

# TIMKEN®

## SURVIVOR® SERIES

*CORROSION RESISTANT  
HOUSED UNITS*





*Does rust cause your ball bearing housed units to fail quickly? Does rust cause unsanitary operating conditions, resulting in frequent changeout and downtime?*

*Let Timken Survivor<sup>®</sup> units help you get the rust out.*

## THE SUPERIOR SOLUTION FOR CORROSIVE APPLICATIONS

### SURVIVOR UNIT SELECTION GUIDE FEATURING TIMKEN FAFNIR® BALL BEARINGS

#### Survivor Unit Nomenclature

Example: YCJT 1 3/16 PT

**Y**

#### Insert Type:

- Y = setscrew lock
- R = self-locking collar
- K = light-duty, setscrew lock

**1 3/16**

#### Shaft Size:

- 1 3/16 = 1 3/16"
- 25 = 25mm

**CJT**

#### Housing Style:

- AK = low base pillow block
- AS = high base pillow block
- CJ = four-bolt flange
- CJT = two-bolt flange
- TB = tapped base pillow block
- FB = flanged bracket
- TU = take-up unit

**PT**

#### Series Type:

- PT = polymer housing, TDC coated insert
- NT = nickel-plated housing, TDC coated insert
- PS = polymer housing, stainless steel insert

	FREQUENT WASHDOWNS	LOW SPEED OR LIGHT LOADS	FULL RANGE SPEED/LOAD	SINGLE-DIRECTION ROTATION	REVERSING-DIRECTION ROTATION	LARGE SIZES AVAILABLE
Y-PT SURVIVOR PT with setscrew lock pages 4-6	●		●		●	
R-PT SURVIVOR PT with self-locking collar pages 4-5	●		●	●		
K-PS SURVIVOR PS with light-duty stainless steel, setscrew lock bearings page 10	●	●			●	
R-NT SURVIVOR NT with self-locking collar pages 7-9	●		●	●		●

### COMMON APPLICATIONS FOR SURVIVOR BEARINGS

#### Food Applications

- Packaging and Processing
- Beverage Bottling
- Dairies
- Beef, Pork, Poultry and Fish Processing
- Fruit and Vegetable Processing
- Bakeries

#### Other Applications

- Chemical & Rubber Processing
- Pharmaceutical Industries
- Paper Mills
- Car Washes
- Material Handling
- Maritime Applications
- Highway Salt & Sand Trucks
- Wastewater Treatment Facilities

**YCJT - PT**  
TDC Setscrew Lock Two-Bolt Flange



**YAS - PT**  
TDC Setscrew Lock Pillow Block



**KCJT - PS**  
Stainless Steel Setscrew Lock Two-Bolt Flange



**RCJT - NT**  
TDC Self-locking Two-Bolt Flange with Nickel-Plating



**YFB - PT**  
TDC Setscrew Lock Flange Bracket

**YCJ - PT**  
TDC Setscrew Lock Four-Bolt Flange



**KAK - PS**  
Stainless Steel Setscrew Lock Pillow Block



**EC**  
Protective End Cover for use with all polymer housing styles

**RAK - NT**  
TDC Self-locking Pillow Block with Nickel-Plating



**RCJ - PT**  
TDC Self-locking  
Four-Bolt Flange



**KAS - PS**  
Stainless Steel Setscrew  
Lock Pillow Block



**YCJT - PT**  
TDC Setscrew Lock Two-Bolt  
Flange (with protective end cover)



**YTB - PT**  
TDC Setscrew Lock Tapped Base  
Pillow Block



**RTU - NT**  
TDC Self-locking Take-Up Unit with Nickel-Plating



**GY - KRRB TDCF**  
TDC Setscrew Lock Replacement Bearing Insert



## TIMKEN SURVIVOR PT HOUSED UNITS

*Y-PT Setscrew Lock Series for Reversing-Direction Rotation*  
*R-PT Self-locking Series for Single-Direction Rotation*

### **A** Durable Corrosion Proof Polymer Housing:

- Stainless steel crush bushings in mounting holes
- Stainless steel grease fitting with nylon cap
- Polymer resists a broad range of acids and alkalis, as well as steam and continuous temperature up to 250°F (and brief exposure up to 320°F)
- Polymer strength exceeds static capacity of bearing; housing retains proper bearing fit and resists shock loads
- Flush base contains no voids where bacteria can collect

### **B** Corrosion Resistant Insert Bearing:

- Coated insert bearing
- Stainless steel balls with nylon retainer
- Industrial duty contact seals with stainless steel shroud caps
- Stainless steel lock collar for self-locking series
- Stainless steel setscrews for setscrew lock series
- Factory lubricated with FDA/USDA approved grease (class H1 lubricant) for incidental food contact

### **C** End Covers:

- End covers further protect insert bearing from direct contact with washdown solutions and cover rotating components

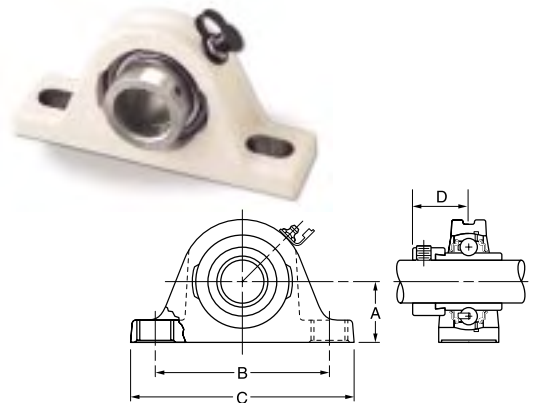
END COVERS	
TIMKEN FAFNIR END COVER P/N	FOR SHAFT SIZES
204EC	3/4", 20 mm
205EC	1", 25 mm
206EC	1 3/16", 1 1/4S", 30 mm
207EC	1 1/4", 1 7/16", 35 mm
208EC	1 1/2", 40 mm

Note: End covers available for polymer units only and are ordered separately.

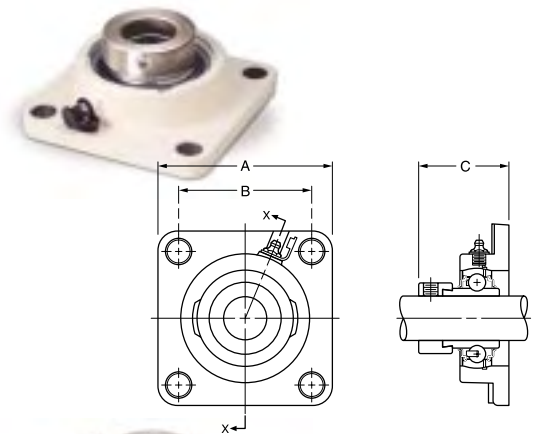
*FDA/USDA Approval: All materials, including lubricant, comply with all applicable federal food processing requirements.*

## TIMKEN SURVIVOR PT HOUSED UNITS

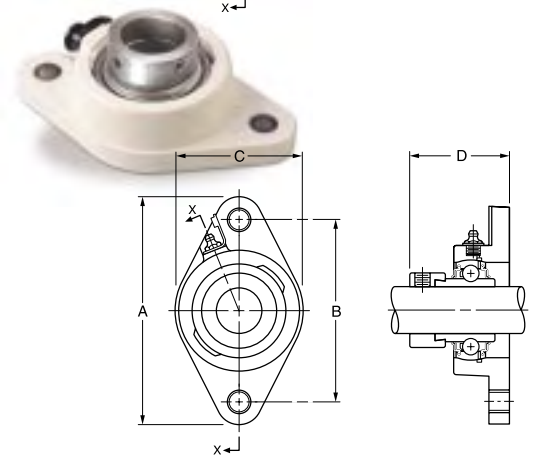
Timken Fafnir P/N	Insert Fafnir Bearing P/N	RAK A	RAS A	B	C	D	LOAD RATINGS		Limiting Speed (RPM)		
							Static lbs.	Dynamic lbs.			
RAK 3/4	PT	G1012KRRB	TDCF	1.25	1.31	3.78	5.00	1.05	1,460	3,250	9,200
RAK 1	PT	G1100KRRB	TDCF	1.31	1.44	4.12	5.50	1.06	1,730	3,550	6,900
RAK 1 3/16	PT	G1103KRRB	TDCF	1.56	1.69	4.62	6.19	1.19	2,500	4,900	5,800
RAK 1 1/4S	PT	G1103KRRB3	TDCF	1.56	1.69	4.62	6.19	1.19	2,500	4,900	5,500
RAK 1 1/4	PT	G1104KRRB	TDCF	1.81	1.88	5.12	6.56	1.27	3,400	6,400	5,500
RAK 1 7/16	PT	G1107KRRB	TDCF	1.81	1.88	5.12	6.56	1.27	3,400	6,400	4,800
RAK 1 1/2	PT	G1108KRRB	TDCF	1.94	1.94	5.37	7.06	1.37	4,400	8,150	4,600



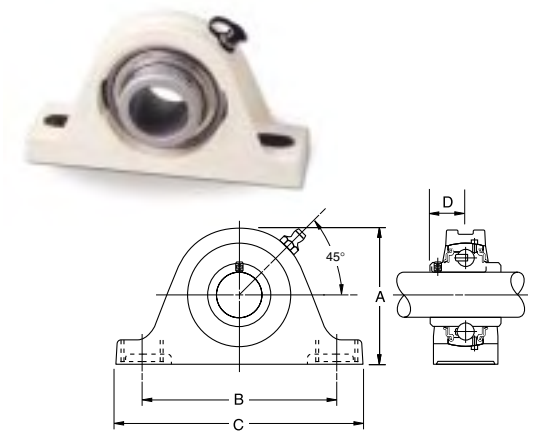
Timken Fafnir P/N	A	B	C	LOAD RATINGS			
				Static lbs.	Dynamic lbs.	Limiting Speed (RPM)	
RCJ 3/4	PT	3.37	2.50	1.78	1,460	3,250	9,200
RCJ 1	PT	3.75	2.75	1.81	1,730	3,550	6,900
RCJ 1 3/16	PT	4.25	3.25	1.93	2,500	4,900	5,800
RCJ 1 1/4S	PT	4.25	3.25	1.93	2,500	4,900	5,500
RCJ 1 1/4	PT	4.62	3.62	2.08	3,400	6,400	5,500
RCJ 1 7/16	PT	4.62	3.62	2.08	3,400	6,400	4,800
RCJ 1 1/2	PT	5.12	4.00	2.31	4,400	8,150	4,600



Timken Fafnir P/N	A	B	C	D	LOAD RATINGS			
					Static lbs.	Dynamic lbs.	Limiting Speed (RPM)	
RCJT 3/4	PT	4.41	3.53	2.38	1.78	1,460	3,250	9,200
RCJT 1	PT	4.88	3.89	2.75	1.81	1,730	3,550	6,900
RCJT 1 3/16	PT	5.56	4.59	3.12	1.93	2,500	4,900	5,800
RCJT 1 1/4S	PT	5.56	4.59	3.12	1.93	2,500	4,900	5,500
RCJT 1 1/4	PT	6.12	5.12	3.62	2.08	3,400	6,400	5,500
RCJT 1 7/16	PT	6.12	5.12	3.62	2.08	3,400	6,400	4,800
RCJT 1 1/2	PT	6.75	5.66	4.12	2.31	4,400	8,150	4,600

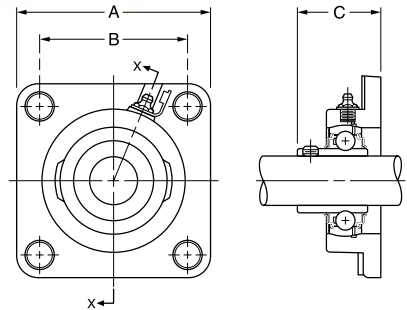


Timken Fafnir P/N	Insert Bearing P/N	YAS A	YAK A	B	C	D	LOAD RATINGS			Limiting Speed (RPM)	
							Static lbs.	Dynamic lbs.	Limiting Speed (RPM)		
YAS 3/4	PT	GY1012KRRB	TDCF	1.31	1.25	3.78	5.00	0.72	1,460	3,250	9,200
YAS 1	PT	GY1100KRRB	TDCF	1.44	1.31	4.12	5.50	0.78	1,730	3,550	6,900
YAS 1 3/16	PT	GY1103KRRB	TDCF	1.69	1.56	4.62	6.19	0.87	2,500	4,900	5,800
YAS 1 1/4S	PT	GY1103KRRB3	TDCF	1.69	1.56	4.62	6.19	0.87	2,500	4,900	5,500
YAS 1 1/4	PT	GY1104KRRB	TDCF	1.88	1.81	5.12	6.56	1.00	3,400	6,400	5,500
YAS 1 7/16	PT	GY1107KRRB	TDCF	1.88	1.81	5.12	6.56	1.00	3,400	6,400	4,800
YAS 1 1/2	PT	GY1108KRRB	TDCF	1.94	1.94	5.37	7.06	1.19	4,400	8,150	4,600
<b>Metric Series</b>											
YAS 20	PT	GYE20KRRB	TDCF	1.31	-	3.78	5.00	0.72	1,460	3,250	8,800
YAS 25	PT	GYE25KRRB	TDCF	1.44	-	4.12	5.50	0.78	1,730	3,550	7,000
YAS 30	PT	GYE30KRRB	TDCF	1.69	-	4.62	6.19	0.87	2,500	4,900	5,800
YAS 35	PT	GYE35KRRB	TDCF	1.88	-	5.12	6.56	1.00	3,400	6,400	5,000
YAS 40	PT	GYE40KRRB	TDCF	1.94	-	5.37	7.06	1.19	4,400	8,150	4,400

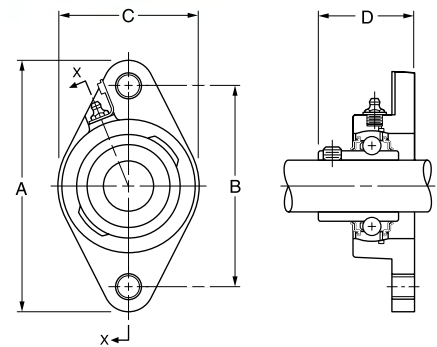


Note: All dimensions shown are in inches.

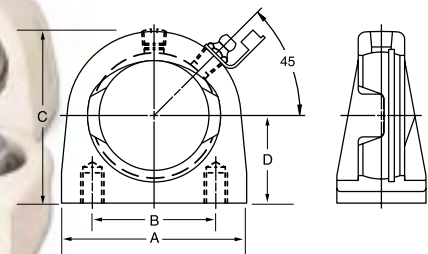
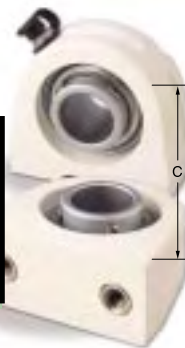
Timken Fafnir P/N		A B C			LOAD RATINGS		
					Static lbs.	Dynamic lbs.	Limiting Speed (RPM)
YCJ 3/4	PT	3.37	2.50	1.46	1,460	3,250	9,200
YCJ 1	PT	3.75	2.75	1.53	1,730	3,550	6,900
YCJ 1 3/16	PT	4.25	3.25	1.62	2,500	4,900	5,800
YCJ 1 1/4S	PT	4.25	3.25	1.62	2,500	4,900	5,500
YCJ 1 1/4	PT	4.62	3.62	1.81	3,400	6,400	5,500
YCJ 1 7/16	PT	4.62	3.62	1.81	3,400	6,400	4,800
YCJ 1 1/2	PT	5.12	4.00	2.12	4,400	8,150	4,600
<b>Metric Series</b>							
YCJ 20	PT	3.37	2.50	1.46	1,460	3,250	8,800
YCJ 25	PT	3.75	2.75	1.53	1,730	3,550	7,000
YCJ 30	PT	4.25	3.25	1.62	2,500	4,900	5,800
YCJ 35	PT	4.62	3.62	1.81	3,400	6,400	5,000
YCJ 40	PT	5.12	4.00	2.12	4,400	8,150	4,400



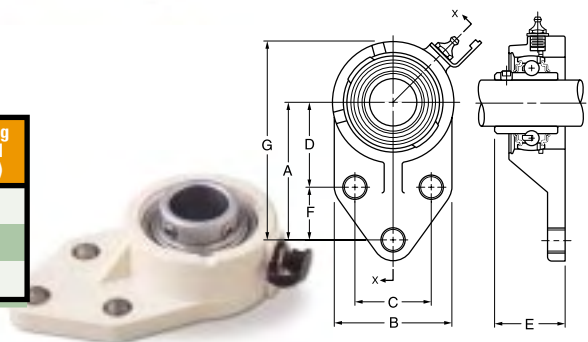
Timken Fafnir P/N		A B C D				LOAD RATINGS		
						Static lbs.	Dynamic lbs.	Limiting Speed (RPM)
YCJT 3/4	PT	4.41	3.53	2.38	1.46	1,460	3,250	9,200
YCJT 1	PT	4.88	3.89	2.75	1.53	1,730	3,550	6,900
YCJT 1 3/16	PT	5.56	4.59	3.12	1.62	2,500	4,900	5,800
YCJT 1 1/4S	PT	5.56	4.59	3.12	1.62	2,500	4,900	5,500
YCJT 1 1/4	PT	6.12	5.12	3.62	1.81	3,400	6,400	5,500
YCJT 1 7/16	PT	6.12	5.12	3.62	1.81	3,400	6,400	4,800
YCJT 1 1/2	PT	6.75	5.66	4.12	2.12	4,400	8,150	4,600
<b>Metric Series</b>								
YCJT 20	PT	4.41	3.53	2.38	1.46	1,460	3,250	8,800
YCJT 25	PT	4.88	3.89	2.75	1.53	1,730	3,550	7,000
YCJT 30	PT	5.56	4.59	3.12	1.62	2,500	4,900	5,800
YCJT 35	PT	6.12	5.12	3.62	1.81	3,400	6,400	5,000
YCJT 40	PT	6.75	5.66	4.12	2.12	4,400	8,150	4,400



Timken Fafnir P/N		A B C D				LOAD RATINGS		
						Static lbs.	Dynamic lbs.	Limiting Speed (RPM)
YTB 1	PT	3.0	2.0	2.80	1.41	1,730	3,550	6,900
<b>Metric Series</b>								
YTB 25	PT	3.0	2.0	2.80	1.41	1,730	3,550	7,000



Timken Fafnir P/N		Basic Outer Ring Size	A B C D E F G							LOAD RATINGS		
										Static lbs.	Dynamic lbs.	Limiting Speed (RPM)
YFB 1	PT	205	3.38	2.50	1.62	1.81	1.50	1.12	4.67	1,560	3,450	6,900
<b>Metric Series</b>												
YFB 25	PT	205	3.38	2.50	1.62	1.81	1.50	1.12	4.67	1,560	3,450	7,000



Note: All dimensions shown are in inches.



## TIMKEN SURVIVOR NT HOUSED UNITS

### LARGEST VARIETY OF CONFIGURATIONS AND SHAFT SIZES:

- Timken Survivor NT, featuring Fafnir ball bearings, is available in popular sizes from 1/2" to 2 15/16"
- Survivor NT units are available as RAK/RAS pillow blocks, RCJ/RCJT flange units and RTU take-up units

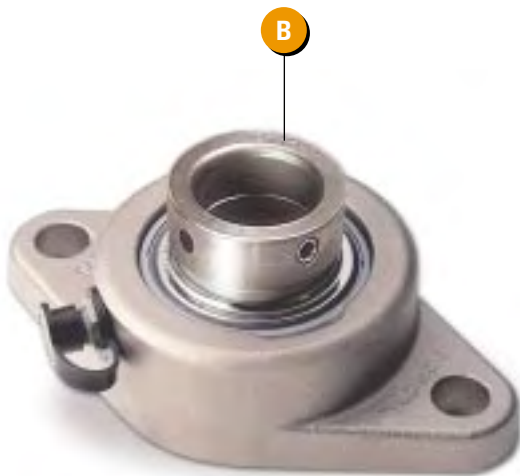


#### **A** Corrosion Resistant Housing:

- Electroless nickel-plated housing with stainless steel grease fitting and protective cap withstands corrosion and prevents contamination

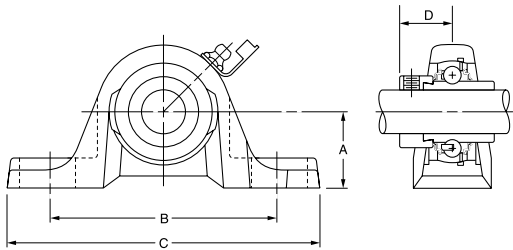
#### **B** Corrosion Resistant Insert Bearing:

- Coated insert bearing
- Stainless steel balls with nylon retainer
- Industrial duty contact seals with stainless steel shroud caps
- Stainless steel self-locking collar
- Factory lubricated with FDA/USDA approved grease (class H1 lubricant) for incidental food contact

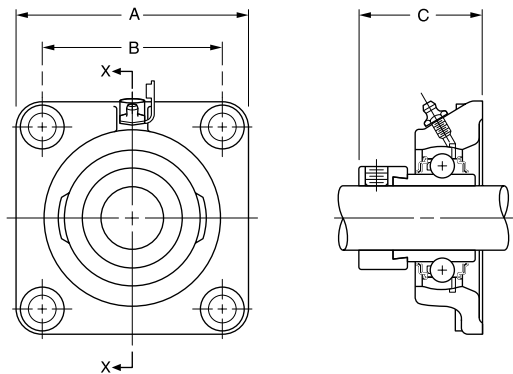


*FDA/USDA Approval: All materials, including lubricant, comply with all applicable federal food processing requirements.*

## TIMKEN SURVIVOR NT HOUSED UNITS



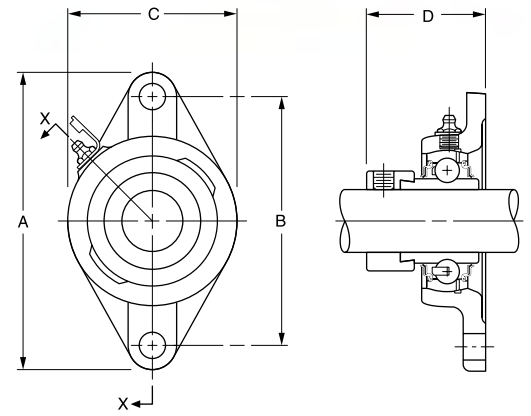
Timken Fafnir P/N	Insert Bearing P/N	TDCF	RAK A	RAS A	B	C	D	LOAD RATINGS		Limiting Speed (RPM)
								Static lbs.	Dynamic lbs.	
RAK 1/2	NT	G1008KRRB	1.06	1.19	3.62	4.87	0.92	1,060	2,400	13,800
RAK 5/8	NT	G1010KRRB	1.06	1.19	3.62	4.87	0.92	1,060	2,400	11,000
RAK 3/4	NT	G1012KRRB	1.25	1.31	3.78	5.00	1.05	1,460	3,250	9,200
RAK 1	NT	G1100KRRB	1.31	1.44	4.12	5.50	1.06	1,730	3,550	6,900
RAK 1 3/16	NT	G1103KRRB	1.56	1.69	4.62	6.19	1.18	2,500	4,900	5,800
RAK 1 1/4S	NT	G1103KRRB3	1.56	1.69	4.62	6.19	1.18	2,500	4,900	5,500
RAK 1 1/4	NT	G1104KRRB	1.81	1.87	5.12	6.56	1.28	3,400	6,400	5,500
RAK 1 7/16	NT	G1107KRRB	1.81	1.87	5.12	6.56	1.28	3,400	6,400	4,800
RAK 1 1/2	NT	G1108KRRB	1.94	1.94	5.37	7.06	1.37	4,400	8,150	4,600
RAK 1 11/16	NT	G1111KRRB	2.06	2.12	5.87	7.53	1.37	4,500	8,150	4,100
RAK 1 3/4	NT	G1112KRRB	2.06	2.12	5.87	7.53	1.37	4,500	8,150	3,900
RAK 1 15/16	NT	G1115KRRB	2.19	2.25	6.22	7.87	1.50	5,100	8,800	3,600
RAK 2	NT	G1200KRRB	2.44	2.50	6.94	8.75	1.72	6,400	10,800	3,400
RAK 2 3/16	NT	G1203KRRB	2.44	2.50	6.94	8.75	1.72	6,400	10,800	3,100
RAK 2 7/16	NT	G1207KRRB	2.69	—	7.41	9.44	1.84	8,000	13,200	2,800
RAK 2 11/16	NT	G1211KRRB	3.00	—	8.00	10.50	1.78	9,650	15,600	2,600
RAK 2 15/16	NT	G1215KRRB	3.31	—	9.50	12.00	2.16	9,800	15,600	2,300



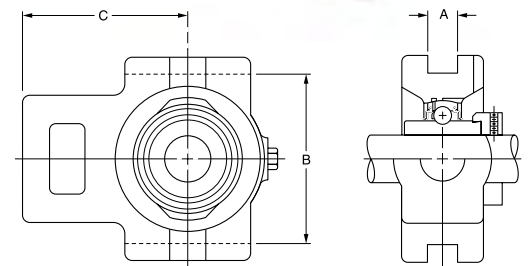
Timken Fafnir P/N	NT	A	B	C	LOAD RATINGS		Limiting Speed (RPM)
					Static lbs.	Dynamic lbs.	
RCJ 1/2	NT	3.00	2.12	1.58	1,060	2,400	13,800
RCJ 5/8	NT	3.00	2.12	1.58	1,060	2,400	11,000
RCJ 3/4	NT	3.37	2.50	1.80	1,460	3,250	9,200
RCJ 1	NT	3.75	2.76	1.81	1,730	3,550	6,900
RCJ 1 3/16	NT	4.25	3.25	1.97	2,500	4,900	5,800
RCJ 1 1/4S	NT	4.25	3.25	1.97	2,500	4,900	5,500
RCJ 1 1/4	NT	4.62	3.62	2.09	3,400	6,400	5,500
RCJ 1 7/16	NT	4.62	3.62	2.09	3,400	6,400	4,800
RCJ 1 1/2	NT	5.12	4.00	2.31	4,400	8,150	4,600
RCJ 1 11/16	NT	5.37	4.12	2.31	4,500	8,150	4,100
RCJ 1 3/4	NT	5.37	4.12	2.31	4,500	8,150	3,900
RCJ 1 15/16	NT	5.62	4.37	2.59	5,100	8,800	3,600
RCJ 2	NT	6.37	5.12	2.94	6,400	10,800	3,400
RCJ 2 3/16	NT	6.37	5.12	2.94	6,400	10,800	3,100
RCJ 2 7/16	NT	6.87	5.62	3.19	8,000	13,200	2,800
RCJ 2 11/16	NT	7.37	5.87	3.50	9,650	15,600	2,600
RCJ 2 15/16	NT	7.75	6.00	3.78	9,800	15,600	2,300

Note: All dimensions shown are in inches.

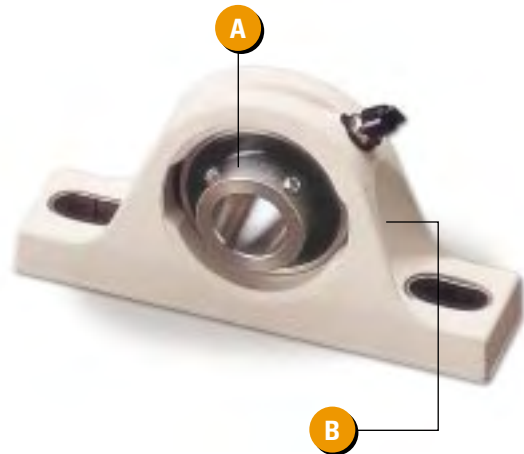
Timken Fafnir P/N	A	B	C	D	LOAD RATINGS			
					Static lbs.	Dynamic lbs.	Limiting Speed (RPM)	
RCJT 1/2	NT	3.87	3.00	2.37	1.58	1,060	2,400	13,800
RCJT 5/8	NT	3.87	3.00	2.37	1.58	1,060	2,400	11,000
RCJT 3/4	NT	4.41	3.53	2.56	1.80	1,460	3,250	9,200
RCJT 1	NT	4.87	3.91	2.75	1.78	1,730	3,550	6,900
RCJT 1 3/16	NT	5.56	4.59	3.12	1.97	2,500	4,900	5,800
RCJT 1 1/4S	NT	5.56	4.59	3.12	1.97	2,500	4,900	5,500
RCJT 1 1/4	NT	6.12	5.12	3.62	2.09	3,400	6,400	5,500
RCJT 1 7/16	NT	6.12	5.12	3.62	2.09	3,400	6,400	4,800
RCJT 1 1/2	NT	6.75	5.66	4.12	2.31	4,400	8,150	4,600
RCJT 1 11/16	NT	7.06	5.83	4.37	2.31	4,500	8,150	4,100
RCJT 1 3/4	NT	7.06	5.83	4.37	2.31	4,500	8,150	3,900
RCJT 1 15/16	NT	7.44	6.19	4.56	2.59	5,100	8,800	3,600
RCJT 2	NT	8.50	7.25	5.00	2.94	6,400	10,800	3,400
RCJT 2 3/16	NT	8.50	7.25	5.00	2.94	6,400	10,800	3,100



Timken Fafnir P/N	A	B	C	LOAD RATINGS			
				Static lbs.	Dynamic lbs.	Limiting Speed (RPM)	
RTU 1	NT	0.53	3.00	0.75	1,730	3,450	6,900
RTU 13/16	NT	0.53	3.50	0.88	2,500	4,900	5,800
RTU 1 1/4	NT	0.53	3.50	0.88	3,400	6,400	5,500
RTU 1 7/16	NT	0.53	3.50	0.88	3,400	6,400	4,800
RTU 1 1/2	NT	0.69	3.97	1.13	4,400	8,150	4,600
RTU 1 15/16	NT	0.69	3.97	1.13	5,100	8,800	3,600
RTU 2 3/16	NT	1.06	5.09	1.38	6,400	10,800	3,100



Note: All dimensions shown are in inches.



## TIMKEN SURVIVOR PS HOUSED UNITS

### A Stainless Steel Bearing Insert:

- 300 series stainless steel insert provides the highest resistance to corrosion in the industry
- Specifically designed for light loads and low speeds
- Stainless steel setscrews

### B Durable Corrosion Proof Polymer Housing:

- Stainless steel crush bushings in mounting holes
- Stainless steel grease fitting with nylon cap
- Polymer resists a broad range of acids and alkalis, as well as steam and continuous temperature up to 250°F (and brief exposure up to 320°F)
- Polymer strength exceeds static capacity of bearing; housing retains proper bearing fit and resists shock loads
- Flush base contains no voids where bacteria can collect

### C End Covers:

- End covers further protect insert bearing from direct contact with washdown solutions and cover rotating components

	PILLOW BLOCKS			FLANGES			Corresponding End Cover p/n
	High Base	Low Base	Tapped Base	Two-Bolt	Four-Bolt	Bracket	
3/4	●	●	–	●	●	–	204EC
1	●	●	●	●	●	●	205EC
1 3/16	●	●	–	●	●	–	206EC
1 1/4	●	●	–	●	●	–	207EC
1 7/16	●	●	–	●	●	–	207EC
Example p/n:	KAS 1 PS	KAK 1 PS	KTB 1 PS	KCJT 1 PS	KCJ 1 PS	KFB 1 PS	

*FDA/USDA Approval: All materials, including lubricant, comply with all applicable federal food processing requirements.*

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**WORLDWIDE LEADER IN BEARINGS AND STEEL**