—	—
SPA132-02	2	132.0	137.5	8	2012	50	—	35	102	3	32	—	—
SPA140-02	2	140.0	145.5	8	2012	50	—	35	110	3	32	—	—
SPA150-02	2	150.0	155.5	8	2012	50	—	35	120	3	32	—	—
SPA160-02	2	160.0	165.5	8	2012	50	—	35	130	3	32	—	—
SPA170-02	2	170.0	175.5	7	2012	50	12	35	137	3	32	—	95
SPA180-02	2	180.0	185.5	6	2012	50	12	35	147	1.5	32	1.5	95
SPA190-02	2	190.0	195.5	6	2012	50	12	35	157	1.5	32	1.5	95
SPA200-02	2	200.0	205.5	7	2517	60	12	35	167	5	45	5	120
SPA212-02	2	212.0	217.5	7	2517	60	15	35	177	5	45	5	120
SPA224-02	2	224.0	229.5	7	2517	60	12	35	190	5	45	5	120
SPA250-02	2	250.0	255.5	4	2517	60	—	35	216	5	45	5	120
SPA280-02	2	280.0	285.5	4	2517	60	—	35	246	—	45	10	120
SPA315-02	2	315.0	320.5	4	2517	60	—	35	281	—	45	10	120
SPA355-02	2	355.0	360.5	4	2517	60	—	35	321	—	45	10	120
SPA400-02	2	400.0	405.5	4	2517	60	—	35	366	—	45	10	120
SPA450-02	2	450.0	455.5	4	2517	60	—	35	416	—	45	10	120
SPA500-02	2	500.0	505.5	4	2517	60	—	35	466	—	45	10	120
SPA560-02	2	560.0	565.5	4	3020	75	—	35	526	—	51	16	150
SPA630-02	2	630.0	635.5	4	3020	75	—	35	596	—	51	16	150

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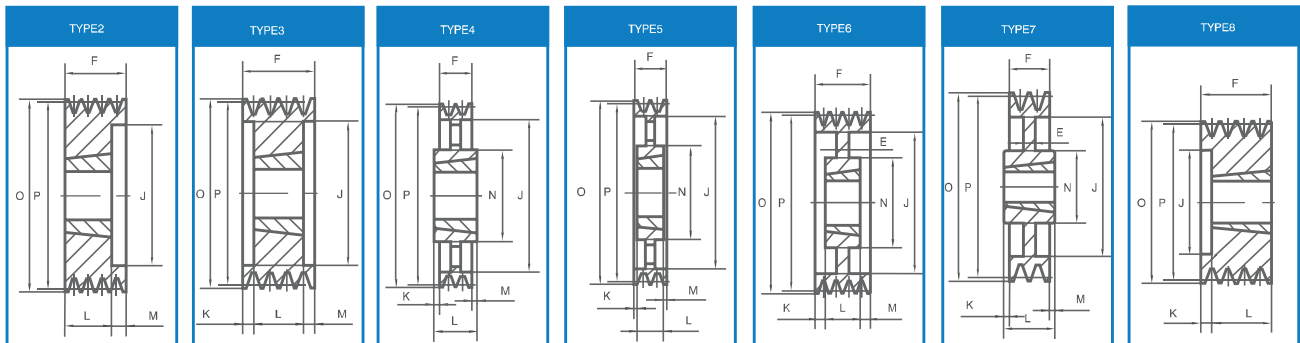
SPA/03	GROOVES	PD	O.D	TYPE	BUSH	MAX BORE	E	F	J	K	L	M	N
SPA 71-03	3	71.0	76.5	8	1108	28	—	50	40	28	22	—	—
SPA 75-03	3	75.0	80.5	8	1210	32	—	50	44	25	25	—	—
SPA 80-03	3	80.0	85.5	8	1210	32	—	50	47	25	25	—	—
SPA 85-03	3	85.0	90.5	8	1210	32	—	50	52	25	25	—	—
SPA 90-03	3	90.0	95.5	8	1610	42	—	50	60	25	25	—	—
SPA 95-03	3	95.0	100.5	8	1610	42	—	50	65	25	25	—	—
SPA100-03	3	100.0	105.5	8	1610	42	—	50	70	—	25	25	—
SPA106-03	3	106.0	111.5	8	1610	42	—	50	76	—	25	25	—
SPA112-03	3	112.0	117.5	8	2012	50	—	50	79	18	32	—	—
SPA118-03	3	118.0	123.5	2	2012	50	—	50	85	—	32	18	—
SPA125-03	3	125.0	130.5	2	2012	50	—	50	92	—	32	18	—
SPA132-03	3	132.0	137.5	2	2012	50	—	50	99	—	32	18	—
SPA140-03	3	140.0	145.5	8	2517	60	—	50	107	5	45	—	—
SPA150-03	3	150.0	155.5	8	2517	60	—	50	117	5	45	—	—
SPA160-03	3	160.0	165.5	8	2517	60	—	50	127	5	45	—	—
SPA170-03	3	170.0	175.5	8	2517	60	—	50	137	5	45	—	—
SPA180-03	3	180.0	185.5	8	2517	60	—	50	147	5	45	—	—
SPA190-03	3	190.0	195.5	6	2517	60	15	50	157	5	45	—	120
SPA200-03	3	200.0	205.5	6	2517	60	15	50	167	2.5	45	2.5	120
SPA212-03	3	212.0	217.5	6	2517	60	15	50	178	2.5	45	2.5	120
SPA224-03	3	224.0	229.5	6	2517	60	15	50	190	2.5	45	2.5	120
SPA250-03	3	250.0	255.5	4	2517	60	—	50	216	2.5	45	2.5	120
SPA280-03	3	280.0	285.5	4	2517	60	—	50	246	2.5	45	2.5	120
SPA315-03	3	315.0	320.5	4	3020	75	—	50	281	0.5	51	0.5	150
SPA355-03	3	355.0	360.5	4	3020	75	—	50	321	0.5	51	0.5	150
SPA400-03	3	400.0	405.5	4	3020	75	—	50	366	0.5	51	0.5	150
SPA450-03	3	450.0	455.5	4	3020	75	—	50	416	0.5	51	0.5	150
SPA500-03	3	500.0	505.5	4	3020	75	—	50	466	0.5	51	0.5	150
SPA560-03	3	560.0	565.5	4	3020	75	—	50	526	0.5	51	0.5	150
SPA630-03	3	630.0	635.5	4	3020	75	—	50	596	0.5	51	0.5	150
SPA800-03	3	800.0	805.5	4	3535	90	—	50	766	19.5	89	19.5	170
SPA1000-03	3	1000.0	1005.5	4	3535	90	—	50	966	19.5	89	19.5	170



SPA/04	GROOVES	PD	O.D	TYPE	BUSH	MAX BORE	E	F	J	K	L	M	N
SPA 90-04	4	90.0	95.5	3	1615	42	—	65	59	13.5	38	13.5	—
SPA 95-04	4	95.0	100.5	3	1615	42	—	65	64	13.5	38	13.5	—
SPA100-04	4	100.0	105.5	2	1615	42	—	65	69	—	38	27	—
SPA106-04	4	106.0	111.5	8	2012	50	—	65	73	33	32	—	—
SPA112-04	4	112.0	117.5	8	2012	50	—	65	79	33	32	—	—
SPA118-04	4	118.0	123.5	2	2012	50	—	65	85	—	32	33	—
SPA125-04	4	125.0	130.5	2	2012	50	—	65	92	—	32	33	—
SPA132-04	4	132.0	137.5	2	2517	60	—	65	99	—	45	20	—
SPA140-04	4	140.0	145.5	2	2517	60	—	65	107	—	45	20	—
SPA150-04	4	150.0	155.5	2	2517	60	—	65	117	—	45	20	—
SPA160-04	4	160.0	165.5	2	2517	60	—	65	127	—	45	20	—
SPA170-04	4	170.0	175.5	2	2517	60	—	65	137	—	45	20	—
SPA180-04	4	180.0	185.5	2	2517	60	—	65	147	—	45	20	—
SPA190-04	4	190.0	195.5	2	2517	60	—	65	157	—	45	20	—
SPA200-04	4	200.0	205.5	2	3020	75	—	65	167	—	51	14	—
SPA212-04	4	212.0	217.5	2	3020	75	18	65	178	—	51	14	150
SPA224-04	4	224.0	229.5	6	3020	75	18	65	190	—	51	14	150
SPA250-04	4	250.0	255.5	6	3020	75	18	65	216	7	51	7	150
SPA280-04	4	280.0	285.5	6	3020	75	18	65	246	7	51	7	150
SPA315-04	4	315.0	320.5	6	3020	75	18	65	281	7	51	7	150
SPA355-04	4	355.0	360.5	5	3020	75	—	65	321	7	51	7	150
SPA400-04	4	400.0	405.5	5	3020	75	—	65	366	7	51	7	150
SPA450-04	4	450.0	455.5	5	3020	75	—	65	416	7	51	7	150
SPA500-04	4	500.0	505.5	5	3020	75	—	65	466	7	51	7	150
SPA560-04	4	560.0	565.5	4	3535	90	—	65	526	12	89	12	170
SPA630-04	4	630.0	635.5	4	3535	90	—	65	596	12	89	12	170
SPA800-04	4	800.0	805.5	4	3535	90	—	65	766	12	89	12	170
SPA1000-04	4	1000.0	1005.5	4	4040	100	—	65	966	18.5	102	18.5	200

Taper Bore SPA

SPA/05	GROOVES	P.D	O.D	TYPE	BUSH	MAX BORE	E	F	J	K	L	M	N
SPA100-05	5	100.0	105.5	2	1615	42	—	80	69	—	38	42	—
SPA106-05	5	106.0	111.5	8	2012	50	—	80	72	48	32	—	—
SPA112-05	5	112.0	117.5	8	2012	50	—	80	78	48	32	—	—
SPA118-05	5	118.0	123.5	2	2012	50	—	80	84	—	32	48	—
SPA125-05	5	125.0	130.5	3	2012	50	—	80	91	24	32	24	—
SPA132-05	5	132.0	137.5	3	2517	60	—	80	98	17.5	45	17.5	—
SPA140-05	5	140.0	145.5	3	2517	60	—	80	106	17.5	45	17.5	—
SPA150-05	5	150.0	155.5	3	2517	60	—	80	116	17.5	45	17.5	—
SPA160-05	5	160.0	165.5	3	2517	60	—	80	126	17.5	45	17.5	—
SPA170-05	5	170.0	175.5	3	2517	75	—	80	136	17.5	45	17.5	—
SPA180-05	5	180.0	185.5	3	3020	75	—	80	146	14.5	51	14.5	—
SPA190-05	5	190.0	195.5	3	3020	75	—	80	156	14.5	51	14.5	—
SPA200-05	5	200.0	205.5	3	3020	75	—	80	166	14.5	51	14.5	—
SPA212-05	5	212.0	217.5	2	3020	75	—	80	178	—	51	29	—
SPA224-05	5	224.0	229.5	6	3020	75	20	80	190	—	51	29	150
SPA250-05	5	250.0	255.5	6	3020	75	20	80	216	14.5	51	14.5	150
SPA280-05	5	280.0	285.5	7	3535	90	20	80	246	4.5	89	4.5	170
SPA315-05	5	315.0	320.5	4	3535	90	20	80	281	4.5	89	4.5	170
SPA355-05	5	355.0	360.5	4	3535	90	—	80	321	4.5	89	4.5	170
SPA400-05	5	400.0	405.5	4	3535	90	—	80	366	4.5	89	4.5	170
SPA450-05	5	450.0	455.5	4	3535	90	—	80	416	4.5	89	4.5	170
SPA500-05	5	500.0	505.5	4	3535	90	—	80	466	4.5	89	4.5	170
SPA560-05	5	560.0	565.5	4	3535	90	—	80	526	4.5	89	4.5	170
SPA630-05	5	630.0	635.5	4	3535	90	—	80	596	4.5	89	4.5	170
SPA800-05	5	800.0	805.5	4	4040	100	—	80	766	11	102	11	200
SPA1000-05	5	1000.0	1005.5	4	4545	110	—	80	966	17	114	17	225



SPA/06	GROOVES	P.D	O.D	TYPE	BUSH	MAX BORE	E	F	J	K	L	M	N
SPA100-06	6	100.0	105.5	3	1615	42	—	95	69	28.5	38	28.5	—
SPA106-06	6	106.0	111.5	8	2012	50	—	95	73	63	32	—	—
SPA112-06	6	112.0	117.5	8	2012	50	—	95	79	63	32	—	—
SPA118-06	6	118.0	123.5	8	2012	50	—	95	85	63	32	—	—
SPA125-06	6	125.0	130.5	3	2012	50	—	95	92	31.5	32	31.5	—
SPA132-06	6	132.0	137.5	3	2517	60	—	95	98	25	45	25	—
SPA140-06	6	140.0	145.5	3	2517	60	—	95	106	25	45	25	—
SPA150-06	6	150.0	155.5	3	2517	60	—	95	116	25	45	25	—
SPA160-06	6	160.0	165.5	3	2517	60	—	95	126	25	45	25	—
SPA180-06	6	180.0	185.5	3	3020	75	—	95	146	22	51	22	—
SPA200-06	6	200.0	205.5	3	3020	75	—	95	166	22	51	22	—
SPA224-06	6	224.0	229.5	3	3020	75	—	95	190	22	51	22	—
SPA250-06	6	250.0	255.5	6	3020	75	25	95	216	22	51	22	150
SPA280-06	6	280.0	285.5	6	3535	90	25	95	246	3	89	3	170
SPA315-06	6	315.0	320.5	5	3535	90	25	95	281	3	89	3	170
SPA355-06	6	355.0	360.5	5	3535	90	—	95	321	3	89	3	170
SPA400-06	6	400.0	405.5	5	3535	90	—	95	366	3	89	3	170
SPA450-06	6	450.0	455.5	5	3535	90	—	95	416	3	89	3	170
SPA500-06	6	500.0	505.5	5	3535	90	—	95	466	3	89	3	170
SPA560-06	6	560.0	565.5	5	3535	90	—	95	526	3	89	3	170
SPA630-06	6	630.0	635.5	4	4040	100	—	95	596	3.5	102	3.5	200
SPA800-06	6	800.0	805.5	4	4040	100	—	95	766	3.5	102	3.5	200
SPA1000-06	6	1000.0	1005.5	4	4545	110	—	95	966	9.5	114	9.5	225