

Where to use EDT plane bearings

Tough applications where ball bearings don't perform as reliably as desired, such as:

- Sanitary – HACCP
- High or low temperature
- Wash-down or steam
- Exposure to processing liquids, chemicals
- Incomplete rotation or oscillating motion
- Submerged in liquids
- Locations difficult to regularly maintain
- Exposed to bulk solid contaminants

Where to use EDT ball bearings

- High tension applications (V-belt drives, flat belt conveyors, urethane belts)
- High speed devices (fans, pumps, table top conveyors)
- Overhung loads (shaft mounted gear reducers)
- Trunnion applications

HOW TO CALCULATE PV

$$PV - P \times V$$

P - pressure in PSI (lbs./sq. in.)

V - velocity in SFM (surface ft./min.)

$$P - F/A$$

where **F** = force (load) on bearing

A = shaft dia (in.) x LTB

(LTB = bearing length through the bore)

$$V - .262 \times D \times \text{RPM}$$

where **D** = shaft diameter (in.)

RPM = shaft revolutions/min.

See PV Calculation Worksheet on page T4

MATERIAL SELECTION CHART

	ALL-ROUND® Bearing Materials	PV Limit	Max Speed V (SFM)	Max Loading P (PSI)	Continuous Operating Temp.	Performance in Moisture		Δ T Dimensional Stability with Temp Change	Chemical Resistance	Abrasion Resistance	Impact Resistance	USDA/FDA Contact Approval
						Wash-down	Submerged					
Bearings	PA UHMW white	1,000	50	800	150°F	Excellent	Excellent	Poor	Excellent	Abrasion applications are very unpredictable. Each application must be tested for abrasion resistance.	Excellent	Direct
	AA white	2,000	200	1,000	160°F	Excellent	Good	Fair	Fair		Fair	Direct
	OA black OE brown	5,000	350	1,000	160°F	Excellent	Good	Fair	Fair		Fair	Incidental
	NA grey	6,000	350	2,000	220°F	Excellent	Fair	Fair	Fair		Excellent	Incidental
	FA white	6,000	350	1,000	500°F	Excellent	Excellent	Poor	Excellent		Excellent	Direct
	QB black-green	50,000	400	3,000	550°F	Excellent	Poor	Excellent	Fair		Fair	Incidental
	QF black	60,000	400	6,000	500°F	Excellent	Excellent	Excellent	Excellent		Fair	Incidental
	MA black-brown	110,000	400	6,000	600°F	Excellent	Poor	Excellent	Fair		Fair	Incidental
Housings	KG polymer housing	Not a bearing material			160°F	Excellent	Excellent	Good	Excellent	N/A	Good	Incidental
	ZA stainless housing	Not a bearing material			1000°F	Excellent	Excellent	Excellent	Excellent	N/A	Excellent	Direct

Scale: Poor-Fair-Good-Excellent

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