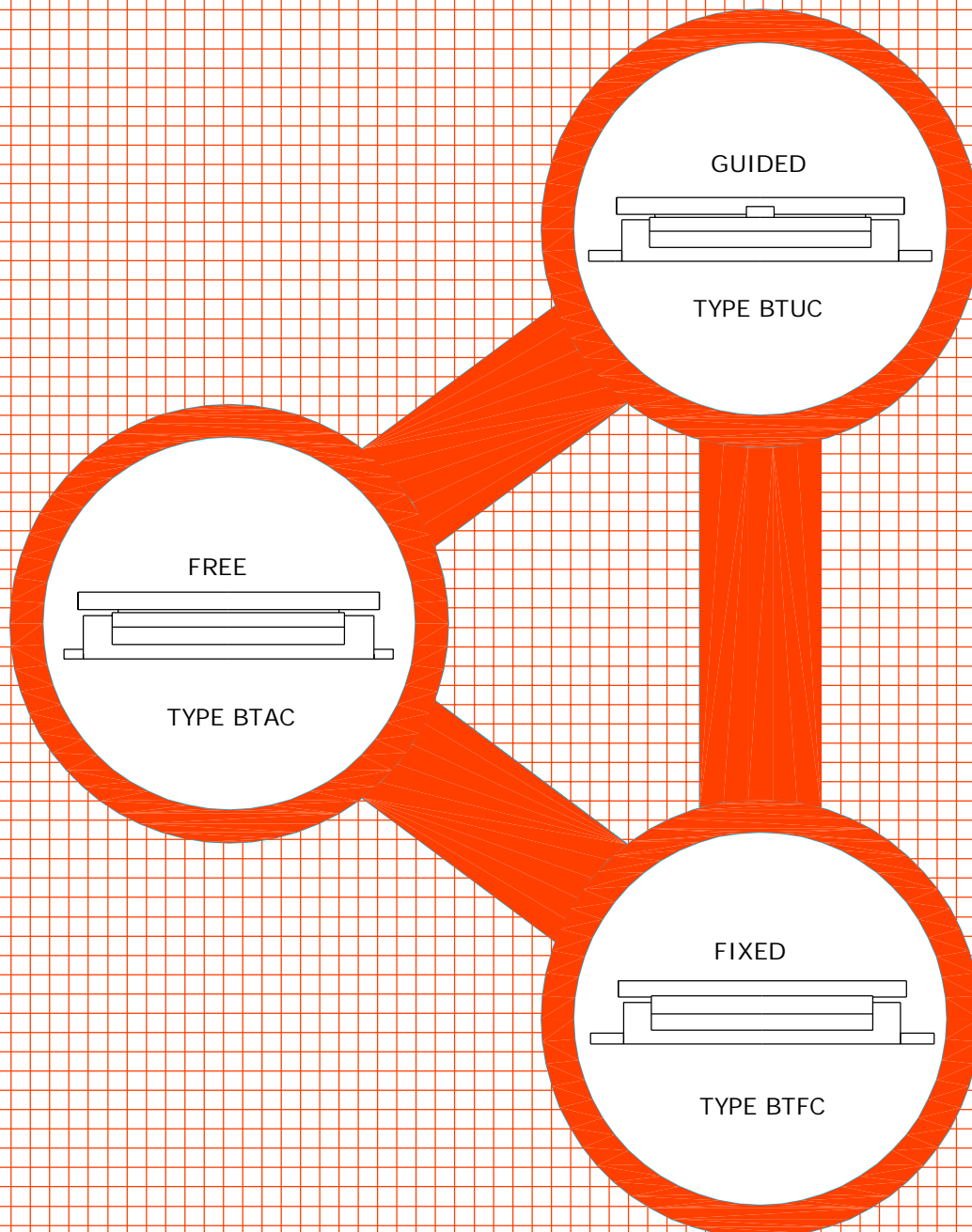


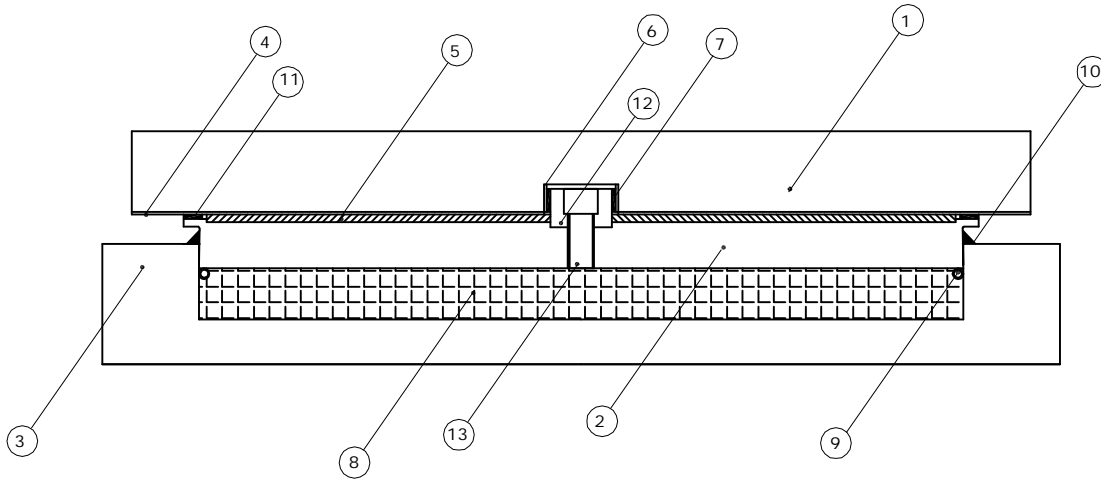


POT BEARINGS TO COLTO SPECIFICATIONS



BASIC CONSTRUCTION

Typical type BTUC guided Pot Bearing



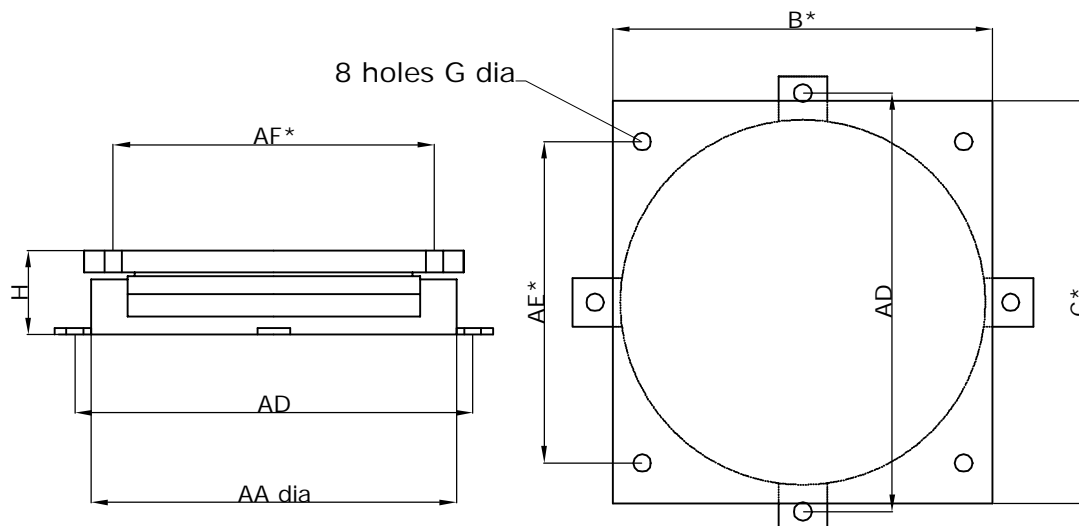
item	description	specification
1	top plate	steel S275JR (300WA)
2	piston	steel S355 J2G3
3	pot	steel S355 J2G3
4	sliding surface	stainless steel Gr316
5	PTFE	BS3784: 1973 Grade A
6	guide bar bearing strip	DU (CSB10)
7	stainless steel guide strip	stainless steel Gr 316
8	rubber disc	BS1154 Z13 (55 shore)
9	piston sealing rings	stainless steel Gr302
10	pot seal	neoprene
11	dust seal	expanded neoprene
12	guide key	steel 300WA
13	guide key screws	HT capscrews

DESIGN AND MANUFACTURE

Bearing Technologies Pot Bearings are designed in accordance with BS5400 Pt9.1: 1983 with the additional requirements as specified by the South African Committee of Transport Officials (COLTO) 6604 (e) iv and v. Material specifications are selected to ensure reliability, longevity and continuity of supply.

Manufacturing is processed in modern well equipped workshops specialising in this type of work and operating quality control systems compatible with SABS ISO 9001.

POT BEARINGS-FREE Type BTAC

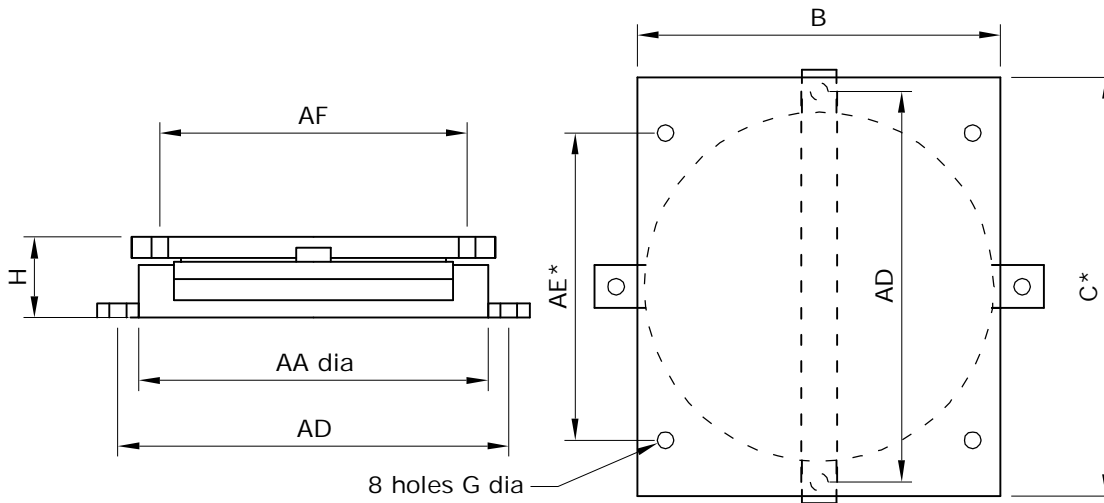


Bearing Reference No.	Max.vert. load kN	Base dia. AA mm	PI width B* mm	PI length C* mm	bolt ctrs AD mm	Hole ctrs AE* mm	Hole ctrs AF* mm	Hole dia G mm	Height H mm	Net mass kg
BTAC50/20/**	500	190	205	205	245	170	170	14	49	10
BTAC75/20/**	750	230	235	235	285	200	200	14	51	14
BTAC100/20/**	1000	260	260	260	315	225	225	14	55	19
BTAC125/20/**	1250	300	300	300	355	250	250	14	64	28
BTAC150/20/**	1500	325	325	325	380	275	275	14	66	34
BTAC175/20/**	1750	350	350	350	405	300	300	14	69	41
BTAC200/20/**	2000	370	370	370	425	320	320	14	73	49
BTAC250/20/**	2500	415	415	415	480	350	350	18	77	65
BTAC300/20/**	3000	450	450	450	515	385	385	18	82	82
BTAC350/20/**	3500	500	500	500	565	435	435	18	81	95
BTAC400/20/**	4000	530	530	530	595	465	465	18	84	110
BTAC450/20/**	4500	560	560	560	625	495	495	18	89	131
BTAC500/20/**	5000	585	585	585	650	490	490	18	94	153
BTAC550/20/**	5500	615	615	615	680	520	520	18	100	181
BTAC600/20/**	6000	640	640	640	705	545	545	18	103	201
BTAC700/20/**	7000	695	695	695	760	600	600	18	105	235
BTAC800/20/**	8000	745	745	745	810	650	650	18	112	288
BTAC900/20/**	9000	785	785	785	850	690	690	18	119	344
BTAC1000/20/**	10000	825	825	825	890	730	730	18	123	393
BTAC1200/20/**	12000	895	895	895	960	800	800	18	139	536
BTAC1400/20/**	14000	975	975	975	1040	845	845	18	143	633
BTAC1600/20/**	16000	1045	1045	1045	1110	915	915	18	150	763
BTAC1800/20/**	18000	1110	1110	1110	1175	980	980	18	157	898
BTAC2000/20/**	20000	1170	1170	1170	1235	1040	1040	18	163	1037

The average bearing pressure on the concrete is 20Mpa.

*All dimensions are for bearings with +/-10mm movement in both directions. For larger movements dimensions B,C,AE,AF are increased accordingly. The suffix /** in the Reference No. indicates required +/- movement in Longitudinal and transverse directions respectively.

POT BEARINGS- UNIDIRECTIONAL Type BTUC



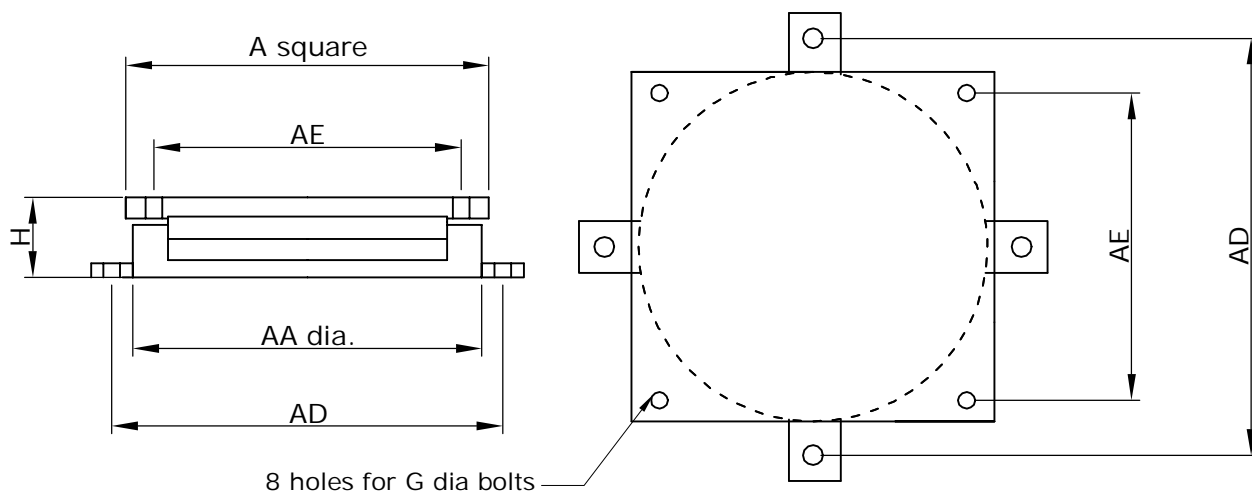
Bearing Reference No.	Max.vert. Load kN	Max.horiz load kN	Base dia. AA mm	PI width B mm	PI length C* mm	Hole ctrs AD mm	Hole ctrs AE* mm	Hole ctrs AF mm	Hole dia G mm	Height H mm	Net mass kg
BTUC50/20/*	500	100	215	215	260	270	225	180	14	73	26
BTUC75/20/*	750	100	235	235	280	290	245	200	14	76	33
BTUC100/20/*	1000	100	265	265	310	320	275	230	14	77	41
BTUC125/20/*	1250	125	310	310	330	370	265	245	18	80	55
BTUC150/20/*	1500	150	335	335	350	395	285	270	18	85	67
BTUC175/20/*	1750	175	360	360	370	425	305	295	18	87	78
BTUC200/20/*	2000	200	380	380	390	445	325	315	18	89	88
BTUC250/20/*	2500	250	425	425	425	495	345	345	22	98	119
BTUC300/20/*	3000	300	460	460	460	530	380	380	22	102	144
BTUC350/20/*	3500	350	510	510	510	580	430	430	22	107	184
BTUC400/20/*	4000	400	545	545	545	625	450	450	27	110	214
BTUC450/20/*	4500	450	570	570	570	650	475	475	27	116	245
BTUC500/20/*	5000	500	595	595	595	680	450	450	27	118	276
BTUC550/20/*	5500	520	630	630	630	715	485	485	27	126	326
BTUC600/20/*	6000	580	655	655	655	740	510	510	27	130	363
BTUC700/20/*	7000	560	710	710	710	805	530	530	33	132	425
BTUC800/20/*	8000	640	755	755	755	850	575	575	33	138	502
BTUC900/20/*	9000	720	800	800	800	895	620	620	33	144	586
BTUC1000/20/*	10000	750	845	845	845	945	665	665	33	153	696
BTUC1200/20/*	12000	840	910	910	910	1010	730	730	33	162	850
BTUC1400/20/*	14000	910	990	990	990	1100	775	775	39	170	1038
BTUC1600/20/*	16000	960	1055	1055	1055	1165	840	840	39	175	1205
BTUC1800/20/*	18000	990	1120	1120	1120	1230	905	905	39	182	1402
BTUC2000/20/*	20000	1000	1180	1180	1180	1290	965	965	39	188	1606

The average bearing pressure on the concrete is 20Mpa.

All dimensions are for bearings with +/-10mm movement . For larger movements dimensions C & AE are increased accordingly. The suffix //* in the Reference No. indicates required +/- movement in longitudinal direction.

+ The maximum horizontal load can only be applied if it is less than 33 % of the simultaneous vertical load. Beyond this limit and for higher horizontal loads special designs are available.

POT BEARINGS-FIXED Type BTFC



Bearing Reference No.	Max. Vert. Load kN	Max. horiz. Load kN	Base dia. AA mm	T/P sq B mm	Hole ctrs AD mm	bolt ctrs AE mm	Hole dia G mm	tot height H mm	Net mass kg
BTFC50/20	500	100	202	202	255	130	14	53	13
BTFC75/20	750	150	240	240	295	170	14	55	19
BTFC100/20	1000	170	269	269	325	195	14	60	25
BTFC125/20	1250	212	317	317	380	220	18	66	38
BTFC150/20	1500	240	342	342	405	245	18	68	45
BTFC175/20	1750	280	366	366	430	270	18	70	52
BTFC200/20	2000	300	387	387	450	270	18	74	62
BTFC250/20	2500	375	431	431	505	265	22	78	79
BTFC300/20	3000	450	466	466	540	310	22	82	99
BTFC350/20	3500	455	519	519	590	315	22	85	120
BTFC400/20	4000	520	550	550	630	365	27	89	141
BTFC450/20	4500	585	580	580	660	400	27	93	165
BTFC500/20	5000	600	607	607	690	400	27	98	192
BTFC550/20	5500	660	638	638	720	425	27	102	218
BTFC600/20	6000	690	663	663	745	450	27	104	240
BTFC700/20	7000	700	719	719	815	505	33	106	278
BTFC800/20	8000	800	768	768	860	555	33	115	348
BTFC900/20	9000	900	812	812	905	570	33	123	417
BTFC1000/20	10000	1000	854	854	950	610	33	128	478
BTFC1200/20	12000	1200	922	922	1020	680	33	142	625
BTFC1400/20	14000	1400	1011	1011	1120	770	39	148	766
BTFC1600/20	16000	1600	1080	1080	1190	805	39	155	915
BTFC1800/20	18000	1800	1122	1122	1235	850	39	163	1022
BTFC2000/20	20000	2000	1178	1178	1290	905	39	170	1168

The average bearing pressure on the concrete is 20 MPa.
 The maximum horizontal load can only be applied if it is less than 33% of the simultaneous vertical load.



CONCRETE PRESSURES

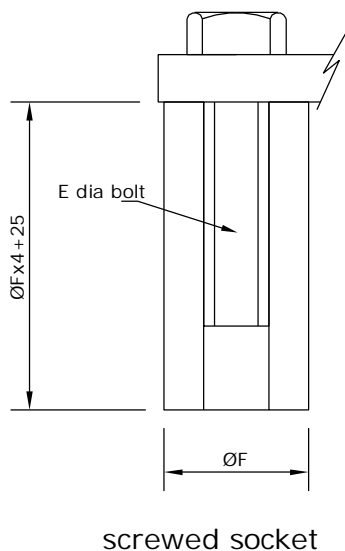
BEARING TECHNOLOGIES Pot Bearings are designed for average structure interface pressures approaching 20MPa. Where concrete strengths are inadequate to support this locally applied pressure a layer of higher strength concrete or epoxy mortar can be used to reduce the pressure to lower values. This is more economic than the use of larger bearings.

FIXING ARRANGEMENTS

In addition to ensuring that bearings are located correctly it is necessary to provide fixing arrangements to transmit horizontal forces to the structure. Normally friction between the bearing and the structure interface is considered in the design of fixing arrangements. There are two optional fixing methods.

OPTION 1-BOLTS AND SCREWED SOCKETS

Screwed sockets are bolted to the base (pot) and top plate respectively and are permanently cast into the structure when the bearing is installed. In the event that a bearing needs to be replaced in the future the bolts are unscrewed from their sockets and the deck jacked a minimum of 5mm to enable the bearing to be removed.

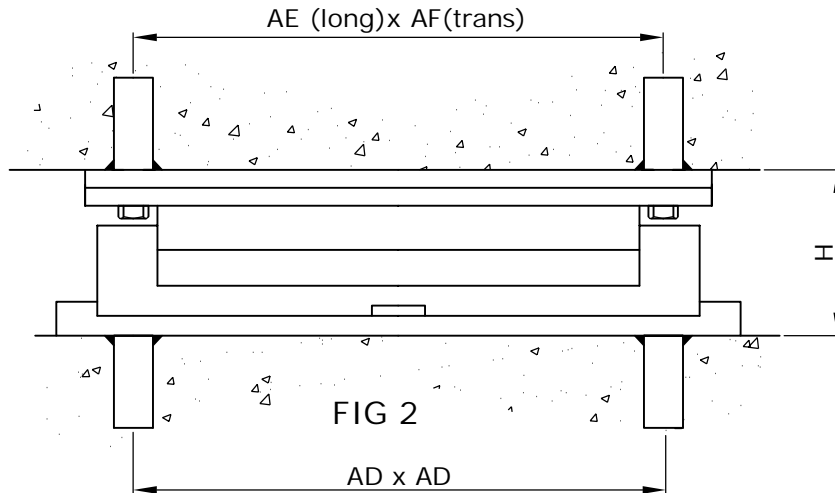


Bearing size ref.	BTAC type		BTUC type		BTFC type	
	Bolt size E mm	anchor ØF mm	Bolt size E mm	anchor ØF mm	Bolt size E mm	anchor ØF mm
50	12	16	12	20	12	20
75	12	16	12	20	12	20
100	12	16	12	20	12	20
125	12	25	16	25	16	25
150	12	25	16	25	16	25
175	12	25	16	25	16	25
200	12	25	16	30	16	30
250	16	30	20	30	20	30
300	16	30	20	30	20	30
350	16	30	20	30	20	30
400	16	30	24	35	24	35
450	16	30	24	35	24	35
500	16	30	24	35	24	35
550	16	35	24	35	24	35
600	16	35	24	35	24	35
700	16	35	30	45	30	45
800	16	35	30	45	30	45
900	16	35	30	45	30	45
1000	16	35	30	45	30	45
1200	16	35	30	45	30	45
1400	16	35	36	50	36	50
1600	16	35	36	50	36	50
1800	16	35	36	50	36	50
2000	16	35	36	50	36	50



OPTION 2-ADAPTOR PLATES

Upper and/or lower adaptor plates with welded anchor bars are fitted to the bearing and are cast into the structure permanently (see fig 2 below). The anchor bars transmit horizontal forces to the structure. In the event that a bearing needs to be replaced in the future the deck is jacked a minimum of 12mm which releases the lower bearing plate (pot) from the recess in the lower adaptor plate and permits a skid to be inserted under the pot to assist bearing removal after the fixing bolts are withdrawn from the upper adaptor plate.

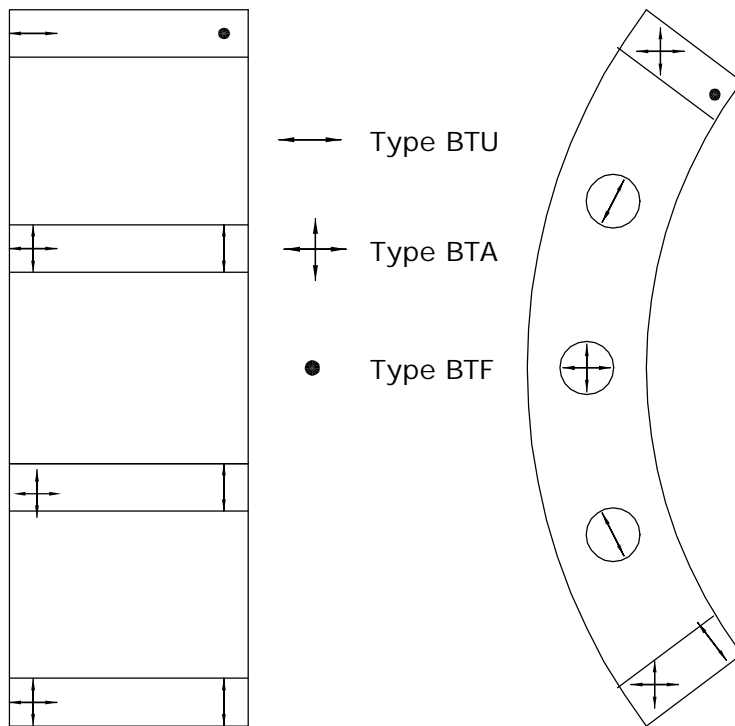


bearing size	BTAC				BTUC				BTFC		
	AD mm	AE* mm	AF* mm	H mm	AD mm	AE* mm	AF mm	H mm	AD mm	AE/AF mm	H mm
50	125	135	135	73	125	175	130	97	130	130	65
75	145	165	165	75	145	195	150	100	170	170	67
100	175	190	190	79	175	225	180	101	195	195	72
125	190	200	200	96	190	205	185	112	220	220	82
150	215	225	225	98	215	225	210	117	245	245	84
175	240	250	250	101	240	245	235	119	270	270	86
200	225	270	270	105	225	250	240	121	270	270	90
250	270	290	290	109	270	270	270	130	265	265	94
300	310	325	325	114	310	305	305	134	310	310	98
350	360	375	375	113	360	355	355	139	315	315	101
400	365	405	405	116	365	365	365	142	365	365	105
450	390	435	435	121	390	390	390	148	400	400	109
500	410	430	430	126	410	365	365	150	400	400	114
550	445	450	450	140	445	400	400	166	425	425	122
600	470	475	475	143	470	425	425	170	450	450	124
700	465	530	530	145	465	420	420	172	505	505	126
800	510	580	580	152	510	465	465	178	555	555	135
900	555	620	620	159	555	510	510	184	570	570	143
1000	605	660	660	163	605	555	555	193	610	610	148
1200	670	730	730	179	670	620	620	202	680	680	162
1400	715	775	775	183	715	650	650	210	770	770	168
1600	780	845	845	190	780	715	715	215	805	805	175
1800	845	910	910	197	845	780	780	222	850	850	183
2000	905	970	970	203	905	840	840	228	905	905	190

N.B *these dimensions for +/-10mm movement.

HORIZONTAL FORCES

Horizontal forces can result from vehicle braking, wind force, centrifugal forces, earth movements and friction. The bearing configuration in the structure has an important influence on how these forces are distributed. The clearances between bearing components, although generally less than 1mm, may exceed the local elasticity of the structure and thus the horizontal forces may not be shared evenly between adjacent fixed or guided bearings. Typical bearing layouts are shown below.



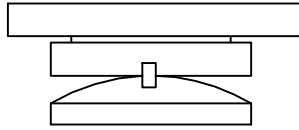
The maximum horizontal forces that can be safely accommodated by BTU and BTF type bearings are shown in the tables. It must be emphasized, however, that these forces can only be applied with a simultaneous vertical load of at least 3 times the horizontal force. When the vertical load is less than this the horizontal load capacity is reduced proportionately in the interests of stability.

SPECIAL DESIGNS

Where loading parameters are outside the limits of these Standard Pot Bearings, special designs can be produced to accommodate virtually any combination of loadings and movements.

OTHER STRUCTURAL BEARING TYPES AVAILABLE

BD series



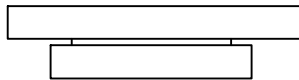
Sliding
High rotation about 1 axis
Up to 5000kN

BT series



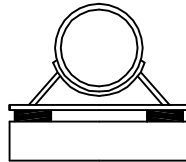
Sliding
Rotation about all axes
Up to 20000kN

BA series



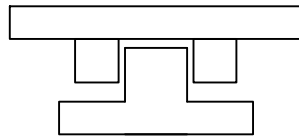
Plain sliding
No rotation
Up to 2000kN

BP series



Pipe support bearings
Rotation up to 0,04 radians
Up to 60kN
Unlimited movement

BV series



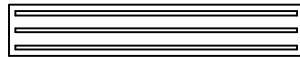
Horizontal guide
No transverse rotation
No vertical load capacity

BK series



Strip bearings
Up to 350kN/meter
Movement <10mm

BR series



Laminated rubber bearings
Limited rotation and movement
Up to 4000kN

These products are supplied by:

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BT is constantly developing these products and reserves the right to change dimensions, specifications and designs at any time without prior notice.