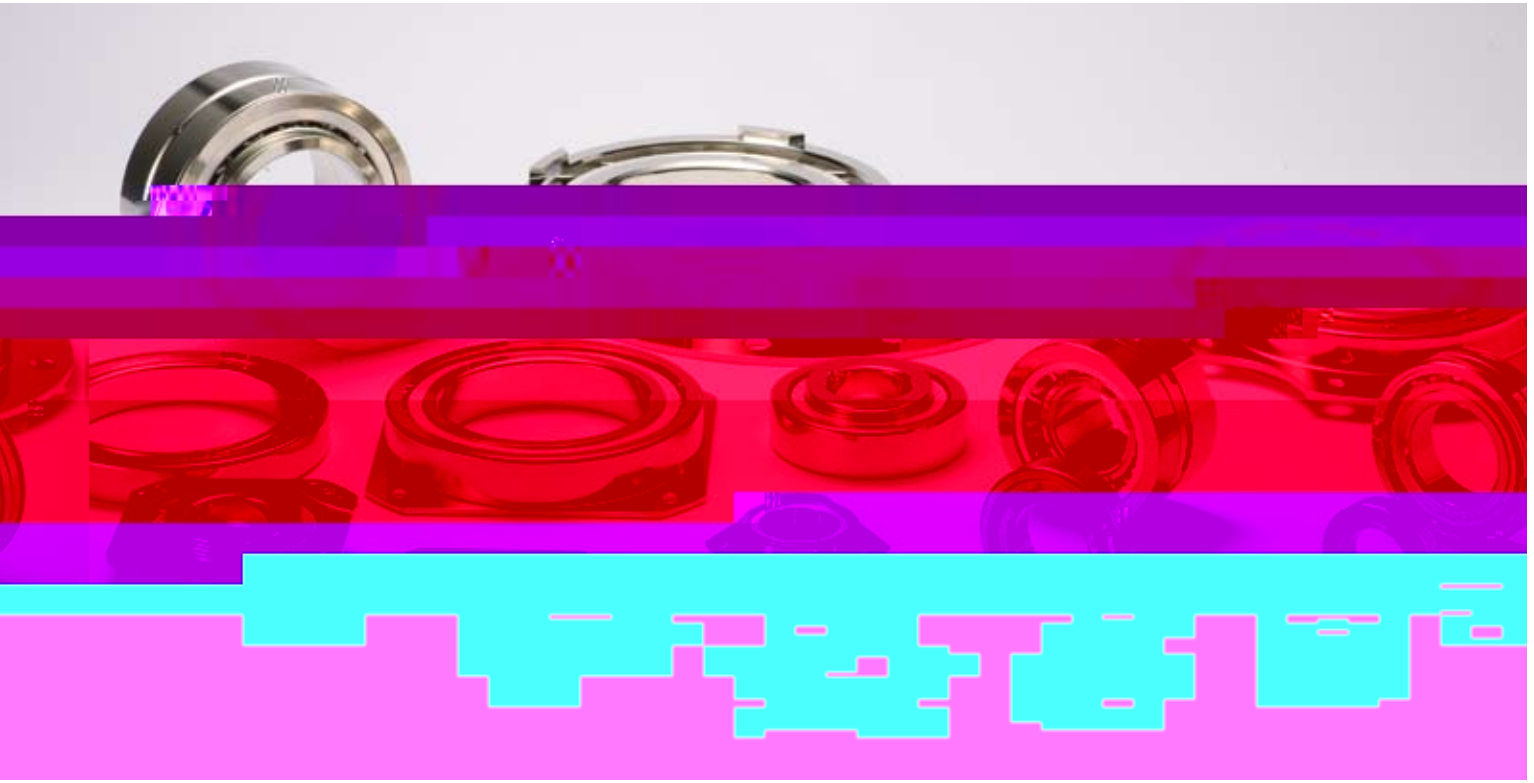


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FAA TSO-C149 › 5

1 Deep groove, radial retainer, miniature & instrument ball bearing 6

2 Deep groove, radial retainer, single shield narrow series miniature & instrument ball bearing....18

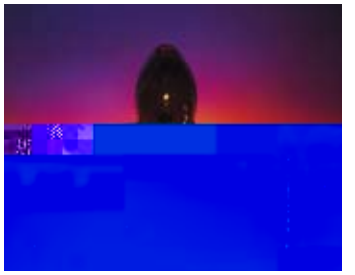
3 Deep groove, radial retainer, modified dimension miniature & instrument ball bearing....19

4 Deep groove, full complement miniature & instrument ball bearing 21

5 Separable angular contact miniature & instrument ball bearing 22

6 Non-separable angular contact miniature & instrument ball bearing 23

1992



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2007 Purdy



FAA EASA



– ARJ21-700 Timken® Timken® 60

FAA TSO-C149



U.S. Department of Transportation
Federal Aviation Administration

Boston Aircraft Cert. Office
12 New England Executive Park
Tel: (781) 238-7151
Fax: (781) 238-7199

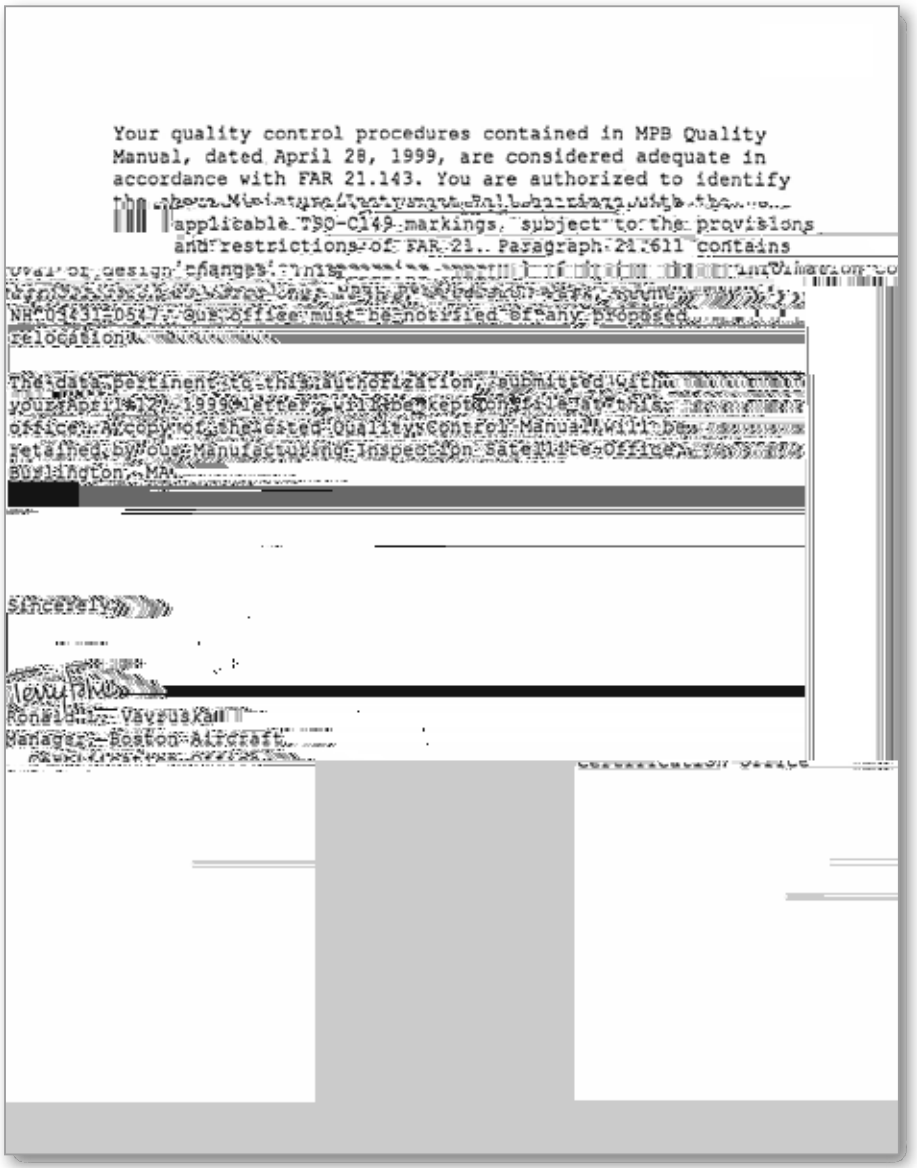
May 19, 1999

Timken Aerospace & Super Precision Bearings (MPB Division)
Attn: Mr. Edward Jarvis, Group Leader, Product Engineering
P.O. Box 547
Precision Park
Keene, NH 03431-0547

Dear Mr. Jarvis:

This will acknowledge receipt of your April 12, 1999 letter requesting Technical Standard Order (TSO) authorization for the following Miniature Precision Bearing (MPB)

The data and certification of conformance requirements of subpart O of the Federal Aviation



Your quality control procedures contained in MPB Quality Manual, dated April 28, 1999, are considered adequate in accordance with FAR 21.143. You are authorized to identify the above Miniature Ball Bearings with the applicable TSO-C149 markings, subject to the provisions and restrictions of FAR 21. Paragraph 21.611 contains

NH 03431-0547. Our office must be notified of any proposed relocation.

The data pertinent to this authorization, submitted with your April 12, 1999 letter, will be kept on file at this office. A copy of the dated Quality Control Manual will be retained by your Manufacturing Inspection Satellite Office, Burlington, MA.

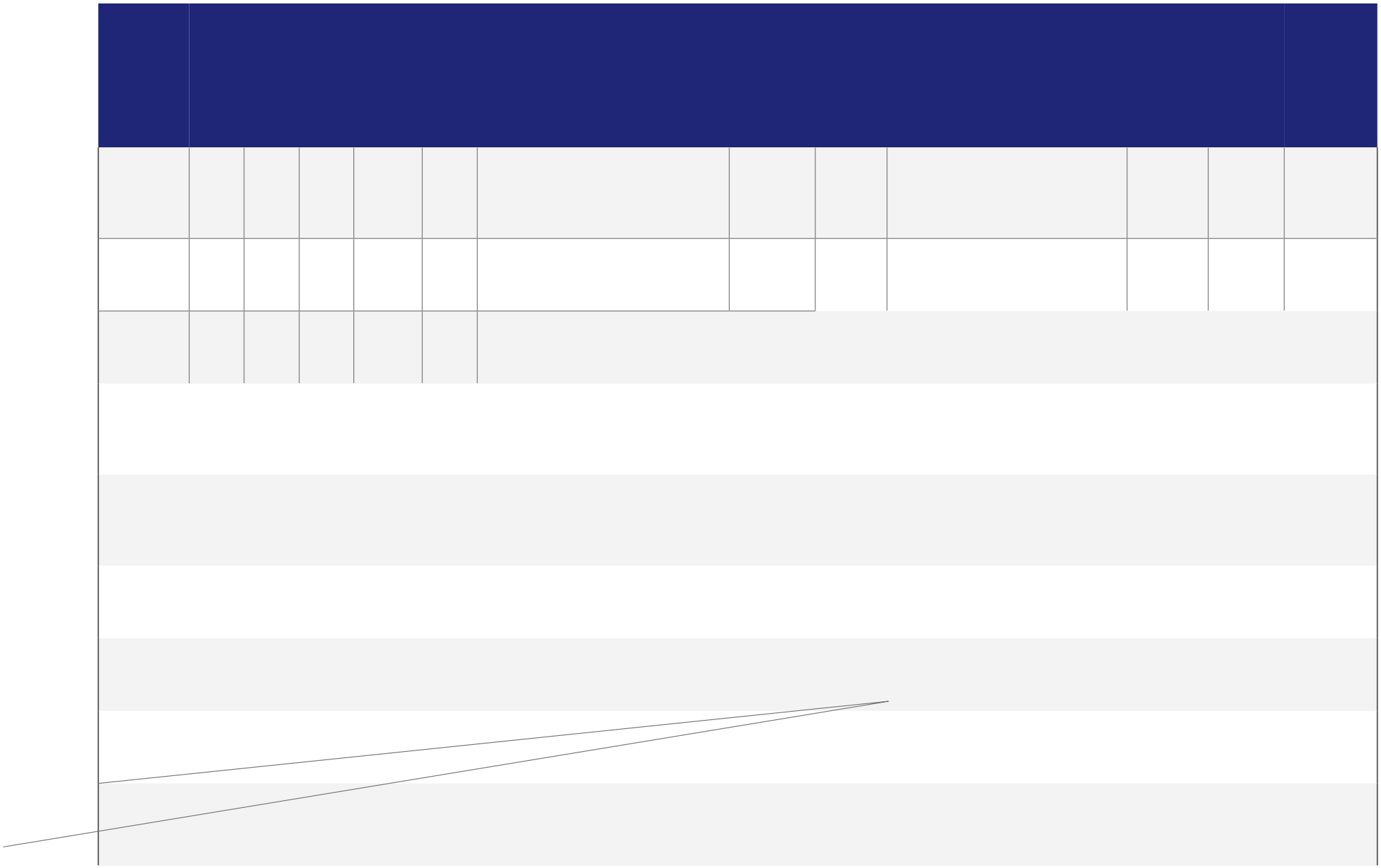
Sincerely,

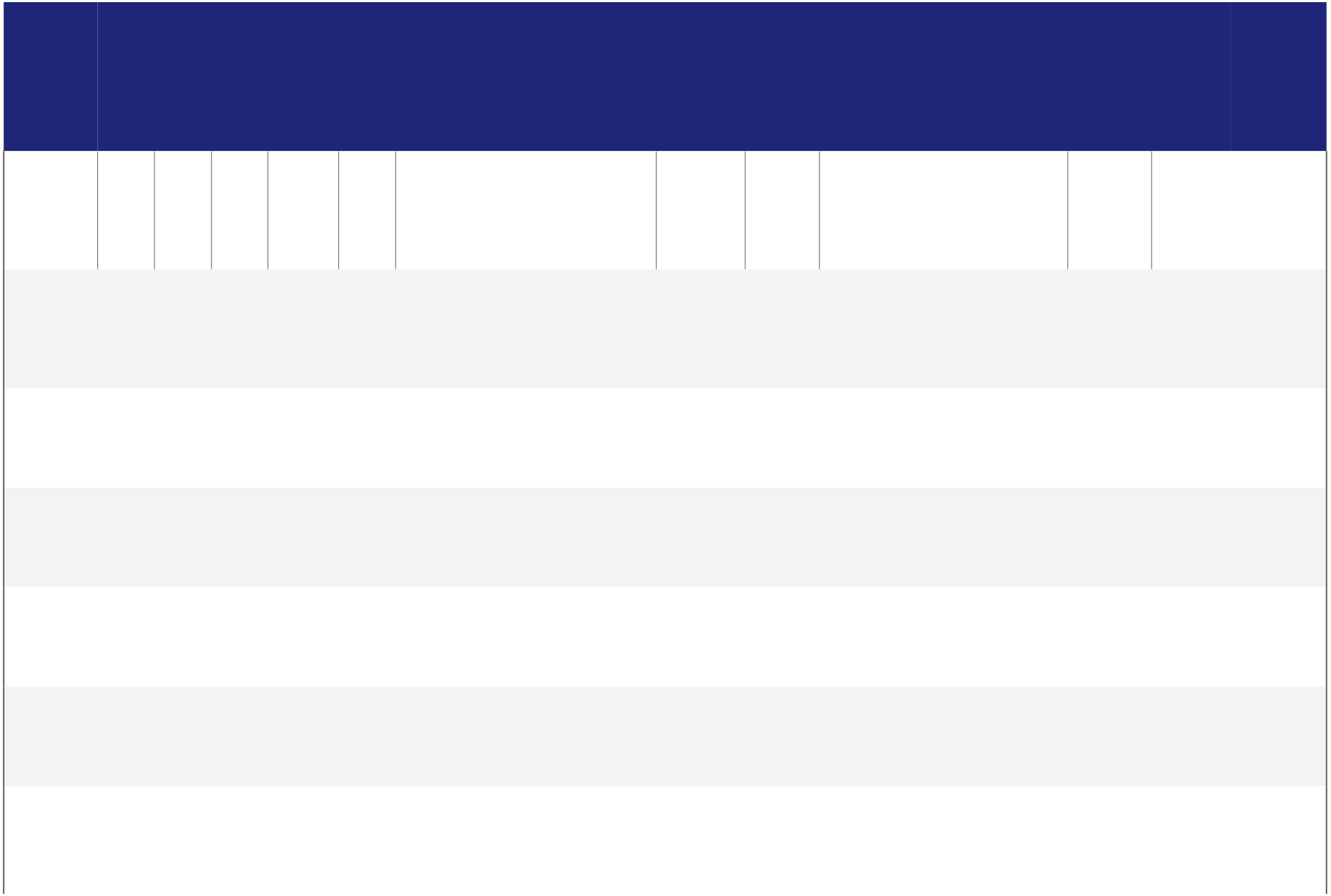
Ronald [illegible]
Manager, Boston Aircraft

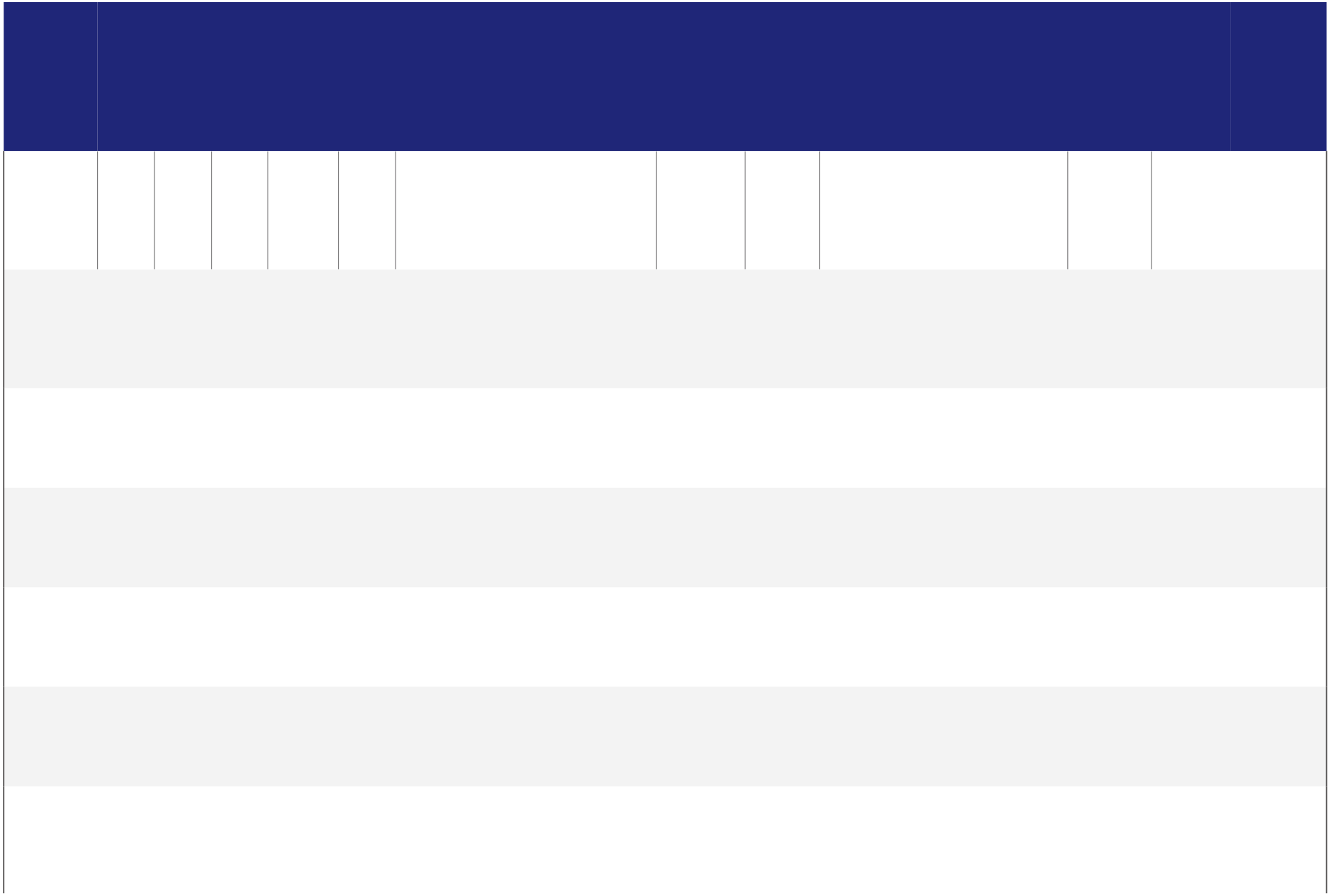
Timken P/N	Bore (Inch)	O.D (Inch)	Width (Inch)	Load ratings (lbs)		Configuration						Reference Speed limit (RPM)
				Dynamic	Static	STD Cage Code	Material	Design	Useful features	Shield	STD Bearing class	
S2C5	0.0400	0.1250	0.0469	12	2	**C** Description: Balls in deep groove bearing separated by a one-piece snap-in pressed steel retainer	410 SST Hardened		Low frictional torque at speeds up to 10000 RPM Not to be used under high acceleration	Only Open type	ABEC 5	10000
S2C7	0.0400	0.1250	0.0469	12	2	**C** Description: Balls in deep groove bearing separated by a one-piece snap-in pressed steel retainer	410 SST Hardened		Low frictional torque at speeds up to 10000 RPM Not to be used under high acceleration	Only Open type	ABEC 7	10000
S2R5	0.0400	0.1250	0.0469	12	2	**R** Description: Ball in deep groove bearing separated by a two-piece, pressed steel retainer.	430 SST or 300 series SST		Low breakaway frictionat at speed to 10000 RPM High speeds may result in excessive wear.	Only Open type	ABEC 5	10000
S2R7	0.0400	0.1250	0.0469	12	2	**R** Description: Ball in deep groove bearing separated by a two-piece, pressed steel retainer.	430 SST or 300 series SST		Low breakaway frictionat at speed to 10000 RPM High speeds may result in excessive wear.	Only Open type	ABEC 7	10000
S2MC5	0.0400	0.1250	0.0469	12	2	**MC** Description: one-piece, machined, snap-in crown phenolic retainer	Phenolic Laminate					

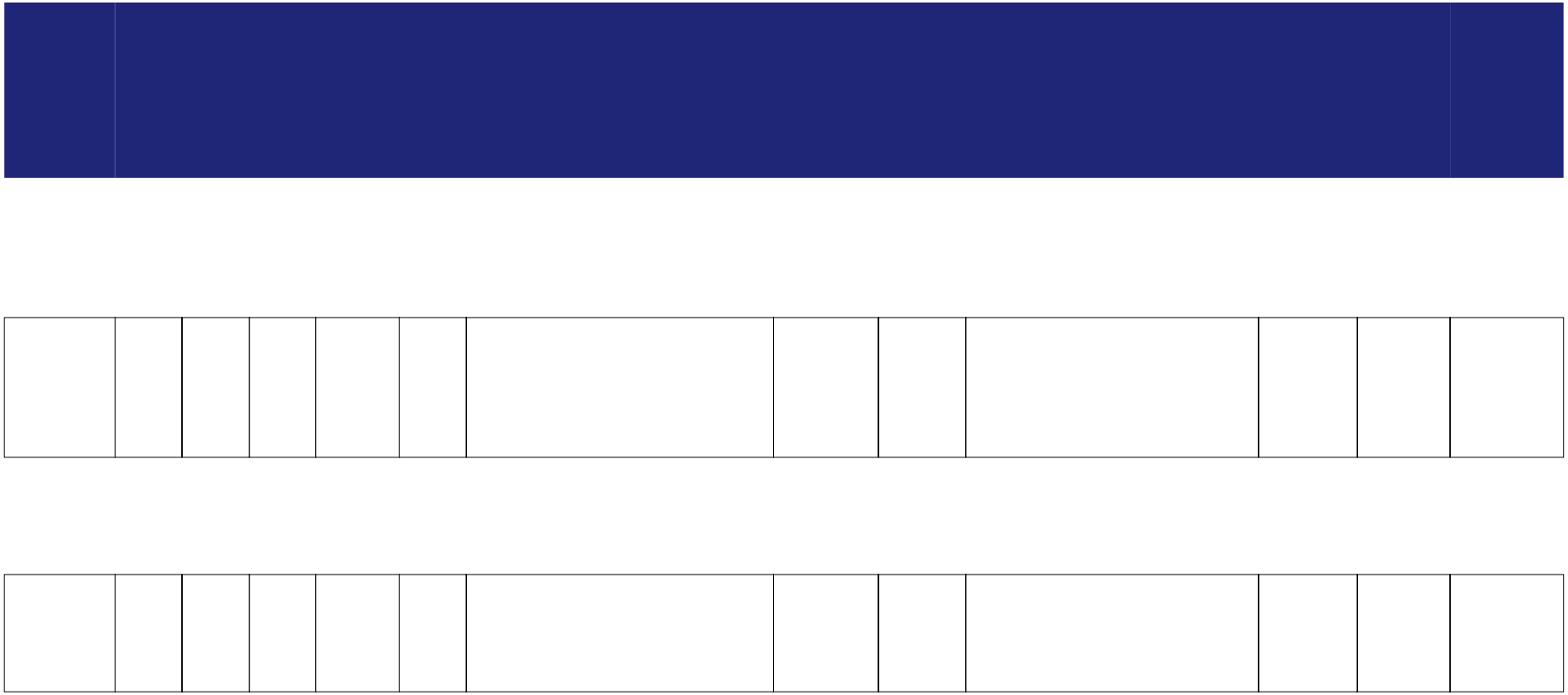
Timken P/N	Bore (Inch)	O.D (Inch)	Width (Inch)	Load ratings (lbs)		Configuration						Reference Speed limit (RPM)
				Dynamic	Static	STD Cage Code	Material	Design	Useful features	Shield	STD Bearing class	
S3332C5	0.0937	0.1875	0.0625	24.2	3.7	**C** Description: Balls in deep groove bearing separated by a one-piece snap-in pressed steel retainer	410 SST Hardened		Low frictional torque at speeds up to 10000 RPM Not to be used under high acceleration	Open type	ABEC 5	10000
S3332C7	0.0937	0.1875	0.0625	24.2	3.7	**C** Description: Balls in deep groove bearing separated by a one-piece snap-in pressed steel retainer	410 SST Hardened					

Timken P/N	Bore (Inch)	O.D (Inch)	Width (Inch)	Load ratings (lbs)		Configuration						Reference Speed limit (RPM)
				Dynamic	Static	STD Cage Code	Material	Design	Useful features	Shield	STD Bearing class	
S5632C5	0.1875	0.3125	0.1094	53.8	11.2	**C** Description: Balls in deep groove bearing separated by a one-piece snap-in pressed steel retainer	410 SST Hardened		Low frictional torque at speeds up to 10000 RPM Not to be used under high acceleration	Open type	ABEC 5	10000
S5632C7	0.1875	0.3125	0.1094	53.8	11.2	**C** Description: Balls in deep groove bearing separated by a one-piece snap-in pressed steel retainer	410 SST Hardened		Low frictional torque at speeds up to 10000 RPM Not to be used under high acceleration	Open type	ABEC 7	10000
S5632R5	0.1875	0.3125	0.1094	53.8	11.2	**R** Description: Ball in deep groove bearing separated by a two-piece, pressed steel retainer.	430 SST or 300 series SST					





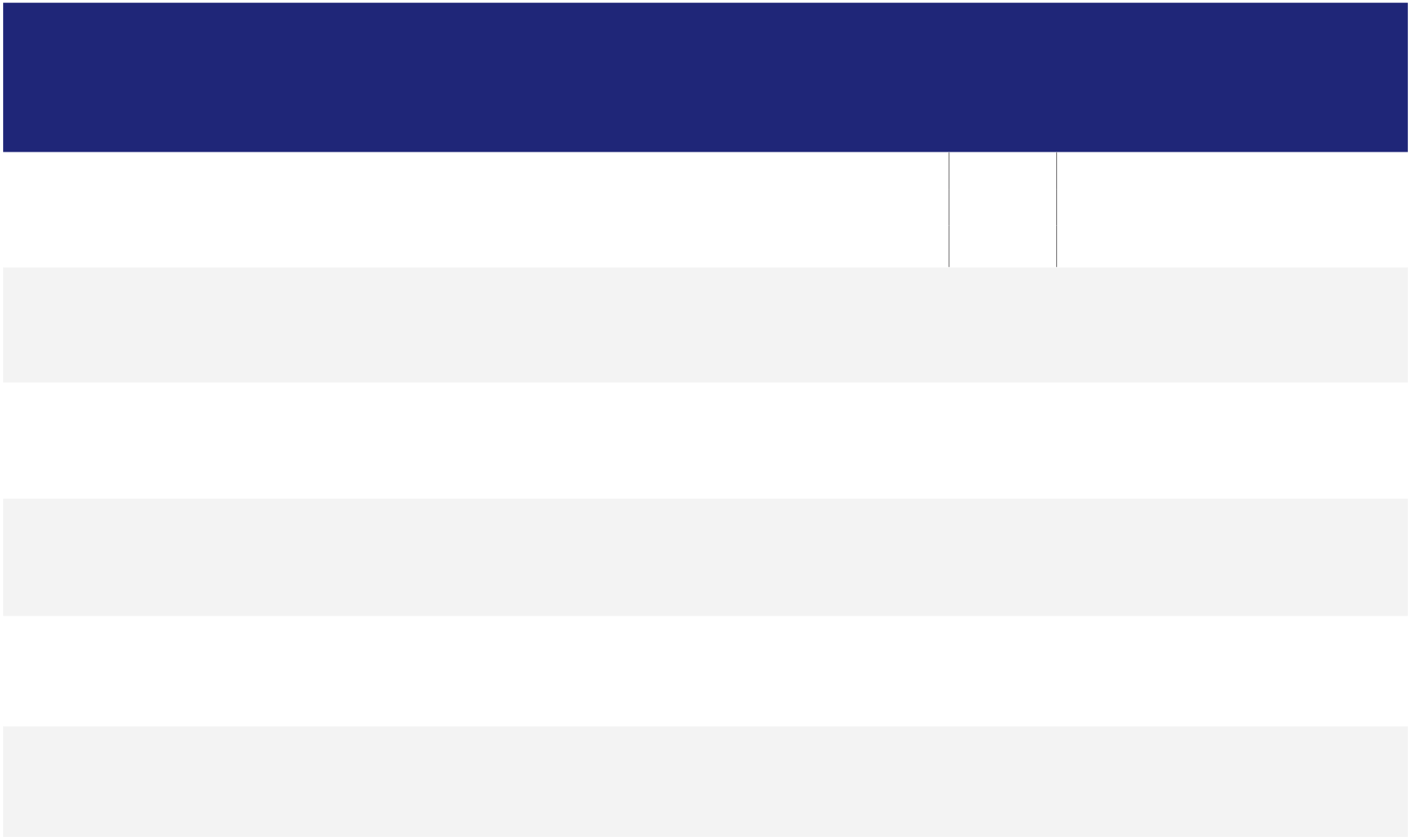




Deep groove, radial retainer, single shield narrow series miniature & instrument ball bearing

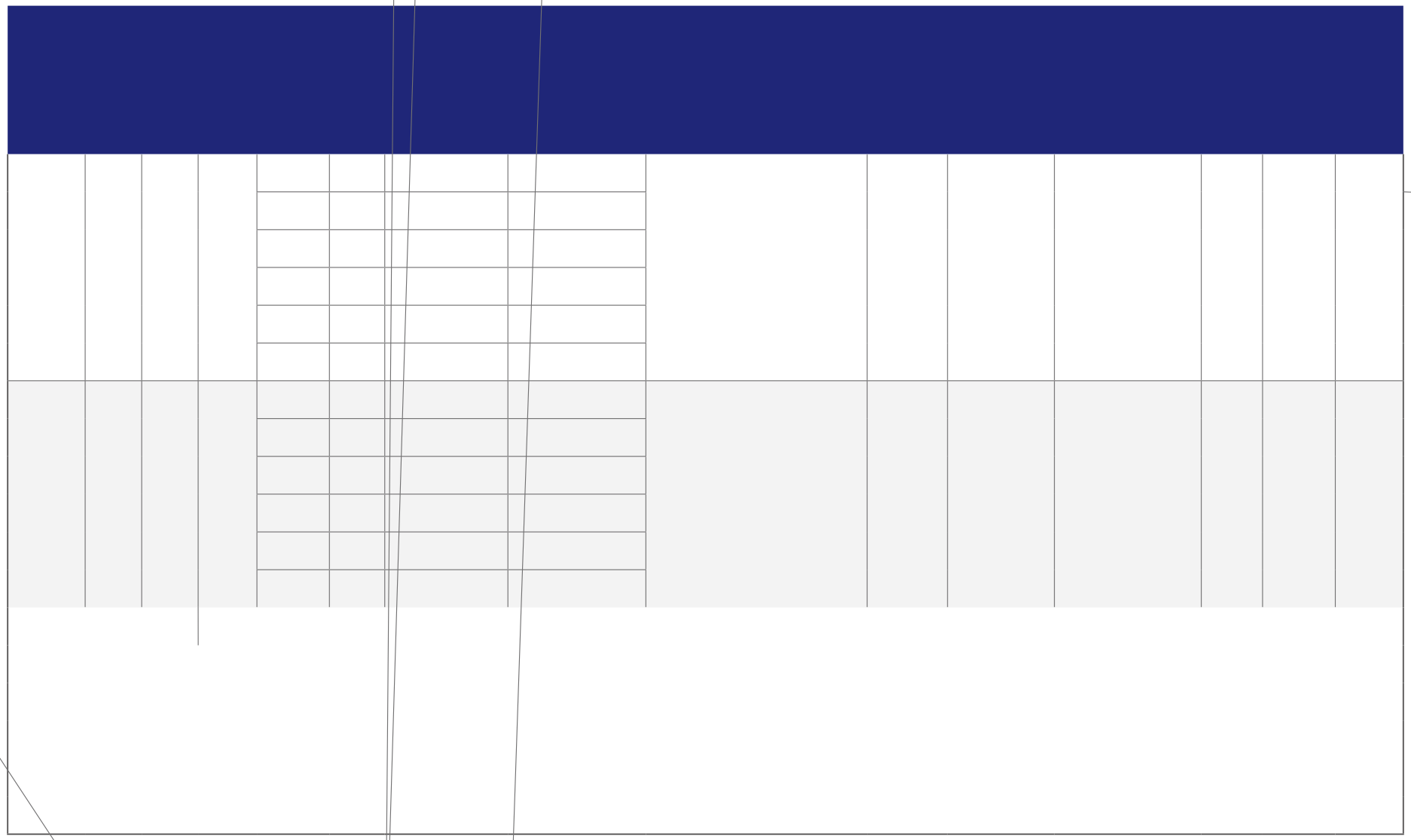
Timken P/N	Bore (Inch)	O.D (Inch)	Width (Inch)	Load ratings (lbs)		Configuration						Reference Speed limit (RPM)
						¢ ŕ Ą˜ ŵ ب ت Ď						
				Dynamic	Static	STD Cage Code	Material	Design	Useful features	Shield	STD Bearing class	
S518RHN5	0.1250	0.3125	0.1094	77.9	14.8	**R** Description: Ball in deep groove bearing separated by a two-piece, pressed steel retainer.	430 SST or 300 series SST					

Timken P/N	Bore (Inch)	O.D (Inch)	Width (Inch)	Load ratings (lbs)		Configurationa						Reference Speed limit (RPM)a
						ę ⱴ ѽ ł ت ₡ Ď						
				Dynamic	Static	STD Cage Code	Material	Design	Useful features	Shield	STD Bearing class	
A281- (Sequential number)	0.1250	0.3750	0.1094	38	6.8	C Description: Balls in deep groove bearing separated by a one-piece snap-in pressed steel retainer.	410 SST Hardened					



Timken P/N	Bore (Inch)	O.D (Inch)	Width (Inch)	Load ratings (lbs)				Configuration						
				Dynamic	Static	R.I.C Range (Inch)	Reference Contact Angle Range (degree)	STD Cage Code	Material	Design	Useful features	Shield	STD Bearing class	
S518MX7	0.1250	0.3125	0.1094	84.5	20	0.0002 TO 0.0005	9 TO 14	**MX** Description: One piece, machined through hole, salox M	Salox M	—	—	Open	ABEC 7	—
				88.5	17.7	0.0005 TO 0.0009	14 TO 19							
				87.1	16	0.0009 TO 0.0013	19 TO 22.5							
SR2M5	0.1250	0.3750	0.1562					528.Tf -628.71 l h 25239w 4 M0 gs 0 064 S50 11815.m 2105.954381237.4m 2105lg5.51165835 m4847..4 -510.27 3847vg5.8)Tj 425 571 54381						
				65431387( )(L(Dyn17(ugh)Tj ET 99/R18 g5.08 53 429-2843.08										

Non-separable angular contact miniature & instrument ball bearing



Timken

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