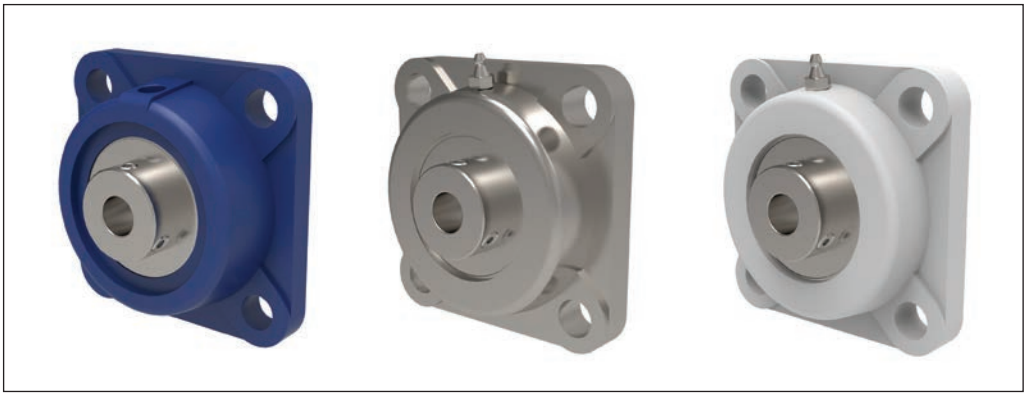
Housing material options

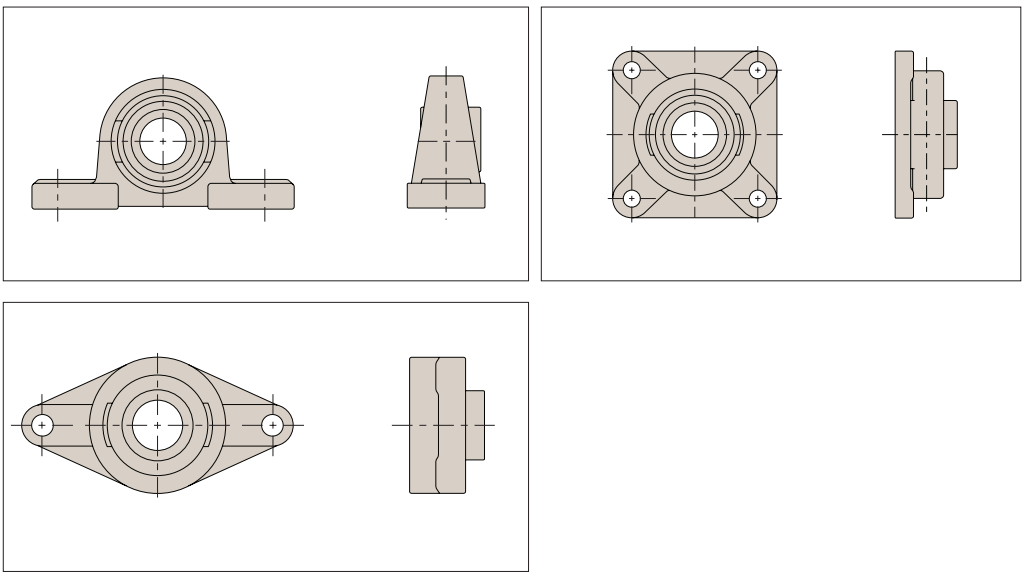


Cast iron housing
Standard version, passivated and painted Ø12-120mm.

Stainless steel housing
Stainless AISI 304, Ø12-60mm.

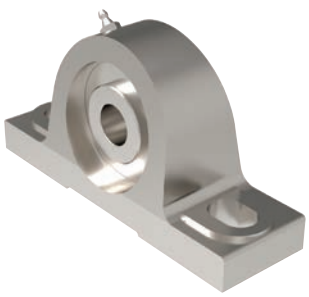
Thermoplastic housing
Food grade applications, smooth PBT resin material, Ø20-40mm.

Pillow Bearings



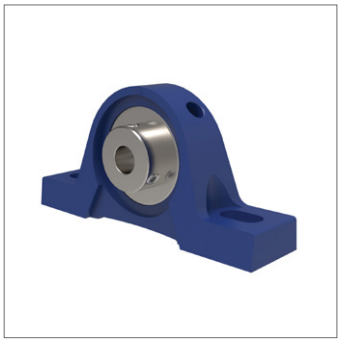
Use with Automotion linear shafts L1770-L1774

Options

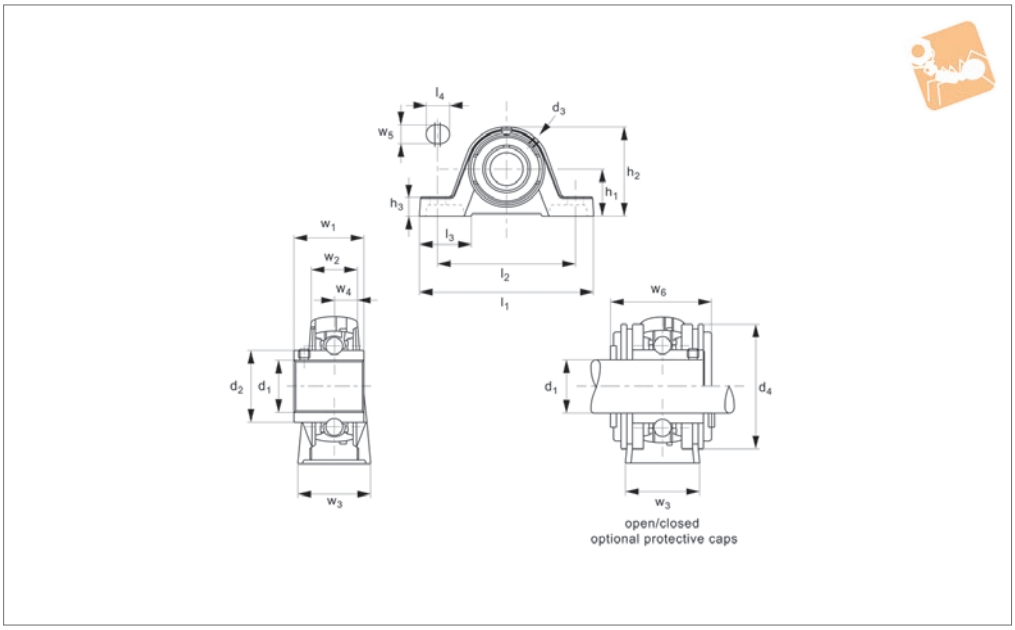
Pillow block	Four point flange	Two point flange
		

Bearing Supports from Automotion Components

Pillow Block Bearing Units
cast iron



L1860



Material
Cast iron (FG20 or FG25), passivated and painted blue (RAL 5010). Steel, self-aligning bearing units with double seals, lubricated for life.

Technical Notes
Self-aligning bearings, relubricatable.
Temperature range: -20°C to +120°C.

The max. axial load is 0.5 x radial static load.
The housings are rated to take the maximum bearing loads.
For optional shaft end caps add suffixes:
-CO for two open protective caps (with seals) for through shafts.
-CC for one open and one closed protective caps for shaft ends.

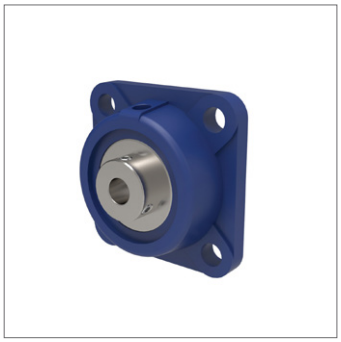
Tips
Shaft retention with two set screws (at 120° offset).
Used with h6 tolerance shafts (see our part no.s L1770-L1776).

Order No.	d_1 for h6	l_1	h_1 ±0.2	l_2 ±1.0	d_2	d_3	d_4	h_2	h_3	Weight kg
L1860.012	12	130	33.3	97	29.0	R1/8“	54	64.0	14.5	0.5
L1860.015	15	130	33.3	97	29.0	R1/8“	54	64.0	14.5	0.5
L1860.017	17	130	33.3	97	29.0	R1/8“	54	64.0	14.5	0.5
L1860.020	20	130	33.3	97	29.0	R1/8“	54	64.0	14.5	0.5
L1860.025	25	130	36.5	103	34.0	R1/8“	60	70.0	14.5	0.7
L1860.030	30	158	42.9	118	40.3	R1/8“	70	82.0	17.0	1.1
L1860.035	35	163	47.6	126	48.0	R1/8“	80	93.0	19.0	1.5
L1860.040	40	179	49.2	138	53.0	R1/8“	88	99.0	19.0	1.8
L1860.045	45	192	54.0	150	57.2	R1/8“	95	107.0	21.5	2.2
L1860.050	50	200	57.2	158	61.8	R1/8“	100	115.0	21.5	2.7
L1860.055	55	222	63.5	176	69.0	R1/8“	110	124.5	22.5	3.4
L1860.060	60	240	69.9	190	74.9	R1/8“	120	140.0	25.0	4.8
L1860.065	65	260	79.4	203	82.0	R1/8“	132	140.0	27.5	6.1
L1860.070	70	260	79.4	203	86.5	R1/8“	-	156.0	27.5	6.1
L1860.075	75	265	82.5	210	91.5	R1/8“	-	156.0	27.5	6.9
L1860.080	80	290	89.0	232	98.0	R1/8“	-	175.0	30.0	9.0

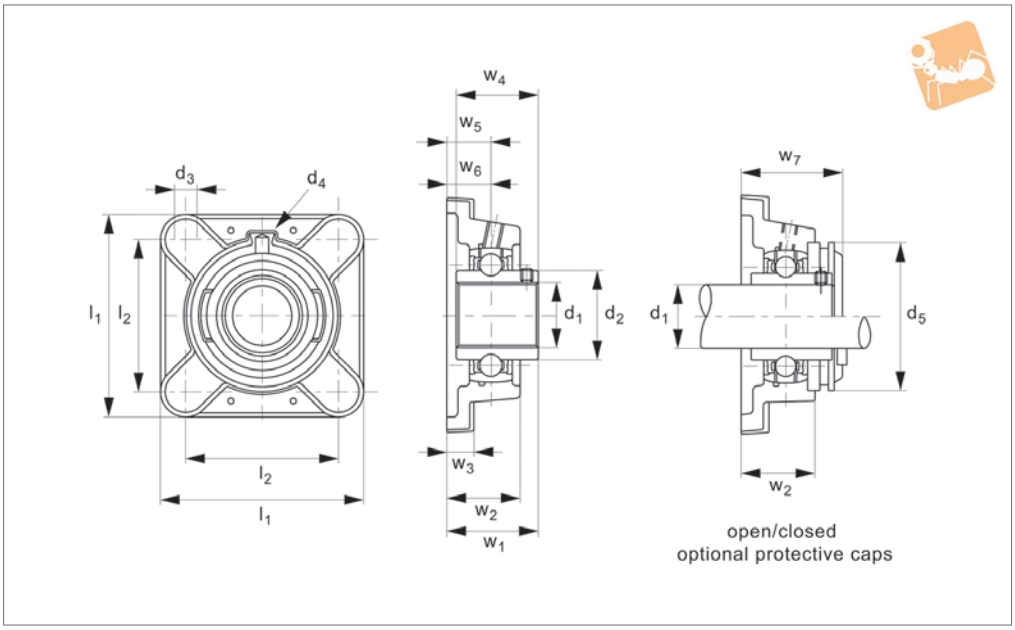
Order No.	l_3	l_4	w_1	w_2	w_3	w_4	w_5	w_6	Dyn. radial load C kN max.	Static radial load C_0 kN max.	Speed rpm max.
L1860.012	40.0	19	31.0	19	32	12.7	11	44.6	12.80	6.65	6500
L1860.015	40.0	19	31.0	19	32	12.7	11	44.6	12.80	6.65	6500
L1860.017	40.0	19	31.0	19	32	12.7	11	44.6	12.80	6.65	6500
L1860.020	40.0	19	31.0	19	32	12.7	11	44.6	12.80	6.65	6500
L1860.025	39.0	19	34.0	21	36	14.3	11	47.8	14.00	7.88	6500
L1860.030	47.0	22	38.1	25	40	15.9	14	52.8	19.50	11.20	4500
L1860.035	49.0	21	42.9	27	45	17.5	14	57.4	25.70	15.20	4500
L1860.040	53.0	26	49.2	30	48	19.0	14	66.8	26.90	18.20	3500
L1860.045	54.5	29	49.2	32	48	19.0	14	67.8	31.85	20.80	3500

Order No.	l_3	l_4	w_1	w_2	w_3	w_4	w_5	w_6	Dyn. radial load C kN max.	Static radial load C_0 kN max.	Speed rpm max.
L1860.050	61.0	23	51.6	34	54	19.0	18	74.6	35.10	23.20	3000
L1860.055	68.0	30	55.6	35	60	22.2	18	75.2	43.55	29.20	3000
L1860.060	71.0	28	65.1	42	60	25.4	18	87.8	52.50	32.80	2500
L1860.065	77.0	28	65.1	44	65	25.4	22	88.8	57.20	40.00	2500
L1860.070	77.0	28	74.6	44	65	30.2	22	-	62.00	45.00	2500
L1860.075	78.0	30	77.8	48	66	33.3	22	-	66.00	49.50	2500
L1860.080	90.0	34	82.6	55	78	33.3	26	-	72.50	54.20	2500

Square Flanged Bearing Units
cast iron



L1862



Material
Cast iron (FG20 or FG25), passivated and painted blue (RAL 5010). Steel, self-aligning bearing units with double seals, lubricated for life.

Technical Notes
Self-aligning bearings, relubricatable.
Temperature range: -20°C to +120°C.
The max. axial load is 0.5 x radial static load.
The housings are rated to take the maximum bearing loads.
For optional shaft end caps add suffixes:
-CO for one open protective cap (with seal) for through shafts
-CC for closed protective cap for shaft ends.

Tips
Shaft retention with two set screws (at 120° offset).
Used with h6 tolerance shafts (see our part no.s L1770-L1776).

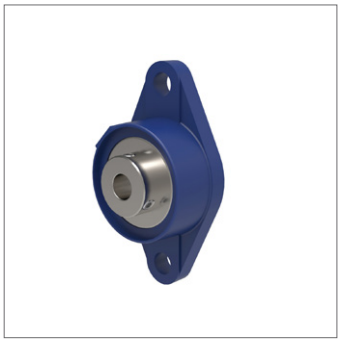
Important Notes
For precise positioning of the flanged units they are provided with a rear centring bore and dowel pin location - please see technical pages for these dimensions.

Order No.	d_1 for h6	l_1	l_2 ±0.7	d_2	d_3	d_4	d_5	w_1	w_2	Weight kg
L1862.012	12	86	63.5	29.0	11.5	R1/8“	54	37.3	29.5	0.7
L1862.015	15	86	63.5	29.0	11.5	R1/8“	54	37.3	29.5	0.7
L1862.017	17	86	63.5	29.0	11.5	R1/8“	54	37.3	29.5	0.5
L1862.020	20	86	63.5	29.0	11.5	R1/8“	54	37.3	29.5	0.7
L1862.025	25	95	70.0	34.0	11.5	R1/8“	60	38.7	30.0	0.8
L1862.030	30	108	82.5	40.3	11.5	R1/8“	70	42.2	33.5	1.2
L1862.035	35	118	92.0	48.0	14.0	R1/8“	80	46.4	36.0	1.6
L1862.040	40	130	101.5	53.0	14.0	R1/8“	88	54.2	39.5	2.1
L1862.045	45	137	105.0	57.2	14.0	R1/8“	95	54.2	40.0	2.2
L1862.050	50	143	111.0	61.8	18.0	R1/8“	100	60.6	44.0	2.6
L1862.055	55	162	130.0	69.0	18.0	R1/8“	110	64.4	48.5	3.7
L1862.060	60	175	143.0	74.9	18.0	R1/8“	120	73.7	53.5	4.9
L1862.065	65	188	150.0	82.0	18.0	R1/8“	132	77.7	56.0	6.0
L1862.070	70	188	150.0	86.5	18.0	R1/8“	-	82.4	56.0	6.2
L1862.075	75	197	153.0	91.5	23.0	R1/8“	-	85.8	59.0	6.3
L1862.080	80	197	153.0	98.0	23.0	R1/8“	-	90.6	61.0	7.1
L1862.090	90	235	187.0	111.0	23.0	R1/8“	-	80.1	45.0	10.4

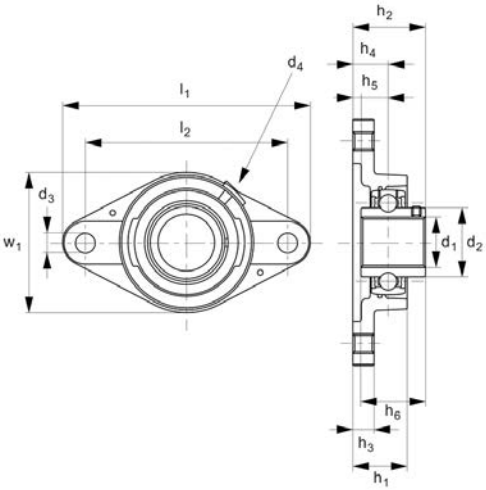
Order No.	w_3	w_4	w_5 ±0.5	w_6	w_7	Dyn. radial load C kN max.	Static radial load C_0 kN max.	Speed rpm max.
L1862.012	10.0	31.0	19.0	12.7	42.8	12.80	6.65	6500
L1862.015	10.0	31.0	19.0	12.7	42.8	12.80	6.65	6500
L1862.017	10.0	31.0	19.0	12.7	42.8	12.80	6.65	6500
L1862.020	10.0	31.0	19.0	12.7	42.8	12.80	6.65	6500
L1862.025	11.0	32.0	19.0	14.3	42.9	14.00	7.88	6500
L1862.030	12.0	38.1	20.0	15.9	46.9	19.50	11.20	4500

Order No.	w_3	w_4	w_5 ±0.5	w_6	w_7	Dyn. radial load C kN max.	Static radial load C_0 kN max.	Speed rpm max.
L1862.035	12.5	42.9	21.0	17.5	50.2	25.70	15.20	4500
L1862.040	13.0	49.2	24.0	19.0	57.9	29.60	18.20	3500
L1862.045	13.0	49.2	24.0	19.0	58.4	31.85	20.80	3500
L1862.050	13.0	51.6	28.0	19.0	65.8	35.10	23.20	3000
L1862.055	15.0	55.6	31.0	22.2	69.1	43.55	29.20	3000
L1862.060	16.0	65.1	34.0	25.4	78.4	52.50	32.80	2500
L1862.065	18.0	95.1	38.0	25.4	77.4	57.20	40.00	2500
L1862.070	18.0	74.6	38.0	30.2	-	62.00	45.00	2500
L1862.075	20.0	77.8	41.3	33.3	-	66.00	49.50	2500
L1862.080	20.0	82.6	41.3	33.3	-	72.50	54.20	2500
L1862.090	22.0	96.0	23.8	39.7	-	96.00	71.50	2500

Oval Flanged Bearing Unit
cast iron



L1864



Material
Cast iron (FG20 or FG25), passivated and painted blue (RAL 5010). Steel, self-aligning bearing units with double seals, lubricated for life.

Technical Notes
Self-aligning bearings, relubricatable.
Temperature range: -20°C to +120°C.
The max. axial load is 0.5 x radial static load.
The housings are rated to take the maximum bearing loads.
For optional shaft end caps add suffixes:
-CO for one open protective cap (with seal) for through shafts
-CC for closed protective cap for shaft ends.

Tips
Shaft retention with two set screws (at 120° offset).
Used with h6 tolerance shafts (see our part no.s L1770-L1776).

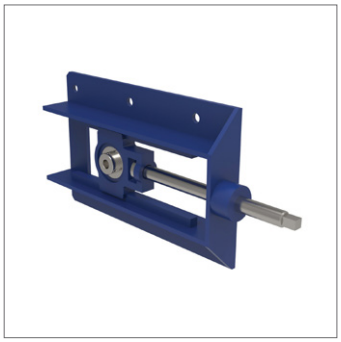
Important Notes
For precise positioning of the flanged units they are provided with a rear centring bore and dowel pin location - please see technical pages fro these dimensions.

Order No.	d_1 for h6	l_1 ±0.7	h_1	l_2	d_2	d_3	d_4	d_5	h_2	h_3	Weight kg
L1864.012	12	112	30.3	90.0	29.0	11.5	R1/8“	54	37.3	10.0	0.5
L1864.015	15	112	30.3	90.0	29.0	11.5	R1/8“	54	37.3	10.0	0.5
L1864.017	17	112	30.3	90.0	29.0	11.5	R1/8“	54	37.3	10.0	0.5
L1864.020	20	112	30.3	90.0	29.0	11.5	R1/8“	54	37.3	10.0	0.5
L1864.025	25	124	29.3	99.0	34.0	11.5	R1/8“	60	38.7	11.0	0.6
L1864.030	30	142	32.1	116.5	40.3	11.5	R1/8“	70	42.2	12.0	0.8
L1864.035	35	155	33.7	130.0	48.0	14.0	R1/8“	80	46.4	12.5	1.1
L1864.040	40	172	37.5	143.5	53.0	14.0	R1/8“	88	54.2	13.0	1.6
L1864.045	45	180	37.5	148.5	57.2	14.0	R1/8“	95	54.2	13.0	1.8
L1864.050	50	190	41.6	157.0	61.8	18.0	R1/8“	100	60.6	13.0	2.1
L1864.055	55	222	45.8	184.0	69.0	18.0	R1/8“	110	64.4	15.0	3.4
L1864.060	60	238	50.4	202.0	74.9	18.0	R1/8“	120	73.7	16.0	3.7
L1864.065	65	258	57.0	216.0	82.0	21.0	R1/8“	132	77.7	18.0	4.0
L1864.070	70	258	57.0	216.0	86.5	21.0	R1/8“	-	82.4	18.0	5.4
L1864.075	75	258	57.0	216.0	91.5	21.0	R1/8“	-	82.5	18.0	5.2

Order No.	h_4	h_5 ±0.5	h_6	w_1	w_2	Dyn. radial load C kN max.	Static radial load C_0 kN max.	Speed rpm max.
L1864.012	19	12.7	31.0	61	41.8	12.80	6.65	6500
L1864.015	19	12.7	31.0	61	41.8	12.80	6.65	6500
L1864.017	19	12.7	31.0	61	41.8	12.80	6.65	6500
L1864.020	19	12.7	31.0	61	41.8	12.80	6.65	6500
L1864.025	19	14.3	34.0	70	43.9	14.00	7.88	6500
L1864.030	20	15.9	38.1	80	46.9	19.50	11.20	4500
L1864.035	21	17.5	42.9	92	50.2	25.70	15.20	4500
L1864.040	24	19.0	49.2	105	57.9	29.60	18.20	3500

Order No.	h_4	h_5 ±0.5	h_6	w_1	w_2	Dyn. radial load C kN max.	Static radial load C_0 kN max.	Speed rpm max.
L1864.045	24	19.0	49.2	111	58.4	31.85	20.80	3500
L1864.050	28	19.0	51.6	116	65.8	35.10	23.20	3000
L1864.055	31	22.2	55.6	134	69.1	43.55	29.20	3000
L1864.060	34	25.4	65.1	138	82.4	52.50	32.80	2500
L1864.065	38	25.4	65.1	160	82.9	57.20	40.00	2500
L1864.070	38	30.2	74.6	160	-	62.00	45.00	2500
L1864.075	38	33.3	77.8	160	-	66.00	49.50	2500

Take-up Units & Frame
with stretcher frame



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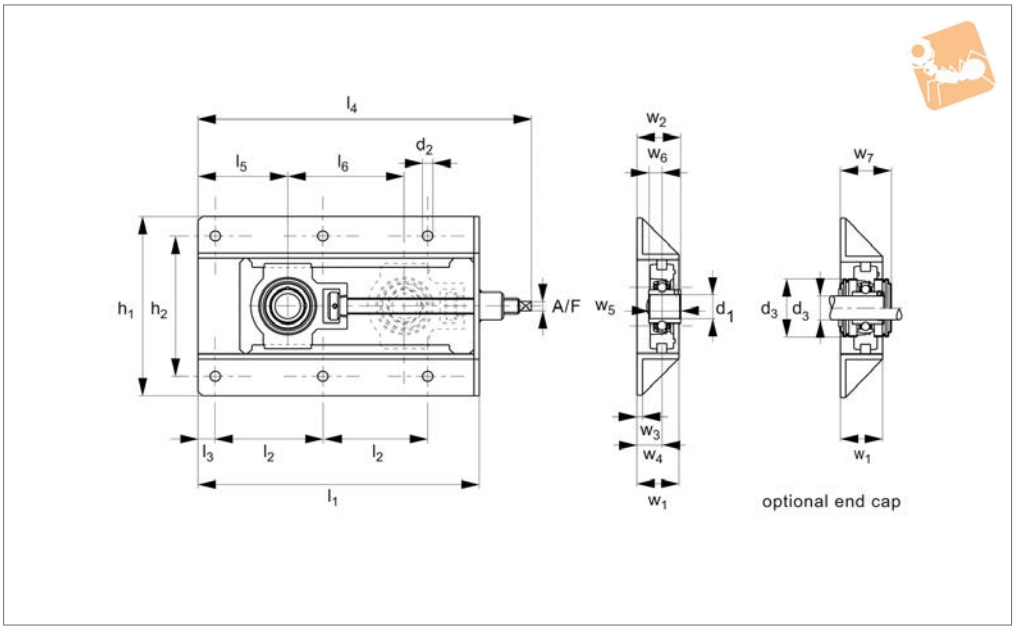


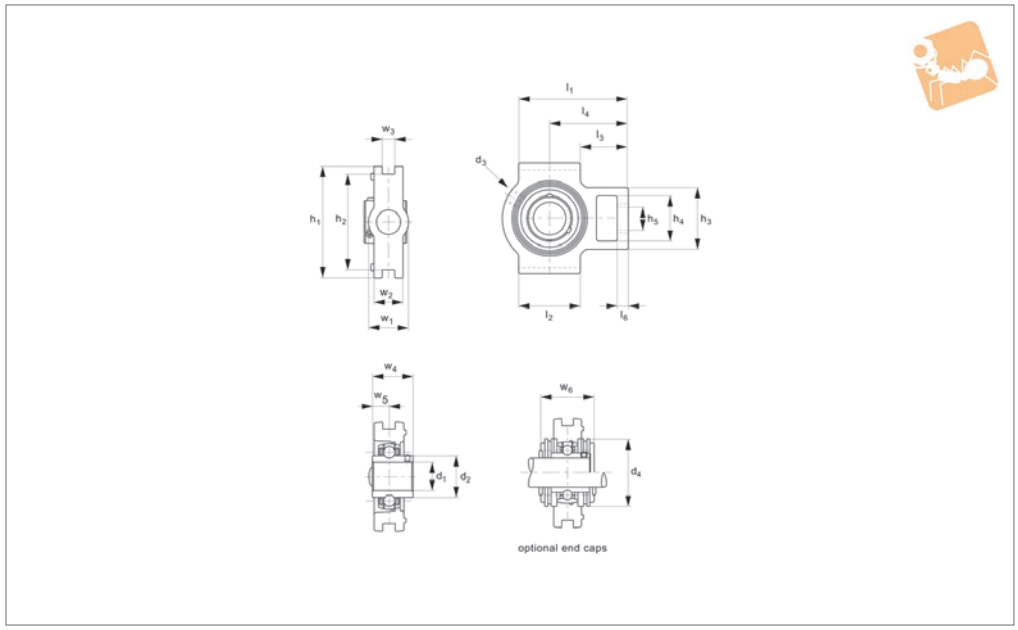
Material
Cast iron (FG20 or FG25), passivated and painted blue (RAL 5010). Steel stretcher frame.

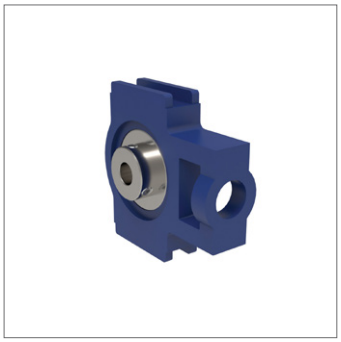
Technical Notes
Shaft retention with set screw.

Used with h6 tolerance shafts (see our part no.s L1770-L1776.
For optional shaft end caps add suffixes:
-CO for two open protective caps (with seala) for through shafts.
-CC for one open and one closed protective caps for shaft ends.
Stretcher frame allows easy access and adjustment.

Order No.	d_1 for h6	l_1	h_1	l_2	d_2	d_3	h_2	l_3	l_4	l_5	Weight kg
L1865.012	12	317	199	117	12	54	154	19	367	83	5.2
L1865.015	15	317	199	117	12	54	154	19	367	83	5.2
L1865.017	17	317	199	117	12	54	154	19	367	83	5.2
L1865.020	20	317	199	117	12	54	154	19	367	83	5.2
L1865.025	25	317	199	117	12	60	154	19	368	83	5.2
L1865.030	30	337	212	127	12	70	166	19	396	95	6.2
L1865.035	35	429	212	173	12	80	166	19	490	99	8.4
L1865.040	40	520	233	219	15	88	192	22	591	108	11.7
L1865.045	45	520	233	219	15	95	192	22	590	108	11.8
L1865.050	50	520	233	219	15	100	192	22	593	108	12.0
L1865.055	55	542	301	230	15	110	240	22	631	114	18.4
L1865.060	60	568	301	243	15	120	240	22	651	127	20.2
L1865.065	65	606	322	260	15	132	260	22	699	144	25.3

Order No.	l_6	w_1	w_2	w_3	w_4	w_5	w_6	w_7	Dyn. radial load C kN max.	Static radial load C_0 kN max.	Speed rpm max.	A/F
L1865.012	150	50	47.3	6	29	31.0	12.7	43.7	12.8	6.6	6500	11
L1865.015	150	50	47.3	6	29	31.0	12.7	43.7	12.8	6.6	6500	11
L1865.017	150	50	47.3	6	29	31.0	12.7	43.7	12.8	6.6	6500	11
L1865.020	150	50	47.3	6	29	31.0	12.7	43.7	12.8	6.6	6500	11
L1865.025	150	50	48.7	6	29	34.0	14.3	47.5	14.0	7.8	6500	11
L1865.030	150	50	52.2	6	30	38.1	15.9	52.5	19.5	11.2	4500	11
L1865.035	230	50	55.4	6	30	42.9	17.5	59.1	25.7	15.2	4500	11
L1865.040	300	50	60.2	6	30	49.2	19.0	68.6	29.6	18.2	3500	15
L1865.045	300	50	60.2	6	30	49.2	19.0	68.6	31.8	20.8	3500	15
L1865.050	300	50	631	6	30	51.6	19.0	74.1	35.1	23.2	3000	15
L1865.055	300	65	71.4	6	38	55.6	22.2	75.3	43.5	29.2	3000	19
L1865.060	300	65	77.7	6	38	65.1	25.4	88.6	52.5	32.8	2500	19
L1865.065	300	65	77.7	6	38	65.1	25.4	88.6	57.2	40.0	2500	24





L1866

Material
Cast iron (FG20 or FG25), passivated and painted blue (RAL 5010).

Technical Notes
Shaft retention with set screw.

Used with h6 tolerance shafts (see our part no.s L1770-L1776.
For optional shaft end caps add suffixes:
-CO for two open protective caps (with seal) for through shafts.
-CC for one open and one closed protective caps for shaft ends.

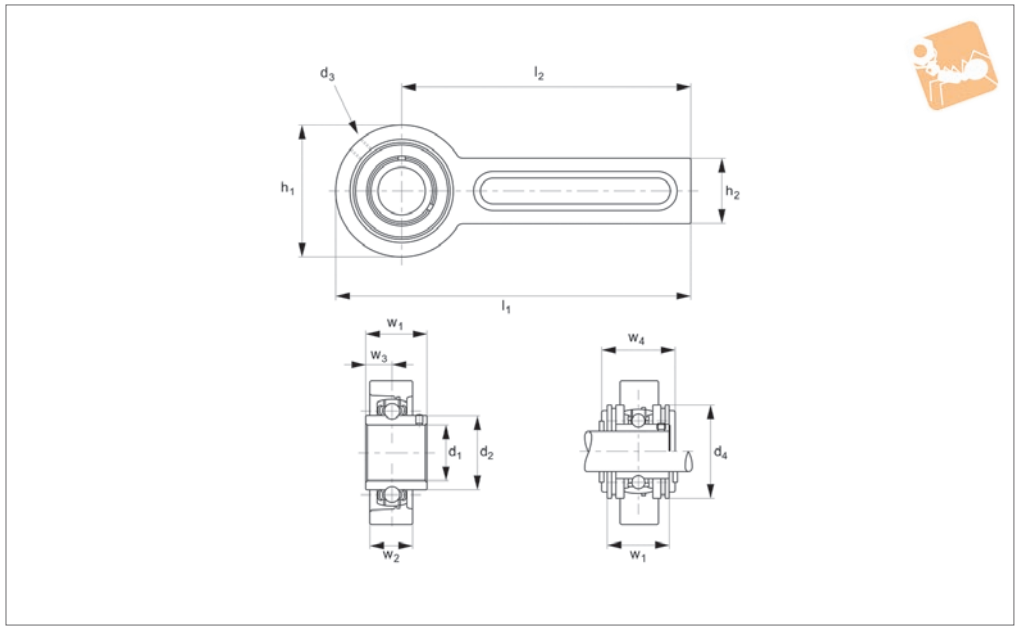
Order No.	d_1 for h6	l_1	h_1	l_2	d_2	d_3	d_4	h_2 +0|-0.8	h_3	h_4	Weight kg
L1866.012	12	94	89	51	29.0	M 6x1	54	76	51	32	0.8
L1866.015	15	94	89	51	29.0	M 6x1	54	76	51	32	0.8
L1866.017	17	94	89	51	29.0	M 6x1	54	76	51	32	0.7
L1866.020	20	94	89	51	29.0	M 6x1	54	76	51	32	0.7
L1866.025	25	97	89	51	34.0	M 6x1	60	76	51	32	0.8
L1866.030	30	113	102	57	40.3	M 6x1	70	89	56	37	1.2
L1866.035	35	129	102	64	48.0	M 6x1	80	89	64	37	1.6
L1866.040	40	144	114	83	53.0	M 6x1	88	102	83	49	2.3
L1866.045	45	144	117	83	57.2	M 6x1	95	102	83	49	2.3
L1866.050	50	149	117	86	61.8	M 6x1	100	102	83	49	2.5
L1866.055	55	171	146	95	69.0	M 6x1	110	130	102	64	3.9
L1866.060	60	194	146	102	74.9	M 6x1	120	130	102	64	4.7
L1866.065	65	224	167	121	82.0	M 6x1	132	151	111	70	6.8
L1866.070	70	224	167	121	86.5	M10x1	-	151	111	70	6.9
L1866.075	75	232	167	121	91.5	M10x1	-	151	111	70	7.2
L1866.080	80	235	184	121	98.0	M10x1	-	165	111	70	8.2
L1866.085	85	260	198	157	105.1	M10x1	-	173	124	73	10.8

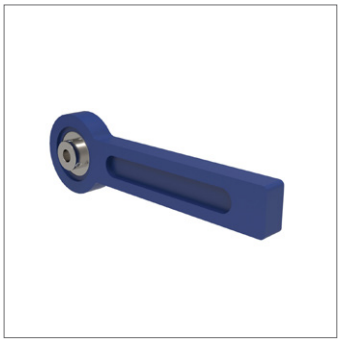
Order No.	h_5	l_3	l_4	l_5	w_1	w_2	w_3 +0.3|-0	w_4	w_5	w_6	Dyn. radial load C kN max.	Static radial load C_0 kN max.	Speed rpm max.
L1866.012	19	35.5	61	10	32	21	12	31.0	12.7	43.7	12.80	6.65	6500
L1866.015	19	35.5	61	10	32	21	12	31.0	12.7	43.7	12.80	6.65	6500
L1866.017	19	35.5	61	10	32	21	12	31.0	12.7	43.7	12.80	6.65	6500
L1866.020	19	35.5	61	10	32	21	12	31.0	12.7	43.7	12.80	6.65	6500
L1866.025	19	36.5	62	10	32	24	12	34.0	14.3	47.5	14.00	7.88	6500
L1866.030	22	41.5	70	10	37	28	12	38.1	15.9	52.5	19.50	11.20	4500
L1866.035	22	46.0	78	13	37	30	12	42.9	17.5	59.1	25.70	15.20	4500
L1866.040	29	46.5	88	16	49	33	16	49.2	19.0	68.6	29.60	18.20	3500
L1866.045	29	45.5	87	16	49	35	16	49.2	19.0	68.6	31.85	20.80	3500
L1866.050	29	47.0	90	16	49	37	16	51.6	19.0	74.1	35.10	23.20	3000
L1866.055	35	58.5	106	19	64	38	22	55.6	22.2	75.3	43.55	29.20	3000

Take-up Units

set screw type

Order No.	h_5	l_3	l_4	l_5	w_1	w_2	w_3 +0.3|-0	w_4	w_5	w_6	Dyn. radial load C kN max.	Static radial load C_0 kN max.	Speed rpm max.
L1866.060	35	68.0	119	19	64	42	22	65.1	25.4	88.6	52.50	32.80	2500
L1866.065	41	76.5	137	21	70	44	26	65.1	25.4	88.6	57.20	40.00	2500
L1866.070	41	76.5	137	21	70	46	26	74.6	30.2	-	62.00	45.00	2500
L1866.075	41	79.5	140	21	70	48	26	77.8	33.3	-	66.00	49.50	2500
L1866.080	41	79.5	140	21	70	51	26	82.6	33.3	-	72.50	54.20	2500
L1866.085	48	83.5	162	29	73	54	30	85.7	34.1	-	83.20	63.80	2500





L1867

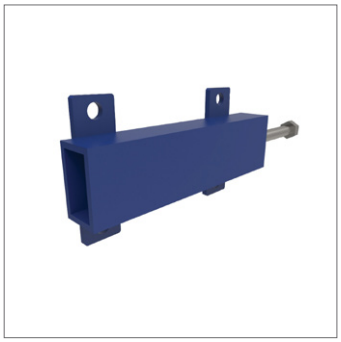
Material
Housings made from cold rolled sheet steel with zinc-plated surfaces.

Technical Notes
Re-lubricatable. For use with stretcher frame (see our part L1868).
For optional shaft end caps add suffixes:
-CO for two open protective caps (with seal) for through shafts.
-CC for one open and one closed protective caps for shaft ends.

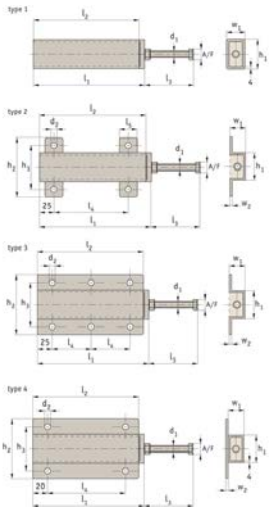
Order No.	d_1 for h6	l_1	h_1	l_2	d_2	d_3	d_4	h_2	w_1	Weight kg
L1867.012	12	264	78	225	29.0	R1/8“	60	41	31.0	1.7
L1867.015	15	264	78	225	29.0	R1/8“	60	41	31.0	1.7
L1867.017	17	264	78	225	29.0	R1/8“	60	41	31.0	1.7
L1867.020	20	264	78	225	29.0	R1/8“	60	41	31.0	1.7
L1867.025	25	264	78	225	34.0	R1/8“	60	41	34.0	1.7
L1867.030	30	264	78	225	40.3	R1/8“	80	41	38.1	1.9
L1867.035	35	264	78	225	48.0	R1/8“	80	41	42.9	2.1
L1867.040	40	274	98	225	53.0	R1/8“	100	41	49.2	4.2
L1867.045	45	274	98	225	57.2	R1/8“	100	41	49.2	4.2
L1867.050	50	274	98	225	61.8	R1/8“	100	41	51.6	4.2

Order No.	w_2	w_3	w_4	Dyn. radial load C kN max.	Static radial load C_0 kN max.	Speed rpm max.
L1867.012	21	12.7	48.8	12.8	6.6	6500
L1867.015	21	12.7	48.8	12.8	6.6	6500
L1867.017	21	12.7	48.8	12.8	6.6	6500
L1867.020	21	12.7	48.8	12.8	6.6	6500
L1867.025	21	14.3	48.8	14.0	7.8	6500
L1867.030	21	15.9	58.4	19.5	11.2	4500
L1867.035	21	17.5	58.4	25.7	15.2	4500
L1867.040	21	19.0	75.6	29.6	18.2	3500
L1867.045	21	19.0	45.6	31.8	20.8	3500
L1867.050	21	19.0	75.6	35.1	23.2	3000

Stretcher Units
for conveyor belt tensioner



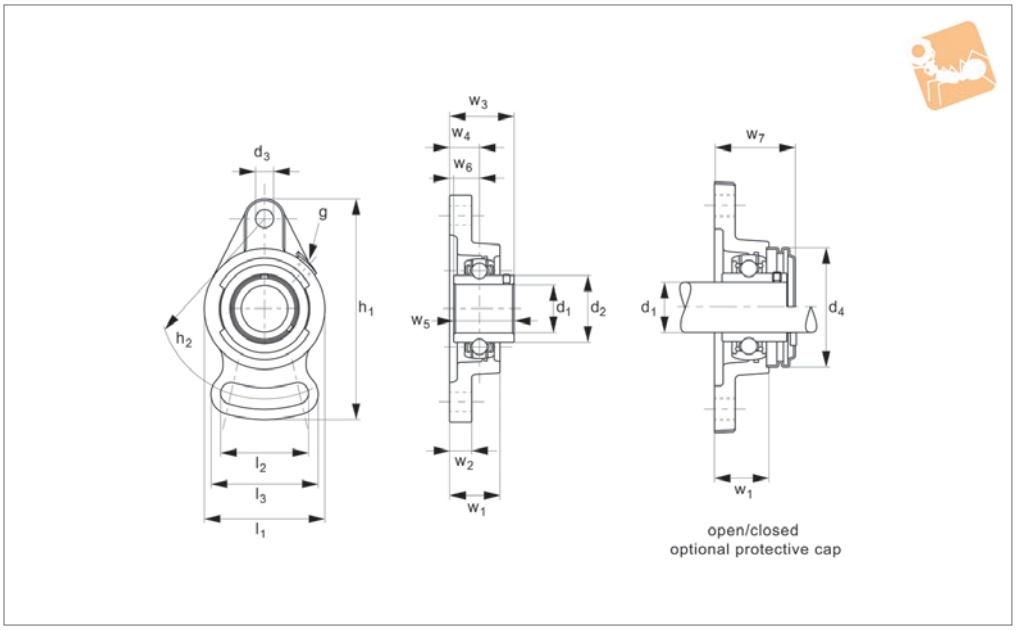
L1868

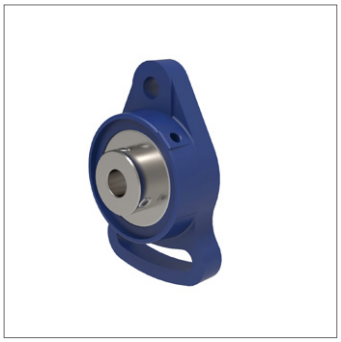


Material
Quality grey cast iron (FG20 or FG25), passivated and painted (RAL 5010).

Technical Notes
Stretcher frame for use with conveyor belt tensioner, part L1867.

Order No.	For shaft dia.	Type	d_1	l_1	h_1	l_2	d_2	h_2	h_3	l_3	l_4	l_5	w_1	w_2	A/F
L1868.010	12-35	1	M12x 90	190	50	180	-	-	-	85	-	-	30	4	18
L1868.020	40-50	1	M16x110	225	70	210	-	-	-	105	-	-	40	4	24
L1868.011	12-35	2	M12x 90	190	50	180	11.0	100	80	85	130	30	30	5	18
L1868.021	40-50	2	M16x110	225	70	210	14.0	140	100	105	160	40	40	6	24
L1868.012	12-35	3	M12x 90	190	48	180	10.0	100	75	85	65	-	25	3	18
L1868.022	40-50	3	M16x110	225	68	210	12.0	130	100	105	80	-	35	3	24
L1868.014	12-35	4	M12x100	190	48	180	11.5	103	80	97	140	-	25	3	18
L1868.024	40-50	4	M16x120	235	68	220	14.0	130	100	111	180	-	35	3	24





L1869

Material
Quality grey cast iron (FG20 or FG25), passivated and painted (RAL 5010).

Technical Notes
Self-aligning bearings, relubricatable.
Temperature range: -20°C to +120°C.
The max. axial load is 0.5 x radial static load.
The housings are rated to take the maximum bearing loads.
For optional shaft end caps add suffixes:
-C0 for one open protective cap (with seal)
for through shafts
-CC for closed protective cap for shaft ends.

Tips
Shaft retention with set screw.
Used with h6 tolerance shafts (see our part no.s L1770-L1776.

Order No.	d_1 for h6	l_1	h_1	l_2	d_2	d_3	d_4	d_5	h_2	l_3	Weight kg
L1869.012	12	60	102	40	29.0	10	M6x1	54	78	54	0.5
L1869.015	15	60	102	40	29.0	10	M6x1	54	78	54	0.5
L1869.017	17	60	102	40	29.0	10	M6x1	54	78	54	0.5
L1869.020	20	60	102	40	29.0	10	M6x1	54	78	54	0.5
L1869.025	25	68	125	51	34.0	12	M6x1	60	98	65	0.7
L1869.030	30	80	144	58	40.3	12	M6x1	70	117	72	1.2
L1869.035	35	90	161	66	48.0	15	M6x1	80	130	82	1.6
L1869.040	40	100	175	71	53.0	15	M6x1	88	144	87	2.0
L1869.045	45	108	181	72	57.2	15	M6x1	95	148	90	2.3
L1869.050	50	115	190	76	61.8	15	M6x1	100	157	94	2.7
L1869.055	55	130	219	86	69.0	16	M6x1	110	184	104	3.5
L1869.060	60	140	250	92	74.9	23	M6x1	120	202	118	4.2

Order No.	w_1	w_2	w_3	w_4	w_5	w_6	w_7	Dyn. radial load C kN max.	Static radial load C_0 kN max.	Speed rpm max.
L1869.012	25.5	12	33.3	15	31.0	12.7	36.5	12.8	6.6	6500
L1869.015	25.5	12	33.3	15	31.0	12.7	36.5	12.8	6.6	6500
L1869.017	25.5	12	33.3	15	31.0	12.7	33.0	12.8	6.6	6500
L1869.020	25.5	12	33.3	15	31.0	12.7	36.5	12.8	6.6	6500
L1869.025	27.0	14	35.7	16	34.0	14.3	39.1	14.0	7.8	6500
L1869.030	31.0	14	40.2	18	38.1	15.9	44.1	19.5	11.2	4500
L1869.035	34.0	16	44.4	19	42.9	17.5	48.3	25.7	15.2	4500
L1869.040	36.0	16	51.2	21	49.2	19.0	55.1	29.6	18.2	3500
L1869.045	38.0	18	52.2	22	49.2	19.0	56.3	31.8	20.8	3500
L1869.050	40.0	18	54.6	22	51.6	19.0	59.3	35.1	23.2	3000
L1869.055	43.0	20	58.4	25	55.6	22.2	62.8	43.5	29.2	3000
L1869.060	48.0	20	68.7	29	65.1	25.4	73.3	52.5	32.8	2500

Self-Aligning Bearing Units

Technical

For cast iron housings

- Single row radial contact self-aligning bearings (steel 100Cr6).
- Re-lubricatable.
- Fixing to shaft via set screw.
- Operating temperature range -20° to +100°.

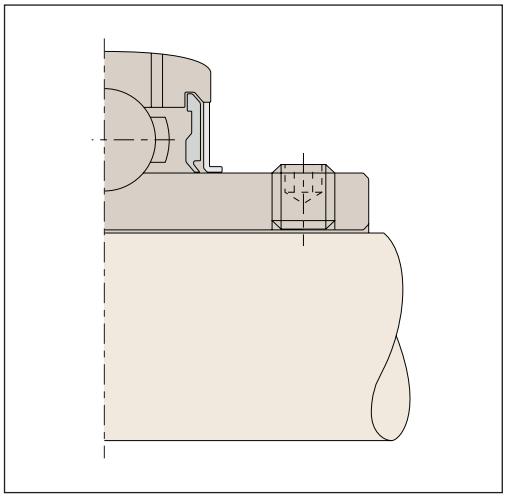
For stainless & thermoplastic housings

- Single row radial contact self-aligning bearings (stainless steel AISI 440C), stainless steel cage.
- Lubricated with food grade grease.
- Fixing to shaft via set screw.

Shaft fixing set screw

2 set screws at 120° with hexagon socket and knurled cup point, recommended shaft tolerance h6/h7.

Set screw	Max. tightening torque (Nm)	Hexagon socket A/F
M5 x 0,8	3,5	2,5
M6 x 1	5,5	3,0
M8 x 1	11,5	4,0
M10 x 1,25	22,0	5,0
M12 x 1,25	33,0	6,0
M14 x 1,5	42,0	7,0
M16 x 1,5	64,0	8,0
M18 x 1,5	75,0	9,0
M20 x 1,5	120,0	10,0

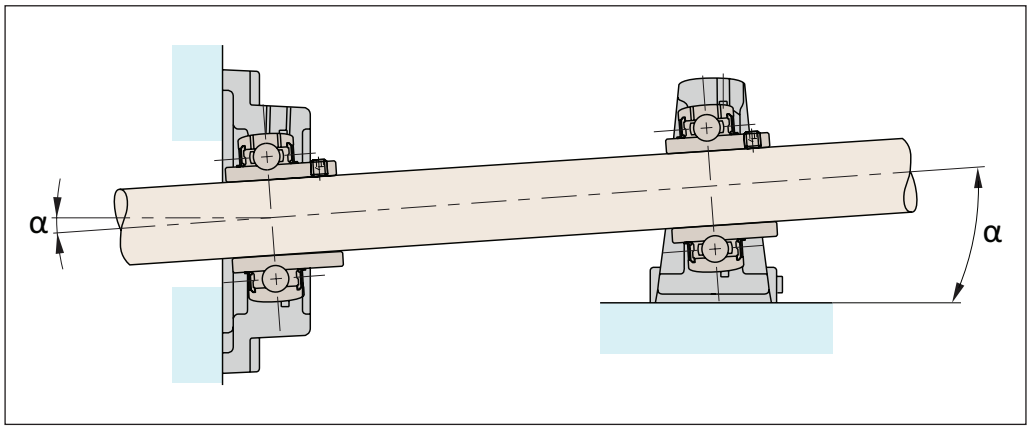


Lubrication

Our units are lubricated for life. If re-lubrication is necessary (because of severe operating conditions), use a lithium soap base with a viscosity of 100mm²/s at 40°C.

Installation

Shaft misalignment is compensated to a certain degree by the shaft-aligning bearings.



If re-lubrication required

α = ± 2°

If no re-lubrication

α = ± 5°

When using protective end caps

α = ± 5°

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The radial loads of the cast iron bearing supports are limited by the bearings themselves – the housings can withstand the maximum loads.

Please see the part numbers for dynamic and static radial loads. The maximum axial loads are 50% of the maximum static radial loads. The standard bearing have a C3 clearance.

Bore nominal size (mm)		Radial bearing clearance (µ) C3	
Above	Up to	Min.	Max.
10	18	11	25
18	24	13	28
24	30	13	28
30	40	15	33
40	50	18	36
50	65	23	43
65	80	25	51
80	100	30	58
100	120	36	66
120	140	41	81

When choosing a suitable bearing size – this depends on the load and speed required.

If the load acts mainly whilst the bearing rotates, then it is a dynamic load, if it acts mainly during no movement or low speeds, then it is a static load.

The maximum for both of these, for each bearing, is shown in the part tables.

Dynamic equivalent loads:

For some situations the bearing will have to withstand both radial and axial loads and we then need to calculate an equivalent dynamic load using the following equation:

$$L = X \bullet F_r + Y \bullet F_a \ (kN)$$

P = Dynamic equivalent load (kN)
F_r = Actual radial load (kN)
F_a = Actual axial load (kN)
X = Radial factor
Y = Axial factor

Load ratio table 1:

$\frac{F_a}{C_{0r}}$	e	$\frac{F_a}{F_r} \le e$		$\frac{F_a}{F_r} > e$	
		X	Y	X	Y
0,014	0,19				2,30
0,028	0,22				1,99
0,056	0,26				1,71
0,084	0,28				1,55
0,110	0,30	1	0	0,56	1,45
0,170	0,34				1,31
0,280	0,38				1,15
0,420	0,42				1,04
0,560	0,44				1,00

e = Limiting value
C_{0r} = Radial static load rating (see dimension tables for ball bearing units)

Bearing Supports from Automotion Components

Bearing Supports from Automotion Components

Static equivalent loads

For situations where there are radial and axial loads on the static or slow moving bearings:

$$P_0 = X_0 \bullet F_r + Y_0 \bullet F_a \ (kN)$$

$$P_0 = F_r \quad \text{if} \quad \frac{F_a}{F_r} \leq 0.8$$

P_0 = Static equivalent load (kN)
X_0 = Static radial factor
Y_0 = Static axial factor

For all bearing inserts the following applies:
X_0 = 0.6
Y_0 = 0.5

Using the ratio ***fs,*** it can be checked if sufficient static dimensioning for the insert has been ensured:

$$fs = \frac{C_{0r}}{P_0}$$

Some standard values are:

fs = 0.7 Minimal demands for running smoothness and rotating movement
fs = 1.0 occasional rotating bearing, normal demands for running
fs = 2.0 smoothness, high demands for running smoothness

It should be noted that this ratio does not provide any assurance against a break or similar, but instead it is assurance against excessive local deformation in the rolling contact (ball/raceway).

Calculating bearing life

When calculating bearing life for bearing units, the following applies:

$$L_{10} = \left(\frac{C_r}{p}\right)^3 \qquad (10^6 \text{ revolutions})$$

If the bearing life should be specified in hours, the following applies:

$$L_{10h} = \left(\frac{C_r}{p}\right)^3 \bullet \frac{10^6}{60n} \quad (h)$$

n = speed (min^{-1})

Bearing life calculation

The bearing life of a UCP210 ball bearing unit under the following conditions:

Radial load:	F_r	=	2 kN
Axial load:	F_a	=	1.7 kN
Normal operating condition speed:	n	=	1800 min^{-1}
UCP210 ball bearing unit data:	C_r	=	35.1 kN
	C_{0r}	=	23.2 kN

Dynamic equivalent bearing load:

$$P = X \bullet F_r + Y \bullet F_a \quad (kN)$$

$$\frac{F_a}{C_{0r}} = \frac{1.7\ kN}{23.2\ kN} = 0.073 \quad \text{and} \quad \frac{F_a}{F_r} = \frac{1.7\ kN}{2\ kN} = 0.85$$

From load ratio table 1:

with $F_a/C_{0r} = 0.073$, e is determined to be ≈ 0.28

with $F_a/F_r = 0.85 > e = 0.28$

X = 0.56 Y = 1.55

$$P = 0.56 \bullet 2\ kN + 1.7\ kN = 3.76\ kN$$

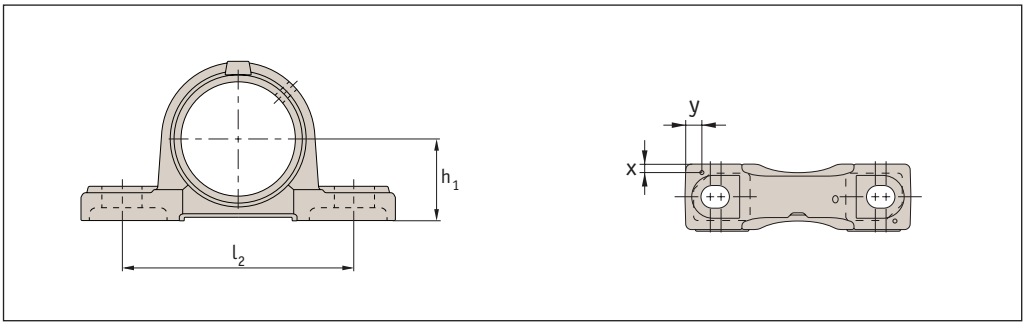
$$L_{10h} = \left(\frac{C_r}{p}\right)^3 \bullet \frac{10^6}{60n} \quad (h)$$

$$L_{10h} = \left(\frac{35.1}{3.76}\right)^3 \bullet \left(\frac{10^6}{60 \times 1800}\right) = 7532\ h$$

The theoretical bearing life of the bearing unit, under normal operating conditions, is 7532 hours.

Bearing Supports from Automotion Components

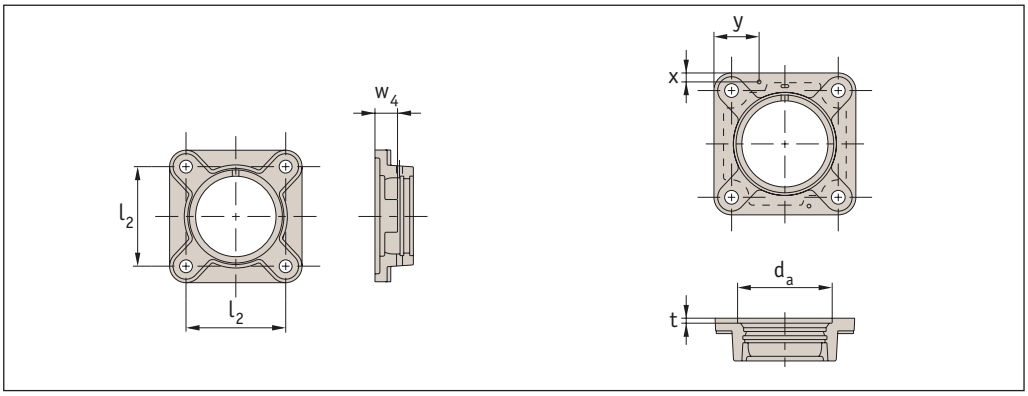
L1860 Pillow block housing



For shaft i/d d_1	h_1 ±	l_2 ±
12-20	±0,15	±0,70
25		
30		
35		
40		
45		
50		
55	±0,20	±1,00
60		
65		
70		
75		
80		
90	±0,30	

x	y	Dowel Ø
10,0	59,0	3
12,0	59,0	
13,0	72,0	
14,5	73,0	4
16,0	81,5	
16,0	88,0	5
18,0	91,0	
20,0	101,0	6
20,0	110,0	
-	-	-
21,5	119,0	6
22,0	121,5	
26,0	132,0	8
28,5	151,0	10

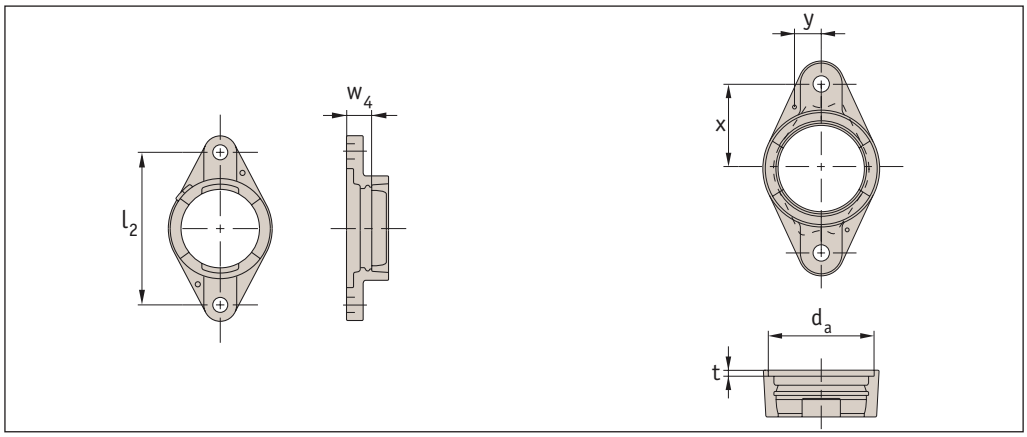
L1862 Square flanged bearing housing



For shaft i/d d_1	l_2 ±	w_4 ±	Radial runout
12-20	±0,70	±0,50	0,20
25			
30			
35			
40			
45			
50			
55	±1,00	±0,80	0,30
60			
65			
70			
75			
80			
90			

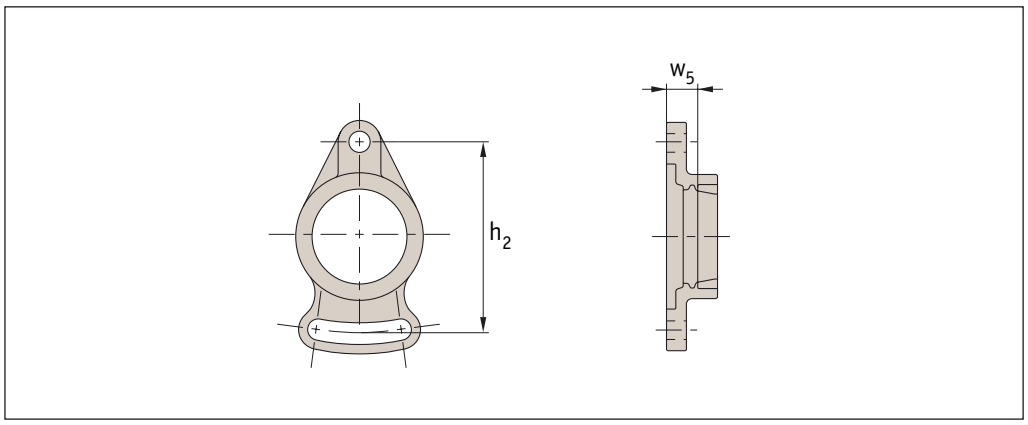
x	y	Dowel Ø	d_a	t
36,0	13,0	3	50,80	3,2
40,5	15,0		63,50	
46,0	17,0		76,20	4,0
51,0	18,0	4	88,90	
57,0	20,0		88,90	
60,5	21,0	5	98,42	
63,5	22,0		101,60	
71,0	25,0	6	107,95	
77,5	27,0		125,40	
85,0	29,0		161,92	
85,0	29,0		161,92	
88,5	30,0		161,92	
88,5	30,0		161,92	
103,5	36,0		179,37	

L1864 Oval flanged bearing housing



For shaft i/d d_1	l_2 ±	w_4 ±	Radial runout	x	y	Dowel Ø	d_a	t
12-20	±0,70	±0,50	0,20	31,0	14,5	3	50,80	3,2
25				35,0	16,0		63,50	
30				42,5	17,0		73,00	4,0
35				50,0	17,0	4	82,50	
40				55,0	19,0		88,90	
45				58,0	21,0	5	98,42	
50				60,0	22,5		101,60	
55	±1,00	±0,80	0,30	70,0	26,0	6	107,95	
60				75,0	26,0		125,40	
65				85,0	28,0		142,00	
70				85,0	28,0		142,00	
75				85,0	30,0		142,00	

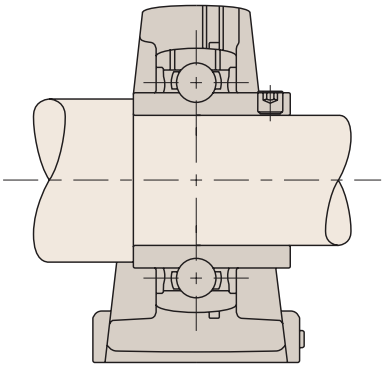
L1869 Take up unit housing



For shaft i/d	h_2 ±	w_5 ±
12-20	±0,70	±0,50
25		
30		
35		
40		
45		
50		
55	±1,00	±0,80
60		

Bearing Supports from Automotion Components

Axial load capacity



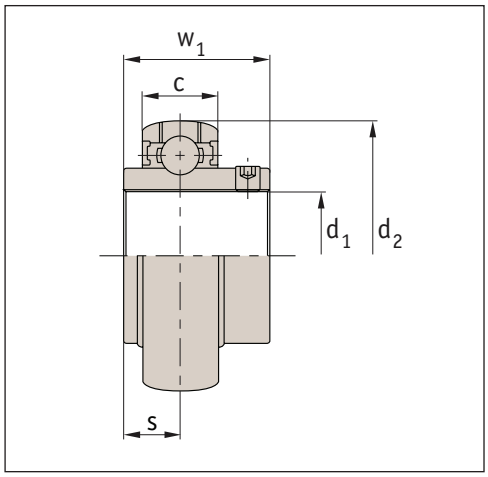
shaft shoulder recommended
for axial loads

The axial load capacity of the inserts depends largely on the type of fixing on the shaft. The inner design of the raceways and balls is of little importance in most cases. A further factor is the shaft tolerance used.

In order to attain the largest possible axial load capacity for the respective type of fixing, it is necessary that the fixing element (e.g. set screw, adapter sleeve) is secured at the specified tightening torque.

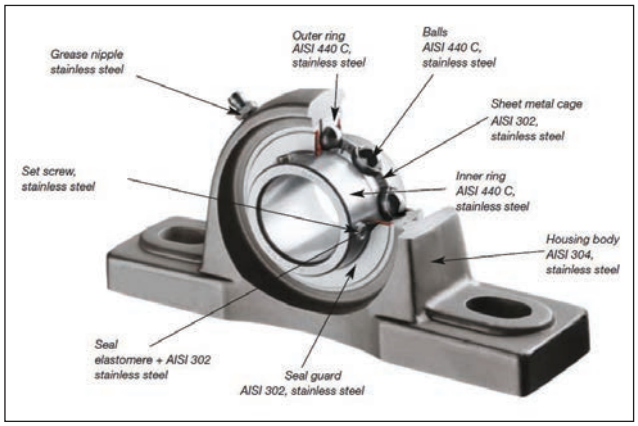
For applications with strong vibrations or shock loads, it is recommended to set the inner ring against a shaft shoulder and to secure with a groove nut and lock washer as necessary. In this case, the axial load carrying capacity of the inserts can be fully utilised. The axial load rating can be up to 0.5 times the radial static load rating C_{0r}.

Bearing tolerances



For shaft i/d	w_1	d_2 µ
12-20	±0,020	+0,0 -11
25		
30		
35		
40		
45		
50	±0,025	+0,0 -11
55		
60		
65		
70		
75		
80	±0,035	+0,0 -15
90		

Technical specification - materials



Suitable for:

- Wet environments.
- Chemical environments.
- Frequent wash downs.

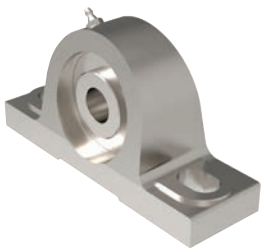
e.g. food, pharmaceuticals, bottling, outdoor application etc.

Protective end caps made of stainless steel, SCC and SCO models

- Open protective end cap for through shafts with double-lip seal made of flourine elastomer.
- Closed protective end cap for shaft ends.
- Stainless steel AISI 304.
- Shafts Ø 12 - 60mm.
- Standard sizes available from stock.

- Stainless steel self-aligning units. Stainless steel (AISI 304 body) with AISI 440C stainless bearing unit.
- For shafts Ø 12-60mm.
- Lubricated with food grade grease (USDA H1 approved), Mobil FM102.
- Temperature range -20°C to +120°C.

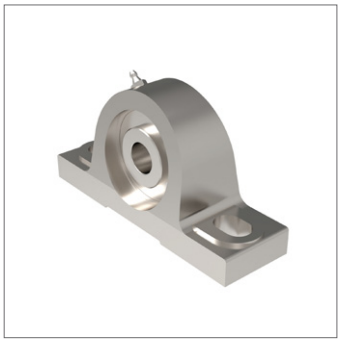
Pillow block



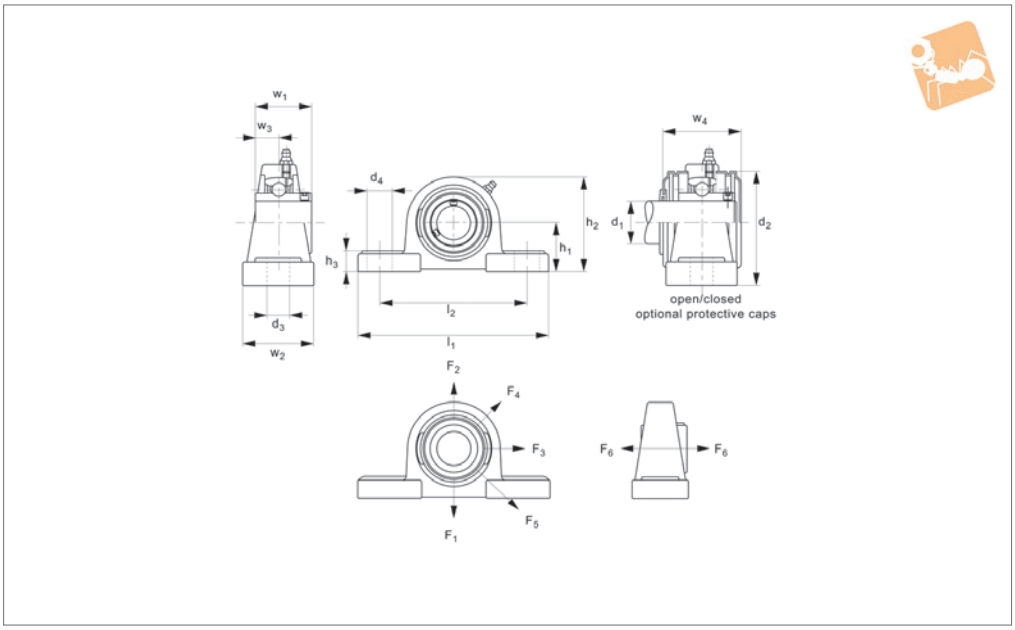
Four point flange

Two point flange

- Generally used in food, pharmaceutical and chemical industries, or where washdown is needed/ outdoor applications.
- Use with h6 tolerance shafts.



L1870



Material
Stainless steel (AISI 304), with smooth surfaces. Bearing stainless steel (440C) with 2RS seals, lubricated with food grade grease (USDA approved).

Technical Notes
Self-aligning bearing units.
Temperature range for bearings: -15°C to +120°C.
Resistant to a moisture and a wide range of aggressive chemicals.
For optional shaft end caps add suffixes:
-CO for two open protective caps (with seals) for through shafts.
-CC for one open and one closed protective caps for shaft ends.

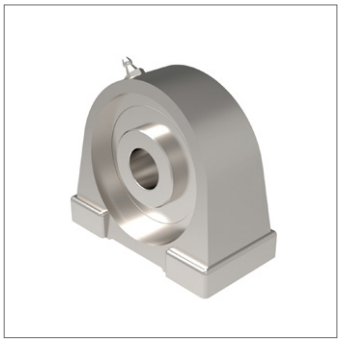
Tips
Shaft retention with two set screws (at 120° offset).
Used with h6 tolerance shafts (see our part no.s L1770-L1776).
Maximum housing loads measured @ 20°C.

Order No.	d_1 for h6	l_1	d_2	d_3	d_4	h_1	h_2 +0|-0.8	h_3	l_2	w_1	w_2	w_3	w_4	Weight kg
L1870.012	12	126	54	13	19	33.3	65	15	95	31.0	38	12.7	45.6	0.83
L1870.015	15	126	54	13	19	33.3	63	15	95	31.0	38	12.7	45.6	0.80
L1870.017	17	126	54	13	19	33.3	65	15	95	31.0	38	12.7	45.6	0.84
L1870.020	20	126	54	13	19	33.3	65	15	95	31.0	38	12.7	45.6	0.82
L1870.025	25	140	60	13	19	36.5	70	16	105	34.1	38	14.3	47.8	0.95
L1870.030	30	165	70	17	21	42.9	83	18	121	38.1	48	15.9	52.8	1.58
L1870.035	35	167	80	17	21	47.6	94	19	127	42.9	48	17.5	57.4	1.95
L1870.040	40	184	88	17	23	49.2	100	19	136	49.2	54	19.0	66.8	2.39
L1870.045	45	190	95	17	23	54.0	109	20	146	49.2	54	19.0	67.8	2.72
L1870.050	50	206	100	20	25	57.2	114	22	159	51.6	60	19.0	75.6	3.28
L1870.055	55	219	110	20	25	63.5	126	23	171	55.6	60	22.2	75.2	4.12
L1870.060	60	241	120	20	25	69.8	138	25	184	65.1	70	25.4	87.8	5.71

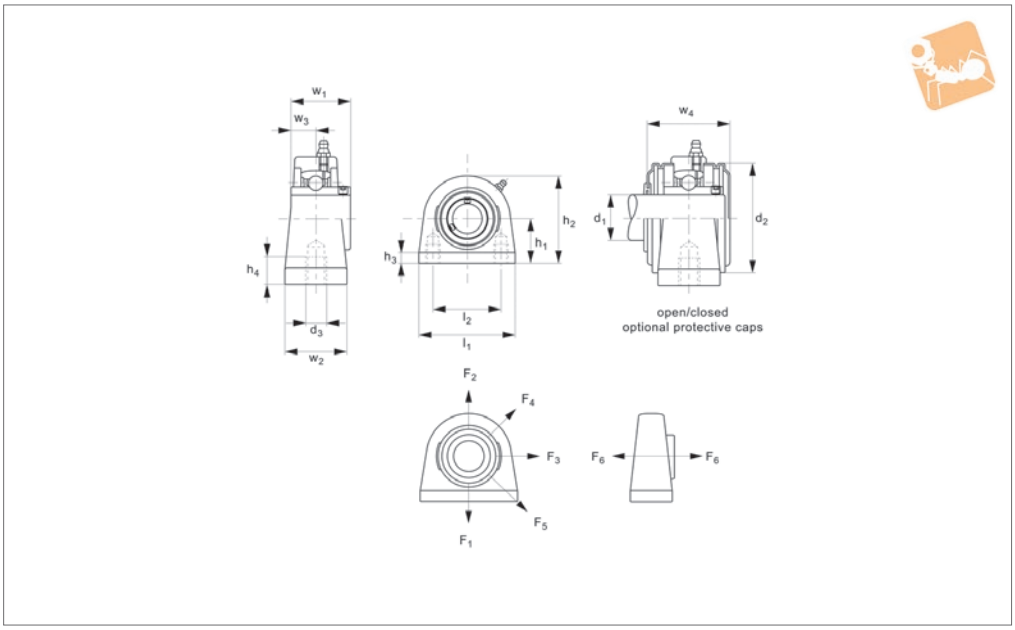
Order No.	Speed rpm max.	Dyn. load C kN max.	Static bearing load C_0 kN max.	Housing load F_1 kN max.	Housing load F_6 kN max.	Housing load F_2 kN max.	Housing load F_3 kN max.	Torque screw to Nm	Housing load F_4 kN max.	Housing load F_5 kN max.	Set screw size
L1870.012	4800	10.1	6.8	160	34	66	110	8.5	50	160	M 6x1
L1870.015	4800	10.1	6.8	160	34	66	110	8.5	50	160	M 6x1
L1870.017	4800	10.1	6.8	160	34	66	110	8.5	50	160	M 6x1
L1870.020	4800	10.1	6.8	160	34	66	110	8.5	50	160	M 6x1
L1870.025	4000	11.0	8.0	180	36	74	120	8.5	56	180	M 6x1
L1870.030	3400	15.3	11.5	240	44	100	180	8.5	70	240	M 6x1

Order No.	Speed rpm max.	Dyn. load C kN max.	Static bearing load C_0 kN max.	Housing load F_1 kN max.	Housing load F_6 kN max.	Housing load F_2 kN max.	Housing load F_3 kN max.	Torque screw to Nm	Housing load F_4 kN max.	Housing load F_5 kN max.	Set screw size
L1870.035	3000	20.1	15.6	320	48	120	200	20	88	320	M 8x1
L1870.040	2600	22.8	18.2	360	50	130	220	20	90	360	M 8x1
L1870.045	2400	25.7	20.8	380	52	140	240	40	98	380	M 10x1,25
L1870.050	2200	27.5	23.7	380	64	150	280	40	110	380	M 10x1,25
L1870.055	1800	34.0	25.5	475	80	191	350	40	262	475	M 10x1,25
L1870.060	1600	41.0	31.5	587	99	236	433	40	324	587	M 10x1,25

Stainless Pillow Block Bearing Units
blind holes



L1871



Material
Stainless steel (AISI 304), with smooth surfaces. Bearing stainless steel (440C) with 2RS seals, lubricated with food grade grease (USDA approved).

Technical Notes
Self-aligning bearing units.

Temperature range for bearings: -15°C to +120°C.
Resistant to a moisture and a wide range of aggressive chemicals.
For shaft end caps add suffixes:
-CO for open (with seal)
-CC for closed.

Tips
Shaft retention with two set screws (at 120° offset).
Used with h6 tolerance shafts (see our part no.s L1770-L1776).
Maximum housing loads measured @ 20°C.

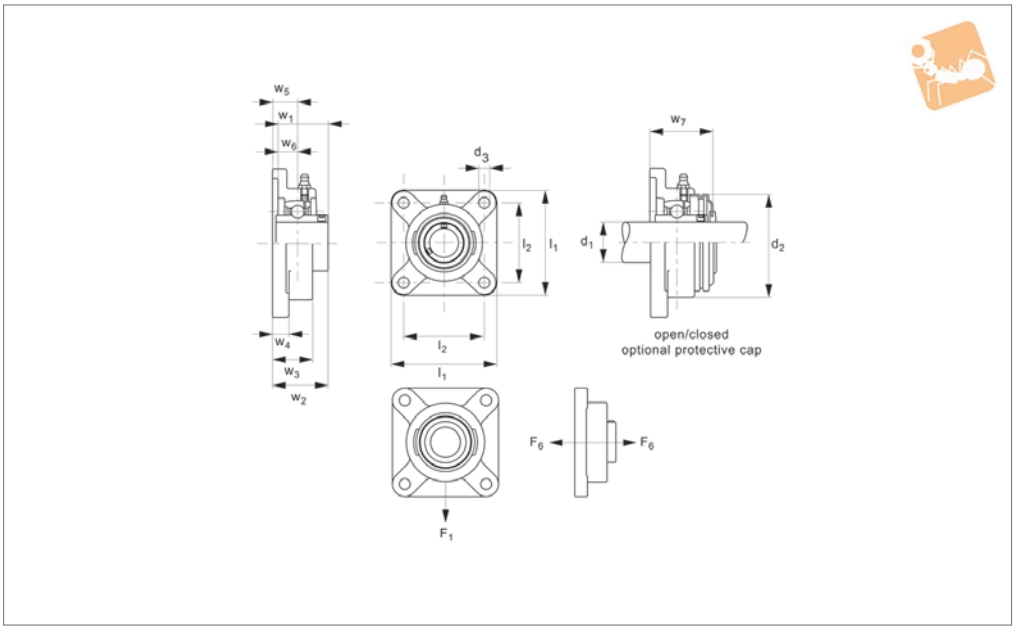
Order No.	d_1 for h6	l_1	d_2	d_3	h_1	h_2 +0|-0.8	h_3	h_4	l_2	w_1	w_2	w_3	w_4	Weight kg
L1871.012	12	73	M 8	50.8	54	11	13	31.0	65	38	12.7	45.6	0.73	33.3
L1871.015	15	73	M 8	50.8	54	11	13	31.0	65	38	12.7	45.6	0.71	33.3
L1871.017	17	73	M 8	50.8	54	11	13	31.0	65	38	12.7	45.6	0.70	33.3
L1871.020	20	73	M 8	50.8	54	11	13	31.0	65	38	12.7	45.6	0.68	33.3
L1871.025	25	76	M10	50.8	60	11	13	34.1	71	38	14.3	47.8	0.78	36.5
L1871.030	30	102	M10	76.2	70	12	16	38.1	86	38	15.9	52.8	1.30	42.9
L1871.035	35	108	M10	82.6	80	12	19	42.9	95	48	17.5	57.4	1.72	47.6
L1871.040	40	117	M12	89.0	88	13	19	42.9	100	48	19.0	66.8	1.91	49.2
L1871.045	45	127	M12	95.3	95	13	19	49.2	108	51	19.0	67.8	2.33	54.0
L1871.050	50	140	M16	101.6	100	13	19	51.6	117	51	19.0	75.6	2.83	57.2

Order No.	Speed rpm	Dyn. load C kN max.	Static bearing load C_0 kN max.	Housing load F_1 kN max.	Housing load F_6 kN max.	Housing load F_2 kN max.	Housing load F_3 kN max.	Torque screw to Nm	Housing load F_4 kN max.	Housing load F_5 kN max.	Set screw size
L1871.012	4800	10.1	6.8	160	34	66	110	8.5	50	160	M 6x1
L1871.015	4800	10.1	6.8	160	34	66	110	8.5	50	160	M 6x1
L1871.017	4800	10.1	6.8	160	34	66	110	8.5	50	160	M 6x1
L1871.020	4800	10.1	6.8	160	34	66	110	8.5	50	160	M 6x1
L1871.025	4000	11.0	8.0	180	36	74	120	20	56	180	M 8x1
L1871.030	3400	15.3	11.5	240	44	100	180	20	70	240	M 8x1
L1871.035	3000	20.1	15.6	320	48	120	200	40	88	320	M 10x1,25

Order No.	Speed rpm	Dyn. load C kN max.	Static bearing load C_0 kN max.	Housing load F_1 kN max.	Housing load F_6 kN max.	Housing load F_2 kN max.	Housing load F_3 kN max.	Torque screw to Nm	Housing load F_4 kN max.	Housing load F_5 kN max.	Set screw size
L1871.040	2600	22.8	18.2	360	50	130	220	40	90	360	M 10x1,25
L1871.045	2400	25.7	20.8	380	52	140	240	40	98	380	M 10x1,25
L1871.050	2200	27.5	23.7	380	64	150	280	40	110	380	M 10x1,25

Stainless Square Flanged Bearing
four point flange

L1872



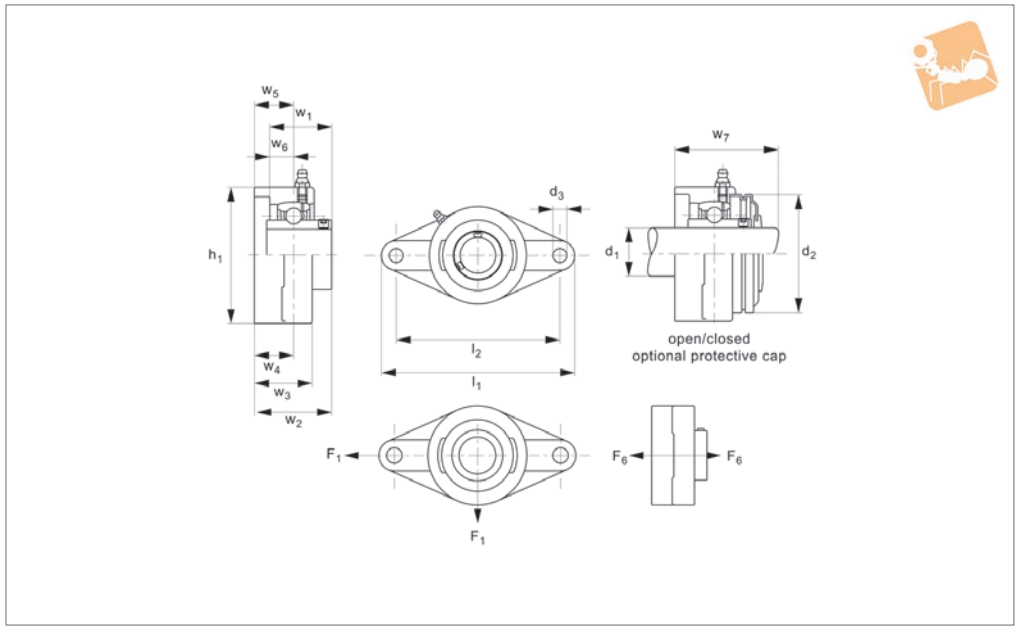
Material
Stainless steel (AISI 304), with smooth surfaces. Bearing stainless steel (440C) with 2RS seals, lubricated with food grade grease (USDA approved).

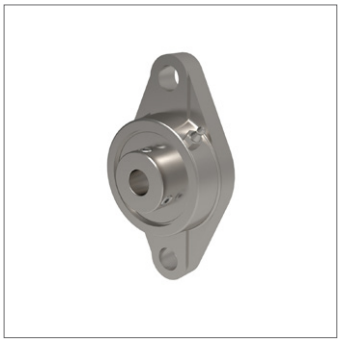
Technical Notes
Self-aligning bearing units.
Temperature range for bearings: -15°C to +120°C.
Resistant to a moisture and a wide range of aggressive chemicals.
For optional shaft end caps add suffixes:
-CO for one open protective cap (with seal) for through shafts
-CC for closed protective cap for shaft ends.

Tips
Shaft retention with two set screws (at 120° offset).
Used with h6 tolerance shafts (see our part no.s L1770-L1776).
Maximum housing loads measured @ 20°C.

Order No.	d_1 for h6	l_1	d_2	d_3	l_2	w_1	w_2 +0.3|-0	w_3	w_4	w_5	Weight kg
L1872.012	12	86	12	64	31.0	33.3	25.5	12.0	15	0.66	54
L1872.015	15	86	12	64	31.0	33.3	25.5	12.0	15	0.64	54
L1872.017	17	86	12	64	31.0	33.3	25.5	12.0	15	0.63	54
L1872.020	20	86	12	64	31.0	33.3	25.5	12.0	15	0.61	0.71
L1872.025	25	95	12	70	34.1	35.8	27.0	14.0	16	0.82	60
L1872.030	30	108	12	83	38.1	40.2	30.5	14.0	18	1.31	70
L1872.035	35	116	14	92	42.9	44.4	33.5	14.5	19	1.41	80
L1872.040	40	130	16	102	49.2	51.2	36.0	14.5	21	1.89	88
L1872.045	45	137	16	105	49.2	52.2	38.0	15.5	22	2.32	95
L1872.050	50	143	16	111	51.6	54.6	40.0	15.0	22	2.65	100
L1872.055	55	162	19	130	55.6	58.4	44.0	20.0	25	4.06	110
L1872.060	60	175	19	143	65.1	68.7	48.0	20.0	29	5.48	120

Order No.	w_6	w_7	Speed rpm	Dyn. load C kN max.	Static bearing load C_0 kN max.	Housing load F_1 kN max.	Housing load F_6 kN max.	Torque screw to Nm	Set screw size
L1872.012	12.7	37.8	4800	10.1	6.8	86	36	8.5	M 6x1
L1872.015	12.7	37.8	4800	10.1	6.8	86	36	8.5	M 6x1
L1872.017	12.7	37.8	4800	10.1	6.8	86	36	8.5	M 6x1
L1872.020	12.7	37.8	4800	10.1	6.8	86	36	8.5	M 6x1
L1872.025	14.3	39.9	4000	11.0	8.0	130	50	8.5	M 6x1
L1872.030	15.9	44.4	3400	15.3	11.5	130	60	8.5	M 6x1
L1872.035	17.5	48.2	3000	20.1	15.6	130	70	20	M 8x1
L1872.040	19.0	54.4	2600	22.8	18.2	140	78	20	M 8x1
L1872.045	19.0	55.9	2400	25.7	20.8	200	90	40	M 10x1,25
L1872.050	19.0	59.8	2200	27.5	23.7	200	100	40	M 10x1,25
L1872.055	22.2	62.6	1800	34.0	25.5	255	125	40	M 10x1,25
L1872.060	25.4	72.9	1600	41.0	31.5	315	155	40	M 10x1,25





L1873

Material
Stainless steel (AISI 304), with smooth surfaces. Bearing stainless steel (440C) with 2RS seals, lubricated with food grade grease (USDA approved).

Technical Notes
Self-aligning bearing units.
Temperature range for bearings: -15°C to +120°C.
Resistant to a moisture and a wide range of aggressive chemicals.
For optional shaft end caps add suffixes:
-CO for one open protective cap (with seal) for through shafts
-CC for closed protective cap for shaft ends.

Tips
Shaft retention with two set screws (at 120° offset).
Used with h6 tolerance shafts (see our part no.s L1770-L1776).
Maximum housing loads measured @ 20°C.

Order No.	d_1 for h6	l_1	d_2	d_3	h_1	l_2	w_1	w_2 +0.3|-0	w_3	w_4	Weight kg
L1873.012	12	112	12	90	46	31.0	33.3	25.5	12	0.52	60
L1873.015	15	112	12	90	46	31.0	33.3	25.5	12	0.51	60
L1873.017	17	112	12	90	46	31.0	33.3	25.5	12	0.49	60
L1873.020	20	112	12	90	54	31.0	33.3	25.5	12	0.47	60
L1873.025	25	125	16	99	60	34.1	35.8	27.0	13	0.60	68
L1873.030	30	141	16	117	70	38.1	40.2	31.0	13	0.89	80
L1873.035	35	156	16	130	80	42.9	44.4	33.0	15	1.18	90
L1873.040	40	172	19	144	88	49.2	51.2	36.0	15	1.53	100
L1873.045	45	180	19	148	95	49.2	52.2	38.0	15	1.81	108
L1873.050	50	190	19	157	100	51.6	54.6	39.0	16	2.17	115

Order No.	w_5	w_6	w_7	Dyn. load C kN max.	Static bearing load C_0 kN max.	Housing load F_1 kN max.	Torque screw to Nm	Set screw size	Axial load F_6 kN max.
L1873.012	15	12.7	37.8	10.1	6.8	48	8.5	M 6x1	24
L1873.015	15	12.7	37.8	10.1	6.8	48	8.5	M 6x1	24
L1873.017	15	12.7	37.8	10.1	6.8	48	8.5	M 6x1	24
L1873.020	15	12.7	37.8	10.1	6.8	48	8.5	M 6x1	24
L1873.025	16	14.3	39.9	11.0	8.0	76	20	M 8x1	32
L1873.030	18	15.9	44.4	15.3	11.5	76	20	M 8x1	40
L1873.035	19	17.5	47.7	20.1	15.6	80	40	M 10x1,25	46
L1873.040	21	19.0	54.4	22.8	18.2	82	40	M 10x1,25	54
L1873.045	22	19.0	55.9	25.7	20.8	120	40	M 10x1,25	64
L1873.050	22	19.0	59.8	27.5	23.7	124	40	M 10x1,25	78

Stainless Pillow Blocks

Technical

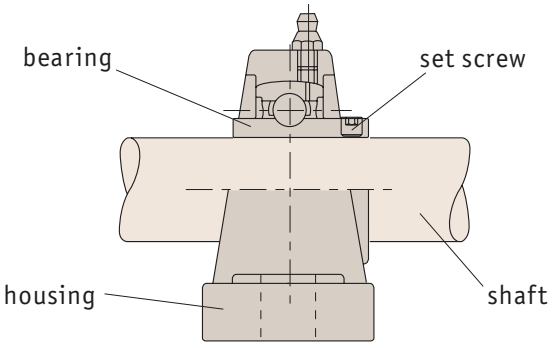
Bearing Supports from Automotion Components

Ball bearing units made of stainless steel are used in areas where corrosion resistance is a must. In these areas, where high atmospheric humidity or the requirement for periodic washdown of the equipment is necessary to prevent bacteria growth, conventional ball bearing units made of cast iron do not suit.

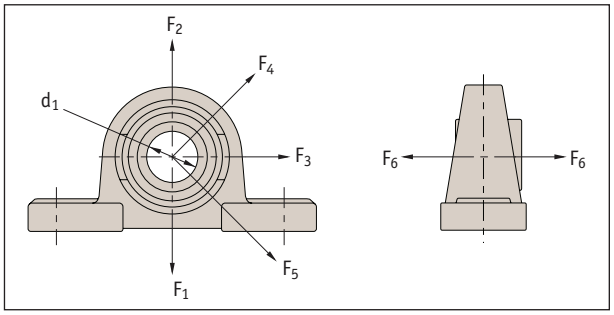
We offer a comprehensive standard range of ball bearing units made of stainless steel. To satisfy the requirements of the pharmaceutical and food industries all our ball bearing units made of stainless steel are filled with grease meeting the USDA H1 food grade specification.

Bearing i/d Ø	Max. rpm	Max. dynamic bearing load kN	Max. static bearing load kN
12	4800	10,1	6,8
15	4800	10,1	6,8
17	4800	10,1	6,8
20	4800	10,1	6,8
25	4000	11,0	8,0
30	3400	15,3	11,5
35	3000	20,1	15,6
40	2600	22,8	18,2
45	2400	25,7	20,8
50	2200	27,5	23,7
55	1800	34,0	25,5
60	1600	41,0	31,5

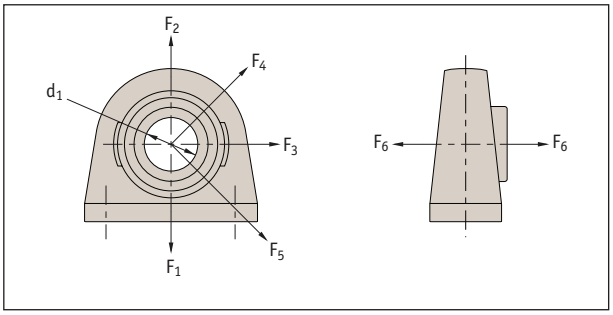
Tightening torques



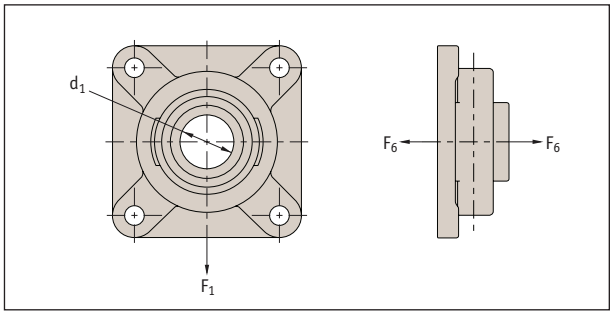
Ø	Set screw	Torque to Nm
12-30	M6 x 1	8,5
35-40	M8 x 1	20
45-60	M 10 x 1,5	40



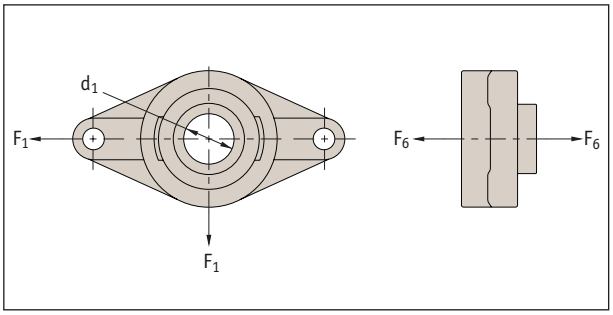
Order no.	Static load carrying capacity (kN) Load direction						Ød1
	F1	F2	F3	F4	F5	F6	
L1870.012-020	160	66	110	50	160	34	12-20
L1870.012-025	180	74	120	56	180	36	25
L1870.012-030	240	100	180	70	240	44	30
L1870.012-035	320	120	200	88	320	48	35
L1870.012-040	360	130	220	90	360	50	40
L1870.012-045	380	140	240	98	380	52	45
L1870.012-050	380	150	280	110	380	64	50
L1870.012-055	475	191	350	262	475	80	55
L1870.012-060	587	236	433	324	587	99	60



Order no.	Static load carrying capacity (kN) Load direction						Ød1
	F1	F2	F3	F4	F5	F6	
L1871.012-020	160	66	110	50	160	34	12-20
L1871.012-025	180	74	120	56	180	36	25
L1871.012-030	240	100	180	70	240	44	30
L1871.012-035	320	120	200	88	320	48	35
L1871.012-040	360	130	220	90	360	50	40
L1871.012-045	380	140	240	98	380	52	45
L1871.012-050	380	150	280	110	380	64	50



Order no.	Static load carrying capacity (kN) Load direction						Ød1
	F1	F2	F3	F4	F5	F6	
L1872.012-020	86	-	-	-	-	36	12-20
L1872.012-025	130	-	-	-	-	50	25
L1872.012-030	130	-	-	-	-	60	30
L1872.012-035	130	-	-	-	-	70	35
L1872.012-040	140	-	-	-	-	78	40
L1872.012-045	200	-	-	-	-	90	45
L1872.012-050	200	-	-	-	-	100	50
L1872.012-055	255	-	-	-	-	125	55
L1872.012-060	315	-	-	-	-	155	60



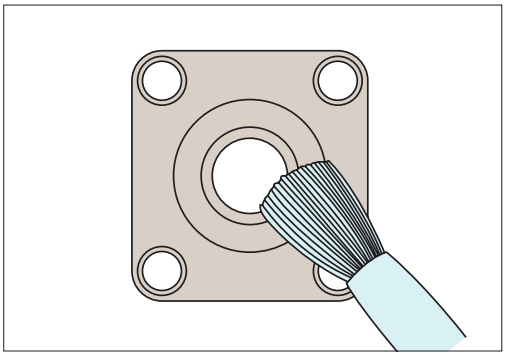
Order no.	Static load carrying capacity (kN) Load direction						Ød1
	F1	F2	F3	F4	F5	F6	
L1873.012-020	48	-	-	-	-	24	12-20
L1873.012-025	76	-	-	-	-	32	25
L1873.012-030	76	-	-	-	-	40	30
L1873.012-035	80	-	-	-	-	46	35
L1873.012-040	82	-	-	-	-	54	40
L1873.012-045	120	-	-	-	-	64	45
L1873.012-050	124	-	-	-	-	78	50

Description of the installation steps

Self-aligning bearing units must be installed under conditions that ensure maximum bearing life. We recommend that you refer to the following chapters and follow the reference procedures for this type of bearing unit.

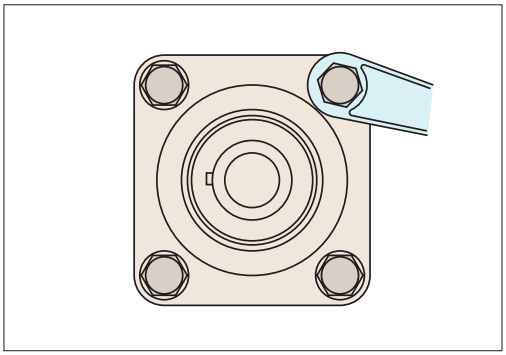
When installing sealed bearings, grease the seals to avoid dry operation when the shaft first starts to rotate.

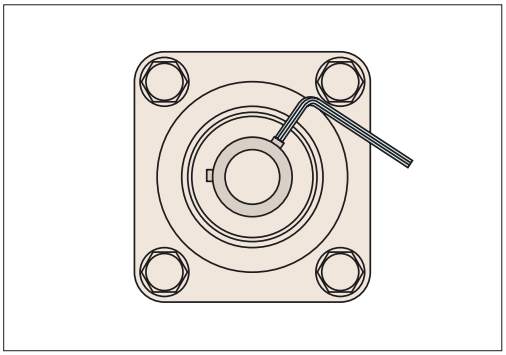
Make sure that the seating surfaces are perfectly clean and flat before starting any installation operations.



Install the shaft by mounting the bearing unit housings on the supporting frame. Tighten the inner ring retaining screw to the required torque indicated in the torque value table.

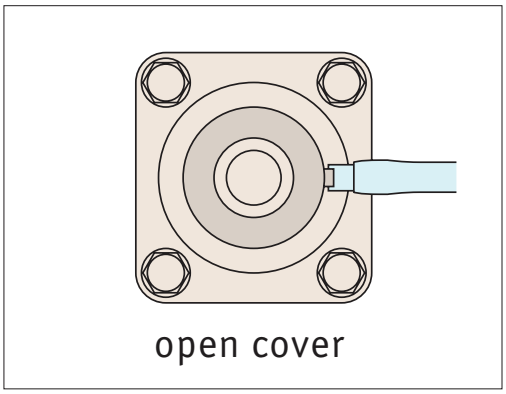
In all cases the shaft is installed first by attaching the bearing unit housings to the supporting frame. Tighten the screws in alternate diagonals.



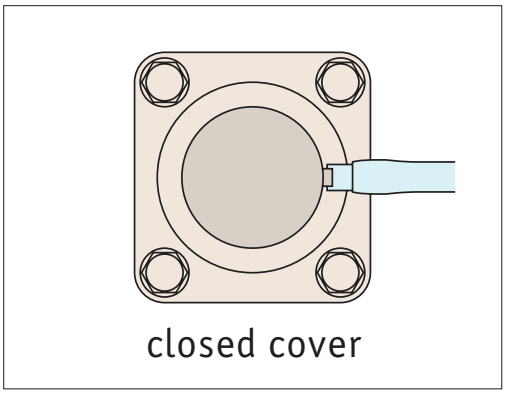


Installation / removal of protective covers

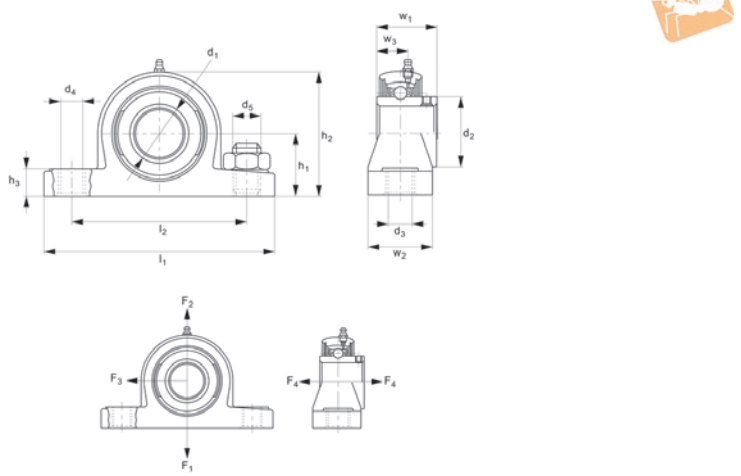
The covers (if required) are installed by snap-fitting, which can be done with a light blow of a mallet. They are removed by inserting the tip of a screwdriver into the cavity and applying light pressure to release them.

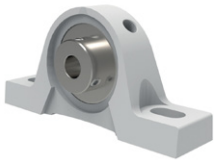


open cover



closed cover





L1876

Material
Thermoplastic (PBT) housing, with smooth surfaces. Stainless steel bearings (440C) with 2RS seals and sleeves for fixing bolts. Bearing lubricated with food grade grease.

Technical Notes
Self-aligning bearing units.

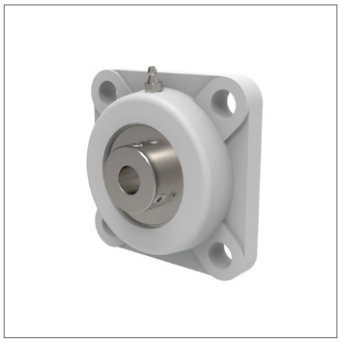
Temperature range for bearings: -15°C to +120°C.
Resistant to a wide range of chemicals.
Provide good protection against bacterial contamination.

Tips
Shaft retention with two set screws (at 120° offset).
Used with h6 tolerance shafts (see our part no.s L1770-L1776).
For protective end caps see L1879.

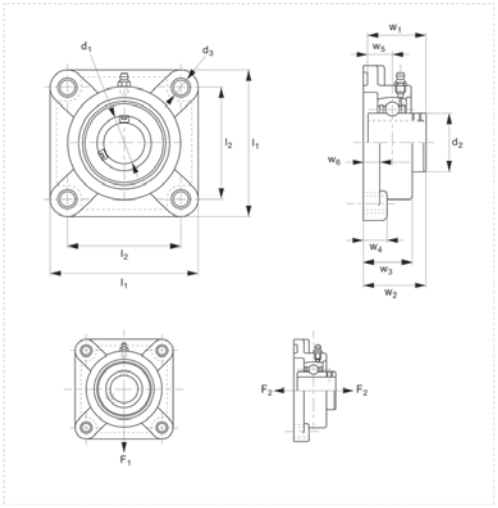
Order No.	d_1 for h6	l_1	w_1	w_2	w_3	d_2	d_3	d_4	d_5	h_1	h_2 +0|-0.8	h_3	l_2	Weight kg
L1876.020	20	127.0	31.0	38.0	12.7	29.0	11.0	14.0	M10	33.3	65.0	14.2	95.0	0.30
L1876.025	25	140.0	34.0	38.0	14.3	34.0	11.0	14.0	M10	36.5	71.0	14.5	105.0	0.35
L1876.030	30	162.0	38.1	46.0	15.9	40.5	14.0	18.0	M12	42.9	83.0	17.8	119.0	0.55
L1876.035	35	167.0	42.9	48.0	17.5	48.0	14.0	18.0	M12	47.6	94.0	18.0	127.0	0.78
L1876.040	40	184.0	49.2	54.0	19.0	53.0	14.0	18.0	M12	49.2	98.0	19.5	137.0	0.98

Order No.	Speed rpm max.	Static radial bearing load C_0 kN max.	Housing load F_1 kN max.	Housing load F_2 kN max.	Housing load F_3 kN max.	Axial load F_4 kN max.	Set screw size	Torque screw to Nm
L1876.020	7400	5.3	1.7	1.4	1.3	0.7	M6x1	3.9
L1876.025	6200	6.3	2.0	1.5	1.3	0.9	M6x1	3.9
L1876.030	5300	9.0	2.5	1.8	2.0	1.3	M6x1	3.9
L1876.035	4500	12.3	3.0	2.1	2.1	1.6	M8x1	8.3
L1876.040	4000	14.3	3.0	2.1	2.1	1.6	M8x1	8.3

Thermoplastic Square Flanged Units
four point flange



L1877



Material
Thermoplastic (PBT) housing, with smooth surfaces. Stainless steel bearings (440C) with 2RS seals and sleeves for fixing bolts. Bearing lubricated with food grade grease.

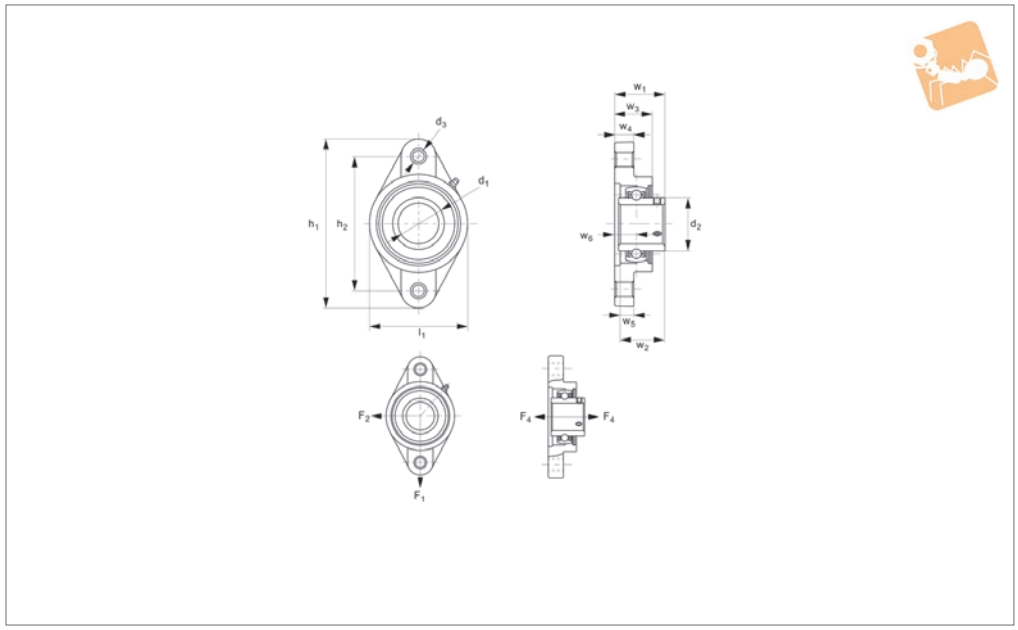
Technical Notes
Self-aligning bearing units.

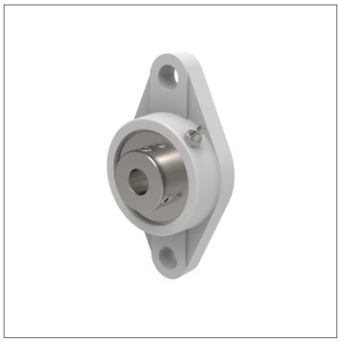
Temperature range for bearings: -15°C to +120°C.
Resistant to a wide range of chemicals.
Provide good protection against bacterial contamination.
Open and closed protection caps available (see our part L1869).

Tips
Shaft retention with two set screws (at 120° offset).
Used with h6 tolerance shafts (see our part no.s L1770-L1776).
For protective end caps see L1879.

Order No.	d_1 for h6	l_1	w_1	w_2	w_3	w_4	w_5	w_6	d_2	Weight kg
L1877.020	20	86	31.0	36.3	27.8	13.4	12.7	18.0	29.0	0.30
L1877.025	25	95	34.0	36.7	28.0	14.3	14.3	17.0	34.0	0.36
L1877.030	30	107	38.1	41.4	31.5	14.3	15.9	19.2	40.5	0.51
L1877.035	35	118	42.9	46.9	34.8	15.5	17.5	21.5	48.0	0.75
L1877.040	40	130	49.2	53.2	37.5	17.0	19.0	23.0	53.0	0.98

Order No.	d_3	l_2	Speed rpm	Static radial bearing load C_0 kN max.	Housing load F_1 kN max.	Axial load F_2 kN max.
L1877.020	11	63.5	7400	5.3	1.6	0.7
L1877.025	11	70.0	6200	6.3	1.7	0.7
L1877.030	11	83.0	5300	9.0	2.3	1.1
L1877.035	13	92.0	4500	12.3	3.1	1.3
L1877.040	14	102.0	4000	14.3	3.1	1.5





L1878

Material
Thermoplastic (PBT) housing, with smooth surfaces. Stainless steel bearings (440C) with 2RS seals and sleeves for fixing bolts. Bearing lubricated with food grade grease.

Technical Notes
Self-aligning bearing units.

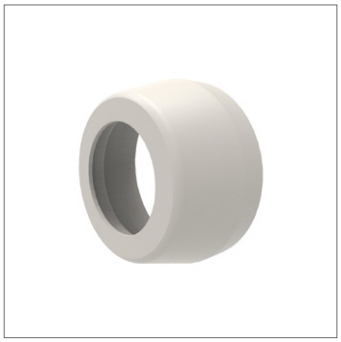
Temperature range for bearings: -15°C to +120°C.
Resistant to a wide range of chemicals.
Provide good protection against bacterial contamination.
Open and closed protection caps available (see our part L1869).

Tips
Shaft retention with two set screws (at 120° offset).
Used with h6 tolerance shafts (see our part no.s L1770-L1776).
For protective end caps see L1879.

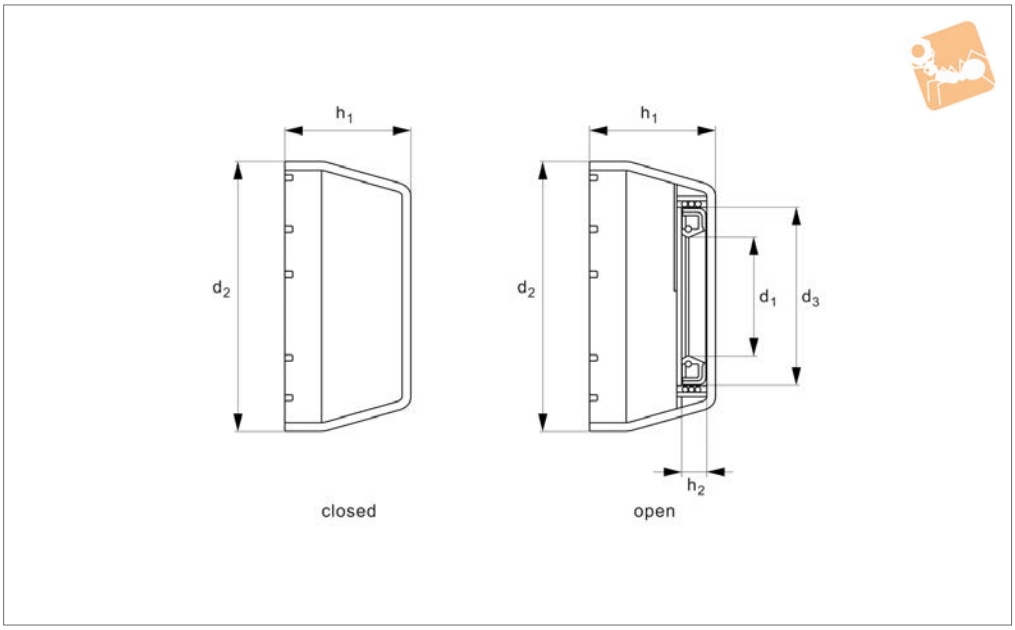
Order No.	d_1 for h6	l_1	w_1	w_2	w_3	w_4	w_5	w_6	d_2	d_3	Weight kg
L1878.020	20	65	33.7	31.0	26.5	11.4	12.7	15.4	29.0	11	0.25
L1878.025	25	70	36.7	34.0	29.7	13.5	14.3	17.0	34.0	11	0.30
L1878.030	30	80	41.2	38.1	30.5	13.3	15.9	19.0	40.5	11	0.45
L1878.035	35	90	43.4	42.9	32.8	16.1	17.5	18.0	48.0	13	0.67
L1878.040	40	100	51.7	49.2	37.5	20.0	19.0	21.5	53.0	14	0.88

Order No.	h_1	h_2 +0|-0.8	Speed rpm max.	Static radial bearing load C_0 kN max.	Housing load F_1 kN max.	Housing load F_2 kN max.	Axial load F_3 kN max.	Set screw size	Torque screw to Nm
L1878.020	130	90	7400	5.3	0.9	2.2	0.7	M6x1	3.9
L1878.025	130	99	6200	6.3	1.5	2.2	0.7	M6x1	3.9
L1878.030	148	117	5300	9.0	1.6	2.9	1.0	M6x1	3.9
L1878.035	163	130	4500	12.3	2.0	3.2	1.4	M8x1	8.3
L1878.040	175	144	4000	14.3	2.0	3.2	1.4	M8x1	8.3

Thermoplastic End Caps
open & closed



L1879



Material
White SR50 polypropene, with smooth surfaces.

Technical Notes
Temperature range: -15°C to +110°C.
Resistant to a wide range of chemicals.

Provide good protection against bacterial contamination.

Order No.	Type	d_1	d_2	d_3	h_1	h_2
L1879.200-CC	Closed	20	50.1	-	23	7
L1879.250-CC	Closed	25	55.0	-	25	7
L1879.300-CC	Closed	30	64.0	-	30	7
L1879.350-CC	Closed	35	74.5	-	32	7
L1879.400-CC	Closed	40	84.0	-	37	7
L1879.200-CO	Open	20	50.1	32	23	7
L1879.250-CO	Open	25	55.0	37	25	7
L1879.300-CO	Open	30	64.0	42	30	7
L1879.350-CO	Open	35	74.5	47	32	7
L1879.400-CO	Open	40	84.0	52	37	7

- Thermoplastic self-aligning unit, with stainless steel insert
- For diameters of shaft 20-40mm
- White PBT resin (prevents retention of dust, mould and bacteria)
- Lubricated with food grade grease (USDA H1 approved)
- Temperature range -15°C to +90°C
- Excellent chemical resistance (acids, bases, organic solvents, salts etc.)

Pillow block | **Four point flange** | **Two point flange**

- Can be used in wet or chemical environments such as bottling lines, food or pharmaceutical production lines, outdoor applications etc.
- Use with h6 tolerance shafts

Installation

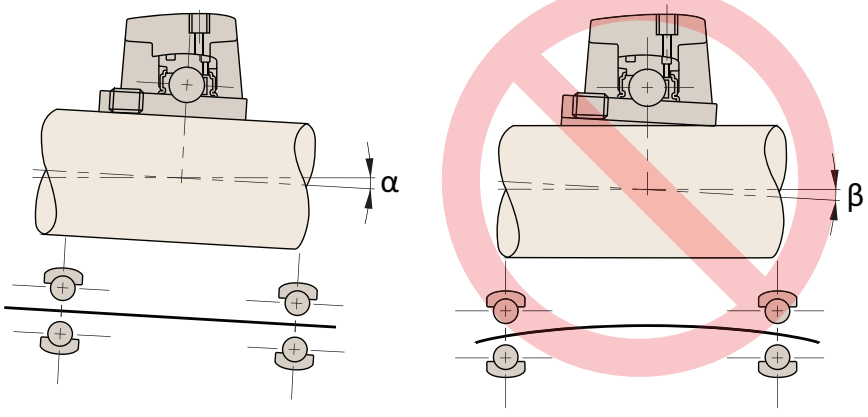
- Check clean and flat surface
- Tighten retaining screws, diagonal method
- Check shaft can be rotated by hand
- Check no distortion

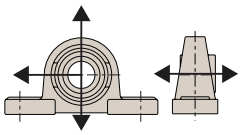
Tightening of stainless steel fitting screws

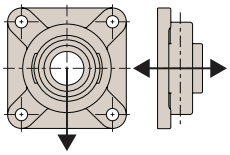
M6 thread, torque to 3.9 Nm
M8 thread, torque to 8.3 Nm

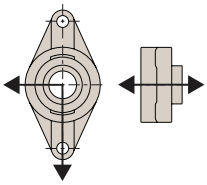
Permissible misalignment

- With provision for re-lubrication, the bearing can swivel inside the housing up to an angle **α** of about 5° (the groove is aligned with the lubricator hole) and 8° without provision for re-lubrication
- Pay attention to the swivelling of the bearing in the bearing unit. Permanent swivelling induced by rotational deflection of the shaft would cause wear of the housing and is therefore not allowable (angle ß)
- The maximum allowable values are those for deep-groove ball bearings corresponding to the same shaft diameter (maximum angle ß < 0.5)



Part no.	Max. rpm (h_6 shaft)	Loads	Max. static bearing radial load C_0 kN	Max. housing load capacity at 20°C kN ↓	↑	←	Max. axial load kN ↔	Screw size
L1876.020	7,400		5,3	1,7	1,4	1,3	0,7	M10
L1876.025	6,200		6,3	2,0	1,5	1,3	0,9	M10
L1876.030	5,300		9,0	2,5	1,8	2,0	1,3	M10
L1876.035	4,500		12,3	3,0	2,1	2,1	1,6	M12
L1876.040	4,000		14,3	3,0	2,1	2,1	1,6	M12

Part no.	Max. rpm (h_6 shaft)	Loads	Max. static bearing radial load C_0 kN	Max. housing load capacity at 20°C kN ↓	Max. axial load kN ↔	Screw size
L1877.020	7,400		5,3	1,6	0,7	M10
L1877.025	6,200		6,3	1,7	0,7	M10
L1877.030	5,300		9,0	2,3	1,1	M10
L1877.035	4,500		12,3	3,1	1,3	M12
L1877.040	4,000		14,3	3,1	1,5	M12

Part no.	Max. rpm (h_6 shaft)	Loads	Max. static bearing radial load C_0 kN	Max. housing load capacity at 20°C kN ←	↓	Max. axial load kN ↔	Screw size
L1877.020	7,400		5,3	2,2	0,9	0,7	M10
L1877.025	6,200		6,3	2,0	1,5	0,7	M10
L1877.030	5,300		9,0	2,9	1,6	1,0	M10
L1877.035	4,500		12,3	3,2	2,0	1,4	M12
L1877.040	4,000		14,3	3,2	2,0	1,4	M12

*at 20° continuous load

Characteristics of thermoplastic PBT

Properties	Unit	
Tensile strength at yield	N/mm²	115
Elongation at yield	%	3
Tensile modulus	N/mm²	8,000
Flexural yield strength	N/mm²	170
Flexural modulus	N/mm²	7,000
Notched impact strength Charpy	k/m²	12
Notched impact strength IZOD	J/m	100
Hardness H358/10	N/mm²	104
Hardness H358/60	N/mm²	101
Hardness Rockwell	-	L102

Thermal	Unit	
Oxygen index	%	19
Flame retardancy (1/6mm thickness)	-	94HB
Heat resistance: Vicat, method B	°C	210-215
Thermal conductivity	W/m²C	0,19
Mould shrinkage flow	%	0,4-0,6
Cross flow direction	%	0,6-0,8

Physical	Unit	
Water absorption: Saturation for 24h at 23°C	%	0,06

For units L1876 - L1878

All data expressed in terms of % retention of tensile strength.

Chemical environment	°C	Immulsion days	% retention of strength
Acids			
10% Hydrochloric	23	30	89
	23	90	85
	23	180	82
10% Sulphuric	23	30	97
	23	90	94
	23	180	90
36% Sulphuric (battery)	23	30	97
	23	180	96
	66	30	84
	66	180	35
10% Acetic	23	30	89
	23	180	88
Bases			
5% Potassium hydroxide	23	30	83
	23	90	10
10% Sodium hydroxide	23	30	2
	23	180	-
10% Ammonium hydroxide	23	30	90
	23	90	87
	23	180	58
Salts			
10% Zinc chloride	25	30	97
	25	90	94
10% Sodium hydroxide	25	30	98
	25	90	98
10% Sodium chloride	25	30	97
	25	90	97
Organic solvents			
Ethyl alcohol	23	30	99
	23	180	94
Methyl alcohol	23	30	91
	23	180	76
Isopropyl-alcohol	23	30	100
	23	180	100
Isopropyl-alcohol & water (50/50)	23	30	93
	23	180	96
Turpentine	23	30	66
	23	180	92
Acetone	23	30	90
	23	180	63