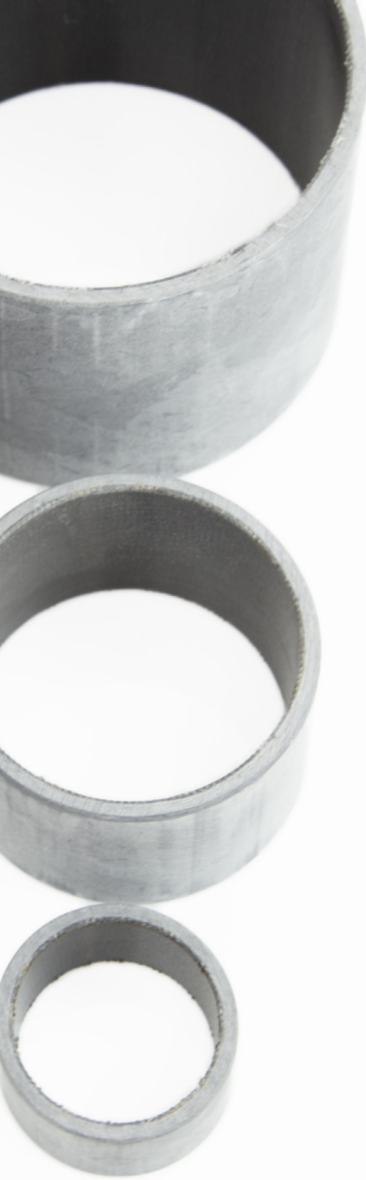




BOWMAX™

Filament Wound Composite Bearing Design Guide

Self Lubricating, Non Corrodible, High Load Bearings.



Bowman BowMax™ Filament Wound Composite Bearing Range

These bearings are maintenance free and are suitable for extreme operating conditions.

This range is dimensionally interchangeable with cast bronze, sintered, wrapped and other types of bearings. Dimensions in accordance with ISO 4379. The outside diameters and the end faces can be machined if required.

ATTRIBUTES

- ▶ High Load Capacity
- ▶ Non Corrodible
- ▶ Good Chemical Resistance
- ▶ Low Friction
- ▶ Withstands Misalignment
- ▶ Meets RoHS Requirements
- ▶ Lowers Cost of Maintenance
- ▶ Good for Shock Loads
- ▶ Good for Contamination Resistance
- ▶ Tolerates Edge Loading
- ▶ Low Wear Rate
- ▶ Excellent for Vibrations
- ▶ Intrinsically Safe
- ▶ Large Temperature Range

TYPES AVAILABLE

- ▶ Plain Cylindrical Bearings
- ▶ Flanged
- ▶ Thrust Washers

* Metric and Imperial sizes. Specials made to order.

APPLICATIONS

- ▶ Agricultural Equipment
- ▶ Hydraulic Cylinder Bushings
- ▶ Excavators
- ▶ Boom Loaders
- ▶ Conveyors
- ▶ Medical Equipment
- ▶ Quarrying Machinery
- ▶ Hoists
- ▶ Forestry Equipment
- ▶ Loading Shovels
- ▶ Food Machinery
- ▶ Cranes and many more



WHAT IS A FILAMENT WOUND COMPOSITE BEARING?

BowMax™ is a long life, high strength self lubricative bearing which uses continuous fibreglass, PTFE and Polyester filaments incorporated into a special epoxy resin matrix for very high strength that is naturally concentric with no seam or overlap. The high strength laminate construction allows for a thin wall bearing which can reduce the size and weight of the assembly. The resulting bearing exhibits a very low coefficient of friction coupled with high load bearing capacity.

BowMax BEARING DATA

Bearing Properties	Unit of Measure		Value
Maximum Load	Static	N/mm ²	480
	Dynamic		205
Operating Temperature	Min	°C	-165
	Max		+165
Maximum Sliding Speed	Dry	m/s	0.13
Maximum PV Factor	Dry	N/mm ² x m/s	1.05
Coefficient of Friction	Dry	N/mm ² x m/s	0.05 - 0.30
Coefficient of Linear Expansion	m/m/ °C		8.67 x 10 ⁻⁶
Thermal Conductivity	W/m K		0.40
Density	g/cm ³		2.02
Ultimate Compressive Strength	N/mm ²		450

RECOMMENDED FITTING DATA

Shaft Tolerance	h8
Housing Tolerance	H7
Shaft Finish	Ra 0.15 - 0.40 µm
Shaft Hardness	HRC 35 to HRC 58
For Longer Life, Seals are Recommended Where Abrasive Contaminants are Present	

BEARING SUBMERSION DATA

Water Absorption (2 Hours)	0.12%
Water Absorption (24 Hours)	0.16%
Specific Gravity	1.87

LUBRICATION

After a very short time a film of the PTFE will transfer from the bore of the bearing on to the shaft. No lubrication is required.

However, if some lubricant can be provided the life will be extended and will give added protection against the ingress of contaminants.

For further technical information or assistance with your designs or applications, please contact our sales department.



BOWMAN™

Metric Plain Heavy Duty Bearings in Filament Wound Composite Material



Bearing ID		Bearing OD		Standard Lengths									
				ID < 80 : Length +/- 0.25									
				10	15	20	25	30	35	40	50	60	
12		17		WMP 12 17 10	WMP 12 17 15	WMP 12 17 20	WMP 12 17 25	WMP 12 17 30					
12		22		WMP 12 22 10	WMP 12 22 15	WMP 12 22 20	WMP 12 22 25	WMP 12 22 30					
15		20		WMP 15 20 10	WMP 15 20 15	WMP 15 20 20	WMP 15 20 25	WMP 15 20 30					
15		25		WMP 15 25 10	WMP 15 25 15	WMP 15 25 20	WMP 15 25 25	WMP 15 25 30					
16		21		WMP 16 21 10	WMP 16 21 15	WMP 16 21 20	WMP 16 21 25	WMP 16 21 30					
16		26		WMP 16 26 10	WMP 16 26 15	WMP 16 26 20	WMP 16 26 25	WMP 16 26 30					
18		23		WMP 18 23 10	WMP 18 23 15	WMP 18 23 20	WMP 18 23 25	WMP 18 23 30					
18		28		WMP 18 28 10	WMP 18 28 15	WMP 18 28 20	WMP 18 28 25	WMP 18 28 30					
20		24			WMP 20 24 15	WMP 20 24 20	WMP 20 24 25	WMP 20 24 30					
20		25			WMP 20 25 15	WMP 20 25 20	WMP 20 25 25	WMP 20 25 30					
20	+0.120 -0.200	27	+0.050 -0.100		WMP 20 27 15	WMP 20 27 20	WMP 20 27 25	WMP 20 27 30					
20		30			WMP 20 30 15	WMP 20 30 20	WMP 20 30 25	WMP 20 30 30					
22		32			WMP 22 32 15	WMP 22 32 20	WMP 22 32 25	WMP 22 32 30					
25		30			WMP 25 30 15	WMP 25 30 20	WMP 25 30 25	WMP 25 30 30	WMP 25 30 35	WMP 25 30 40			
25		35			WMP 25 35 15	WMP 25 35 20	WMP 25 35 25	WMP 25 35 30	WMP 25 35 35	WMP 25 35 40			
28		33			WMP 28 33 15	WMP 28 33 20	WMP 28 33 25	WMP 28 33 30	WMP 28 33 35	WMP 28 33 40			
28		34			WMP 28 34 15	WMP 28 34 20	WMP 28 34 25	WMP 28 34 30	WMP 28 34 35	WMP 28 34 40			
28		38			WMP 28 38 15	WMP 28 38 20	WMP 28 38 25	WMP 28 38 30	WMP 28 38 35	WMP 28 38 40			
30		35				WMP 30 35 20	WMP 30 35 25	WMP 30 35 30	WMP 30 35 35	WMP 30 35 40	WMP 30 35 50	WMP 30 35 60	
30		36				WMP 30 36 20	WMP 30 36 25	WMP 30 36 30	WMP 30 36 35	WMP 30 36 40	WMP 30 36 50	WMP 30 36 60	
30		40				WMP 30 40 20	WMP 30 40 25	WMP 30 40 30	WMP 30 40 35	WMP 30 40 40	WMP 30 40 50	WMP 30 40 60	

Recommended shaft diameter h7 or h8. Recommended housing diameter H7 or H8.

Non-standard bore, OD and length sizes can be supplied. If the size you require is not listed please contact our sales department.

Bore sizes up to 305mm can be supplied.

Bearing ID		Bearing OD		Standard Lengths									
				ID < 80 : Length +/- 0.25					ID ≥ 80 : Length +/- 0.50				
				25	30	35	40	50	60	70	80	90	100
35	+0.120 -0.200	40	+0.020 -0.100	WMP 35 40 25	WMP 35 40 30	WMP 35 40 35	WMP 35 40 40	WMP 35 40 50	WMP 35 40 60	WMP 35 40 70			
35		41		WMP 35 41 25	WMP 35 41 30	WMP 35 41 35	WMP 35 41 40	WMP 35 41 50	WMP 35 41 60	WMP 35 41 70			
35		45		WMP 35 45 25	WMP 35 45 30	WMP 35 45 35	WMP 35 45 40	WMP 35 45 50	WMP 35 45 60	WMP 35 45 70			
40		45		WMP 40 45 25	WMP 40 45 30	WMP 40 45 35	WMP 40 45 40	WMP 40 45 50	WMP 40 45 60	WMP 40 45 70			
40		48		WMP 40 48 25	WMP 40 48 30	WMP 40 48 35	WMP 40 48 40	WMP 40 48 50	WMP 40 48 60	WMP 40 48 70			
40		50	+0.055 -0.105	WMP 40 50 25	WMP 40 50 30	WMP 40 50 35	WMP 40 50 40	WMP 40 50 50	WMP 40 50 60	WMP 40 50 70			
45	+0.130 -0.230	50		WMP 45 50 25	WMP 45 50 30	WMP 45 50 35	WMP 45 50 40	WMP 45 50 50	WMP 45 50 60	WMP 45 50 70	WMP 45 50 80		
45		53		WMP 45 53 25	WMP 45 53 30	WMP 45 53 35	WMP 45 53 40	WMP 45 53 50	WMP 45 53 60	WMP 45 53 70	WMP 45 53 80		
45		55		WMP 45 55 25	WMP 45 55 30	WMP 45 55 35	WMP 45 55 40	WMP 45 55 50	WMP 45 55 60	WMP 45 55 70	WMP 45 55 80		
50		55		WMP 50 55 25	WMP 50 55 30	WMP 50 55 35	WMP 50 55 40	WMP 50 55 50	WMP 50 55 60	WMP 50 55 70	WMP 50 55 80	WMP 50 55 90	WMP 50 55 100
50		58		WMP 50 58 25	WMP 50 58 30	WMP 50 58 35	WMP 50 58 40	WMP 50 58 50	WMP 50 58 60	WMP 50 58 70	WMP 50 58 80	WMP 50 58 90	WMP 50 58 100
50		60		WMP 50 60 25	WMP 50 60 30	WMP 50 60 35	WMP 50 60 40	WMP 50 60 50	WMP 50 60 60	WMP 50 60 70	WMP 50 60 80	WMP 50 60 90	WMP 50 60 100
55		60		WMP 55 60 25	WMP 55 60 30	WMP 55 60 35	WMP 55 60 40	WMP 55 60 50	WMP 55 60 60	WMP 55 60 70	WMP 55 60 80	WMP 55 60 90	WMP 55 60 100
55		63		WMP 55 63 25	WMP 55 63 30	WMP 55 63 35	WMP 55 63 40	WMP 55 63 50	WMP 55 63 60	WMP 55 63 70	WMP 55 63 80	WMP 55 63 90	WMP 55 63 100
55		65		WMP 55 65 25	WMP 55 65 30	WMP 55 65 35	WMP 55 65 40	WMP 55 65 50	WMP 55 65 60	WMP 55 65 70	WMP 55 65 80	WMP 55 65 90	WMP 55 65 100
60		65			WMP 60 65 30	WMP 60 65 35	WMP 60 65 40	WMP 60 65 50	WMP 60 65 60	WMP 60 65 70	WMP 60 65 80	WMP 60 65 90	WMP 60 65 100
60	+0.145 -0.245	70	+0.070 -0.120		WMP 60 70 30	WMP 60 70 35	WMP 60 70 40	WMP 60 0 50	WMP 60 70 60	WMP 60 70 70	WMP 60 70 80	WMP 60 70 90	WMP 60 70 100
65		75				WMP 65 75 35	WMP 65 75 40	WMP 65 75 50	WMP 65 75 60	WMP 65 75 70	WMP 65 75 80	WMP 65 75 90	WMP 65 75 100
70		75				WMP 70 75 35	WMP 70 75 40	WMP 70 75 50	WMP 70 75 60	WMP 70 75 70	WMP 70 75 80	WMP 70 75 90	WMP 70 75 100
70		80				WMP 70 80 35	WMP 70 80 40	WMP 70 80 50	WMP 70 80 60	WMP 70 80 70	WMP 70 80 80	WMP 70 80 90	WMP 70 80 100
75		80				WMP 75 80 35	WMP 75 80 40	WMP 75 80 50	WMP 75 80 60	WMP 75 80 70	WMP 75 80 80	WMP 75 80 90	WMP 75 80 100
75		85				WMP 75 85 35	WMP 75 85 40	WMP 75 85 50	WMP 75 85 60	WMP 75 85 70	WMP 75 85 80	WMP 75 85 90	WMP 75 85 100
80	+0.175 -0.275	85	+0.075 -0.125						WMP 80 85 60	WMP 80 85 70	WMP 80 85 80	WMP 80 85 90	WMP 80 85 100
80		90							WMP 80 90 60	WMP 80 90 70	WMP 80 90 80	WMP 80 90 90	WMP 80 90 100
85		90							WMP 85 90 60	WMP 85 90 70	WMP 85 90 80	WMP 85 90 90	WMP 85 90 100
85		95							WMP 85 95 60	WMP 85 95 70	WMP 85 95 80	WMP 85 95 90	WMP 85 95 100
90		95							WMP 90 95 60	WMP 90 95 70	WMP 90 95 80	WMP 90 95 90	WMP 90 95 100
90		100							WMP 90 100 60	WMP 90 100 70	WMP 90 100 80	WMP 90 100 90	WMP 90 100 100
90		105							WMP 90 105 60	WMP 90 105 70	WMP 90 105 80	WMP 90 105 90	WMP 90 105 100

Recommended shaft diameter h7 or h8. Recommended housing diameter H7 or H8.

Non-standard bore, OD and length sizes can be supplied. If the size you require is not listed please contact our sales department.

Bore sizes up to 305mm can be supplied.

Metric Plain Bearings

Bearing ID		Bearing OD		Standard Lengths								
				ID < 80 : Length +/- 0.25								
				60	70	80	90	100	125	150	175	200
95	+0.185 -0.310	100	+0.075 -0.125	WMP 95 100 60	WMP 95 100 70	WMP 95 100 80	WMP 95 100 90	WMP 95 100 100				
95		105		WMP 95 105 60	WMP 95 105 70	WMP 95 105 80	WMP 95 105 90	WMP 95 105 100				
95		110	+0.075 -0.125	WMP 95 110 60	WMP 95 110 70	WMP 95 110 80	WMP 95 110 90	WMP 95 110 100				
80		85		WMP 80 85 60	WMP 80 85 70	WMP 80 85 80	WMP 80 85 90	WMP 80 85 100				
80		90		WMP 80 90 60	WMP 80 90 70	WMP 80 90 80	WMP 80 90 90	WMP 80 90 100				
85		90		WMP 85 90 60	WMP 85 90 70	WMP 85 90 80	WMP 85 90 90	WMP 85 90 100				
85		95		WMP 85 95 60	WMP 85 95 70	WMP 85 95 80	WMP 85 95 90	WMP 85 95 100				
90		95		WMP 90 95 60	WMP 90 95 70	WMP 90 95 80	WMP 90 95 90	WMP 90 95 100				
90		100		WMP 90 100 60	WMP 90 100 70	WMP 90 100 80	WMP 90 100 90	WMP 90 100 100				
90		105		WMP 90 105 60	WMP 90 105 70	WMP 90 105 80	WMP 90 105 90	WMP 90 105 100				
95		100		WMP 95 100 60	WMP 95 100 70	WMP 95 100 80	WMP 95 100 90	WMP 95 100 100				
95		105		WMP 95 105 60	WMP 95 105 70	WMP 95 105 80	WMP 95 105 90	WMP 95 105 100				
95		110		WMP 95 110 60	WMP 95 110 70	WMP 95 110 80	WMP 95 110 90	WMP 95 110 100				
100		105		WMP 100 105 60	WMP 100 105 70	WMP 100 105 80	WMP 100 105 90	WMP 100 105 100	WMP 100 105 125			
100		115		WMP 100 115 60	WMP 100 115 70	WMP 100 115 80	WMP 100 115 90	WMP 100 115 100	WMPF100 115 125			
110		115		WMP 110 115 60	WMP 110 115 70	WMP 110 115 80	WMP 110 115 90	WMP 110 115 100	WMP 110 115 125			
110		120		WMP 110 120 60	WMP 110 120 70	WMP 110 120 80	WMP 110 120 90	WMP 110 120 100	WMP 110 120 125			
110		125		WMP 110 125 60	WMP 110 125 70	WMP 110 125 80	WMP 110 125 90	WMP 110 125 100	WMP 110 125 125			
120		125	+0.090 -0.140	WMP 120 125 60	WMP 120 125 70	WMP 120 125 80	WMP 120 125 90	WMP 120 125 100	WMP 120 125 125			
120		130		WMP 120 130 60	WMP 120 130 70	WMP 120 130 80	WMP 120 130 90	WMP 120 130 100	WMP 120 130 125			
120		135		WMP 120 135 60	WMP 120 135 70	WMP 120 135 80	WMP 120 135 90	WMP 120 135 100	WMP 120 135 125			
130		135			WMP 130 135 70	WMP 130 135 80	WMP 130 135 90	WMP 130 135 100	WMP 130 135 125	WMP 130 135 150	WMP 130 135 175	WMP 130 135 200
130		140			WMP 130 140 70	WMP 130 140 80	WMP 130 140 90	WMP 130 140 100	WMP 130 140 125	WMP 130 140 150	WMP 130 140 175	WMP 130 140 200
130		145			WMP 130 145 70	WMP 130 145 80	WMP 130 145 90	WMP 130 145 100	WMP 130 145 125	WMP 130 145 150	WMP 130 145 175	WMP 130 145 200
140		145			WMP 140 145 70	WMP 140 145 80	WMP 140 145 90	WMP 140 145 100	WMP 140 145 125	WMP 140 145 150	WMP 140 145 175	WMP 140 145 200
140		150			WMP 140 150 70	WMP 140 150 80	WMP 140 150 90	WMP 140 150 100	WMP 140 150 125	WMP 140 150 150	WMP 140 150 175	WMP 140 150 200
140		155			WMP 140 155 70	WMP 140 155 80	WMP 140 155 90	WMP 140 155 100	WMP 140 155 125	WMP 140 155 150	WMP 140 155 175	WMP 140 155 200
150		155			WMP 150 155 70	WMP 150 155 80	WMP 150 155 90	WMP 150 155 100	WMP 150 155 125	WMP 150 155 150	WMP 150 155 175	WMP 150 155 200
150		160			WMP 150 160 70	WMP 150 160 80	WMP 150 160 90	WMP 150 160 100	WMP 150 160 125	WMP 150 160 150	WMP 150 160 175	WMP 150 160 200
150		165			WMPF150 165 70	WMP 150 165 80	WMP 150 165 90	WMP 150 165 100	WMP 150 165 125	WMP 150 165 150	WMP 150 165 175	WMP 150 165 200

Recommended shaft diameter h7 or h8. Recommended housing diameter H7 or H8.
Non-standard bore, OD and length sizes can be supplied. If the size you require is not listed please contact our sales department.
Bore sizes up to 305mm can be supplied.


BOWMAN™

Metric Heavy Duty Flanged Bearings in Filament Wound Composite Material

Bearing ID		Bearing OD		Flange	Standard Lengths								
					ID < 80 : Length +/- 0.25								
					10	15	20	25	30	35	40	50	60
12	+0.120 -0.200	17	+0.050 -0.100	Flange Diameter and Thickness can be Specified by Customer	WMPF 12 17 10	WMPF 12 17 15	WMPF 12 17 20	WMPF 12 17 25	WMPF 12 17 30				
12		22			WMPF 12 22 10	WMPF 12 22 15	WMPF 12 22 20	WMPF 12 22 25	WMPF 12 22 30				
15		20			WMPF 15 20 10	WMPF 15 20 15	WMPF 15 20 20	WMPF 15 20 25	WMPF 15 20 30				
15		25			WMPF 15 25 10	WMPF 15 25 15	WMPF 15 25 20	WMPF 15 25 25	WMPF 15 25 30				
16		21			WMPF 16 21 10	WMPF 16 21 15	WMPF 16 21 20	WMPF 16 21 25	WMPF 16 21 30				
16		26			WMPF 16 26 10	WMPF 16 26 15	WMPF 16 26 20	WMPF 16 26 25	WMPF 16 26 30				
18		23			WMPF 18 23 10	WMPF 18 23 15	WMPF 18 23 20	WMPF 18 23 25	WMPF 18 23 30				
18		28			WMPF 18 28 10	WMPF 18 28 15	WMPF 18 28 20	WMPF 18 28 25	WMPF 18 28 30				
20		24				WMPF 20 24 15	WMPF 20 24 20	WMPF 20 24 25	WMPF 20 24 30				
20		25				WMPF 20 25 15	WMPF 20 25 20	WMPF 20 25 25	WMPF 20 25 30				
20		27				WMPF 20 27 15	WMPF 20 27 20	WMPF 20 27 25	WMPF 20 27 30				
20		30				WMPF 20 30 15	WMPF 20 30 20	WMPF 20 30 25	WMPF 20 30 30				
22		32				WMPF 22 32 15	WMPF 22 32 20	WMPF 22 32 25	WMPF 22 32 30				
25		30				WMPF 25 30 15	WMPF 25 30 20	WMPF 25 30 25	WMPF 25 30 30	WMPF 25 30 35	WMPF 25 30 40		
25		35				WMPF 25 35 15	WMPF 25 35 20	WMPF 25 35 25	WMPF 25 35 30	WMPF 25 35 35	WMPF 25 35 40		
28		33				WMPF 28 33 15	WMPF 28 33 20	WMPF 28 33 25	WMPF 28 33 30	WMPF 28 33 35	WMPF 28 33 40		
28		34				WMPF 28 34 15	WMPF 28 34 20	WMPF 28 34 25	WMPFF 28 34 30	WMPF 28 34 35	WMPF 28 34 40		
28		38				WMPF 28 38 15	WMPF 28 38 20	WMPF 28 38 25	WMPF 28 38 30	WMPF 28 38 35	WMPF 28 38 40		
30		35					WMPF 30 35 20	WMPF 30 35 25	WMPF 30 35 30	WMPF 30 35 35	WMPF 30 35 40	WMPF 30 35 50	WMPF 30 35 60
30		36					WMPF 30 36 20	WMPF 30 36 25	WMPF 30 36 30	WMPF 30 36 35	WMPF 30 36 40	WMPF 30 36 50	WMPF 30 36 60
30		40					WMPF 30 40 20	WMPF 30 40 25	WMPF 30 40 30	WMPF 30 40 35	WMPF 30 40 40	WMPF 30 40 50	WMPF 30 40 60

Recommended shaft diameter h7 or h8. Recommended housing diameter H7 or H8.

Non-standard bore, OD and length sizes can be supplied. If the size you require is not listed please contact our sales department.

Bore sizes up to 305mm can be supplied.

Metric Flanged Bearings

Bearing ID		Bearing OD		Flange	Standard Lengths									
					ID < 80 : Length +/- 0.25					ID ≥ 80 : Length +/- 0.50				
					25	30	35	40	50	60	70	80	90	100
35	+0.120 -0.200	40	+0.050 -0.100	Flange Diameter and Thickness can be Specified by Customer	WMPF 35 40 25	WMPF 35 40 30	WMPF 35 40 35	WMPF 35 40 40	WMPF 35 40 50	WMPF 35 40 60	WMPF 35 40 70			
35		41			WMPF 35 41 25	WMPF 35 41 30	WMPF 35 41 35	WMPF 35 41 40	WMPF 35 41 50	WMPF 35 41 60	WMPF 35 41 70			
35		45			WMPF 35 45 25	WMPF 35 45 30	WMPF 35 45 35	WMPF 35 45 40	WMPF 35 45 50	WMPF 35 45 60	WMPF 35 45 70			
40		45			WMPF 40 45 25	WMPF 40 45 30	WMPF 40 45 35	WMPF 40 45 40	WMPF 40 45 50	WMPF 40 45 60	WMPF 40 45 70			
40		48			WMPF 40 48 25	WMPF 40 48 30	WMPF 40 48 35	WMPF 40 48 40	WMPF 40 48 50	WMPF 40 48 60	WMPF 40 48 70			
40		50			WMPF 40 50 25	WMPF 40 50 30	WMPF 40 50 35	WMPF 40 50 40	WMPF 40 50 50	WMPF 40 50 60	WMPF 40 50 70			
45	+0.130 -0.230	50	+0.055 -0.105		WMPF 45 50 25	WMPF 45 50 30	WMPF 45 50 35	WMPF 45 50 40	WMPF 45 50 50	WMPF 45 50 60	WMPF 45 50 70	WMPF 45 50 80		
45		53			WMPF 45 53 25	WMPF 45 53 30	WMPF 45 53 35	WMPF 45 53 40	WMPF 45 53 50	WMPF 45 53 60	WMPF 45 53 70	WMPF 45 53 80		
45		55			WMPF 45 55 25	WMPF 45 55 30	WMPF 45 55 35	WMPF 45 55 40	WMPF 45 55 50	WMPF 45 55 60	WMPF 45 55 70	WMPF 45 55 80		
50		55			WMPF 50 55 25	WMPF 50 55 30	WMPF 50 55 35	WMPF 50 55 40	WMPF 50 55 50	WMPF 50 55 60	WMPF 50 55 70	WMPF 50 55 80	WMPF 50 55 90	WMPF 50 55 100
50		58			WMPF 50 58 25	WMPF 50 58 30	WMPF 50 58 35	WMPF 50 58 40	WMPF 50 58 50	WMPF 50 58 60	WMPF 50 58 70	WMPF 50 58 80	WMPF 50 58 90	WMPF 50 58 100
50		60			WMPF 50 60 25	WMPF 50 60 30	WMPF 50 60 35	WMPF 50 60 40	WMPF 50 60 50	WMPF 50 60 60	WMPF 50 60 70	WMPF 50 60 80	WMPF 50 60 90	WMPF 50 60 100
55		60	WMPF 55 60 25		WMPF 55 60 30	WMPF 55 60 35	WMPF 55 60 40	WMPF 55 60 50	WMPF 55 60 60	WMPF 55 60 70	WMPF 55 60 80	WMPF 55 60 90	WMPF 55 60 100	
55		63	WMPF 55 63 25		WMPF 55 63 30	WMPF 55 63 35	WMPF 55 63 40	WMPF 55 63 50	WMPF 55 63 60	WMPF 55 63 70	WMPF 55 63 80	WMPF 55 63 90	WMPF 55 63 100	
55		65	WMPF 55 65 25		WMPF 55 65 30	WMPF 55 65 35	WMPF 55 65 40	WMPF 55 65 50	WMPF 55 65 60	WMPF 55 65 70	WMPF 55 65 80	WMPF 55 65 90	WMPF 55 65 100	
60		65	WMPF 60 65 30		WMPF 60 65 35	WMPF 60 65 40	WMPF 60 65 50	WMPF 60 65 60	WMPF 60 65 70	WMPF 60 65 80	WMPF 60 65 90	WMPF 60 65 100		
60		70	WMPF 60 70 30		WMPF 60 70 35	WMPF 60 70 40	WMPF 60 0 50	WMPF 60 70 60	WMPF 60 70 70	WMPF 60 70 80	WMPF 60 70 90	WMPF 60 70 100		
65		75			WMPF 65 75 35	WMPF 65 75 40	WMPF 65 75 50	WMPF 65 75 60	WMPF 65 75 70	WMPF 65 75 80	WMPF 65 75 90	WMPF 65 75 100		
70	75		WMPF 70 75 35		WMPF 70 75 40	WMPF 70 75 50	WMPF 70 75 60	WMPF 70 75 70	WMPF 70 75 80	WMPF 70 75 90	WMPF 70 75 100			
70	80		WMPF 70 80 35		WMPF 70 80 40	WMPF 70 80 50	WMPF 70 80 60	WMPF 70 80 70	WMPF 70 80 80	WMPF 70 80 90	WMPF 70 80 100			
75	80		WMPF 75 80 35		WMPF 75 80 40	WMPF 75 80 50	WMPF 75 80 60	WMPF 75 80 70	WMPF 75 80 80	WMPF 75 80 90	WMPF 75 80 100			
75	85		WMPF 75 85 35		WMPF 75 85 40	WMPF 75 85 50	WMPF 75 85 60	WMPF 75 85 70	WMPF 75 85 80	WMPF 75 85 90	WMPF 75 85 100			
80	85					WMPF 80 85 50	WMPF 80 85 60	WMPF 80 85 70	WMPF 80 85 80	WMPF 80 85 90	WMPF 80 85 100			
80	90					WMPF 80 90 50	WMPF 80 90 60	WMPF 80 90 70	WMPF 80 90 80	WMPF 80 90 90	WMPF 80 90 100			
85	+0.175 -0.275	90	+0.075 -0.125				WMPF 85 90 50	WMPF 85 90 60	WMPF 85 90 70	WMPF 85 90 80	WMPF 85 90 90	WMPF 85 90 100		
85		95					WMPF 85 95 50	WMPF 85 95 60	WMPF 85 95 70	WMPF 85 95 80	WMPF 85 95 90	WMPF 85 95 100		
90		95					WMPF 90 95 50	WMPF 90 95 60	WMPF 90 95 70	WMPF 90 95 80	WMPF 90 95 90	WMPF 90 95 100		
90		100					WMPF 90 100 50	WMPF 90 100 60	WMPF 90 100 70	WMPF 90 100 80	WMPF 90 100 90	WMPF 90 100 100		
90		105					WMPF 90 105 50	WMPF 90 105 60	WMPF 90 105 70	WMPF 90 105 80	WMPF 90 105 90	WMPF 90 105 100		
95		100					WMPF 95 100 50	WMPF 95 100 60	WMPF 95 100 70	WMPF 95 100 80	WMPF 95 100 90	WMPF 95 100 100		
95	+0.185 -0.310	105					WMPF 95 105 50	WMPF 95 105 60	WMPF 95 105 70	WMPF 95 105 80	WMPF 95 105 90	WMPF 95 105 100		
95		110					WMPF 95 110 50	WMPF 95 110 60	WMPF 95 110 70	WMPF 95 110 80	WMPF 95 110 90	WMPF 95 110 100		

Recommended shaft diameter h7 or h8. Recommended housing diameter H7 or H8.
 Non-standard bore, OD and length sizes can be supplied. If the size you require is not listed please contact our sales department.
 Bore sizes up to 305mm can be supplied.

Bearing ID		Bearing OD		Flange	Standard Lengths								
					ID < 80 : Length +/- 0.25								
					60	70	80	90	100	125	150	175	200
100	+0.185 -0.310	105	+0.085 -0.135	Flange Diameter and Thickness can be Specified by Customer		WMPF 100 105 70	WMPF 100 105 80	WMPF 100 105 90	WMPF 100 105 100	WMPF 100 105 125			
100		115			WMPF 100 115 60	WMPF 100 115 70	WMPF 100 115 80	WMPF 100 115 90	WMPF 100 115 100	WMPF 100 115 125			
110		115			WMPF 110 115 60	WMPF 110 115 70	WMPF 110 115 80	WMPF 110 115 90	WMPF 110 115 100	WMPF 110 115 125			
110		120			WMPF 110 120 60	WMPF 110 120 70	WMPF 110 120 80	WMPF 110 120 90	WMPF 110 120 100	WMPF 110 120 125			
110		125			WMPF 110 125 60	WMPF 110 125 70	WMPF 110 125 80	WMPF 110 125 90	WMPF 110 125 100	WMPF 110 125 125			
120	+0.215 -0.340	125	+0.090 -0.140		WMPF 120 125 60	WMPF 120 125 70	WMPF 120 125 80	WMPF 120 125 90	WMPF 120 125 100	WMPF 120 125 125			
120		130			WMPF 120 130 60	WMPF 120 130 70	WMPF 120 130 80	WMPF 120 130 90	WMPF 120 130 100	WMPF 120 130 125			
120		135			WMPF 120 135 60	WMPF 120 135 70	WMPF 120 135 80	WMPF 120 135 90	WMPF 120 135 100	WMPF 120 135 125			
130		135				WMPF 130 135 70	WMPF 130 135 80	WMPF 130 135 90	WMPF 130 135 100	WMPF 130 135 125	WMPF 130 135 150	WMPF 130 135 175	WMPF 130 135 200
130		140				WMPF 130 140 70	WMPF 130 140 80	WMPF 130 140 90	WMPF 130 140 100	WMPF 130 140 125	WMPF 130 140 150	WMPF 130 140 175	WMPF 130 140 200
130		145				WMPF 130 145 70	WMPF 130 145 80	WMPF 130 145 90	WMPF 130 145 100	WMPF 130 145 125	WMPF 130 145 150	WMPF 130 145 175	WMPF 130 145 200
140		145				WMPF 140 145 70	WMPF 140 145 80	WMPF 140 145 90	WMPF 140 145 100	WMPF 140 145 125	WMPF 140 145 150	WMPF 140 145 175	WMPF 140 145 200
140		150				WMPF 140 150 70	WMPF 140 150 80	WMPF 140 150 90	WMPF 140 150 100	WMPF 140 150 125	WMPF 140 150 150	WMPF 140 150 175	WMPF 140 150 200
140		155				WMPF 140 155 70	WMPF 140 155 80	WMPF 140 155 90	WMPF 140 155 100	WMPF 140 155 125	WMPF 140 155 150	WMPF 140 155 175	WMPF 140 155 200
150		155				WMPF 150 155 70	WMPF 150 155 80	WMPF 150 155 90	WMPF 150 155 100	WMPF 150 155 125	WMPF 150 155 150	WMPF 150 155 175	WMPF 150 155 200
150		160				WMPF 150 160 70	WMPF 150 160 80	WMPF 150 160 90	WMPF 150 160 100	WMPF 150 160 125	WMPF 150 160 150	WMPF 150 160 175	WMPF 150 160 200
150		165				WMPF 150 165 70	WMPF 150 165 80	WMPF 150 165 90	WMPF 150 165 100	WMPF 150 165 125	WMPF 150 165 150	WMPF 150 165 175	WMPF 150 165 200

Recommended shaft diameter h7 or h8. Recommended housing diameter H7 or H8.

Non-standard bore, OD and length sizes can be supplied. If the size you require is not listed please contact our sales department.

Bore sizes up to 305mm can be supplied.


BOWMAN™

Metric Heavy Duty Washers in Filament Wound Composite Material

ID	OD	Dowel Hole Diameter		Dowel Hole PCD		Standard Thickness		
						+/- 0.05		
						1.5	2	3
8	16	1.75				WMPW 8 16 1.5	WMPW 8 16 2	WMPW 8 16 3
10	20					WMPW 10 20 1.5	WMPW 10 20 2	WMPW 10 20 3
12	24			18		WMPW 12 24 1.5	WMPW 12 24 2	WMPW 12 24 3
14	26	2.25		20		WMPW 14 26 1.5	WMPW 14 26 2	WMPW 14 26 3
15	30			22.5		WMPW 15 30 1.5	WMPW 15 30 2	WMPW 15 30 3
16	30			22		WMPW 16 30 1.5	WMPW 16 30 2	WMPW 16 30 3
18	32			25		WMPW 18 32 1.5	WMPW 18 32 2	WMPW 18 32 3
18	36			27		WMPW 18 36 1.5	WMPW 18 36 2	WMPW 18 36 3
20	36			28		WMPW 20 36 1.5	WMPW 20 36 2	WMPW 20 36 3
20	40			30		WMPW 20 40 1.5	WMPW 20 40 2	WMPW 20 40 3
22	38	3.25	+0.125 -0.125	30	+0.120 -0.120	WMPW 22 38 1.5	WMPW 22 38 2	WMPW 22 38 3
22	44			33		WMPW 22 44 1.5	WMPW 22 44 2	WMPW 22 44 3
24	42			33		WMPW 24 42 1.5	WMPW 24 42 2	WMPW 24 42 3
25	50			37.5		WMPW 25 50 1.5	WMPW 25 50 2	WMPW 25 50 3
26	44			35		WMPW 26 44 1.5	WMPW 26 44 2	WMPW 26 44 3
28	48	4.25		38		WMPW 28 48 1.5	WMPW 28 48 2	WMPW 28 48 3
30	55			42.5		WMPW 30 55 1.5	WMPW 30 55 2	WMPW 30 55 3
32	54			43		WMPW 32 54 1.5	WMPW 32 54 2	WMPW 32 54 3
35	60			47.5		WMPW 35 60 1.5	WMPW 35 60 2	WMPW 35 60 3
38	62			50		WMPW 38 62 1.5	WMPW 38 62 2	WMPW 38 62 3
40	65			52.5		WMPW 40 65 1.5	WMPW 40 65 2	WMPW 40 65 3
42	66			54		WMPW 42 66 1.5	WMPW 42 66 2	WMPW 42 66 3
45	70			57.5		WMPW 45 70 1.5	WMPW 45 70 2	WMPW 45 70 3

The maximum static and dynamic loads shown on page 2 are reduced by 60 % for thrust washers.
 Thrust washes are supplied as standard with no dowel hole. If required then please specify on order.
 Non standard bores and OD'S can be supplied. Bore sizes up to 300 mm can be supplied. Maximum ID to OD not to exceed 50 mm.
 Special thickness can be made to order.

ID	OD	Dowel Hole Diameter		Dowel Hole PCD		Standard Thickness		
						+/- 0.05		
						1.5	2	3
48	74	4.25	+0.125 -0.125	61	+0.120 -0.120	WMPW 48 74 1.5	WMPW 48 74 2	WMPW 48 74 3
50	75			62.5		WMPW 50 75 1.5	WMPW 50 75 2	WMPW 50 75 3
52	78			65		WMPW 52 78 1.5	WMPW 52 78 2	WMPW 52 78 3
55	80			67.5		WMPW 55 82 1.5	WMPW 55 82 2	WMPW 55 82 3
60	85			72.5		WMPW 60 85 1.5	WMPW 60 85 2	WMPW 60 85 3
62	90			76		WMPW 62 90 1.5	WMPW 62 90 2	WMPW 62 90 3
65	95			80		WMPW 65 95 1.5	WMPW 65 95 2	WMPW 65 95 3
70	100			85		WMPW 70 100 1.5	WMPW 70 100 2	WMPW 70 100 3
75	115			95		WMPW 75 115 1.5	WMPW 75 115 2	WMPW 75 115 3
95	115			105		WMPW 95 115 1.5	WMPW 95 115 2	WMPW 95 115 3

The maximum static and dynamic loads shown on page 2 are reduced by 60 % for thrust washers.
Thrust washes are supplied as standard with no dowel hole. If required then please specify on order.
Non standard bores and OD'S can be supplied. Bore sizes up to 300 mm can be supplied. Maximum ID to OD not to exceed 50 mm.
Special thickness can be made to order.

Imperial Sized Bearings



Plain Bearings



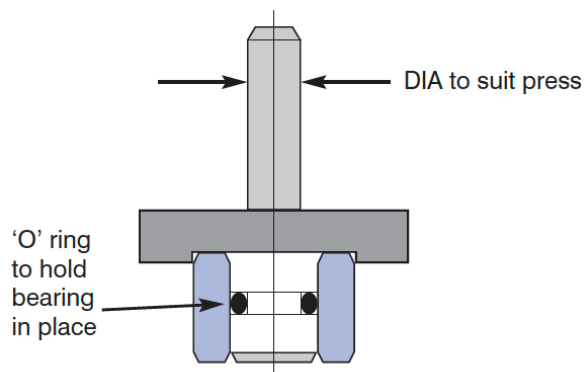
Flanged Bearings



Thrust Washers

Imperial inch sizes are available from 1/4 bore to 6 inch bore

How to fit a bearing





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