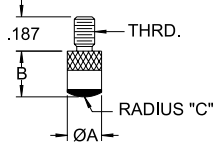

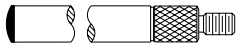








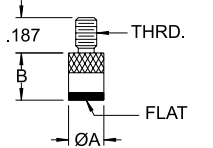




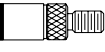
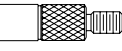




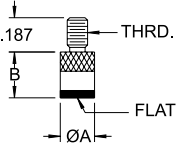
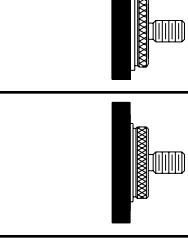

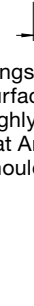

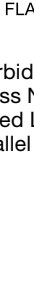
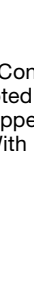

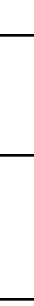
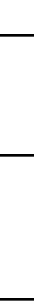
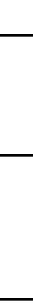


A.G.D. & METRIC	Actual Size	A Diameter	B Length	C Radius	Thread	Part Number	
<p>RADIUS Gauging Surface</p> <p>Contact Surface Highly Polished Tungsten Carbide Unless Noted</p>		.187"	.125"	.187"	4-48	301	
	RUBY INSERT TIP		.187"	.125"	.187"	M2.5 x 0.45	321
						4-48	301R
	RUBY INSERT TIP		.187"	.250"	.187"	4-48	302
						M2.5 x 0.45	322
	RUBY INSERT TIP		.187"	.250"	.187"	4-48	302R
						M2.5 x 0.45	322R
	RUBY INSERT TIP		.187"	.375"	.187"	4-48	303
						M2.5 x 0.45	323
	RUBY INSERT TIP		.187"	.500"	.187"	4-48	304
						M2.5 x 0.45	324
	RUBY INSERT TIP		.187"	.750"	.187"	4-48	308
						M2.5 x 0.45	328
RUBY INSERT TIP		.187"	1.000"	.187"	4-48	309	
					M2.5 x 0.45	329	
RUBY INSERT TIP		.187"	2.000"	.187"	4-48	309-2000	
					M2.5 x 0.45	329-2000	

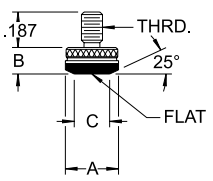
A.G.D. & METRIC RADIUS continued on page 26

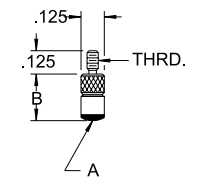
A.G.D. & METRIC continued from page 25		Actual Size	A Diameter	B Length	C Radius	Thread	Part Number
<p>RADIUS Gauging Surface</p>  <p>Contact Surface Highly Polished Tungsten Carbide Unless Noted</p>		.187"	3.000"	.187"	4-48	309-3000	
					M2.5 x 0.45	329-3000	
		.187"	4.000"	.187"	4-48	309-4000	
					M2.5 x 0.45	329-4000	
		.250"	.250"	.250"	4-48	310	
					M2.5 x 0.45	330	
	RUBY INSERT TIP 	.250"	.250"	.250"	4-48	310R	
					M2.5 x 0.45	330R	
		.281"	.140"	.312"	4-48	305	
					M2.5 x 0.45	325	
		.375"	.156"	.437"	4-48	306	
					M2.5 x 0.45	326	
		.500"	.187"	.562"	4-48	311	
					M2.5 x 0.45	331	
	.625"	.187"	.813"	4-48	316		
				M2.5 x 0.45	335		
	.750"	.218"	1.000"	4-48	319		
				M2.5 x 0.45	336		
	1.000"	.218"	1.500"	4-48	320		
				M2.5 x 0.45	339		

A.G.D. & METRIC		Actual Size	A Diameter	B Length	Thread	Part Number
<p>FLAT Gauging Surface</p>  <p>Tungsten Carbide Contact Surface Unless Noted Highly Polished Lapped Flat And Parallel With Shoulder</p>		.062"	.250"	4-48	351	
				M2.5 x 0.45	371	
		.125"	.250"	4-48	352	
				M2.5 x 0.45	372	
		.187"	.125"	4-48	353	
				M2.5 x 0.45	373	
		.187"	.250"	4-48	354	
				M2.5 x 0.45	374	
		.187"	.375"	4-48	355	
				M2.5 x 0.45	375	
	.187"	.500"	4-48	356		
			M2.5 x 0.45	376		

A.G.D. & METRIC FLAT continued on page 27

A.G.D. & METRIC continued from page 26	Actual Size	A Diameter	B Length	Thread	Part Number
<p>FLAT Gauging Surface</p>  <p>Tungsten Carbide Contact Surface Unless Noted Highly Polished Lapped Flat And Parallel With Shoulder</p>		.187"	.750"	4-48	359
				M2.5 x 0.45	379
		.187"	1.000"	4-48	360
				M2.5 x 0.45	380
		.187"	2.000"	4-48	360-2000
				M2.5 x 0.45	380-2000
		.187"	3.000"	4-48	360-3000
				M2.5 x 0.45	380-3000
		.187"	4.000"	4-48	360-4000
				M2.5 x 0.45	380-4000
		.250"	.250"	4-48	361
				M2.5 x 0.45	381
		.281"	.140"	4-48	357
				M2.5 x 0.45	377
		.375"	.156"	4-48	358
				M2.5 x 0.45	378
		.500"	.187"	4-48	317
				M2.5 x 0.45	337
		.625"	.187"	4-48	365
				M2.5 x 0.45	395
	.750"	.218"	4-48	366	
			M2.5 x 0.45	396	
	1.000"	.218"	4-48	367	
			M2.5 x 0.45	398	

A.G.D. & METRIC	Actual Size	A Diameter	B Length	C Diameter	Thread	Part Number	
<p>FLAT Gauging Surface with Lead Chamfer</p>  <p>Tungsten Carbide Contact Surface Unless Noted Highly Polished Lapped Flat And Parallel With Shoulder</p>		.187"	.125"	.125"	4-48	501	
					M2.5 x 0.45	511	
	RUBY INSERT TIP		.187"	.125"	.125"	4-48	353R
					M2.5 x 0.45	373R	
	RUBY INSERT TIP		.187"	.250"	.125"	4-48	354R
					M2.5 x 0.45	374R	
	RUBY INSERT TIP		.250"	.250"	.177"	4-48	361R
					M2.5 x 0.45	381R	
			.281"	.140"	.187"	4-48	502
					M2.5 x 0.45	512	
			.375"	.156"	.250"	4-48	503
					M2.5 x 0.45	513	
			.500"	.187"	.375"	4-48	504
					M2.5 x 0.45	514	
			.625"	.187"	.500"	4-48	505
					M2.5 x 0.45	515	
		.750"	.218"	.625"	4-48	506	
				M2.5 x 0.45	516		
		1.000"	.218"	.875"	4-48	507	
				M2.5 x 0.45	517		

ANSI Group O	Actual Size	A	B Length	Thread	Part Number
<p>Radius And Flat Gauging Surface</p>  <p>Contact Surface Highly Polished Tungsten Carbide</p>		.125" Radius	.156"	0-80	541
				1-72	552
		.125" Radius	.250"	0-80	542
				1-72	553
		Flat	.156"	0-80	543
				1-72	554
		Flat	.250"	0-80	544
				1-72	555

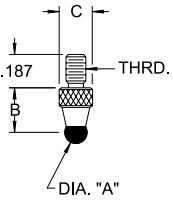
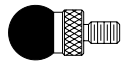
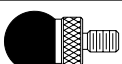



METRIC	Actual Size	A	B Length	Thread	Part Number
<p>Radius And Flat Gauging Surface</p> <p>Ø.170 .187 B A THRD. Contact Surface Highly Polished Tungsten Carbide</p>		.156" Radius	.250"	M2.6 x 0.45	601
		.156" Radius	.250"	M2.5 x 0.45	609
		.156" Radius	.500"	M2.6 x 0.45	602
		.156" Radius	.500"	M2.5 x 0.45	610
		Flat	.250"	M2.6 x 0.45	603
		Flat	.250"	M2.5 x 0.45	611
		Flat	.500"	M2.6 x 0.45	604
		Flat	.500"	M2.5 x 0.45	612

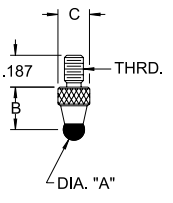
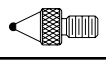
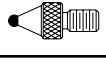
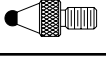
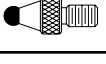
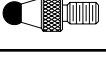
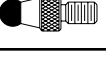
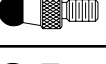
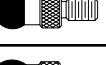
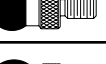

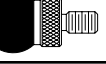
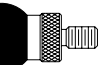


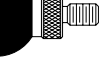
A.G.D. & METRIC	Actual Size	A Length	Thread	Part Number
<p>Flanged Contacts For Checking Grooves And Ledges</p> <p>Ø.187 .187 A .062 .010 45° Ø.375 THRD. Contact Surface Highly Polished Tungsten Carbide</p>		.250"	4-48	340
		.250"	M2.5 x 0.45	345
		.375"	4-48	341
		.375"	M2.5 x 0.45	346
		.500"	4-48	342
		.500"	M2.5 x 0.45	347

A.G.D. & METRIC	Actual Size	A Angle	B Length	Thread	Part Number
<p>Conical Sharp Point Tungsten Carbide Tipped</p> <p>Ø.187 .187 B A THRD.</p>		90°	.312"	4-48	561
		90°	.312"	M2.5 x 0.45	565
		60°	.375"	4-48	562
		60°	.375"	M2.5 x 0.45	566

A.G.D. & METRIC	Actual Size	A Diameter	B Length	C Diameter	Thread	T.C. Ball Part Number	Ruby Ball Part Number
<p>BALL POINTS FRACTIONAL SIZE</p> <p>.187 B C DIA. "A" THRD.</p> <p>Carbide Ball is Grade 25 AFBMA Tolerance ± .0001" Sphericity .000025"</p> <p>Ruby Ball is Grade 10 AFBMA Tolerance ± .0001" Sphericity .000010"</p>		.015"	.250"	.187"	4-48	400-015	400-015R
		.015"	.250"	.187"	M2.5 x 0.45	450-015	450-015R
		.03125"	.250"	.187"	4-48	401	401R
		.03125"	.250"	.187"	M2.5 x 0.45	415	415R
		.04687"	.250"	.187"	4-48	402	402R
		.04687"	.250"	.187"	M2.5 x 0.45	416	416R
		.0625"	.250"	.187"	4-48	403	403R
		.0625"	.250"	.187"	M2.5 x 0.45	417	417R
		.09375"	.250"	.187"	4-48	404	404R
		.09375"	.250"	.187"	M2.5 x 0.45	418	418R
		.125"	.250"	.187"	4-48	405	405R
		.125"	.250"	.187"	M2.5 x 0.45	419	419R
		.15625"	.250"	.187"	4-48	406	406R
		.15625"	.250"	.187"	M2.5 x 0.45	420	420R
		.1875"	.250"	.187"	4-48	407	407R
		.1875"	.250"	.187"	M2.5 x 0.45	421	421R
	.21875"	.250"	.218"	4-48	408	408R	
	.21875"	.250"	.218"	M2.5 x 0.45	422	422R	
	.250"	.250"	.218"	4-48	409	409R	
	.250"	.250"	.218"	M2.5 x 0.45	423	423R	

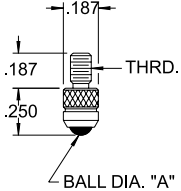





A.G.D. & METRIC FRACTIONAL SIZE continued on page 30

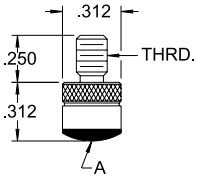
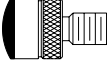
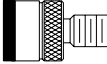
A.G.D. & METRIC continued from page 29	Actual Size	A Diameter	B Length	C Diameter	Thread	T.C. Ball Part Number	Ruby Ball Part Number
<p>BALL POINTS FRACTIONAL SIZE</p>  <p>Carbide Ball is Grade 25 AFBMA Tolerance ± .0001" Sphericity .000025"</p> <p>Ruby Ball is Grade 10 AFBMA Tolerance ± .0001" Sphericity .000010"</p>		.28125"	.250"	.234"	4-48	410	410R
					M2.5 x 0.45	424	424R
		.3125"	.250"	.250"	4-48	411	411R
					M2.5 x 0.45	425	425R
		.375"	.312"	.250"	4-48	412	412R
					M2.5 x 0.45	426	426R
		.437"	.343"	.250"	4-48	413	N/A
					M2.5 x 0.45	427	N/A
		.500"	.375"	.250"	4-48	414	N/A
					M2.5 x 0.45	428	N/A

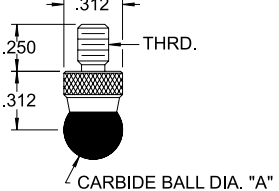
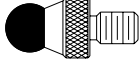
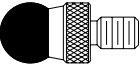
A.G.D. & METRIC	Actual Size	A Diameter	B Length	C Diameter	Thread	T.C. Ball Part Number	Ruby Ball Part Number
<p>BALL POINTS METRIC SIZE</p>  <p>Carbide Ball is Grade 25 AFBMA Tolerance ± .0001" Sphericity .000025"</p> <p>Ruby Ball is Grade 10 AFBMA Tolerance ± .0001" Sphericity .000010"</p>		1mm	.250"	.187"	4-48	400-1	400-1R
					M2.5 x 0.45	450-1	450-1R
		1.5mm	.250"	.187"	4-48	400-1.5	400-1.5R
					M2.5 x 0.45	450-1.5	450-1.5R
		2mm	.250"	.187"	4-48	400-2	400-2R
					M2.5 x 0.45	450-2	450-2R
		2.5mm	.250"	.187"	4-48	400-2.5	400-2.5R
					M2.5 x 0.45	450-2.5	450-2.5R
		3mm	.250"	.187"	4-48	400-3	400-3R
					M2.5 x 0.45	450-3	450-3R
		3.5mm	.250"	.187"	4-48	400-3.5	400-3.5R
					M2.5 x 0.45	450-3.5	450-3.5R
		4mm	.250"	.187"	4-48	400-4	400-4R
					M2.5 x 0.45	450-4	450-4R
		5mm	.250"	.187"	4-48	400-5	400-5R
					M2.5 x 0.45	450-5	450-5R
		6mm	.250"	.218"	4-48	400-6	400-6R
					M2.5 x 0.45	450-6	450-6R
		7mm	.250"	.234"	4-48	400-7	400-7R
					M2.5 x 0.45	450-7	450-7R
	8mm	.250"	.250"	4-48	400-8	400-8R	
				M2.5 x 0.45	450-8	450-8R	
	9mm	.312"	.250"	4-48	400-9	400-9R	
				M2.5 x 0.45	450-9	450-9R	
	10mm	.312"	.250"	4-48	400-10	400-10R	
				M2.5 x 0.45	450-10	450-10R	
	11mm	.343"	.250"	4-48	400-11	N/A	
				M2.5 x 0.45	450-11	N/A	
	12mm	.343"	.250"	4-48	400-12	N/A	
				M2.5 x 0.45	450-12	N/A	

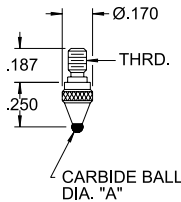




A.G.D. & METRIC	Actual Size	B Length	Thread	Ball Size	T.C Ball Part Number	Ruby Ball Part Number
<p>BALL POINTS EXTENDED TAPER</p> <p>Carbide Ball is Grade 25 AFBMA Tolerance $\pm .0001$" Sphericity .000025"</p> <p>Ruby Ball is Grade 10 AFBMA Tolerance $\pm .0001$" Sphericity .000010"</p>		.500"	4-48	.015" .031" .062"	431-015 431-031 431-062	431-015R 431-031R 431-062R
			M2.5 x 0.45	.015" .031" .062"	436-015 436-031 436-062	436-015R 436-031R 436-062R
		.625"	4-48	.015" .031" .062"	434-015 434-031 434-062	434-015R 434-031R 434-062R
			M2.5 x 0.45	.015" .031" .062"	439-015 439-031 439-062	439-015R 439-031R 439-062R
		.750"	4-48	.015" .031" .062"	432-015 432-031 432-062	432-015R 432-031R 432-062R
			M2.5 x 0.45	.015" .031" .062"	437-015 437-031 437-062	437-015R 437-031R 437-062R
		.750"	4-48	.015"	435	-
			M2.5 x 0.45	.015"	445	-
		1.000"	4-48	.015" .031" .062"	433-015 433-031 433-062	433-015R 433-031R 433-062R
			M2.5 x 0.45	.015" .031" .062"	438-015 438-031 438-062	438-015R 438-031R 438-062R
		1.000"	4-48	.031" .062" .100"	500-031 500-062 500-100	500-031R 500-062R 500-100R
			M2.5 x 0.45	.031" .062" .100"	600-031 600-062 600-100	600-031R 600-062R 600-100R
	1.500"	4-48	.015" .031" .062"	449-015 449-031 449-062	449-015R 449-031R 449-062R	
		M2.5 x 0.45	.015" .031" .062"	444-015 444-031 444-062	444-015R 444-031R 444-062R	

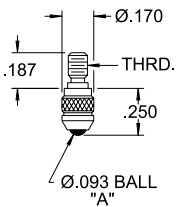


ANSI GROUP O	Actual Size	A Diameter	Thread	Part Number
<p>BALL POINTS</p> <p>CARBIDE BALL DIA. "A"</p>		.0312"	0-80	520
			1-72	531
		.0469"	0-80	521
			1-72	532
		.0625"	0-80	522
			1-72	533
		.0937"	0-80	523
			1-72	534

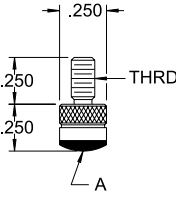


A.G.D. & METRIC	Actual Size	A Diameter	Thread	Part Number
BALL POINTS (LOW PROFILE) 		.062" Carbide	4-48	479
			M2.5 x 0.45	489
		.062" Ruby	4-48	480
			M2.5 x 0.45	490
		.125" Carbide	4-48	481
			M2.5 x 0.45	491
		.125" Ruby	4-48	482
			M2.5 x 0.45	492
		.125" Silicon Nitride	4-48	482SN
			M2.5 x 0.45	492SN

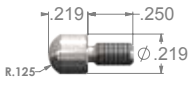
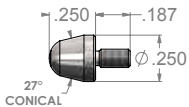
A.G.D.	Actual Size	A	Thread	Part Number
Radius & Flat Gauging Surface  Contact Surface Highly Polished Tungsten Carbide		.312" Radius	8-32	581
			10-32	591
		Flat	8-32	582
			10-32	592

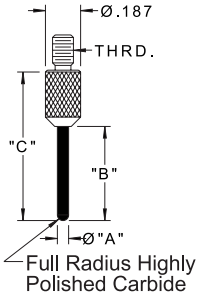





A.G.D.	Actual Size	A Diameter	Thread	Part Number
BALL POINTS 		.250"	10-32	584
			8-32	594
		.3125"	10-32	585
			8-32	595

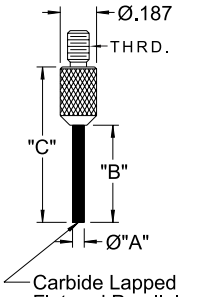






METRIC	Actual Size	A Diameter	Thread	Part Number
BALL POINTS 		.0312"	M2.6 x 0.45	620
			M2.5 x 0.45	631
		.0625"	M2.6 x 0.45	621
			M2.5 x 0.45	632
		.0937"	M2.6 x 0.45	622
			M2.5 x 0.45	633
		.125"	M2.6 x 0.45	623
			M2.5 x 0.45	634

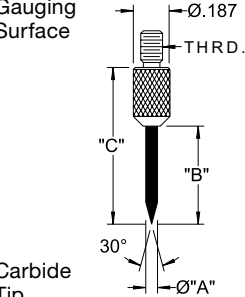

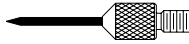



METRIC	Actual Size	A	Thread	Part Number
BALL POINTS (LOW PROFILE) 		Carbide	M2.6 x 0.45	640
			M2.5 x 0.45	645
		Ruby	M2.6 x 0.45	641
			M2.5 x 0.45	646

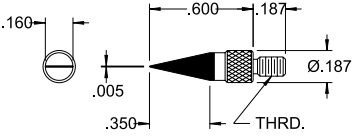
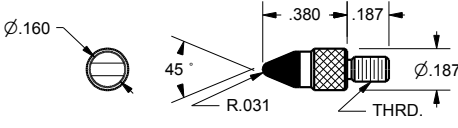
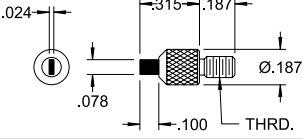
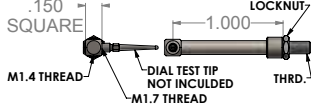
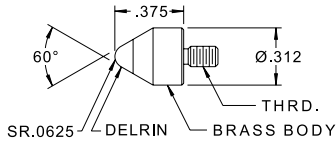
A.G.D.	Actual Size	A	Thread	Part Number
Radius & Flat Gauging Surface Contact Surface Highly Polished Tungsten Carbide Unless Noted		.250" Radius	5-40	660
			4-40	665
		Flat	5-40	661
			4-40	668
	RUBY INSERT TIP 	.250" Radius	5-40	660R
			Flat	5-40

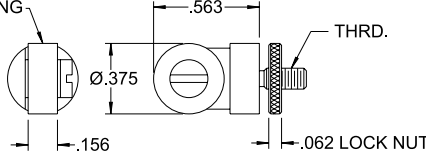
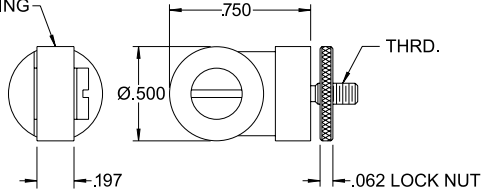
A.G.D. & METRIC DIAMOND TIPPED	Actual Size	A	Thread	Part Number
Radius Gauging Surface Contact Surface Highly Polished Diamond	DIAMOND INSERT TIP 	.125" Radius	5-40	70050103
Radius Gauging Surface Contact Surface Highly Polished Diamond	DIAMOND INSERT TIP 	.105" Radius	M2.5 X 0.45	172246-01

A.G.D. & METRIC	Actual Size	A Diameter	B Length	C Length	Thread	Part Number
RADIUS NEEDLE Gauging Surface 		1.0mm	.120"	.400"	4-48	625
					M2.5 x 0.45	635
		1.0mm	.500"	.780"	4-48	628
					M2.5 x 0.45	638
		1.5mm	.500"	.800"	4-48	525
					M2.5 x 0.45	535
		1.5mm	1.000"	1.300"	4-48	528
					M2.5 x 0.45	538
		2.0mm	1.000"	1.300"	4-48	547
					M2.5 x 0.45	557

A.G.D. & METRIC	Actual Size	A Diameter	B Length	C Length	Thread	Part Number
FLAT NEEDLE Gauging Surface 		.018"	.120"	.400"	4-48	363
					M2.5 x 0.45	383
		1.0mm	.120"	.400"	4-48	364
					M2.5 x 0.45	384
		1.0mm	.500"	.780"	4-48	627
					M2.5 x 0.45	637
		1.5mm	.500"	.800"	4-48	314
					M2.5 x 0.45	334
		1.5mm	1.000"	1.300"	4-48	527
					M2.5 x 0.45	537
	2.0mm	1.000"	1.300"	4-48	546	
				M2.5 x 0.45	556	

A.G.D. & METRIC	Actual Size	A Diameter	B Length	C Length	Thread	Part Number
CONICAL SHARP POINT NEEDLE Gauging Surface 		1.0mm	.120"	.400"	4-48	626
					M2.5 x 0.45	636
		1.0mm	.500"	.780"	4-48	629
					M2.5 x 0.45	639
		1.5mm	.500"	.800"	4-48	526
					M2.5 x 0.45	536
		1.5mm	1.000"	1.300"	4-48	529
					M2.5 x 0.45	539
		2.0mm	1.000"	1.300"	4-48	548
					M2.5 x 0.45	558

A.G.D. & METRIC	Thread	Part Number
FLAT END CHISEL Carbide Tipped 	4-48	318
	M2.5 x 0.45	338
RADIUS END CHISEL Carbide Tipped 	4-48	577
	M2.5 x 0.45	587
FLAT END BLADE Carbide Tipped 	4-48	350
	M2.5 x 0.45	370
RIGHT ANGLE STYLUS CENTER For use with tips on pages 2-18 	4-48	549
	M2.5 x 0.45	559
	4-48	313
	M2.5 x 0.45	333

ROLLER CONTACT		
A.G.D. & METRIC	Thread	Part Number
PRECISION HIGH SPEED BEARING 	4-48	670-375
	M2.5 x 0.45	671-375
PRECISION HIGH SPEED BEARING 	4-48	670-500
	M2.5 x 0.45	671-500

EXTENSIONS					
A.G.D. & METRIC	Actual Size	B Length	Female Thread	Male Thread	Part Number
		.250"	4-48	4-48	307-E250
			M2.5 x 0.45	M2.5 x 0.45	327-E250
		.375"	4-48	4-48	307-E375
			M2.5 x 0.45	M2.5 x 0.45	327-E375
		.500"	4-48	4-48	307-E500
			M2.5 x 0.45	M2.5 x 0.45	327-E500
		.750"	4-48	4-48	307-E750
			M2.5 x 0.45	M2.5 x 0.45	327-E750
		1.000"	4-48	4-48	307-E1000
			M2.5 x 0.45	M2.5 x 0.45	327-E1000
		2.000"	4-48	4-48	307-E2000
			M2.5 x 0.45	M2.5 x 0.45	327-E2000
		3.000"	4-48	4-48	307-E3000
			M2.5 x 0.45	M2.5 x 0.45	327-E3000
		4.000"	4-48	4-48	307-E4000
			M2.5 x 0.45	M2.5 x 0.45	327-E4000
		6.000"	4-48	4-48	307-E6000
			M2.5 x 0.45	M2.5 x 0.45	327-E6000

ADAPTORS					
A.G.D. & METRIC	Actual Size	B Length	Female Thread	Male Thread	Part Number
		.375"	M2.5 x 0.45	4-48	343-E375
			4-48	M2.5 x 0.45	344-E375
		.250"	M1.4 x 0.3	4-48	349-E250
				M2.5 x 0.45	369-E250
		.250"	M1.7 x 0.35	4-48	348-E250
				M2.5 x 0.45	368-E250
		.250"	M2.0 x 0.4	4-48	429-E250
				M2.5 x 0.45	430-E250