



# TILTING PAD BEARINGS

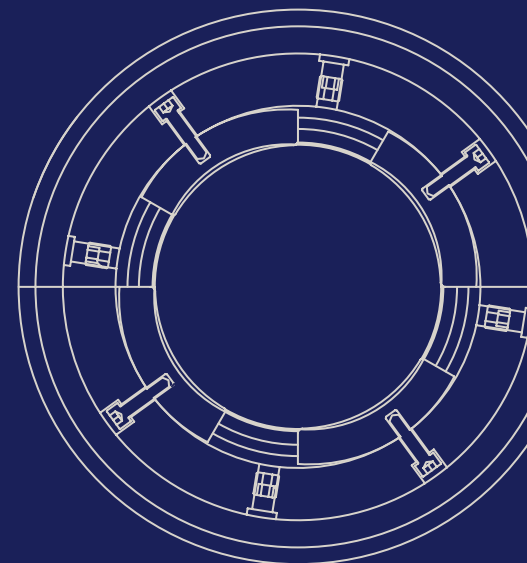
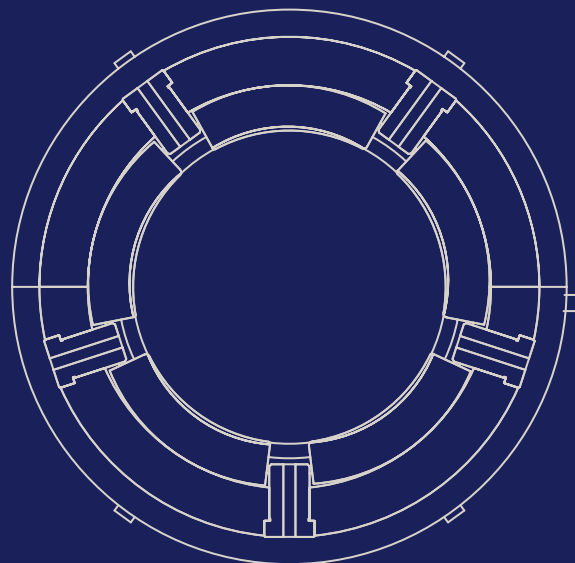
---

TILTING PAD JOURNAL BEARINGS

TILTING PAD THRUST BEARINGS

PRESSING EQUALIZING BEARINGS

TILTING PAD COMBINATION BEARINGS



## **03. Introduction**

---

## **04. KMP Tilting Pad Bearing**

Tilting Pad Journal

Tilting Pad Thrust

Pressure Equalising Bearings

Tilting Pad Combination

---

## **015. Custom Bearing Design & Manufacturing**

Optional Features

---

## **18. Instrumentation**

---

## **19. Services**

Technical Services

Consultancy

---

## **19. Materials**

---

# INTRODUCTION

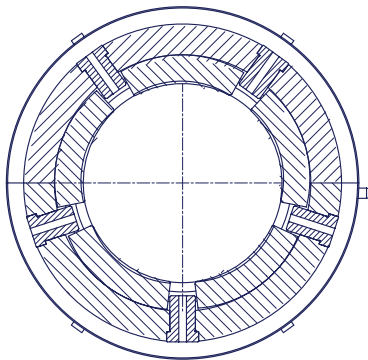
---

KMP Technologies Pvt. Ltd. is a pioneering Indian company specializing in designing and manufacturing all kinds, and sizes of Tilting Pad Bearing Assemblies, and other babbitt-lined bi-metal and tri-metal bearings. Our products are extensively used as original fitment and spares in Gas, Steam and Hydro Turbines, Gear Boxes, Pumps, Compressors, and other critical rotating equipment.

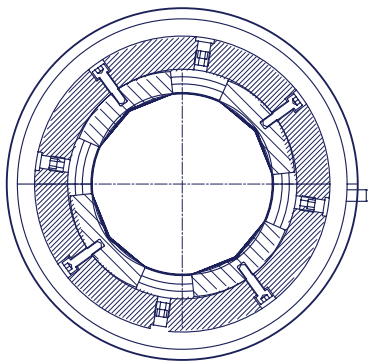
Established in 1968, KMP's services and products are sought with confidence by our global customer base, including reputed manufacturers and end-users, for their requirements of different kinds of bearings. The company highly values its prestigious customer profile and is committed to extending its constant and consistent services, and high quality products, to all the existing and potentially new clients in India and abroad.

# KMP TILTING PAD BEARINGS

---



Typical KMP 4-Pad Tilting Pad Journal Bearing (Available on Demand)



Typical KMP 5-Pad Tilting Pad Journal Bearing (Modular)

## TILTING PAD JOURNAL

Our standard Tilting Pad Journal Bearing design covers the under-noted range and configurations. For bearings larger than Shaft Dia 500mm, or higher loads, we provide customized bearings (please refer to the section on Customized Solutions)

### NOMENCLATURE: KMP-JBxxx-yy-z [a/b/c]

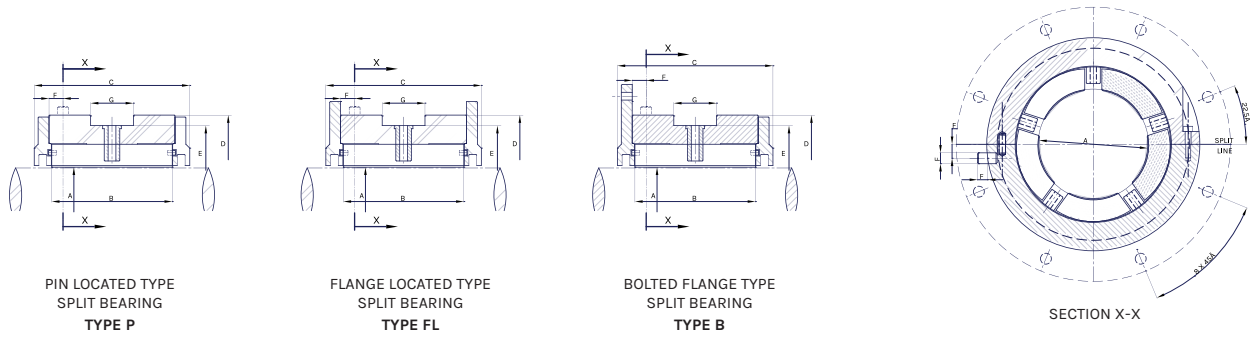
xxx Nominal Bore  
yy Pad Width  
z P,FL or B (fitment type)

### CONFIGURATION: [a/b/c]

a\* D or F (Directed or Flooded Lubrication)  
b\* I or II (single piece or split in 2 halves)  
c\* C, OP or OL (Center, Offset Point or Offset Line Pivot)

### OPTIONS

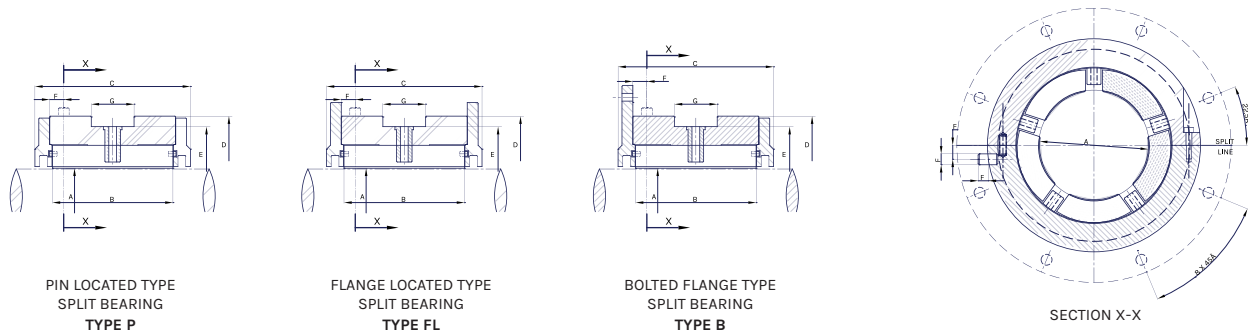
- L/D 0.4, 0.7 and 1
- Directed OR Flooded Lubrication
- Load on Pad OR between Pads
- Single piece OR split in 2-halves
- Centre Pivot (Bi-directional) OR Offset Pivot (uni-directional)



**TILTING PAD JOURNAL BEARING L/D=0.4, DIMENSIONS & LOAD CAPACITY**

Series	Nominal Bore	Pad Width	Casing Width	Oil Groove Width	Oil Groove Diameter	Casing Max Diameter	Pin	Max Load Capacity (N)	
	A							B	C
KMP-JB025-10	25	10	28	6	58	62	4	575	750
KMP-JB030-12	30	12	30	6	65	69	4	828	1080
KMP-JB035-14	35	14	32	6	72	76	4	1127	1470
KMP-JB040-16	40	16	34	7	77	82	4	1472	1920
KMP-JB045-18	45	18	37	7	84	89	4	1863	2430
KMP-JB050-20	50	20	39	8	90	95	5	2300	3000
KMP-JB060-24	60	24	45	9	113	120	5	3312	4320
KMP-JB070-28	70	28	50	10	122	130	5	4508	5880
KMP-JB080-32	80	32	56	11	130	140	6	5888	7680
KMP-JB090-36	90	36	62	12	155	165	6	7452	9720
KMP-JB0100-40	100	40	68	14	163	175	8	9200	12000
KMP-JB110-44	110	44	74	15	178	190	8	11132	14520
KMP-JB0120-48	120	48	80	18	201	215	10	13248	17280
KMP-JB0130-52	130	52	86	20	204	218	10	15548	20280
KMP-JB140-56	140	56	92	22	211	225	10	18032	23520
KMP-JB150-60	150	60	96	24	234	250	10	20700	27000
KMP-JB160-64	160	64	102	25	250	268	12	22528	30720
KMP-JB180-72	180	72	112	28	278	300	12	28512	38880
KMP-JB200-80	200	80	124	30	311	335	16	35200	48000
KMP-JB220-88	220	88	132	32	348	372	16	42592	58080
KMP-JB240-96	240	96	140	35	376	400	20	50688	69120
KMP-JB260-104	260	104	150	38	402	428	20	59488	81120
KMP-JB280-112	280	112	168	40	418	450	20	68992	94080
KMP-JB300-120	300	120	180	42	444	480	20	79200	108000
KMP-JB350-140	350	140	210	50	516	566	25.4	107800	147000
KMP-JB400-160	400	160	240	58	570	630	25.4	140800	192000
KMP-JB450-180	450	180	270	68	630	700	25.4	178200	243000
KMP-JB500-200	500	200	300	80	680	760	25.4	220000	300000

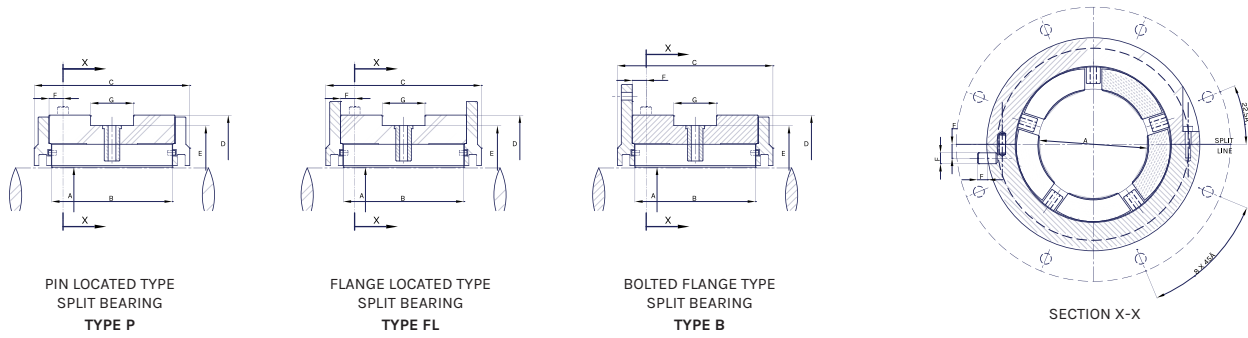
(All dimensions in mm, unless otherwise specified)



**TILTING PAD JOURNAL BEARING L/D=0.7, DIMENSIONS & LOAD CAPACITY**

Series	Nominal Bore	Pad Width	Casing Width	Oil Groove Width	Oil Groove Diameter	Casing Max Diameter	Pin	Max Load Capacity (N)	
	A							B	C
KMP-JB025-17.5	25	17.5	35.5	6	58	62	4	575	750
KMP-JB030-21	30	21	39	8	65	69	4	828	1080
KMP-JB035-24.5	35	24.5	42.5	8	72	76	4	1127	1470
KMP-JB040-28	40	28	46	9	77	82	4	1472	1920
KMP-JB045-31.5	45	31.5	51	10	84	89	4	1863	2430
KMP-JB050-35	50	35	54	11	90	95	5	2300	3000
KMP-JB060-42	60	42	64	14	113	120	5	3312	4320
KMP-JB070-49	70	49	72	16	122	130	5	4508	5880
KMP-JB080-56	80	56	80	18	130	140	6	5888	7680
KMP-JB090-63	90	63	90	20	155	165	6	7452	9720
KMP-JB0100-70	100	70	98	24	163	175	8	9200	12000
KMP-JB110-77	110	77	108	26	178	190	8	11132	14520
KMP-JB0120-84	120	84	118	28	201	215	10	13248	17280
KMP-JB0130-91	130	91	125	30	204	218	10	15548	20280
KMP-JB140-98	140	98	134	32	211	225	10	18032	23520
KMP-JB150-105	150	105	145	35	234	250	10	20700	27000
KMP-JB160-112	160	112	152	38	250	268	12	22528	30720
KMP-JB180-126	180	126	168	42	278	300	12	28512	38880
KMP-JB200-140	200	140	186	48	311	335	16	35200	48000
KMP-JB220-154	220	154	202	52	348	372	16	42592	58080
KMP-JB240-168	240	168	218	56	376	400	20	50688	69120
KMP-JB260-182	260	182	232	62	402	428	20	59488	81120
KMP-JB280-196	280	196	256	68	418	450	20	68992	94080
KMP-JB300-210	300	210	274	74	444	480	20	79200	108000
KMP-JB350-245	350	245	320	84	516	566	25.4	107800	147000
KMP-JB400-280	400	280	364	96	570	630	25.4	140800	192000
KMP-JB450-315	450	315	410	110	630	700	25.4	178200	243000
KMP-JB500-350	500	350	450	125	680	760	25.4	220000	300000

(All dimensions in mm, unless otherwise specified)



TILTING PAD JOURNAL BEARING L/D=1, DIMENSIONS & LOAD CAPACITY

Series	Nominal Bore	Pad Width	Casing Width	Oil Groove Width	Oil Groove Diameter	Casing Max Diameter	Pin	Max Load Capacity (N)	
	A							B	C
KMP-JB025-17.5	25	25	41	6	58	62	4	575	750
KMP-JB030-21	30	30	45	8	65	69	4	828	1080
KMP-JB035-24.5	35	35	51	8	72	76	4	1127	1470
KMP-JB040-28	40	40	58	14	77	82	4	1472	1920
KMP-JB045-31.5	45	45	65	15	84	89	4	1863	2430
KMP-JB050-35	50	50	79	18	90	95	5	2300	3000
KMP-JB060-42	60	60	82	20	113	120	5	3312	4320
KMP-JB070-49	70	70	93	23	122	130	5	4508	5880
KMP-JB080-56	80	80	105	26	130	140	6	5888	7680
KMP-JB090-63	90	90	118	30	155	165	6	7452	9720
KMP-JB0100-70	100	100	130	34	163	175	8	9200	12000
KMP-JB110-77	110	110	142	38	178	190	8	11132	14520
KMP-JB0120-84	120	120	154	40	201	215	10	13248	17280
KMP-JB0130-91	130	130	164	44	204	218	10	15548	20280
KMP-JB140-98	140	140	176	48	211	225	10	18032	23520
KMP-JB150-105	150	150	190	52	234	250	10	20700	27000
KMP-JB160-112	160	160	200	54	250	268	12	22528	30720
KMP-JB180-126	180	180	222	60	278	300	12	28512	38880
KMP-JB200-140	200	200	248	68	311	335	16	35200	48000
KMP-JB220-154	220	220	272	72	348	372	16	42592	58080
KMP-JB240-168	240	240	290	82	376	400	20	50688	69120
KMP-JB260-182	260	260	310	88	402	428	20	59488	81120
KMP-JB280-196	280	280	342	94	418	450	20	68992	94080
KMP-JB300-210	300	300	368	110	444	480	20	79200	108000
KMP-JB350-245	350	350	430	120	516	566	25.4	107800	147000
KMP-JB400-280	400	400	490	135	570	630	25.4	140800	192000
KMP-JB450-315	450	450	550	155	630	700	25.4	178200	243000
KMP-JB500-350	500	500	610	175	680	760	25.4	220000	300000

(All dimensions in mm, unless otherwise specified)

# TILTING PAD THRUST

KMP standard Tilting Pad Thrust Bearing design covers the under-noted range and configurations. For larger sizes or loads, we provide customized bearings (please refer to the section on Customized Solutions)

## NOMENCLATURE: KMP-TB-x-yy-zz [a/b/c/d/e]

- x Pad Series
- yy Pad OD
- zz ST or DT (Thrust face on one side or both sides)

## CONFIGURATION: [a/b/c/d/e]

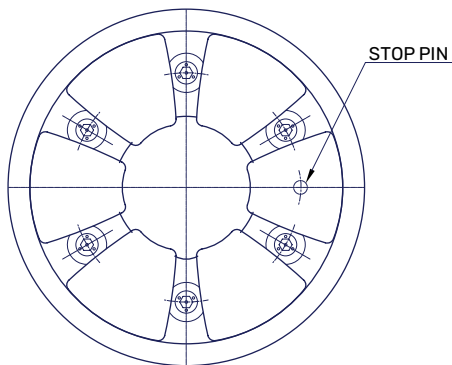
- a\* D or F (Directed or Flooded Lubrication)
- b\* C, P or L (Center, Offset Point or Offset Line Pivot)
- c G or Null (with or without Surface Grooves)
- d E or Null (with or without Pressure Equalizing)

## OPTIONS

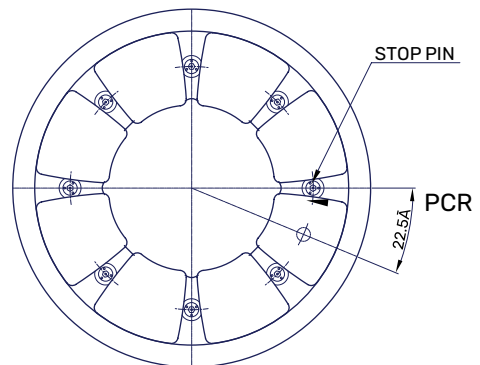
- 6,8,11,13 or 14 Pads
- Directed OR Flooded Lubrication
- Single piece OR split in 2-halves
- Centre Pivot (Bi-directional) OR Offset Pivot (uni-directional), with/without Surface Grooves
- Single OR Double Thrust Face
- Pressure Equalizing

For further information on Offset Pivots, Surface Grooves and other high performance options, please refer to the section on Optional Features.

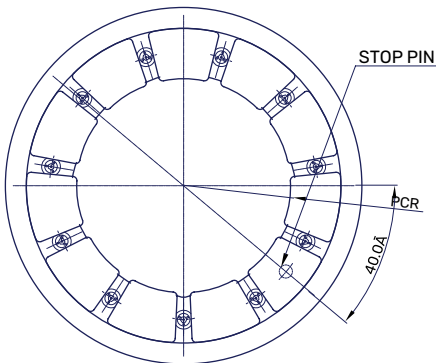
## Our 4 most popular series of Tilting Thrust



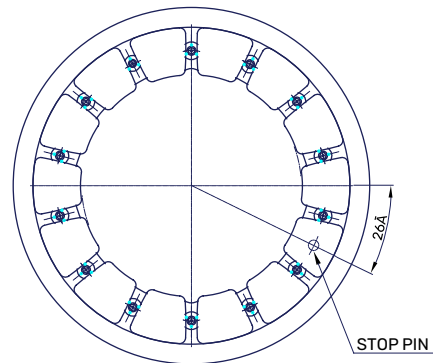
TB 6 SERIES



TB 8 SERIES

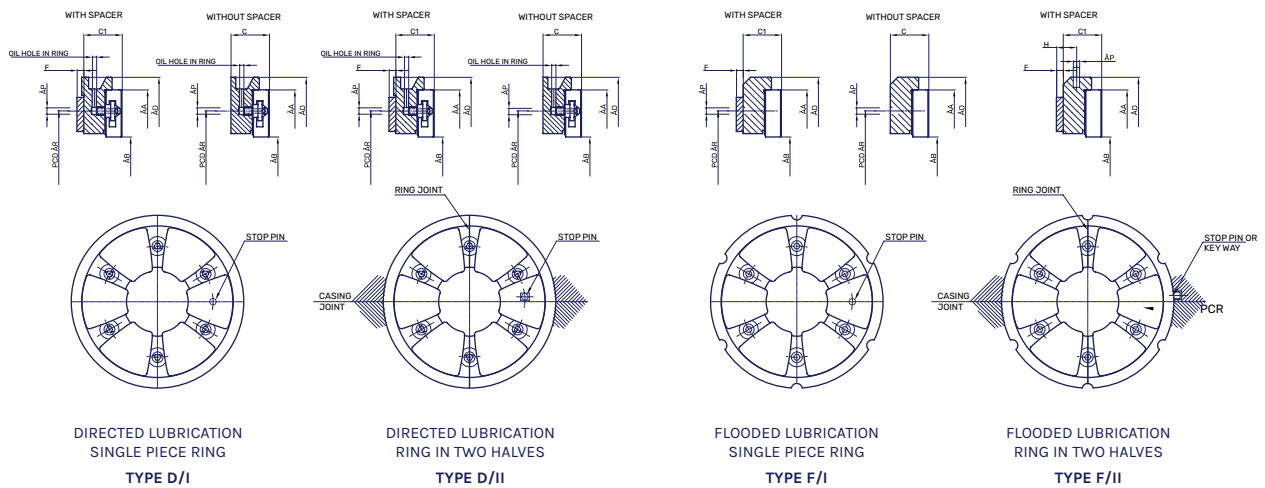


TB 11 SERIES



TB 14 SERIES

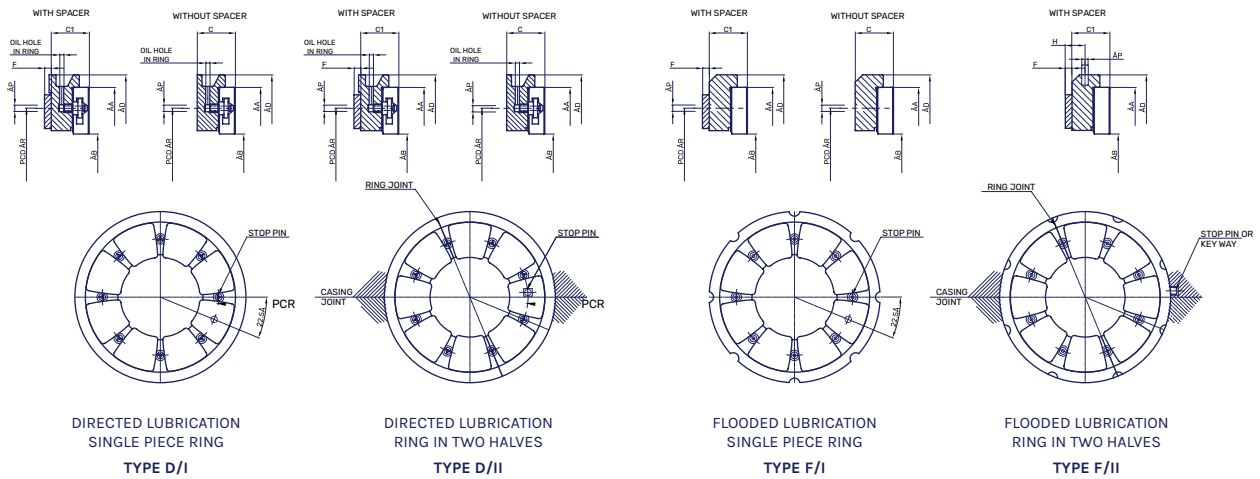




**6 - PAD TILTING PAD THRUST BEARING, DIMENSIONS AND LOAD CAPACITY (MAX SHAFT DIA 160 MM)**

Series	Pad ID	Pad OD	Axial Length		Spacer	Carrier Ring OD	Locating Pin			Max Load Capacity (N)	(End Play)
	B	A	C1 (h8)	C (h8)	F	D (h7)	P	R	H		
KMP-TB-6-058	24	58	16	18	3	69	3	45	8	5198	0.20
KMP-TB-6-069	29	69	17.5	20	3	80	4	53	8	7308	0.25
KMP-TB-6-083	34	83	19	21	3	95	5	63	8	10688	0.25
KMP-TB-6-093	39	93	20.5	22	3	108	5	71	10	13290	0.3
KMP-TB-6-100	43	100	22	25	4	115	6	77	12	15196	0.3
KMP-TB-6-108	46	108	24	26	4	125	6	83	12	17800	0.3
KMP-TB-6-118	49	118	25.4	28	4	138	6	90	13	21483	0.35
KMP-TB-6-127	54	127	27	30	4.5	147	8	98	13	24634	0.35
KMP-TB-6-140	58	140	28.5	31.5	4.5	162	8	107	15	31480	0.35
KMP-TB-6-152	63	152	31	33	4.5	175	10	116	15	39242	0.40
KMP-TB-6-168	69	168	34	38	5	193	10	128	16	48118	0.40
KMP-TB-6-184	76	184	37	40	5	209	11	140	16	57586	0.40
KMP-TB-6-198	82	198	41	44	5	223	11	152	19	66610	0.50
KMP-TB-6-218	90	218	43	47	6	245	12.7	167	22	80850	0.50
KMP-TB-6-236	97	236	45	49	6	265	12.7	180	22	94925	0.50
KMP-TB-6-259	108	259	48.5	52	6	289	12.7	198	22	117782	0.50
KMP-TB-6-285	115	285	55	58	6	317	16	217	24	1489597	0.60
KMP-TB-6-306	126	306	58	64	8	340	20	234	25	173968	0.60
KMP-TB-6-336	138	336	65	70	8	370	20	259	28	209970	0.60
KMP-TB-6-366	150	366	71	77	9	401	20	280	30	249355	0.60
KMP-TB-6-400	165	400	75	80	9	438	22	306	35	297050	0.70
KMP-TB-6-436	180	436	84	91	10	475	25.4	334	40	352805	0.70
KMP-TB-6-476	196	476	90	96	10	515	25.4	364	45	420960	0.70

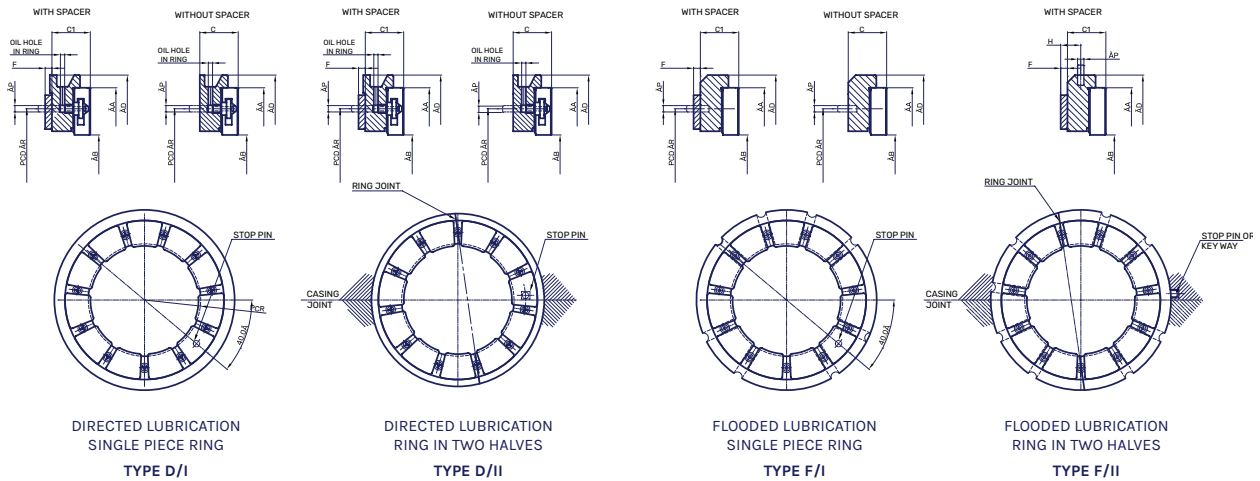
(All dimensions in mm, unless otherwise specified)



**8 - PAD TILTING PAD THRUST BEARING, DIMENSIONS AND LOAD CAPACITY (MAX SHAFT DIA 280 MM)**

Series	Pad ID	Pad OD	Axial Length		Spacer	Carrier Ring OD	Locating Pin			Max Load Capacity (N)	(End Play)
	B	A	C1 (h8)	C (h8)	F	D (h7)	P	R	H		
KMP-TB-8-052	28	52	12.7	14	3	63	3	42	8	3580	0.20
KMP-TB-8-060	32	60	14.3	16	3	71	4	48	8	4800	0.20
KMP-TB-8-074	38	74	16	17.5	3	86	5	59	8	7518	0.20
KMP-TB-8-086	47	86	17.5	20	4	101	5	69	10	9670	0.25
KMP-TB-8-105	55.5	105	19	21.5	4	120	6	84	12	14811	0.25
KMP-TB-8-114	62	114	20.5	23	4	131	6	92	12	17745	0.30
KMP-TB-8-124	66	124	22	25.5	5	144	6	99	13	22600	0.30
KMP-TB-8-135	71	135	24	27.5	5	155	8	108	13	27037	0.30
KMP-TB-8-148	78	148	25.4	29	5	170	8	118	15	32444	0.35
KMP-TB-8-161	86	161	27	30.5	5	184	10	129	15	37990	0.35
KMP-TB-8-177	92	177	28.5	33	6	202	10	141	16	46890	0.35
KMP-TB-8-191	102	191	31.5	35	6	216	11	153	16	55423	0.40
KMP-TB-8-210	112	210	34	38	6	237	11	168	19	67068	0.40
KMP-TB-8-228	120	228	37	43	8	257	12.7	182	22	79880	0.40
KMP-TB-8-250	134	250	40	46	8	280	12.7	200	22	94673	0.50
KMP-TB-8-273	145	273	43	48	8	305	16	218	22	113716	0.50
KMP-TB-8-298	158	298	45	51	9	330	16	238	24	135684	0.50
KMP-TB-8-324	175	324	50	57	10	358	20	260	25	158024	0.50
KMP-TB-8-353	190	353	56	62	10	387	20	284	28	188115	0.60
KMP-TB-8-383	204	383	60	65.5	10	418	22	306	30	223320	0.60
KMP-TB-8-416	223	416	64	71.5	12.7	456	22	335	35	265662	0.60
KMP-TB-8-459	247	459	70	76.5	12.7	498	25.4	368	40	318110	0.60
KMP-TB-8-500	266	500	78	85	12.7	540	25.4	400	45	380962	0.70
KMP-TB-8-544	290	544	83	90	14	586	25.4	436	50	450233	0.70
KMP-TB-8-598	320	598	90	99	16	642	28	480	55	542407	0.70

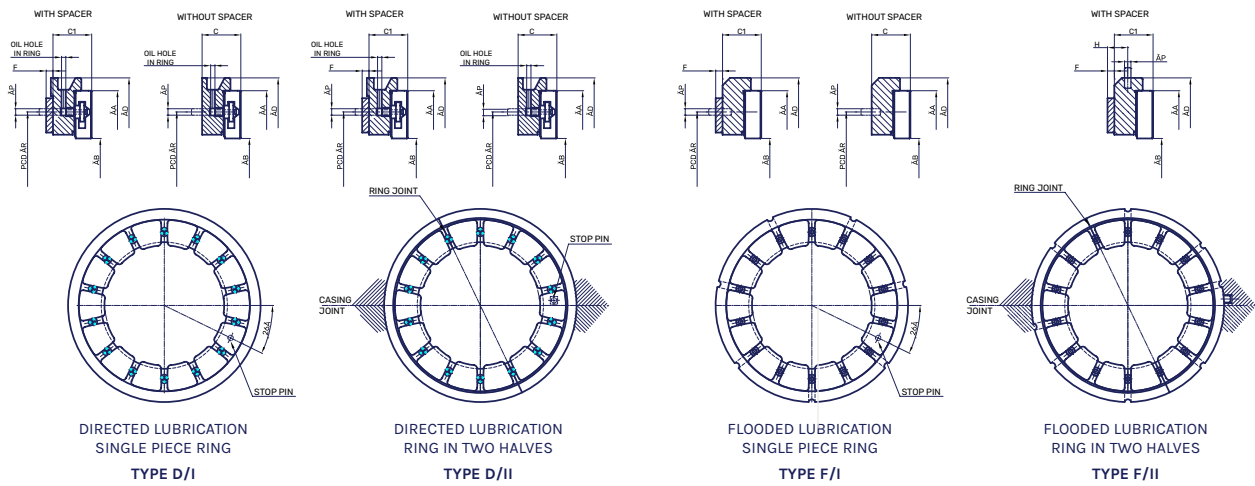
(All dimensions in mm, unless otherwise specified)



**11 - PAD TILTING PAD THRUST BEARING, DIMENSIONS AND LOAD CAPACITY (MAX SHAFT DIA 480 MM)**

Series	Pad ID	Pad OD	Axial Length		Spacer	Carrier Ring OD	Locating Pin			Max Load Capacity (N)	(End Play)
	B	A	C1 (h8)	C (h8)	F	D (h7)	P	R	H		
KMP-TB-11-068	42	68	12.7	15.2	4	83	3	56	8	5332	0.20
KMP-TB-11-079	50	79	14.3	16.8	4	94	4	66	8	6974	0.20
KMP-TB-11-095	62	95	16	18.5	4	112	5	80	8	9660	0.20
KMP-TB-11-114	72	114	17.5	20.5	5	134	5	95	10	15438	0.25
KMP-TB-11-135	86	135	19	22	5	155	6	113	12	21400	0.25
KMP-TB-11-150	96	150	20.5	23.5	5	173	6	126	12	26252	0.30
KMP-TB-11-162	104	162	22	25	5	187	6	136	13	30490	0.30
KMP-TB-11-174	110	174	24	28	6	199	8	145	13	36598	0.30
KMP-TB-11-190	120	190	25.4	29.4	6	217	8	159	15	43693	0.35
KMP-TB-11-210	135	210	27	32.5	8	239	10	176	15	52100	0.35
KMP-TB-11-230	146	230	28.5	34	8	259	10	192	16	63595	0.35
KMP-TB-11-250	158	250	31.5	38	9	282	11	209	16	78378	0.40
KMP-TB-11-270	174	270	34	40.5	9	302	11	227	19	89000	0.40
KMP-TB-11-295	190	295	37	44.5	10	329	12.7	248	22	106336	0.40
KMP-TB-11-325	210	325	40	50	12.7	360	12.7	274	22	128470	0.50
KMP-TB-11-350	224	350	43	53	12.7	368	16	293	22	153716	0.50
KMP-TB-11-384	246	384	45	54.7	12.7	422	16	322	24	184781	0.50
KMP-TB-11-418	270	418	50	60	12.7	458	20	352	25	216415	0.50
KMP-TB-11-458	295	458	56	66.5	14	500	20	385	28	260867	0.60
KMP-TB-11-500	320	500	60	70.5	14	543	22	420	30	313707	0.60
KMP-TB-11-545	350	545	64	74.5	14	588	22	458	35	370933	0.60
KMP-TB-11-594	380	594	70	82	16	639	25.4	498	40	443007	0.60
KMP-TB-11-645	415	645	78	90	16	690	28	542	45	518170	0.70
KMP-TB-11-705	452	705	83	96	16	752	28	592	50	622145	0.70
KMP-TB-11-770	495	770	90	102	16	820	28	648	55	739369	0.70

(All dimensions in mm, unless otherwise specified)

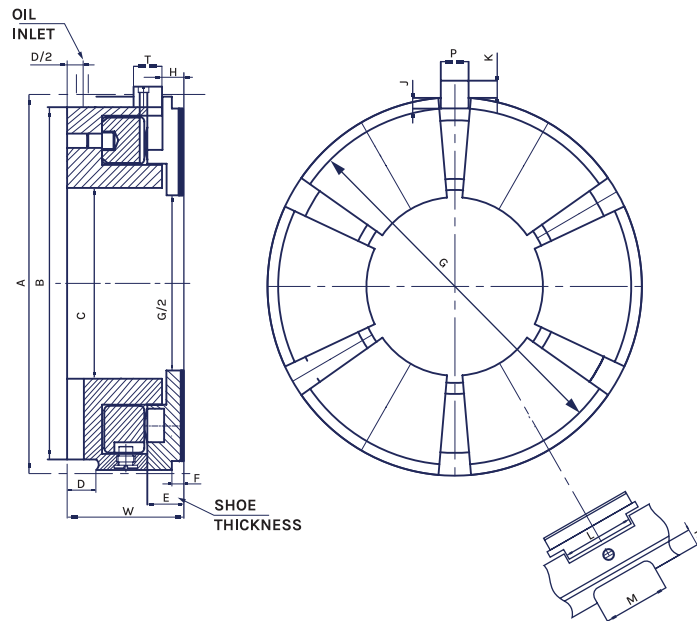


14 - PAD TILTING PAD THRUST BEARING, DIMENSIONS AND LOAD CAPACITY (MAX SHAFT DIA 400 MM)

Series	Pad ID	Pad OD	Axial Length		Spacer	Carrier Ring OD	Locating Pin			Max Load Capacity (N)	(End Play)
	B	A	C1 (h8)	C (h8)	F	D (h7)	P	R	H		
KMP-TB-14-083	58	83	12.7	15.2	4	93	3	72	6	6572	0.20
KMP-TB-14-098	68	98	14.3	17	4	108	4	84	8	9284	0.20
KMP-TB-14-117	82	117	16	19	5	129	5	101	8	12985	0.20
KMP-TB-14-140	98.5	140	18	22	5	152	5	121	10	18454	0.25
KMP-TB-14-165	115	165	20	23.5	5	180	6	142	10	26100	0.25
KMP-TB-14-182	130	182	22	26	6	197	6	158	10	30250	0.30
KMP-TB-14-195	140	195	24	28	6	215	8	170	12	34350	0.30
KMP-TB-14-215	150	215	25.4	29	6	235	8	185	13	46888	0.30
KMP-TB-14-235	165	235	27	31	6	257	10	203	13	55335	0.35
KMP-TB-14-257	180	257	28	33	8	280	10	222	15	66500	0.35
KMP-TB-14-280	197	280	31	34	8	303	11	242	15	78240	0.35
KMP-TB-14-305	215	305	34	39	8	330	11	264	17	92490	0.40
KMP-TB-14-333	234	333	38	43	9	358	12.7	288	17	115120	0.40
KMP-TB-14-360	255	360	40	47	9	390	12.7	312	20	137250	0.40
KMP-TB-14-395	278	395	44	51	9	425	16	342	20	167355	0.50
KMP-TB-14-430	303	430	46	54	10	460	16	372	22	197854	0.50
KMP-TB-14-470	330	470	50	57	10	502	20	406	25	238043	0.50
KMP-TB-14-515	365	515	53	60	12.7	547	20	446	25	280550	0.50
KMP-TB-14-560	396	560	60	65	12.7	595	22	485	30	333226	0.60
KMP-TB-14-610	430	610	65	70	12.7	648	25.4	528	30	397872	0.60

(All dimensions in mm, unless otherwise specified)

# PRESSURE EQUALISING BEARINGS



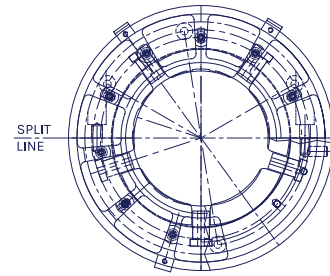
GENERAL ARRANGEMENT FOR 6 & 8 PAD PRESSURE EQUALISING BEARINGS

Bearing Size		101.6	127	152.4	177.8	203.2	228.6	266.7	304.8	342.9	381	431.8
Area	B	5160	8065	11615	15805	20260	26130	35550	46450	58775	72580	93225
Housing Bore	A	111.12	136.52	161.92	187.32	212.72	238.12	279.4	317.5	355.6	393.7	447.68
Normal Size	G	101.6	127	152.4	177.8	203.2	228.6	266.7	304.8	342.9	381	431.8
	W	36.6	44.5	52.3	60.5	68.3	76.2	85.9	95.3	108	117.4	133.4
	J	3.1	4.1	4.8	6.4	7.9	7.9	8.6	10.4	12.7	14.2	14.2
	K	3.1	4.1	4.8	4.8	4.8	4.8	5.6	5.6	6.4	7.9	7.9
	D	9.7	12.7	14.2	17.5	20.6	22.4	25.4	30.2	36.6	35.1	46
	H	7.1	7.9	9.7	11.9	12.7	14.2	15.8	17.5	19.1	20.6	23.9
	P	6.4	7.9	9.7	9.7	11.2	11.2	12.7	14.2	15.8	17.5	19.1
	C	55.6	69.9	82.6	95.3	109.5	124	144.5	165.1	185.7	206.3	233.4
	T	9.7	14.2	16.8	20.6	23.9	23.9	28.5	30.2	35.1	38.1	41.2
	B	104.7	125.5	150.9	171.5	193.6	219	254	293.6	350.2	368.3	419.1
Oil Slot Width	M	20.6	15.8	20.6	22.4	31.8	38.1	44.5	50.8	50.8	55.6	60.5
Oil Slot Depth	N	4.8	7.1	9.7	11.2	13.5	12.7	17.5	16.8	20.6	22.4	25.4
Shoe Straddle Mill	L	32.54	40.49	50.01	59.54	69.06	76.99	80.95	100.81	107.16	129.39	145.26
Shoe Thickness	E	12.7	15.88	19.05	22.23	25.4	28.58	31.75	34.93	38.1	41.28	46.03
Shoe Relief at OD	F	3.1	4.1	4.1	4.8	5.6	7.9	7.1	8.6	9.7	3.1	3.1

# TILTING PAD COMBINATION

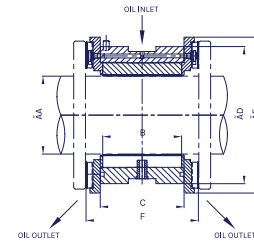
Nomenclature : KMP-TJB-xx-yy-Z/zz [a/b/d]

- x Nominal Bore
- yy Journal Pad Length
- Z Thrust Pad Series
- zz Thrust Pad OD (Please refer to the TB series tables for sizes & load capacities)



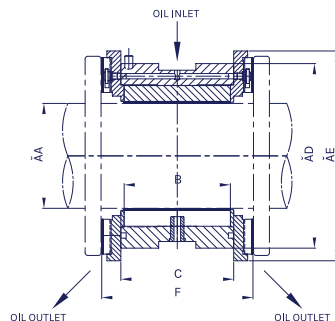
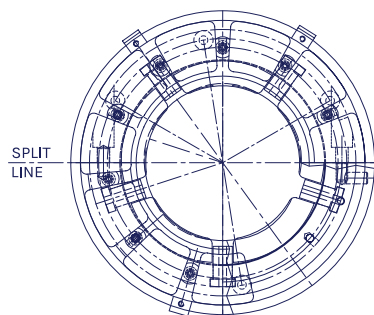
Configuration : (a/b/c/d/e)

- a\* D or F (Directed or Flooded Lubrication)
- b\* C, P or L (Center, Offset Point or Offset Line Pivot)
- c G or Null (with or without Surface Grooves)
- d E or Null (with or without Pressure Equalizing)



Series	Nominal Bore	Pad Length (B)			Housing Width (C)		
		A	L/D = 0.4	L/D = 0.7	L/D = 1	L/D = 0.4	L/D = 0.7
KMP-TJB-040	40	16	28	40	22	34	46
KMP-TJB-045	45	18	31.5	45	24	37.5	51
KMP-TJB-050	50	20	35	50	26	41	56
KMP-TJB-060	60	24	42	60	30	48	66
KMP-TJB-070	70	28	49	70	34	55	76
KMP-TJB-080	80	32	56	80	38	62	86
KMP-TJB-090	90	36	63	90	42	69	96
KMP-TJB-100	100	40	70	100	46	76	106
KMP-TJB-110	110	44	77	110	50	83	116
KMP-TJB-120	120	48	84	120	54	90	126
KMP-TJB-130	130	52	91	130	60	99	138
KMP-TJB-140	140	56	98	140	64	106	148
KMP-TJB-150	150	60	105	150	68	113	158
KMP-TJB-160	160	64	112	160	72	120	168
KMP-TJB-180	180	72	126	180	80	134	188
KMP-TJB-200	200	80	140	200	88	148	208
KMP-TJB-220	220	88	154	220	96	162	228
KMP-TJB-240	240	96	168	240	104	176	248
KMP-TJB-260	260	104	182	260	112	190	268
KMP-TJB-280	280	112	196	280	120	204	288
KMP-TJB-300	300	120	210	300	128	218	308
KMP-TJB-350	350	140	245	350	148	253	358
KMP-TJB-400	400	160	280	400	170	290	410
KMP-TJB-450	450	180	315	450	190	325	460
KMP-TJB-500	500	200	350	500	210	360	510

(All dimensions in mm, unless otherwise specified)



Series	Housing OD		Pin	Max Load Capacity (N)		
	D	E		L/D = 0.4	L/D = 0.7	L/D = 1
KMP-TJB-040	82	92	4	1920	3360	4800
KMP-TJB-045	89	99	4	2430	4252.5	6075
KMP-TJB-050	95	105	5	3000	5250	7400
KMP-TJB-060	120	130	5	4320	7560	10800
KMP-TJB-070	130	140	5	5880	10290	14700
KMP-TJB-080	140	150	6	7680	13440	19200
KMP-TJB-090	165	175	6	9720	17010	24300
KMP-TJB-100	175	185	8	12000	21000	30000
KMP-TJB-110	190	200	8	14520	25410	36300
KMP-TJB-120	215	225	10	17280	30240	43200
KMP-TJB-130	218	234	10	20280	35490	50700
KMP-TJB-140	225	241	10	23520	41160	58800
KMP-TJB-150	250	266	10	27000	47250	67500
KMP-TJB-160	268	284	12	30720	53760	76800
KMP-TJB-180	300	316	12	38880	68040	97200
KMP-TJB-200	335	351	16	48000	84000	120000
KMP-TJB-220	372	388	16	58080	101640	145200
KMP-TJB-240	400	416	20	69120	120960	172800
KMP-TJB-260	428	444	20	81120	141960	202800
KMP-TJB-280	450	466	20	94080	164640	235200
KMP-TJB-300	480	496	20	108000	189000	270000
KMP-TJB-350	566	582	25.4	147000	257250	367500
KMP-TJB-400	630	650	25.4	192000	336000	480000
KMP-TJB-450	700	720	25.4	243000	425250	607500
KMP-TJB-500	760	780	25.4	300000	525000	750000

(All dimensions in mm, unless otherwise specified)

# CUSTOM BEARING DESIGN & MANUFACTURING

---

For conditions where our standard range of bearings are sub-optimal, we carefully design and manufacture customized bearings for a wide range of applications and sizes. These include large tilting pads (both journal and thrust), high performance features like Pressure Equalizing, Leading Edge Grooves (LEG), alternative materials, ingenious sealing solutions and the likes.

## JOURNAL RANGE

SIZE	Up to 1200 mm
LOAD	Up to 1300 kN
SPEED	Up to 49000 rpm

## THRUST RANGE

SIZE	Up to 3000 mm
LOAD	Up to 4650 kN
SPEED	Up to 30000 rpm

Each KMP Bearing is provided with the following performance characteristics to facilitate Rotor Dynamic Analysis:

- Details of Lubricating Oil with Flow Requirement
- Radial/Axial Clearances
- Power Loss at Rated Speeds and Loads
- Stiffness and Damping Coefficients,
- Min. Oil Film Thickness, Pad and Film Temperature etc.



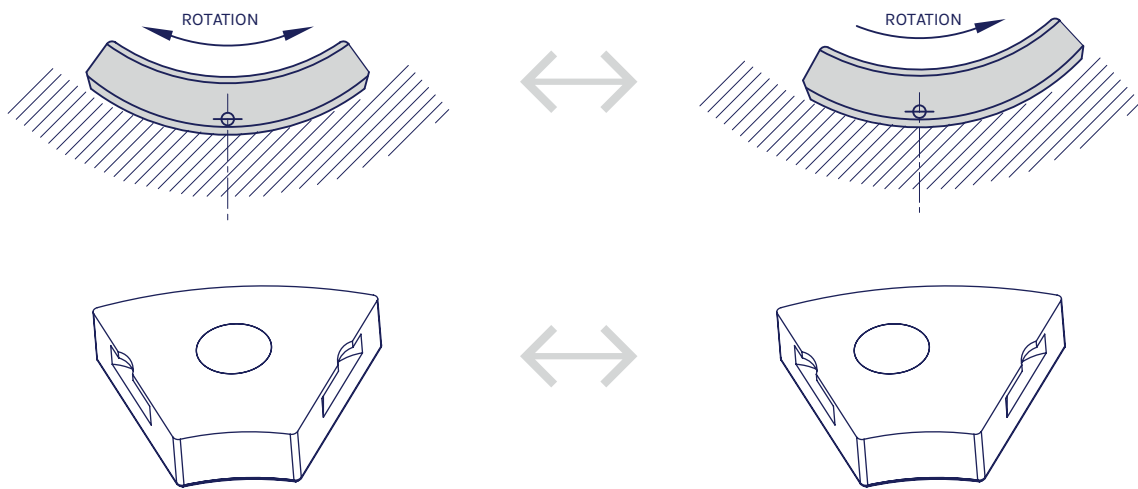
# OPTIONAL FEATURES

As required, KMP bearings can also be designed with additional features, as illustrated below:

## Offset Pivot

---

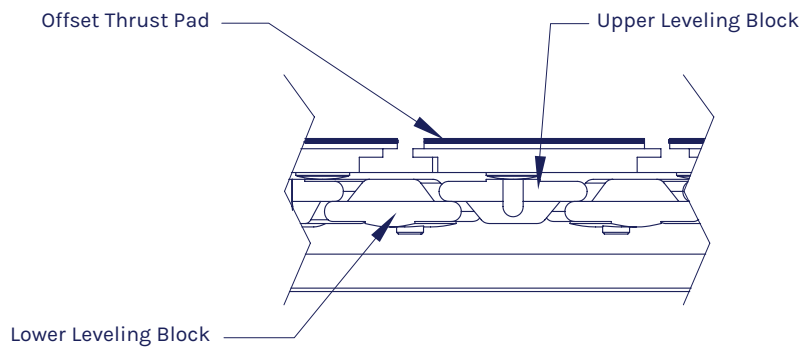
The Bearing Pads can be provided with Offset point or line pivots, thereby increasing the efficiency of the bearing by almost 30%.



## Pressure Equalizing

---

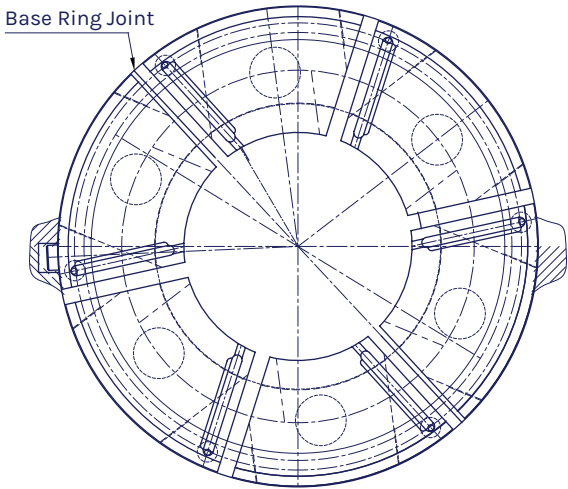
In case of intermittent asymmetric loading, self equalizing pads can be provided to distribute pressure evenly, and prevent pad failure.



### Surface Grooves (LEG)

---

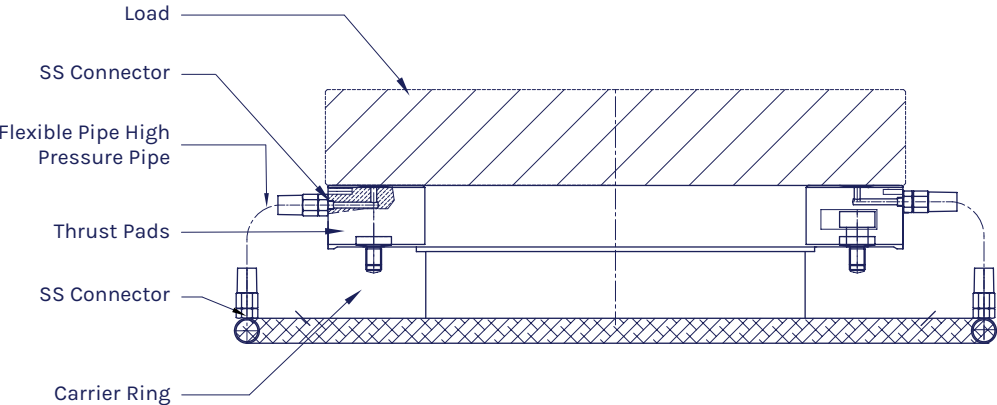
Thrust Bearings can be provided with Surface Grooves, in addition to Offset Pivots, to further enhance suitability for higher speeds & loads.



### Hydrostatic Jacking

---

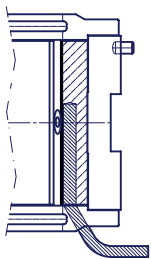
The Bearings can also be provided with Hydrostatic Jacking, suitably designed for the given starting load conditions.



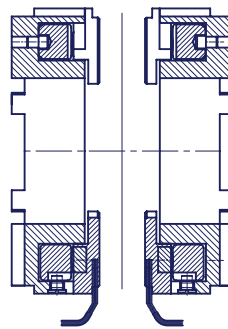
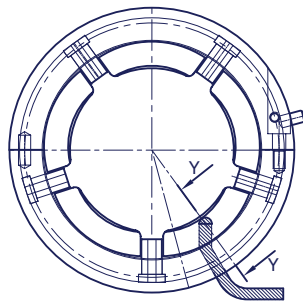
# INSTRUMENTATION

KMP Tilting Pad Bearings can be provided with the following instrumentation, on request of the Customer

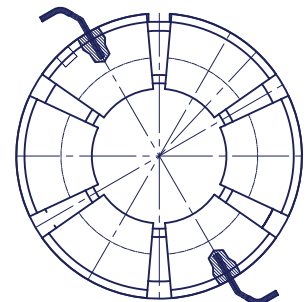
## Temperature Sensors: Miniature RTD's or Thermocouples for temperature measurement



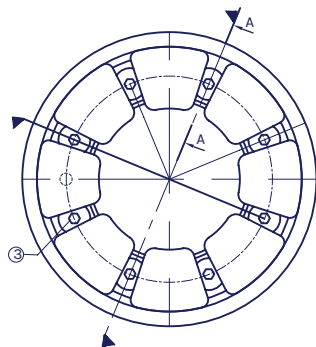
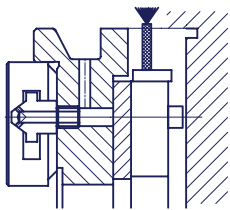
RTD Fitment in Journal Bearing Segments



RTD Fitment in Thrust Bearings Segments



## Load Cells: For dynamic Thrust measurements



4 Load Cells, fitted in Thrust Bearing Segment

## Vibration Probes: At specific locations, to test damping provided by the bearing

# SERVICES

In addition to our customized solutions, we are also happy to extend our specialized services to our customers, including:

## TECHNICAL SERVICES

1. Selection and design of Fluid Film Bearings for Critical Applications
2. Modification and up-gradation of old generation Bearings
3. Import-substitution and indigenization of Bearings
4. Troubleshooting and failure analysis

## CONSULTANCY

1. Selection of Bearing Alloys and Backing Material for specific applications
2. Optimization of performance and life of Bearings
3. Tribology and lubrication of Bearings
4. Fitment, assembly and commissioning of Bearings
5. Preventive maintenance

# MATERIALS

KMP Tilting Pad Bearings are manufactured with the most carefully selected materials, keeping in view the specific requirements of loads, speeds and other operating conditions. The most commonly used materials are as follows:

Part Description	Material
Housing/Casing	Special Steel Alloys
Backing Shell	C10 - C15, 16MnCr5, Chromium- Copper Alloys etc.
Babbitt Lining	Tego Star, ASTM B23 Gr. 2, HOYT Alloys etc.
Pivot	Specially hardened, wear resistant Steel Alloys

**KANPUR METAL PRODUCTS**

93-B, Udyog Nagar  
Kanpur - 208 022, India

**KMP TECHNOLOGIES PVT. LTD.**

3J, Udyog Vihar, Ecotech II  
Greater Noida - 201 306, India

**KMP TECHNOLOGIES PVT. LTD.**

Plot 144, Siemens Limited Technopark  
Maneja, Vadodara - 390 013, India

**T** +91 (512) 229 5248, 229 6180

**W** [www.kmpbearings.com](http://www.kmpbearings.com)