We build relationships

BSA PIE (Product Information Exchange)

PIE (Product Information Exchange) is an industry data sharing system. The Bearing Specialists Association developed a PIE Attribute Template and Instructions document identifying the most common bearing product information fields and providing direction and Rich Content for each field as well as a PIE Examples Document that illustrates a completed PIE Attribute Template with common bearing products. The purpose of these two documents is to streamline the process that Manufacturers use to share requested data with distributors.

The latest version of the PIE Attribute Template and Instructions document can be downloaded by clicking here.

To keep consistency for all suppliers and distributors participating in PIE, the following guidelines and language should be used for certain attributes:

Blank fields – there are to be no blank fields. Indicate one of the following that best applies:

NA = Not Applicable

NP = Not Participating

Retainer – is to be used to describe the Cage or Retainer

Bore – always indicate Straight Bore for bores that are cylindrical, and Tapered Bore when tapered

Lubricant / Lubrication – either word can be used and should replace usage of the single word 'Grease' when describing grease lubrication.

Ring – should be used to refer to the actual outer and inner ring, and should always be described as either Inner or Outer, and not used on its own. Race or Raceway is only to be used when it actually means the raceway or running surface of a bearing component (for example, "Internal clearance is identified as the spacing between the rolling elements and the raceway")

Fractions – are to be entered as numerical values as those are more searchable

The PIE Examples Document can be downloaded by clicking here.

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RICH CONTENT/ATTRIBUTE INFORMATION
Version 2.0

N	R	Field Name	Grouping	Definition, Comments, or Bearing Types
1		Date		Date of when the data was first entered or last modified if being changed
2	R	Manufacturer Part Number	Attributes taken from PPIF	The catalog or item number that uniquely identifies the product. Part numbers should remain static over time.
3	R	UPC Number		Standard UPC number that uniquely identifies the product. Preferred usage is the full 14 digit EAN/UCC-14 number. Acceptable alternate usage is the 12-digit format (UCC-12) or 11-digit UPC.
4	R	Short Description		Shortened description that could be used in a distributor's system. Limit to 50 characters.
5	R	Long Description		Long description that calls out the specific benefits, features, benefits of the product. This could be used the product's description on a website.
6	R	Selling UOM		Selling UOM between manufacturer and distributor
7		Brand		Specific brand of the product Useful for manufacturer's with multiple brands.
8	R	Image File Name		Contains the file name of the image to be used for the product. NOTE: Images are to be supplied separately…resolution, minimum 300 dpi.
9	R	Weight		Item weight for the selling unit of measure of the product. Field to contain numeric values only.
10	R	Weight UOM		Unit of measure for the weight supplied
11		Product URL		URL for the specific product on the manufacturer's website.
12		Bearing Type		Broad category of the item Unmounted ball bearing Unmounted roller bearing Mounted ball bearing Mounted roller bearing Thrust Bearing
13		Series		Series of bearing (ex: '62' for 62xx or '222' for 222xx)
14		Bore size (ID) - in		The inner diameter of the bearing using imperial dimensions Field to contain numeric values only, using decimals to 4 places.
15		Bore size (ID) - mm		The inner diameter of the bearing using metric dimensions Field to contain numeric values only, using decimals to 3 places.

RICH CONTENT/ATTRIBUTE INFORMATION
Version 2.0

N	R	Field Name	Grouping	Definition, Comments, or Bearing Types
16		Outer Diameter - in		The outer diameter of the bearing using imperial dimensions Field to contain numeric values only, using decimals to 4 places.
17		Outer Diameter - mm		The outer diameter of the bearing using metric dimensions Field to contain numeric values only, using decimals to 3 places.
18		Overall width - in		The overall width of the bearing using imperial dimensions Field to contain numeric values only, using decimals to 4 places.
19		Overall width - mm		The overall width of the bearing using metric dimensions Field to contain numeric values only, using decimals to 3 places.
20		Bore Type		The type of bore for the product. Examples are round, hex, etc.
21		Row Type		The number of rows of rolling elements in the product. Examples are single row, double row, etc.
22		Outer Diameter Type		The configuration of the outer ring for the bearing. Examples are cylindrical, spherical, etc
23		Internal Clearance		Internal clearance is identified as the spacing between the rolling elements and the raceway. This field identifies the standard clearance for the bearing. C0, C2, C4, etc.
24		Bearing Material		The material used for the inner/outer rings of the product. Protection features/coatings can be included along with base material.
25		Retainer Material		The material used for the retainer/cage of the product.
26		Precision class		The ABEC/RBEC precision class of the product.
27		Dynamic Load Rating		The basic dynamic load rating of the bearing. Field to contain numeric values only
28		Static Load Rating		The basic static load rating of the bearing. Field to contain numeric values only
29		Load Rating UOM		Indicates the unit of measure for the dynamic and static load ratings.

N	R	Field Name	Grouping	Definition, Comments, or Bearing Types
30		Rolling Element	All Bearing Types	Angular Contact Ball Bearings; Miniature Precision Ball Bearings; Precision Ball Bearings; Self Aligning Ball Bearings; Single Row Ball Bearing; Thrust Ball Bearing; Cam Follower and Track Roller - Stud Type; Cam Follower and Track Roller - Yoke Type; Cylindrical Roller Bearings; Needle Aircraft Roller Bearings; Needle Non Thrust Roller Bearings; Needle Self Aligning Roller Bearings; Spherical Roller Bearings; Thrust Roller Bearing; Spherical Plain Bearings - Radial; Spherical Plain Bearings - Rod Ends; Spherical Plain Bearings - Thrust; Cartridge Unit Bearings; Flange Block Bearings; Hanger Unit Bearings; Pillow Block Bearings; Take Up Unit Bearings; Insert Bearings Cylindrical OD; Insert Bearings Spherical OD
31		Snap Ring		Angular Contact Ball Bearings; Single Row Ball Bearing; Cylindrical Roller Bearings; Insert Bearings Cylindrical OD; Insert Bearings Spherical OD
32		Relubricatable		Cam Follower and Track Roller - Stud Type; Cam Follower and Track Roller - Yoke Type; Cylindrical Roller Bearings; Needle Aircraft Roller Bearings; Needle Non Thrust Roller Bearings; Needle Self Aligning Roller Bearings; Spherical Roller Bearings; Spherical Plain Bearings - Radial; Spherical Plain Bearings - Rod Ends; Spherical Plain Bearings - Thrust; Cartridge Unit Bearings; Flange Block Bearings; Hanger Unit Bearings; Pillow Block Bearings; Insert Bearings Cylindrical OD; Insert Bearings
33		Retainer Type		
34		Material - Rolling Elements (Ball or Roller)		Miniature Precision Ball Bearings; Precision Ball Bearings; Spherical Plain Bearings - Radial; Spherical Plain Bearings - Rod Ends; Spherical Plain Bearings - Thrust
35		Outer Ring Width - Inch		Miniature Precision Ball Bearings; Self Aligning Ball Bearings; Insert Bearings Cylindrical OD; Insert Bearings Spherical OD
36		Outer Ring Width - Millimeter		Miniature Precision Ball Bearings; Self Aligning Ball Bearings; Insert Bearings Cylindrical OD; Insert Bearings Spherical OD
37		Inner Ring Width - Inch		Miniature Precision Ball Bearings; Self Aligning Ball Bearings; Single Row Ball Bearing
38		Inner Ring Width - Millimeter		Miniature Precision Ball Bearings; Self Aligning Ball Bearings; Single Row Ball Bearing
39		Flange Outside Diameter - Inch		Miniature Precision Ball Bearings; Tapered Roller Bearing Assemblies; Tapered Roller Bearings; Sleeve Bearings
40		Flange Outside Diameter - Millimeter		Miniature Precision Ball Bearings; Tapered Roller Bearing Assemblies; Tapered Roller Bearings; Sleeve Bearings

RICH CONTENT/ATTRIBUTE INFORMATION
Version 2.0

N	R	Field Name	Grouping	Definition, Comments, or Bearing Types
41		Lubrication Hole/Groove		Needle Aircraft Roller Bearings
42		Component (I/R; O/R assembly)		Needle Aircraft Roller Bearings; Needle Non Thrust Roller Bearings; Needle Self Aligning Roller Bearings; Tapered Roller Bearing Assemblies; Tapered Roller Bearings; Spherical Plain Bearings - Radial; Spherical Plain Bearings - Thrust
43		Self Aligning		Needle Non Thrust Roller Bearings; Needle Self Aligning Roller Bearings; Thrust Roller Bearing; Spherical Plain Bearings - Radial; Spherical Plain Bearings - Thrust
44		Adapter Sleeve		Self Aligning Ball Bearings
45		Mounting Method		Self Aligning Ball Bearings; Spherical Roller Bearings
46		Flange Thickness - Inch		Sleeve Bearings
47		Flange Thickness - Millimeter		Sleeve Bearings
48		Adapter Part Number - Inch		Spherical Roller Bearings
49		Adapter Part Number - Millimeter		Spherical Roller Bearings
50		Withdrawal Nut		Spherical Roller Bearings
51		Withdrawal Sleeve		Spherical Roller Bearings
52		Optional Components		For Example, Washers
53		Closure (Seal) Type		Indicates the closure configuration of an unmounted bearing. Examples are open, 1 seal, 2 seals, 1 shield, 2 shields, etc.
54		Raceway Style		Miniature Precision Ball Bearings; Precision Ball Bearings
55		Operating Temperature Min		Low end of the allowable operating temperature (or Min) in degrees F

RICH CONTENT/ATTRIBUTE INFORMATION
Version 2.0

N	R	Field Name	Grouping	Definition, Comments, or Bearing Types
56		Operating Temperature Max	All Bearing Types	High end of the allowable operating temperature (or Max) in degrees F
57		Maximum Operating RPM (Oil)		Maximum operating speed of the bearing in RPM operating in oil lubrication
58		Maximum Operating RPM (Grease)		Maximum operating speed of the bearing in RPM operating in grease lubrication
59		Fillet Radius - Inch		Fillet Radius in Inches
60		Fillet Radius - Millimeter		Fillet Radius in Millimeters
61		Manufacturer Product Page Link		Link to Product Page PDF or other print data, if available
62		Contact Angle	Angular contact bearings	Identifies the contact angle for the bearing.
63		Flush Ground		Angular Contact Ball Bearings; Miniature Precision Ball Bearings; Precision Ball Bearings
64		Mounting Arrangement		Angular Contact Ball Bearings; Miniature Precision Ball Bearings; Precision Ball Bearings
65		Number of bearings		Angular Contact Ball Bearings; Miniature Precision Ball Bearings; Precision Ball Bearings
66		Preload		Angular Contact Ball Bearings; Miniature Precision Ball Bearings; Precision Ball Bearings
67		Maximum Capacity / Filling Slot		Angular Contact Ball Bearings; Single Row Ball Bearing
68		Duty Type		Identifies the duty series of the bearing. Examples are light, normal, medium, heavy
69		Locking Type		Identifies the mechanism for locking the bearing to the shaft. Examples are set screw, eccentric collar, concentric collar, tapered adapter, etc
70		Mounting Type		Identifies the specific housing configuration for the product. Examples are pillow block, two bolt flange, piloted flange cartridge, take-up, etc.

RICH CONTENT/ATTRIBUTE INFORMATION
Version 2.0

N	R	Field Name	Grouping	Definition, Comments, or Bearing Types
71		Housing Material		Identifies the specific material used for the housing in a mounted unit. Protection features/coatings can be included along with base material.
72		Expansion Type		Indicates whether the product allows for axial expansion.
73		End Type		Used to indicate covers, back side shields, etc for a mounted unit.
74		Length Through Bore - in		The length through bore of the mounted unit using imperial dimensions. Field to contain numeric values only, using decimals to 4 places. PB, TB, 2B, 3B, 3BB, 4B, PFC, C, TU, H
75		Length Through Bore - mm		The length through bore of the mounted unit using metric dimensions. Field to contain numeric values only, using decimals to 3 places. PB, TB, 2B, 3B, 3BB, 4B, PFC, C, TU, H
76		Bolt Size - in		The bolt size to be used with the mounted unit using imperial dimensions. PB, TB, 2B, 3B, 3BB, 4B, PFC, TU, H
77		Bolt Size - mm		The bolt size to be used with the mounted unit using metric dimensions. PB, TB, 2B, 3B, 3BB, 4B, PFC, TU, H
78		Overall Length - in		This is intended to be an envelope dimension of the mounted unit. The overall length of the mounted unit using imperial dimensions. Field to contain numeric values only, using decimals to 4 places. PB, TB, 2B, 3B, 3BB, 4B, PFC, TU, H
79		Overall Length - mm		This is intended to be an envelope dimension of the mounted unit. The overall length of the mounted unit using metric dimensions. Field to contain numeric values only, using decimals to 3 places. PB, TB, 2B, 3B, 3BB, 4B, PFC, TU, H
80		Overall Height - in		This is intended to be an envelope dimension of the mounted unit. The overall height of the mounted unit using imperial dimensions. Field to contain numeric values only, using decimals to 4 places. PB, TB, 2B, 3B, 3BB, 4B, TU, H
81		Overall Height - mm		This is intended to be an envelope dimension of the mounted unit. The overall height of the mounted unit using metric dimensions. Field to contain numeric values only, using decimals to 3 places. PB, TB, 2B, 3B, 3BB, 4B, TU, H

RICH CONTENT/ATTRIBUTE INFORMATION
Version 2.0

N	R	Field Name	Grouping	Definition, Comments, or Bearing Types
82		Bolt Centers - in	Mounted Bearing and Units	The bolt center distance of the mounted unit using imperial dimensions. Field to contain numeric values only, using decimals to 4 places. PB, TB, 2B, 4B
83		Bolt Centers - mm		The bolt center distance of the mounted unit using metric dimensions. Field to contain numeric values only, using decimals to 3 places. PB, TB, 2B, 4B
84		Bolt Circle Diameter - in		The bolt circle diameter of the mounted unit using imperial dimensions. Field to contain numeric values only, using decimals to 4 places. 3B, some 4B, PFC
85		Bolt Circle Diameter - mm		The bolt circle diameter of the mounted unit using metric dimensions. Field to contain numeric values only, using decimals to 3 places. 3B, some 4B, PFC
86		Pilot Diameter - in		The pilot diameter of the mounted unit using imperial dimensions. Field to contain numeric values only, using decimals to 4 places. 2B with pilot, 4B with pilot, PFC
87		Pilot Diameter - mm		The pilot diameter of the mounted unit using metric dimensions. Field to contain numeric values only, using decimals to 3 places. 2B with pilot, 4B with pilot, PFC
88		Shaft Centerline - in		The shaft center line of the mounted unit using imperial dimensions. Field to contain numeric values only, using decimals to 4 places. PB, TB, 3BB, TU, H
89		Shaft Centerline - mm		The shaft center line of the mounted unit using metric dimensions. Field to contain numeric values only, using decimals to 3 places. PB, TB, 3BB, TU, H
90		Distance Across Slots - in		The distance between the bottom of each slot on a mounted unit using imperial dimensions. Field to contain numeric values only, using decimals to 3 places. TU
91		Distance Across Slots - mm		The distance between the bottom of each slot on a mounted unit using metric dimensions. Field to contain numeric values only, using decimals to 3 places. TU

N	R	Field Name	Grouping	Definition, Comments, or Bearing Types
92		Slot Width - in		The width of the slot on a mounted unit using imperial dimensions. Field to contain numeric values only, using decimals to 4 places. TU
93		Slot Width - mm		The width of the slot on a mounted unit using metric dimensions. Field to contain numeric values only, using decimals to 3 places. TU
94		Housing Outside Diameter - in		The outside diameter of a housing using imperial dimensions. Field to contain numeric values only, using decimals to 4 places. C
95		Housing Outside Diameter - mm		The outside diameter of a housing using metric dimensions. Field to contain numeric values only, using decimals to 3 places. C
96		Thread Size - in		The thread of the tapped hole on a mounted unit using imperial dimensions. TB, some TU, H
97		Thread Size - mm		The thread of the tapped hole on a mounted unit using metric dimensions. TB, some TU, H
98		Thread Depth - in		The depth of the tapped hole on a mounted unit using imperial dimensions. Field to contain numeric values only, using decimals to 4 places. TB, some TU, H
99		Thread Depth - mm		The depth of the tapped hole on a mounted unit using metric dimensions. Field to contain numeric values only, using decimals to 3 places. TB, some TU, H
100		Cartridge Housing Width - Inch		Cartridge Unit Bearings
101		Cartridge Housing Width - Millimeter		Cartridge Unit Bearings
102		Insert Part Number		Cartridge Unit Bearings; Flange Block Bearings; Hanger Unit Bearings; Pillow Block Bearings; Take Up Unit Bearings
103		Cartridge Pilot Depth - Inch		Flange Block Bearings

N	R	Field Name	Grouping	Definition, Comments, or Bearing Types
104		Cartridge Pilot Depth - Millimeter		Flange Block Bearings
105		Pilot Configuration		Flange Block Bearings
106		Housing Configuration		Flange Block Bearings; Pillow Block Bearings
107		Number of Mounting Holes		Flange Block Bearings; Pillow Block Bearings
108		Inner Ring Width Type		Insert Bearings Cylindrical OD; Insert Bearings Spherical OD
109		Bolt Spacing Maximum - Inch		Pillow Block Bearings
110		Bolt Spacing Maximum-Millimeter		Pillow Block Bearings
111		Bolt Spacing Minimum - Inch		Pillow Block Bearings
112		Bolt Spacing Minimum-Millimeter		Pillow Block Bearings
113		Nominal Bolt Center to Center - Inch		Pillow Block Bearings
114		Nominal Bolt Center to Center - Millimete		Pillow Block Bearings
115		Adjustment Travel Length		Take Up Unit Bearings
116		Compatible Take Up Frame		Take Up Unit Bearings
117		Housing Style		Take Up Unit Bearings
118		Material- Insert Bearing		Add insert Material for all MU types

RICH CONTENT/ATTRIBUTE INFORMATION
Version 2.0

N	R	Field Name	Grouping	Definition, Comments, or Bearing Types
119		Hex Socket	Cam Follower	Cam Follower and Track Roller - Stud Type
120		Roller Surface Profile		Cam Follower and Track Roller - Stud Type
121		Stud Diameter - Inch		Cam Follower and Track Roller - Stud Type
122		Stud Diameter - Millimeter		Cam Follower and Track Roller - Stud Type
123		Thread Size		Cam Follower and Track Roller - Stud Type
124		Profile		Cam Follower and Track Roller - Stud Type; Cam Follower and Track Roller - Yoke Type; Cylindrical Roller Bearings; Sleeve Bearings
125		Stud Profile		Cam Follower and Track Roller - Stud Type; Spherical Plain Bearings - Rod Ends
126		Roller Diameter - Inch		Cam Follower And Track Roller - Stud Type; Cam Follower And Track Roller - Yoke Type
127		Roller Diameter - Millimeter		Cam Follower And Track Roller - Stud Type; Cam Follower And Track Roller - Yoke Type
128		Roller Width - Inch		Cam Follower And Track Roller - Stud Type; Cam Follower And Track Roller - Yoke Type
129		Roller Width - Millimeter		Cam Follower And Track Roller - Stud Type; Cam Follower And Track Roller - Yoke Type
130		Separable	Cylindrical Roller Bearings; Needle Non Thrust Roller Bearings	Cylindrical Roller Bearings; Needle Non Thrust Roller Bearings; Needle Self Aligning Roller Bearings
131		Flanges	Unmounted Bearings	Miniature Precision Ball Bearings, Radial Ball Bearings
132		Closed End	Needle Non Thrust Roller Bearings	Needle Non Thrust Roller Bearings

RICH CONTENT/ATTRIBUTE INFORMATION
Version 2.0

N	R	Field Name	Grouping	Definition, Comments, or Bearing Types
133		Length Thru Bore - Inch	Sleeve Bearings	Sleeve Bearings
134		Length Thru Bore - Millimeter		Sleeve Bearings
135		Material Description		Sleeve Bearings
136		Nominal Bore - Inch		Sleeve Bearings
137		Nominal Bore - Millimeter		Sleeve Bearings
138		Nominal Outside Diameter - Inch		Sleeve Bearings
139		Nominal Outside Diameter - Millimeter		Sleeve Bearings
140		Housing Width - Inch	Spherical Plain Bearings	Spherical Plain Bearings - Radial; Spherical Plain Bearings - Rod Ends; Spherical Plain Bearings - Thrust
141		Housing Width - Millimeter		Spherical Plain Bearings - Radial; Spherical Plain Bearings - Rod Ends; Spherical Plain Bearings - Thrust
142		Material - Liner		Spherical Plain Bearings - Radial; Spherical Plain Bearings - Rod Ends; Spherical Plain Bearings - Thrust
143		Material - Outer Member		Spherical Plain Bearings - Radial; Spherical Plain Bearings - Rod Ends; Spherical Plain Bearings - Thrust
144		Ball Width - Inch		Spherical Plain Bearings - Rod Ends
145		Ball Width - Millimeter		Spherical Plain Bearings - Rod Ends
146		Mounting Thread		Spherical Plain Bearings - Rod Ends
147		Thread Direction		Spherical Plain Bearings - Rod Ends

RICH CONTENT/ATTRIBUTE INFORMATION
Version 2.0

N	R	Field Name	Grouping	Definition, Comments, or Bearing Types
148		Ball Outside Diameter - Inch		Spherical Plain Bearings - Thrust
149		Ball Outside Diameter - Millimeter		Spherical Plain Bearings - Thrust
150		Housing Outside Diameter - Inch		Spherical Plain Bearings - Thrust; Hanger Unit Bearings
151		Housing Outside Diameter - Millimeter		Spherical Plain Bearings - Thrust; Hanger Unit Bearings
152		Assembly Components	Tapered Roller Bearings	Tapered Roller Bearing Assemblies
153		Assembly Number		Tapered Roller Bearing Assemblies
154		End Play		Tapered Roller Bearing Assemblies
155		Basic Number		Tapered Roller Bearing Assemblies; Tapered Roller Bearings
156		Banded	Thrust Bearing	Thrust Ball Bearing; Thrust Roller Bearing
157		Bore 2 - Inch		Thrust Ball Bearing; Thrust Roller Bearing
158		Bore 2 - Millimeter		Thrust Ball Bearing; Thrust Roller Bearing
159		Component Description		Thrust Ball Bearing; Thrust Roller Bearing
160		Height - Inch		Thrust Ball Bearing; Thrust Roller Bearing
161		Height - Millimeter		Thrust Ball Bearing; Thrust Roller Bearing

RICH CONTENT/ATTRIBUTE INFORMATION
Version 2.0

N	R	Field Name	Grouping	Definition, Comments, or Bearing Types
			Attributes taken from PPIF	
			All bearing types	
			Angular contact bearings	
			Mounted bearing and units	
			Cam Follower	
			Cylindrical Roller Bearings; Needle Non Thrust Roller Bearings	
			Unmounted bearings	
			Needle Non Thrust Roller Bearings	
			Sleeve Bearings	
			Spherical Plain Bearings	
			Tapered Roller Bearings	
			Thrust Bearing	