

NTN

NTN corporation

HEAVY DUTY BLOCKS

SPAW, SPW and SFCW TYPE



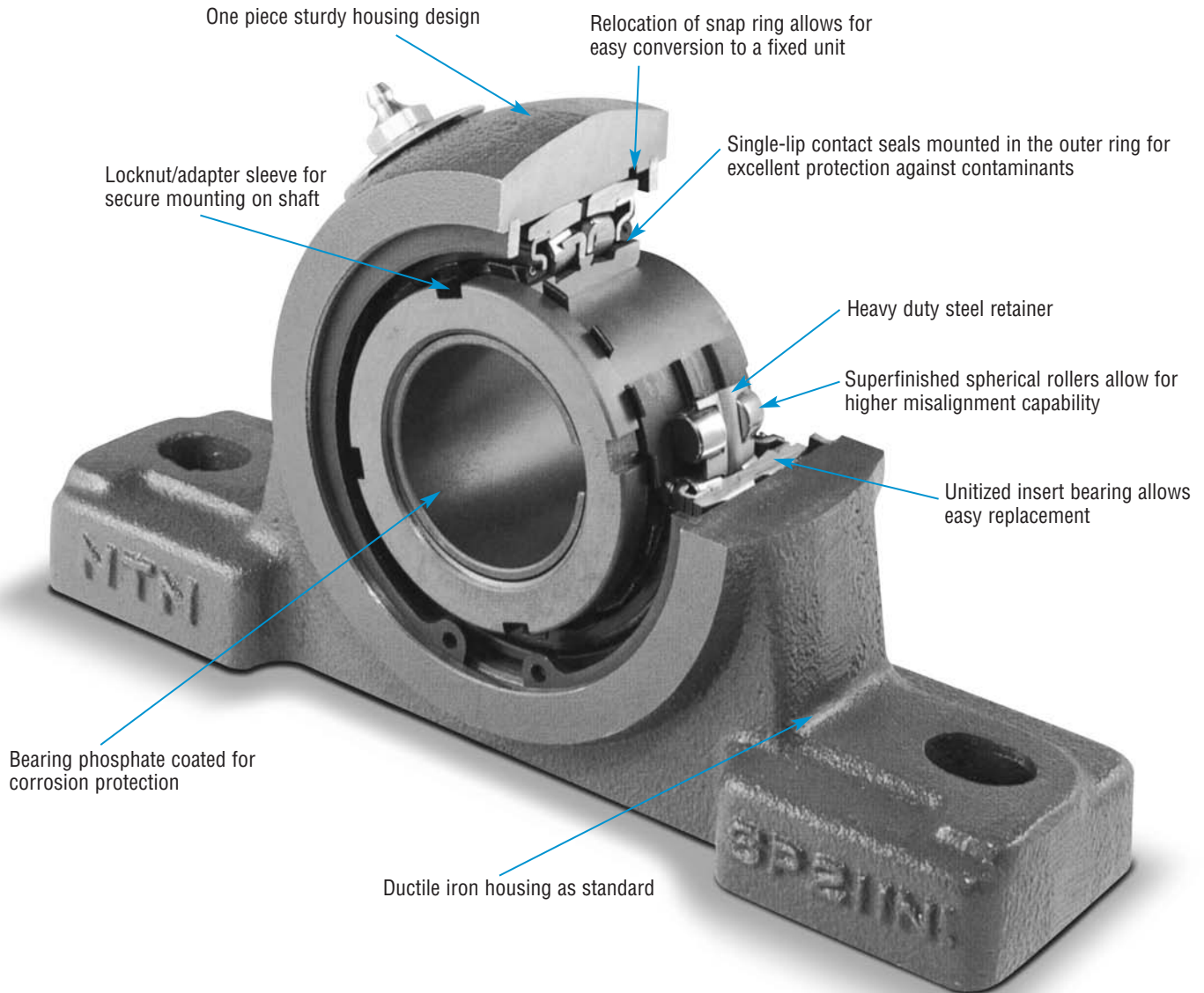
CAT. No. C-2600-IV

Features and Benefits

Comparison SPAW & SPW over SAF & SN Spherical Roller Bearing Mounted Units

FEATURES	SPAW & SPW UNITS	SAF & SN UNITS	BENEFITS TO USER
Unit is completely assembled and consists of a one-piece pillow block or flanged housing and a unitized insert bearing, completely assembled, sealed and lubricated in clean factory environments			• Saves time in mounting and dismounting • Consistent sealing performance
Single lip contact seals mounted in the outer ring of the bearing			• Superior sealing under contaminated conditions • Higher misalignment capability
Rotating the lock nut to a specified angle automatically gives required clearance			• Improves life due to more accurate bearing clearance • Reduces time for adjusting clearance • Eliminates the need for feeler gages
One-piece sturdy housing			• Saves time in mounting and dismounting unit
Through-bored housing makes it easier to slide the insert out of the unit			• Saves time in mounting and dismounting unit • Does not require the shaft to be lifted during replacement
Phosphate coated insert bearing			• Provides excellent corrosion protection
Easy relocation of the snap ring (provided with the unit) converts it from the floating to fixed unit			• Provides flexibility

Proven through years of performance and user satisfaction.



- Designed and developed for demanding North American environments.
- Available with taconite service seals for the most severe applications.
- Allows for quick replacement of our bearing insert.
- Reduces downtime and increases productivity.

SPAW/SPW/SFCW INSTALLATION INSTRUCTIONS

The following is the recommended procedure for mounting the SPW, SPAW and SFCW 2200 series heavy duty bearing units.

1. Adjust the position of the sleeve so that the tapered part comes to about the centre of the bearing. The sleeve should be positioned so that the nut is easily accessible (see Fig. 1).
2. The SPW/SPAW/SFCW bearing unit can be adapted to either the fixed or floating configuration. Units are supplied in the floating configuration unless otherwise specified upon ordering.

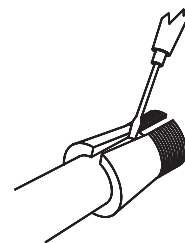


Figure 1

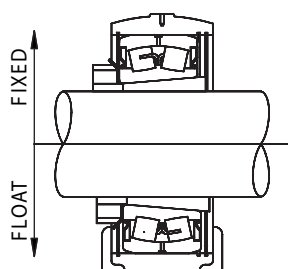


Figure 2

FIXED CONFIGURATION: Using appropriate size snap ring pliers, position the snap ring in the innermost groove of the housing.

FLOATING CONFIGURATION: Using appropriate size snap ring pliers, position the snap ring in the outermost groove of the housing.

3. Install the unit on the shaft by sliding the bearing onto the adapter sleeve. Adjust the entire assembly as needed until the final bearing location is achieved. For floating configuration, ensure the bearing is centered in the housing before performing final adjustments (as in Figure 2).

Appropriate eye protection should be worn when handling snap rings.

4. It is very important that positive contact is established between the shaft, adapter sleeve and the bearing. Tap the wide end of the adapter sleeve lightly over its entire circumference. A cylindrical sleeve may be placed against the inner ring of the bearing to ensure it remains centered for floating configuration (see Figure 3). Install the lockwasher and hand tighten the locknut. Verify that positive contact is made by tapping the groove on the back side of the adapter sleeve. If the sleeve rotates, positive contact has not been established and step 4 will need to be repeated.

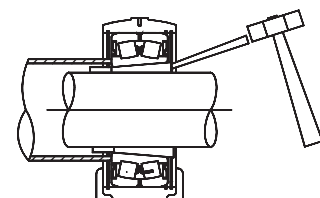


Figure 3

Relieving the weight of the shaft on the bearing will help achieve positive contact.

5. Tighten the locknut according to the following table. A hook spanner or a hammer and punch are commonly used.

GUIDELINES FOR MOUNTING ❶								
Shaft diameter range			Bearing Number	Axial displacement		Recommended Locknut Rotation	Hydraulic Pressure	
over	Inch	Metric		min.	max.		min.	max.
	1 15/16	50 mm	MX-W22211BLLKC3	0.018	0.024	90°	1700	2250
1 15/16	2	60 mm	MX-W22211BLLKC3	0.018	0.024	130° ❷	1700	2250
2	2 3/8	65 mm	MX-W22213BLLKC3	0.018	0.024	90°	1750	2350
2 3/8	2 1/2	75 mm	MX-W22215BLLKC3	0.024	0.030	120°	1800	2250
2 1/2	3	90 mm	MX-W22217BLLKC3	0.028	0.035	150°	2050	2700
3	3 1/2	100 mm	MX-W22220BLLKC3	0.028	0.035	150°	2250	3000
3 1/2	4	110 mm	MX-W22222BLLKC3	0.030	0.043	180°	2650	3700
4	4 1/4	115 mm	MX-W22224BLLKC3	0.030	0.043	180°	2750	3850
4 1/4	4 1/2	125 mm	MX-W22226BLLKC3	0.043	0.055	210°	3250	4500
4 1/2	5	140 mm	MX-W22228BLLKC3	0.043	0.055	210°	3300	4550
5	5 1/2		MX-W22232BLLKC3	0.047	0.063	150° ❸	3950	5250

❶ Values apply to solid shafts and normal loads after positive contact is achieved. For hollow shafts, heavy loads ($Pr > 0.12Cr$), or other special circumstances, please consult NTN Engineering.

❷ Value reflects a decrease in adapter sleeve thread pitch (2 inch shaft only).

❸ Value reflects an increase in adapter sleeve thread pitch.

6. Bend one of the tabs on the circumference of the lockwasher into the nearest notch on the rim of the locknut. If no tabs line up, tighten the locknut slightly. The locknut should not be loosened in order to align the tab with a notch.
7. Reposition the housing and mount the unit securely to the machine.

Excessive misalignment can cause the bearing seals to become unseated. Seals can only be re-installed if unit has not been run for any length of time, if no contamination of the bearing has occurred, and if even pressure can be applied around the periphery of the seal to prevent bending.

Bearings come pre-lubricated with Shell Alvania #3 and require no lubrication upon initial installation.

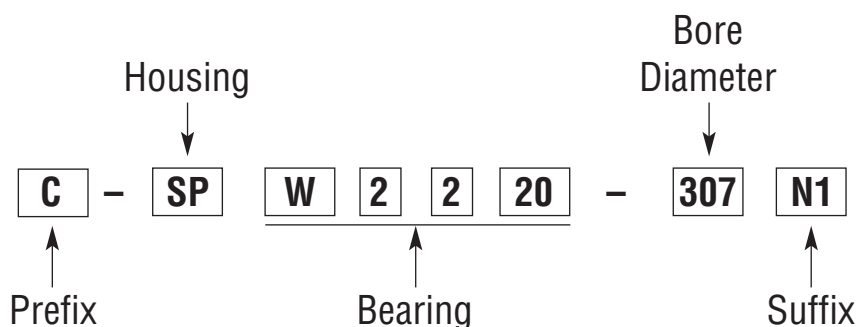
For extremely contaminated environments, external covers are available.

REMOVAL INSTRUCTIONS

1. To remove the unit from the shaft, raise the bent lockwasher tab, loosen the locknut two or three turns, then tap the nut over its entire circumference with a hammer and punch. Ensure sufficient threads remain engaged as to not damage them. Continue tapping until the adapter sleeve can be moved.
2. To remove the bearing insert from the housing, remove one of the snap rings and slide the bearing out.

Appropriate eye protection should be worn when handling snap rings.

HEAVY DUTY BLOCK NUMBERING SYSTEM



1. PREFIX

- No symbol: Standard unit with sealed spherical roller bearing insert
- C: With additional taconite seal covers (SFC housing with one seal only)
- CM: With additional taconite seal and end cover (SFC housing with end cover only)

2. HOUSING

- SP: Pillow block unit to SN housing dimensions
- SPA: Pillow block unit to SAF housing dimensions (SP and SPA only) Ductile iron
- FSPA: Pillow block unit to SAF housing dimensions ❶ Ductile iron, 4 bolt
- SFC: 4 bolt piloted circular flange block for two or four bolt arrangement

3. BEARING

- W22xx: MX-W22xx series sealed spherical roller bearing

4. BORE DIAMETER (-Xnn)

- No value: Metric bore sizing (see tables)
- X: Number of inches
- nn: Number of 1/16 inches
- eg.: -307 indicates a 3 7/16" bore

5. SUFFIX

- N1: Ductile iron housing (Standard)
- FN1: (SP and SPA only) Ductile iron housing with solid base and indents for two or four bolt arrangement

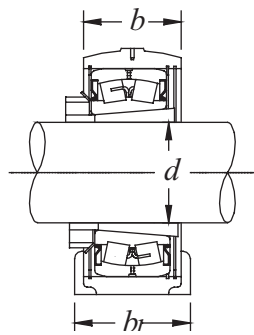
❶ New series, consult your local NTN branch for availability.

CANADIAN PATENT NUMBER: 1307311

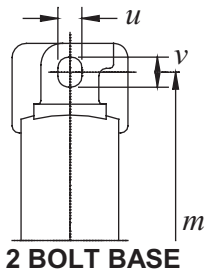
U.S. PATENT NUMBER: 4916750

SPW

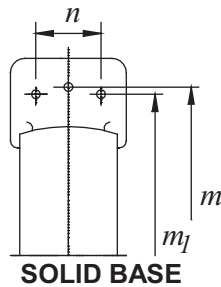
Pillow Blocks



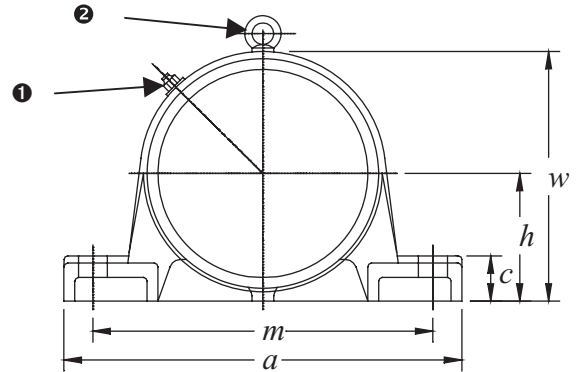
SPW22...



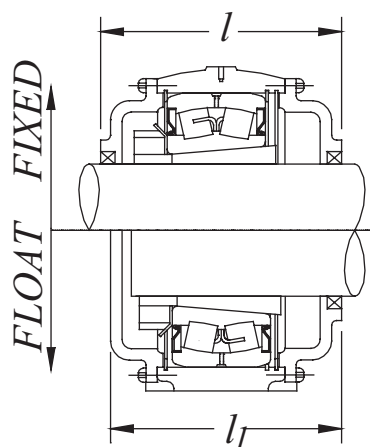
2 BOLT BASE



SOLID BASE



Shaft diameter d inches	Complete Pillow Block Number	Pillow Block Housing	PILLOW BLOCK COMPONENT NUMBERS		Basic Load Ratings (lbs)		Adapter Locknut and Lockwasher	Weight (lbs)
			Bearing Number		Dynamic C	Static Co		
1 15/16	SPW2211-115N1	SP211N1	MX-W22211BLLKC3		21 000	24 700	HA2311M1	13
50mm	SPW2211N1	SP211N1	MX-W22211BLLKC3		21 000	24 700	H2311XM1	13
2	SPW2211-200N1	SP211N1	MX-W22211BLLKC3		21 000	24 700	HE2311XYM1	13
2 3/16	SPW2213-203N1	SP213N1	MX-W22213BLLKC3		32 000	40 000	HA2313M1	18
2 1/4	SPW2213-204N1	SP213N1	MX-W22213BLLKC3		32 000	40 000	HE2313XM1	18
60mm	SPW2213N1	SP213N1	MX-W22213BLLKC3		32 000	40 000	H2313XM1	18
2 3/8	SPW2213-206N1	SP213N1	MX-W22213BLLKC3		32 000	40 000	HS2313XM1	18
2 7/16	SPW2215-207N1	SP215N1	MX-W22215BLLKC3		37 500	50 000	HA2315M1	20
2 1/2	SPW2215-208N1	SP215N1	MX-W22215BLLKC3		37 500	50 000	HE2315XM1	20
65mm	SPW2215N1	SP215N1	MX-W22215BLLKC3		37 500	50 000	H2315XM1	20
2 15/16	SPW2217-215N1	SP217N1	MX-W22217BLLKC3		46 500	61 000	HA2317XM1	31
75mm	SPW2217N1	SP217N1	MX-W22217BLLKC3		46 500	61 000	H2317XM1	31
3	SPW2217-300N1	SP217N1	MX-W22217BLLKC3		46 500	61 000	HE2317XM1	31
3 7/16	SPW2220-307N1	SP220N1	MX-W22220BLLKC3		69 500	92 000	HA2320M1	54
3 1/2	SPW2220-308N1	SP220N1	MX-W22220BLLKC3		69 500	92 000	HE2320XM1	54
90mm	SPW2220N1	SP220N1	MX-W22220BLLKC3		69 500	92 000	H2320XM1	54
100mm	SPW2222N1	SP222N1	MX-W22222BLLKC3		92 000	128 000	H2322XM1	71
3 15/16	SPW2222-315N1	SP222N1	MX-W22222BLLKC3		92 000	128 000	HA2322XM1	71
4	SPW2222-400N1	SP222N1	MX-W22222BLLKC3		92 000	128 000	HE2322XM1	71
4 3/16	SPW2224-403N1	SP224N1	MX-W22224BLLKC3		109 000	157 000	HA2324M1	84
4 1/4	SPW2224-404N1	SP224N1	MX-W22224BLLKC3		109 000	157 000	HE2324M1	84
110mm	SPW2224N1	SP224N1	MX-W22224BLLKC3		109 000	157 000	H2324XM1	84
4 7/16	SPW2226-407N1	SP226N1	MX-W22226BLLKC3		127 000	176 000	HA2326M1	101
4 1/2	SPW2226-408N1	SP226N1	MX-W22226BLLKC3		127 000	176 000	HE2326M1	101
115mm	SPW2226N1	SP226N1	MX-W22226BLLKC3		127 000	176 000	H2326M1	101
125mm	SPW2228N1	SP228N1	MX-W22228BLLKC3		153 000	218 000	H2328M1	118
4 15/16	SPW2228-415N1	SP228N1	MX-W22228BLLKC3		153 000	218 000	HA2328M1	118
5	SPW2228-500N1	SP228N1	MX-W22228BLLKC3		153 000	218 000	HE2328M1	118
5 7/16	SPW2232-507N1	SP232N1	MX-W22232BLLKC3		196 000	290 000	HA2332M1	171
5 1/2	SPW2232-508N1	SP232N1	MX-W22232BLLKC3		196 000	290 000	HE2332M1	171
140mm	SPW2232N1	SP232N1	MX-W22232BLLKC3		196 000	290 000	H2332M1	171



C(M)-SPW22...

Pillow Blocks

SPW

HOW TO ORDER

Example: When you order one SPW2220N1, you will receive an assembly consisting of one SP220N1 Pillow Block Housing, one MX-W22220BLLKC3 Bearing, and one H2320XM1 Adapter.

To order a solid base housing, add suffix F to the part number (example: SPW2220FN1).

When C-SPW2220N1 or CM-SPW2220N1 are specified, external covers will be supplied with the unit.

Example: "C" prefix – 2 taconite service seals (dimension l)

"CM" prefix – 1 taconite service seal, 1 end cover (dimension l1)

Notes: Taconite service seals for which dimensions are shown are standard. All units are supplied in float arrangement and may be converted to fixed by relocation of a snap ring.

All bearing inserts are supplied prelubricated with Shell Alvania™ 3 grease.

Solid base housings may be drilled for 2 or 4 bolt arrangement.

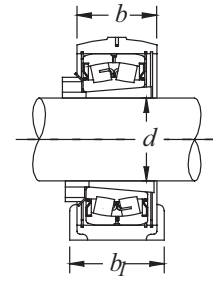
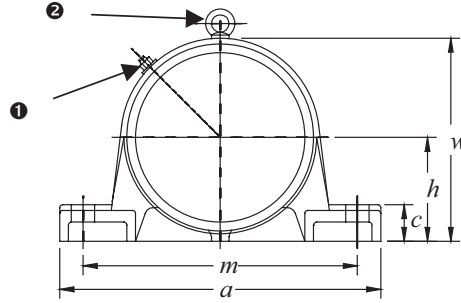
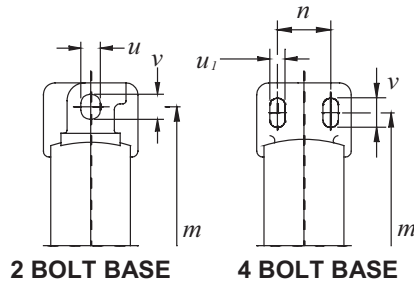
① Grease fittings are provided with all units.

② An eye bolt is provided on housings SP228N1 and SP232N1.

Complete Pillow Block Number	Dimensions (Millimeters)													Set Bolts	
	h	a	b	b ₁	c	m	m ₁	n	w	l	l ₁	u	v	(2 req'd)	(4 req'd)
SPW2211-115N1	70	255	62	70	28	210	200	40	136	120	114	18	23	M16	M12
SPW2211N1	70	255	62	70	28	210	200	40	136	120	114	18	23	M16	M12
SPW2211-200N1	70	255	62	70	28	210	200	40	136	120	114	18	23	M16	M12
SPW2213-203N1	80	275	70	80	30	230	220	48	157	138	126	18	23	M16	M12
SPW2213-204N1	80	275	70	80	30	230	220	48	157	138	126	18	23	M16	M12
SPW2213N1	80	275	70	80	30	230	220	48	157	138	126	18	23	M16	M12
SPW2213-206N1	80	275	70	80	30	230	220	48	157	138	126	18	23	M16	M12
SPW2215-207N1	80	280	72	80	30	230	220	48	163	132	123	18	23	M16	M12
SPW2215-208N1	80	280	72	80	30	230	220	48	163	132	123	18	23	M16	M12
SPW2215N1	80	280	72	80	30	230	220	48	163	132	123	18	23	M16	M12
SPW2217-215N1	95	320	80	90	32	260	252	52	192	156	146	22	27	M20	M16
SPW2217N1	95	320	80	90	32	260	252	52	192	156	146	22	27	M20	M16
SPW2217-300N1	95	320	80	90	32	260	252	52	192	156	146	22	27	M20	M16
SPW2220-307N1	112	380	95	110	40	320	300	66	226	185	175	26	32	M24	M16
SPW2220-308N1	112	380	95	110	40	320	300	66	226	185	175	26	32	M24	M16
SPW2220N1	112	380	95	110	40	320	300	66	226	185	175	26	32	M24	M16
SPW2222N1	125	410	100	120	45	350	320	74	252	198	185	26	32	M24	M16
SPW2222-315N1	125	410	100	120	45	350	320	74	252	198	185	26	32	M24	M16
SPW2222-400N1	125	410	100	120	45	350	320	74	252	198	185	26	32	M24	M16
SPW2224-403N1	140	410	105	120	45	350	330	74	274	203	190	26	32	M24	M16
SPW2224-404N1	140	410	105	120	45	350	330	74	274	203	190	26	32	M24	M16
SPW2224N1	140	410	105	120	45	350	330	74	274	203	190	26	32	M24	M16
SPW2226-407N1	150	445	115	130	50	380	370	80	293	219	206	28	36	M24	M20
SPW2226-408N1	150	445	115	130	50	380	370	80	293	219	206	28	36	M24	M20
SPW2226N1	150	445	115	130	50	380	370	80	293	219	206	28	36	M24	M20
SPW2228N1	150	500	120	150	50	420	400	80	305	232	219	33	42	M30	M24
SPW2228-415N1	150	500	120	150	50	420	400	80	305	232	219	33	42	M30	M24
SPW2228-500N1	150	500	120	150	50	420	400	80	305	232	219	33	42	M30	M24
SPW2232-507N1	170	550	135	160	60	470	450	90	340	260	247	33	42	M30	M24
SPW2232-508N1	170	550	135	160	60	470	450	90	340	260	247	33	42	M30	M24
SPW2232N1	170	550	135	160	60	470	450	90	340	260	247	33	42	M30	M24

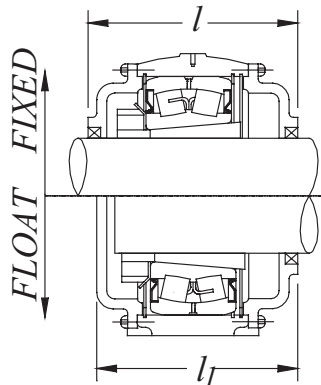
SPAW

Pillow Blocks



SPAW22...

Shaft diameter d inches	Complete Pillow Block Number	Pillow Block Housing	PILLOW BLOCK COMPONENT NUMBERS		Basic Load Ratings (lbs)		Adapter Locknut and Lockwasher	Weight (lbs)
			Bearing Number		Dynamic C	Static Co		
1 15/16 50mm	SPAW2211-115N1 SPAW2211N1	SPA211N1 SPA211N1	MX-W22211BLLKC3 MX-W22211BLLKC3		21 000 21 000	24 700 24 700	HA2311M1 H2311XM1	13 13
2	SPAW2211-200N1	SPA211N1	MX-W22211BLLKC3		21 000	24 700	HE2311XYM1	13
2 3/16	SPAW2213-203N1 FSPAW2213-203N1	SPA213N1 FSPA213N1	MX-W22213BLLKC3 MX-W22213BLLKC3		32 000 32 000	40 000 40 000	HA2313M1 HA2313M1	18 18
2 1/4	SPAW2213-204N1 FSPAW2213-204N1	SPA213N1 FSPA213N1	MX-W22213BLLKC3 MX-W22213BLLKC3		32 000 32 000	40 000 40 000	HE2313XM1 HE2313XM1	18 18
60mm	SPAW2213N1 FSPAW2213N1	SPA213N1 FSPA213N1	MX-W22213BLLKC3 MX-W22213BLLKC3		32 000 32 000	40 000 40 000	H2313XM1 H2313XM1	18 18
2 3/8	SPAW2213-206N1 FSPAW2213-206N1	SPA213N1 FSPA213N1	MX-W22213BLLKC3 MX-W22213BLLKC3		32 000 32 000	40 000 40 000	HS2313XM1 HS2313XM1	18 18
2 7/16	SPAW2215-207N1 FSPAW2215-207N1	SPA215N1 FSPA215N1	MX-W22215BLLKC3 MX-W22215BLLKC3		37 500 37 500	50 000 50 000	HA2315M1 HA2315M1	20 20
2 1/2	SPAW2215-208N1 FSPAW2215-208N1	SPA215N1 FSPA215N1	MX-W22215BLLKC3 MX-W22215BLLKC3		37 500 37 500	50 000 50 000	HE2315XM1 HE2315XM1	20 20
65mm	SPAW2215N1 FSPAW2215N	SPA215N1 FSPA215N1	MX-W22215BLLKC3 MX-W22215BLLKC3		37 500 37 500	50 000 50 000	H2315XM1 H2315XM1	20 20
2 15/16	SPAW2217-215N1 FSPAW2217-215N1	SPA217N1 FSPA217N1	MX-W22217BLLKC3 MX-W22217BLLKC3		46 500 46 500	61 000 61 000	HA2317XM1 HA2317XM1	31 31
75mm	SPAW2217N1 FSPAW2217N1	SPA217N1 FSPA217N1	MX-W22217BLLKC3 MX-W22217BLLKC3		46 500 46 500	61 000 61 000	H2317XM1 H2317XM1	31 31
3	SPAW2217-300N1 FSPAW2217-300N1	SPA217N1 FSPA217N1	MX-W22217BLLKC3 MX-W22217BLLKC3		46 500 46 500	61 000 61 000	HE2317XM1 HE2317XM1	31 31
3 7/16	SPAW2220-307N1 FSPAW2220-307N1	SPA220N1 FSPA220N1	MX-W22220BLLKC3 MX-W22220BLLKC3		69 500 69 500	92 000 92 000	HA2320M1 HA2320M1	54 54
3 1/2	SPAW2220-308N1 FSPAW2220-308N1	SPA220N1 FSPA220N1	MX-W22220BLLKC3 MX-W22220BLLKC3		69 500 69 500	92 000 92 000	HE2320XM1 HE2320XM1	54 54
90mm	SPAW2220N1 FSPAW2220N1	SPA220N1 FSPA220N1	MX-W22220BLLKC3 MX-W22220BLLKC3		69 500 69 500	92 000 92 000	H2320XM1 H2320XM1	54 54
100mm	SPAW2222N1	SPA222N1	MX-W22222BLLKC3		92 000	128 000	H2322XM1	71
3 15/16	SPAW2222-315N1	SPA222N1	MX-W22222BLLKC3		92 000	128 000	HA2322XM1	71
4	SPAW2222-400N1	SPA222N1	MX-W22222BLLKC3		92 000	128 000	HE2322XM1	71
4 3/16	SPAW2224-403N1	SPA224N1	MX-W22224BLLKC3		109 000	157 000	HA2324M1	84
4 1/4	SPAW2224-404N1	SPA224N1	MX-W22224BLLKC3		109 000	157 000	HE2324M1	84
110mm	SPAW2224N1	SPA224N1	MX-W22224BLLKC3		109 000	157 000	H2324XM1	84
4 7/16	SPAW2226-407N1	SPA226N1	MX-W22226BLLKC3		127 000	176 000	HA2326M1	101
4 1/2	SPAW2226-408N1	SPA226N1	MX-W22226BLLKC3		127 000	176 000	HE2326M1	101
115mm	SPAW2226N1	SPA226N1	MX-W22226BLLKC3		127 000	176 000	H2326M1	101
125mm	SPAW2228N1	SPA228N1	MX-W22228BLLKC3		153 000	218 000	H2328M1	118
4 15/16	SPAW2228-415N1	SPA228N1	MX-W22228BLLKC3		153 000	218 000	HA2328M1	118
5	SPAW2228-500N1	SPA228N1	MX-W22228BLLKC3		153 000	218 000	HE2328M1	118
5 7/16	SPAW2232-507N1	SPA232N1	MX-W22232BLLKC3		196 000	290 000	HA2332M1	171
5 1/2	SPAW2232-508N1	SPA232N1	MX-W22232BLLKC3		196 000	290 000	HE2332M1	171
140mm	SPAW2232N1	SPA232N1	MX-W22232BLLKC3		196 000	290 000	H2332M1	171



C(M)-SPAW22...

Pillow Blocks SPAW

HOW TO ORDER

Example: When you order one SPAW2220-307N1, you will receive an assembly consisting of one SPA220N1 Pillow Block Housing, one MX-W2220BLLKC3 Bearing, and one HA2320M1 Adapter. All units are supplied in float arrangement, and may be converted to fixed by relocation of a snap ring.

When C-SPAW2220N1 or CM-SPAW2220N1 are specified, external covers will be supplied with the unit.

Example: "C" prefix – 2 taconite service seals (dimension l)

"CM" prefix – 1 taconite service seal, 1 end cover (dimension l1)

Notes: Taconite service seals for which dimensions are shown are standard. All units are supplied in float arrangement and may be converted to fixed by relocation of a snap ring. All bearing inserts are supplied prelubricated with Shell Alvania™ 3 grease.

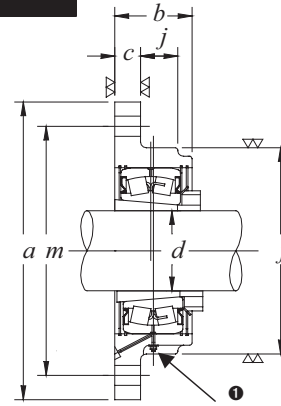
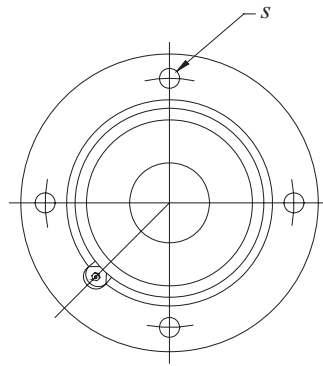
① Grease fittings are provided with all units.

② An eye bolt is provided on housings SPA28N1 and SPA32N1

Complete Pillow Block Number	Dimensions (Inches)													Set Bolts	
	h	a	b	b ₁	c	m	n	w	l	l ₁	u	u ₁	v	Size	No.
SPAW2211-115N1	2 3/4	9.606	2.441	2.756	1.102	7 5/8	—	5.354	4.724	4.488	0.709	—	7/8	5/8	2
SPAW2211N1	2 3/4	9.606	2.441	2.756	1.102	7 5/8	—	5.354	4.724	4.488	0.709	—	7/8	5/8	2
SPAW2211-200N1	2 3/4	9.606	2.441	2.756	1.102	7 5/8	—	5.354	4.724	4.488	0.709	—	7/8	5/8	2
SPAW2213-203N1	3	10.827	2.756	3.110	1.024	8 13/16	2	6.024	5.433	4.961	0.709	—	1 5/16	5/8	2
FSPAW2213-203N1	3	10.827	2.756	3.110	1.024	8 13/16	2	6.024	5.433	4.961	—	0.591	1 5/16	1/2	4
SPAW2213-204N1	3	10.827	2.756	3.110	1.024	8 13/16	2	6.024	5.433	4.961	0.709	—	1 5/16	5/8	2
FSPAW2213-204N1	3	10.827	2.756	3.110	1.024	8 13/16	2	6.024	5.433	4.961	—	0.591	1 5/16	1/2	4
SPAW2213N1	3	10.827	2.756	3.110	1.024	8 13/16	2	6.024	5.433	4.961	0.709	—	1 5/16	5/8	2
FSPAW2213N1	3	10.827	2.756	3.110	1.024	8 13/16	2	6.024	5.433	4.961	—	0.591	1 5/16	1/2	4
SPAW2213-206N1	3	10.827	2.756	3.110	1.024	8 13/16	2	6.024	5.433	4.961	0.709	—	1 5/16	5/8	2
FSPAW2213-206N1	3	10.827	2.756	3.110	1.024	8 13/16	2	6.024	5.433	4.961	—	0.591	1 5/16	1/2	4
SPAW2215-207N1	3 1/4	11.024	2.835	3.110	1.299	9 1/8	1 7/8	6.535	5.197	4.843	0.709	—	1 1/8	5/8	2
FSPAW2215-207N1	3 1/4	11.024	2.835	3.110	1.299	9 1/8	1 7/8	6.535	5.197	4.843	—	0.591	1 1/8	1/2	4
SPAW2215-208N1	3 1/4	11.024	2.835	3.110	1.299	9 1/8	1 7/8	6.535	5.197	4.843	0.709	—	1 1/8	5/8	2
FSPAW2215-208N1	3 1/4	11.024	2.835	3.110	1.299	9 1/8	1 7/8	6.535	5.197	4.843	—	0.591	1 1/8	1/2	4
SPAW2215N1	3 1/4	11.024	2.835	3.110	1.299	9 1/8	1 7/8	6.535	5.197	4.843	0.709	—	1 1/8	5/8	2
FSPAW2215N	3 1/4	11.024	2.835	3.110	1.299	9 1/8	1 7/8	6.535	5.197	4.843	—	0.591	1 1/8	1/2	4
SPAW2217-215N1	3 3/4	12.598	3.150	3.504	1.260	10 7/16	2 1/8	7.559	6.142	5.748	0.866	—	1 5/16	3/4	2
FSPAW2217-215N1	3 3/4	12.598	3.150	3.504	1.260	10 7/16	2 1/8	7.559	6.142	5.748	—	0.709	1 5/16	5/8	4
SPAW2217N1	3 3/4	12.598	3.150	3.504	1.260	10 7/16	2 1/8	7.559	6.142	5.748	0.866	—	1 5/16	3/4	2
FSPAW2217N1	3 3/4	12.598	3.150	3.504	1.260	10 7/16	2 1/8	7.559	6.142	5.748	—	0.709	1 5/16	5/8	4
SPAW2217-300N1	3 3/4	12.598	3.150	3.504	1.260	10 7/16	2 1/8	7.559	6.142	5.748	0.866	—	1 5/16	3/4	2
FSPAW2217-300N1	3 3/4	12.598	3.150	3.504	1.260	10 7/16	2 1/8	7.559	6.142	5.748	—	0.709	1 5/16	5/8	4
SPAW2220-307N1	4 1/2	14.961	3.740	4.331	1.654	12 3/8	2 3/8	8.976	7.283	6.890	1.024	—	1 5/8	7/8	2
FSPAW2220-307N1	4 1/2	14.961	3.740	4.331	1.654	12 3/8	2 3/8	8.976	7.283	6.890	—	0.866	1 5/8	3/4	4
SPAW2220-308N1	4 1/2	14.961	3.740	4.331	1.654	12 3/8	2 3/8	8.976	7.283	6.890	1.024	—	1 5/8	7/8	2
FSPAW2220-308N1	4 1/2	14.961	3.740	4.331	1.654	12 3/8	2 3/8	8.976	7.283	6.890	—	0.866	1 5/8	3/4	4
SPAW2220N1	4 1/2	14.961	3.740	4.331	1.654	12 3/8	2 3/8	8.976	7.283	6.890	1.024	—	1 5/8	7/8	2
FSPAW2220N1	4 1/2	14.961	3.740	4.331	1.654	12 3/8	2 3/8	8.976	7.283	6.890	—	0.866	1 5/8	3/4	4
SPAW2222N1	4 15/16	16.496	3.937	4.764	1.772	13 9/16	2 3/4	10.315	7.795	7.283	—	0.866	1 11/16	3/4	4
SPAW2222-315N1	4 15/16	16.496	3.937	4.764	1.772	13 9/16	2 3/4	10.315	7.795	7.283	—	0.866	1 11/16	3/4	4
SPAW2222-400N1	4 15/16	16.496	3.937	4.764	1.772	13 9/16	2 3/4	10.315	7.795	7.283	—	0.866	1 11/16	3/4	4
SPAW2224-403N1	5 1/4	16.496	4.134	4.764	1.496	13 7/8	2 3/4	10.512	7.992	7.480	—	0.866	1 3/8	3/4	4
SPAW2224-404N1	5 1/4	16.496	4.134	4.764	1.496	13 7/8	2 3/4	10.512	7.992	7.480	—	0.866	1 3/8	3/4	4
SPAW2224N1	5 1/4	16.496	4.134	4.764	1.496	13 7/8	2 3/4	10.512	7.992	7.480	—	0.866	1 3/8	3/4	4
SPAW2226-407N1	6	18.386	4.528	5.118	2.047	15 5/16	3 1/4	11.614	8.622	8.110	—	0.945	1 9/16	7/8	4
SPAW2226-408N1	6	18.386	4.528	5.118	2.047	15 5/16	3 1/4	11.614	8.622	8.110	—	0.945	1 9/16	7/8	4
SPAW2226N1	6	18.386	4.528	5.118	2.047	15 5/16	3 1/4	11.614	8.622	8.110	—	0.945	1 9/16	7/8	4
SPAW2228N1	6	20.118	4.724	5.866	2.047	16 9/16	3 3/8	12.087	9.134	8.622	—	1.024	1 9/16	1	4
SPAW2228-415N1	6	20.118	4.724	5.866	2.047	16 9/16	3 3/8	12.087	9.134	8.622	—	1.024	1 9/16	1	4
SPAW2228-500N1	6	20.118	4.724	5.866	2.047	16 9/16	3 3/8	12.087	9.134	8.622	—	1.024	1 9/16	1	4
SPAW2232-507N1	6 11/16	22.008	5.315	6.260	2.362	18 5/16	3 3/4	13.386	10.236	9.724	—	1.024	1 15/16	1	4
SPAW2232-508N1	6 11/16	22.008	5.315	6.260	2.362	18 5/16	3 3/4	13.386	10.236	9.724	—	1.024	1 15/16	1	4
SPAW2232N1	6 11/16	22.008	5.315	6.260	2.362	18 5/16	3 3/4	13.386	10.236	9.724	—	1.024	1 15/16	1	4

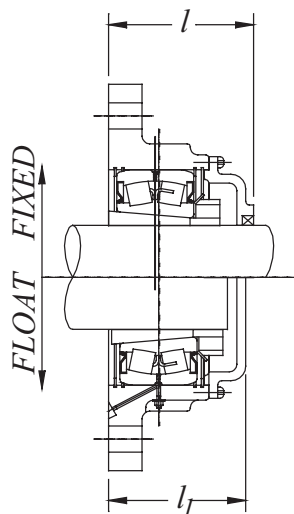
SFCW

Flange Blocks



SFCW22..

Shaft diameter d inches	Complete Flange Block Number	Flange Block Housing	FLANGE BLOCK COMPONENT NUMBERS			Adapter Locknut and Lockwasher	Weight (lbs)
			Bearing Number	Basic Load Ratings (lbs)			
				Dynamic C	Static Co		
1 15⁄16	SPW2211-115N1	SP211N1	MX-W22211BLLKC3	21 000	24 700	HA2311M1	13
50mm	SFCW2211N1	SFC211N1	MX-W22211BLLKC3	21 000	24 700	H2311XM1	19
2	SFCW2211-200N1	SFC211N1	MX-W22211BLLKC3	21 000	24 700	HE2311XYM1	19
2 3⁄16	SFCW2213-203N1	SFC213N1	MX-W22213BLLKC3	32 000	40 000	HA2313M1	23
2 1⁄4	SFCW2213-204N1	SFC213N1	MX-W22213BLLKC3	32 000	40 000	HE2313XM1	23
60mm	SFCW2213N1	SFC213N1	MX-W22213BLLKC3	32 000	40 000	H2313XM1	23
2 3⁄8	SFCW2213-206N1	SFC213N1	MX-W22213BLLKC3	32 000	40 000	HS2313XM1	23
2 7⁄16	SFCW2215-207N1	SFC215N1	MX-W22215BLLKC3	37 500	50 000	HA2315M1	27
2 1⁄2	SFCW2215-208N1	SFC215N1	MX-W22215BLLKC3	37 500	50 000	HE2315XM1	27
65mm	SFCW2215N1	SFC215N1	MX-W22215BLLKC3	37 500	50 000	H2315XM1	27
2 15⁄16	SFCW2217-215N1	SFC217N1	MX-W22217BLLKC3	46 500	61 000	HA2317XM1	34
75mm	SFCW2217N1	SFC217N1	MX-W22217BLLKC3	46 500	61 000	H2317XM1	34
3	SFCW2217-300N1	SFC217N1	MX-W22217BLLKC3	46 500	61 000	HE2317XM1	34
3 7⁄16	SFCW2220-307N1	SFC220N1	MX-W22220BLLKC3	69 500	92 000	HA2320M1	61
3 1⁄2	SFCW2220-308N1	SFC220N1	MX-W22220BLLKC3	69 500	92 000	HE2320XM1	61
90mm	SFCW2220N1	SFC220N1	MX-W22220BLLKC3	69 500	92 000	H2320XM1	61
100mm	SFCW2222N1	SFC222N1	MX-W22222BLLKC3	92 000	128 000	H2322XM1	82
3 15⁄16	SFCW2222-315N1	SFC222N1	MX-W22222BLLKC3	92 000	128 000	HA2322XM1	82
4	SFCW2222-400N1	SFC222N1	MX-W22222BLLKC3	92 000	128 000	HE2322XM1	82
4 3⁄16	SFCW2224-403N1	SFC224N1	MX-W22224BLLKC3	109 000	157 000	HA2324M1	—
4 1⁄4	SFCW2224-404N1	SFC224N1	MX-W22224BLLKC3	109 000	157 000	HE2324M1	—
110mm	SFCW2224N1	SFC224N1	MX-W22224BLLKC3	109 000	157 000	H2324XM1	—
4 7⁄16	SFCW2226-407N1	SFC226N1	MX-W22226BLLKC3	127 000	176 000	HA2326M1	112
4 1⁄2	SFCW2226-408N1	SFC226N1	MX-W22226BLLKC3	127 000	176 000	HE2326M1	112
115mm	SFCW2226N1	SFC226N1	MX-W22226BLLKC3	127 000	176 000	H2326M1	112
125mm	SFCW2228N1	SFC228N1	MX-W22228BLLKC3	153 000	218 000	H2328M1	—
4 15⁄16	SFCW2228-415N1	SFC228N1	MX-W22228BLLKC3	153 000	218 000	HA2328M1	—
5	SFCW2228-500N1	SFC228N1	MX-W22228BLLKC3	153 000	218 000	HE2328M1	—
5 7⁄16	SFCW2232-507N1	SFC232N1	MX-W22232BLLKC3	196 000	290 000	HA2332M1	—
5 1⁄2	SFCW2232-508N1	SFC232N1	MX-W22232BLLKC3	196 000	290 000	HE2332M1	—
140mm	SFCW2232N1	SFC232N1	MX-W22232BLLKC3	196 000	290 000	H2332M1	—



C(M)-SFCW22...

Flange Blocks SFCW

HOW TO ORDER

Example: When you order one SFCW2220N1, you will receive an assembly consisting of one SFC220N1 Flange Block Housing, one MX-W22220BLLKC3 Bearing, and one H2320XM1 Adapter.

When C-SFCW2220N1 or CM-SFCW2220N1 are specified, an external cover will be supplied with the unit.

Example: "C" prefix – 1 taconite service seal (dimension l)

"CM" prefix – 1 closed end cover (dimension l_1)

Notes: Taconite service seals for which dimensions are shown are standard. For dimensions and availability of non-standard taconite service seals, consult NTN Engineering.

All units are supplied in the float arrangement and may be converted to fixed by relocation of a snap ring.

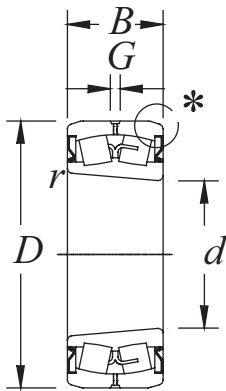
All units are assembled for flush mounting; for spigot mounting, the bearing insert must be reversed.

All bearing inserts are supplied prelubricated with Shell Alvania™ 3 grease.

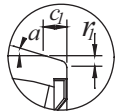
① Grease fittings are provided with all units.

Complete Flange Block Number	Dimensions (Millimeters)								
	a	b	c	m	f	j	l	l_1	s
SFCW2211-115N1	200	62	19	165	130	25	91	85	14
SFCW2211N1	200	62	19	165	130	25	91	85	14
SFCW2211-200N1	200	62	19	165	130	25	91	85	14
SFCW2213-203N1	240	70	24	190	155	25	104	92	14
SFCW2213-204N1	240	70	24	190	155	25	104	92	14
SFCW2213N1	240	70	24	190	155	25	104	92	14
SFCW2213-206N1	240	70	24	190	155	25	104	92	14
SFCW2215-207N1	255	72	24	215	170	32	102	93	17
SFCW2215-208N1	255	72	24	215	170	32	102	93	17
SFCW2215N1	255	72	24	215	170	32	102	93	17
SFCW2217-215N1	270	80	27	240	190	32	118	108	17
SFCW2217N1	270	80	27	240	190	32	118	108	17
SFCW2217-300N1	270	80	27	240	190	32	118	108	17
SFCW2220-307N1	330	95	29	280	230	38	140	130	20
SFCW2220-308N1	330	95	29	280	230	38	140	130	20
SFCW2220N1	330	95	29	280	230	38	140	130	20
SFCW2222N1	365	100	32	310	255	42	149	136	20
SFCW2222-315N1	365	100	32	310	255	42	149	136	20
SFCW2222-400N1	365	100	32	310	255	42	149	136	20
SFCW2224-403N1	400	105	32	330	275	42	154	141	23
SFCW2224-404N1	400	105	32	330	275	42	154	141	23
SFCW2224N1	400	105	32	330	275	42	154	141	23
SFCW2226-407N1	416	115	32	355	290	42	167	154	23
SFCW2226-408N1	416	115	32	355	290	42	167	154	23
SFCW2226N1	416	115	32	355	290	42	167	154	23
SFCW2228N1	450	120	45	385	310	56	174	163	35
SFCW2228-415N1	450	120	45	385	310	56	174	163	35
SFCW2228-500N1	450	120	45	385	310	56	174	163	35
SFCW2232-507N1	520	135	45	435	360	65	195	185	35
SFCW2232-508N1	520	135	45	435	360	65	195	185	35
SFCW2232N1	520	135	45	435	360	65	195	185	35

SEALED SPHERICAL ROLLER BEARING INSERTS



MX-W222K
Taper 1:12



* Detail: ❶

Bearing No.	Bore d	Dimensions (Inch/mm)				Basic Load Rating (lbs/N)		Limiting Speed (rpm) nmax	Weight (lbs)
		O.D. D	Width B	Fillet Radius r	Oil Groove Width G	Dynamic C	Static Co		
MX-W22211BLLKC3	2.1654 55	3.9370 100	1.5748 40	0.0394 1.0	0.2362 6	21 000 93 500	24 700 110 000	2 700	2.6
MX-W22213BLLKC3	2.5591 65	4.7244 120	1.8307 46.5	0.0394 1.0	0.2756 7	32 000 143 000	40 000 179 000	2 300	4.2
MX-W22215BLLKC3	2.9528 75	5.1181 130	1.8307 46.5	0.0394 1.0	0.2756 7	37 500 166 000	50 000 223 000	2 000	4.6
MX-W22217BLLKC3	3.3465 85	5.9055 150	2.0276 51.5	0.0394 1.0	0.2756 7	46 500 206 000	61 000 272 000	1 800	6.2
MX-W22220BLLKC3	3.9370 100	7.0866 180	2.5394 64.5	0.0591 1.5	0.3543 9	69 500 310 000	92 000 410 000	1 500	13.0
MX-W22222BLLKC3	4.3307 110	7.8740 200	2.7953 71	0.0591 1.5	0.3543 9	92 000 410 000	128 000 570 000	1 400	18.7
MX-W22224BLLKC3	4.7244 120	8.4646 215	2.9921 76	0.0591 1.5	0.3543 9	109 000 485 000	157 000 700 000	1 300	24.0
MX-W22226BLLKC3	5.1181 130	9.0551 230	3.3071 84	0.0591 1.5	0.4331 11	127 000 565 000	176 000 785 000	1 200	28.4
MX-W22228BLLKC3	5.5118 140	9.8425 250	3.4627 88	0.0591 1.5	0.4331 11	153 000 680 000	218 000 970 000	1 100	36.2
MX-W22232BLLKC3	6.2992 160	11.4173 290	4.0945 104	0.0591 1.5	0.4331 11	196 000 870 000	290 000 1 290 000	1 000	59.5

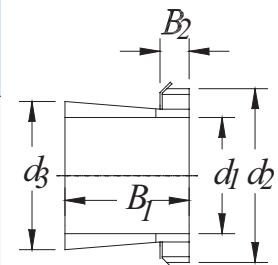
Notes:

- All bearing inserts are supplied prelubricated with Shell Alvania™ 3 grease.
- Outer ring lubrication holes and oil groove provided as standard.
- Limiting speeds listed may not apply under conditions of greater than normal load and/or temperature.

❶ For outside diameter chamfer dimensions, please contact NTN Engineering.

ADAPTERS FOR BEARINGS SERIES MX-W222K

Complete Adapter No.	Adapter Sleeve No.	Lock-Nut No.	Lock-washer No.	Shaft (Bore) Dia. d_1	Dimensions (Inch/mm)				Thread	Weight (lbs)
					d_{2max}	d_{3max}	B_1	B_2		
HA2311M1	AA2311M1	AN11M1	AW11	1 $\frac{15}{16}$	2.953	2.322	2.323	0.472	M55X2	1.0
H2311XM1	A2311XM1	AN11M1	AW11X	50mm	2.953	2.322	2.323	0.472	M55X2	0.9
HE2311XYM1	AE2311XYM1	AN11YM1	AW11X	2	2.953	2.322	2.323	0.472	M55X1.5	0.9
HA2313M1	AA2313M1	AN13M1	AW13	2 $\frac{3}{16}$	3.346	2.729	2.559	0.551	M65X2	1.7
HE2313XM1	AE2313XM1	AN13M1	AW13X	2 $\frac{1}{4}$	3.346	2.729	2.559	0.551	M65X2	1.5
H2313XM1	A2313XM1	AN13M1	AW13X	60mm	3.346	2.729	2.559	0.551	M65X2	1.2
HS2313XM1	AS2313XM1	AN13M1	AW13X	2 $\frac{3}{8}$	3.346	2.729	2.559	0.551	M65X2	1.2
HA2315M1	AA2315M1	AN15M1	AW15	2 $\frac{7}{16}$	3.858	3.145	2.874	0.591	M75X2	2.3
HE2315XM1	AE2315XM1	AN15M1	AW15X	2 $\frac{1}{2}$	3.858	3.145	2.874	0.591	M75X2	2.5
H2315XM1	A2315XM1	AN15M1	AW15X	65mm	3.858	3.145	2.874	0.591	M75X2	2.3
HA2317XM1	AA2317XM1	AN17M1	AW17X	2 $\frac{15}{16}$	4.331	3.559	3.228	0.709	M85X2	3.2
H2317XM1	A2317XM1	AN17M1	AW17X	75mm	4.331	3.559	3.228	0.709	M85X2	3.2
HE2317XM1	AE2317XM1	AN17M1	AW17X	3	4.331	3.559	3.228	0.709	M85X2	3.0
HA2320M1	AA2320M1	AN20M1	AW20	3 $\frac{7}{16}$	5.118	4.192	3.819	0.787	M100X2	5.3
HE2320XM1	AE2320XM1	AN20M1	AW20X	3 $\frac{1}{2}$	5.118	4.192	3.819	0.787	M100X2	5.0
H2320XM1	A2320XM1	AN20M1	AW20X	90mm	5.118	4.192	3.819	0.787	M100X2	4.7
H2322XM1	A2322XM1	AN22M1	AW22X	100mm	5.709	4.609	4.134	0.827	M110X2	6.0
HA2322XM1	AA2322XM1	AN22M1	AW22X	3 $\frac{15}{16}$	5.709	4.609	4.134	0.827	M110X2	6.0
HE2322XM1	AE2322XM1	AN22M1	AW22X	4	5.709	4.609	4.134	0.827	M110X2	5.6
HA2324M1	AA2324M1	AN24M1	AW24	4 $\frac{3}{16}$	6.102	5.022	4.409	0.866	M120X2	8.2
HE2324M1	AE2324M1	AN24M1	AW24	4 $\frac{1}{4}$	6.102	5.022	4.409	0.866	M120X2	7.7
H2324XM1	A2324XM1	AN24M1	AW24X	110mm	6.102	5.022	4.409	0.866	M120X2	7.0
HA2326M1	AA2326M1	AN26M1	AW26	4 $\frac{7}{16}$	6.496	5.443	4.764	0.906	M130X2	10.1
HE2326M1	AE2326M1	AN26M1	AW26	4 $\frac{1}{2}$	6.496	5.443	4.764	0.906	M130X2	10.1
H2326M1	A2326M1	AN26M1	AW26	115mm	6.496	5.443	4.764	0.906	M130X2	10.1
H2328M1	A2328M1	AN28M1	AW28	125mm	7.087	5.866	5.157	0.945	M140X2	12.2
HA2328M1	AA2328M1	AN28M1	AW28	4 $\frac{15}{16}$	7.087	5.866	5.157	0.945	M140X2	12.1
HE2328M1	AE2328M1	AN28M1	AW28	5	7.087	5.866	5.157	0.945	M140X2	11.3
HA2332M1	AA2332M1	AN32M1	AW32	5 $\frac{7}{16}$	8.268	6.693	5.787	1.102	M160X3	21.2
HE2332M1	AE2332M1	AN32M1	AW32	5 $\frac{1}{2}$	8.268	6.693	5.787	1.102	M160X3	20.3
H2332M1	A2332M1	AN32M1	AW32	140mm	8.268	6.693	5.787	1.102	M160X3	20.2

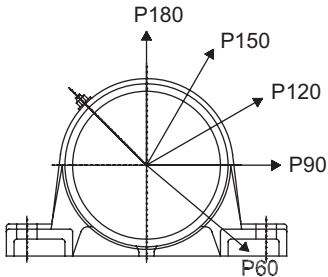


H23...M1

Notes:

- The adapter number denotes the complete assembly consisting of adapter sleeve, locknut and lockwasher.
- Suffix X denotes the narrow slot type of adapter sleeve.
- The straight inner tab type of lockwasher (also denoted by X) should be used with this sleeve.
- Suffix Y denotes a non-standard thread.

SPAW/SPW PILLOW BLOCK HOUSING ALLOWABLE LOADS



Housing	Allowable Load (lbs) ❶				
	P60	P90	P120	P150	P180
SP211N1	12 500	7 500	5 500	5 000	6 000
SP211FN1	27 500	16 500	12 000	11 000	14 000
SP213N1	18 500	11 500	8 500	7 500	9 500
SP213FN1	34 500	21 000	15 500	14 000	17 500
SP2215N1	21 500	13 000	10 000	9 000	11 000
SP215FN1	40 000	25 000	18 000	16 000	20 000
SP217N1	28 500	17 000	12 500	11 500	14 500
SP217FN1	47 000	28 000	21 000	18 500	23 000
SP220N1	38 500	23 000	17 000	15 500	19 500
SP220FN1	52 500	31 500	27 000	21 000	26 500
SP222N1	47 500	28 500	21 000	18 500	23 500
SP222FN1	61 500	37 500	27 500	25 000	31 000
SP224N1	71 500	45 000	24 500	22 000	24 500
SP224FN1	93 500	58 500	35 500	31 000	35 500
SP226N1	77 000	48 500	26 500	24 000	26 500
SP226FN1	104 500	66 000	37 500	33 000	37 500
SP228N1	82 500	52 000	27 500	25 500	27 500
SP228FN1	119 000	75 000	40 000	36 500	40 000
SP232N1	100 500	63 000	34 000	31 000	34 000
SP232FN1	143 500	90 500	48 500	44 000	48 500

Notes:

Allowable thrust loads for complete assemblies mounted on straight shafts depend on the fit between adapter sleeve and shaft. Please consult NTN Engineering.

❶ Values include a safety factor of 2. For more severe conditions, higher safety factors must be applied.

HEAVY DUTY BLOCKS SPAW, SPW and SFCW TYPE



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