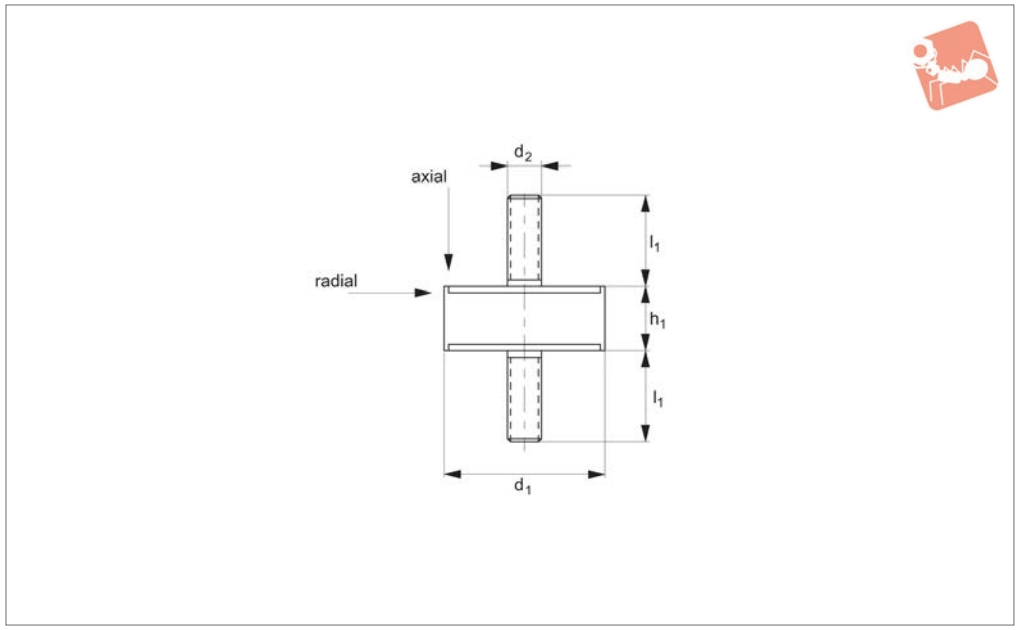
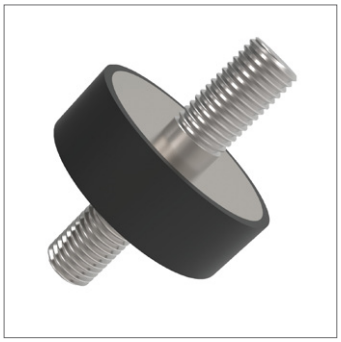




61040

Material
Rubber on silver zinc plated steel (rubber hardness - 55 Shore A).

Technical Notes
Parts with small diameters (d_1) and relatively long length (h) cannot accept radial loads (as shown in table).

Different thread sizes on request.
For rubber mounted on stainless steel - see part no. 61042.

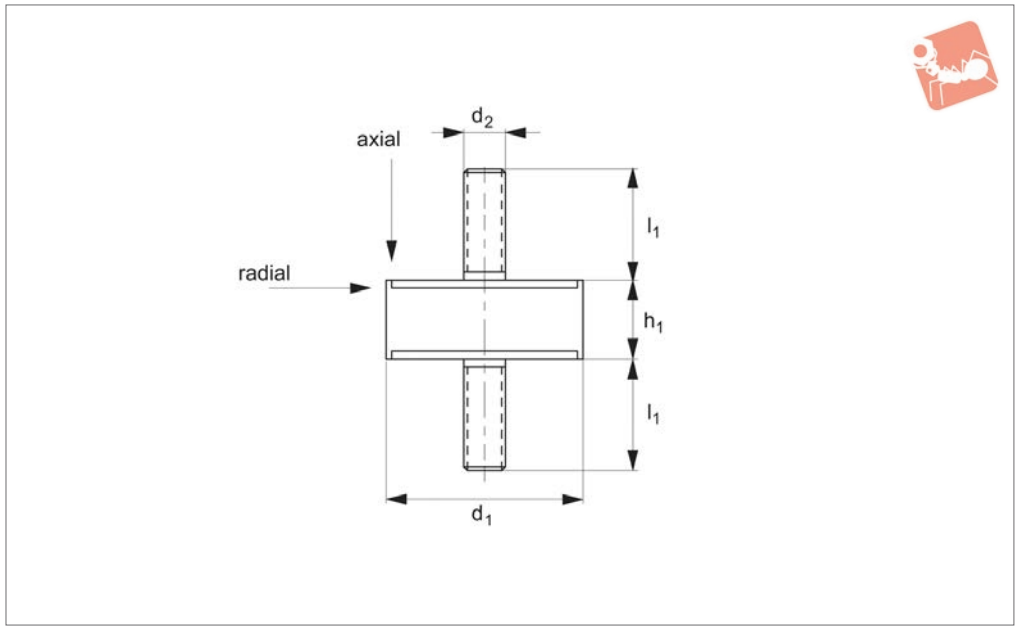
Tips
These cylinders are used to reduce vibration by allowing some movement (in axial and radial as shown).
Typically used in machinery, compressors, air conditioning units, light engineering equipment etc.

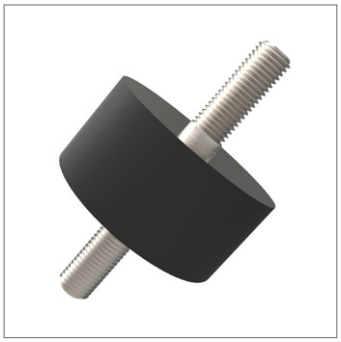
Order No.	d_1	h_1	d_2	l_1	Axial load kgf max.	Radial load kgf max.
61040.W0061	6	7	M 3	10	3	-
61040.W0081	8	8	M 3	10	3	-
61040.W0091	9	12	M 4	10	6	1.5
61040.W0101	10	8	M 4	10	8	1.5
61040.W0102	10	10	M 4	10	10	1.5
61040.W0151	15	8	M 4	10-14	15	2.4
61040.W0152	15	10	M 4	10-14	13	2.4
61040.W0153	15	15	M 4	10-14	13	3.0
61040.W0154	15	20	M 4	10-14	10	-
61040.W0155	15	22	M 4	10-14	10	-
61040.W0156	15	25	M 4	10-14	9	-
61040.W0157	15	28	M 4	10-14	9	-
61040.W0161	16	15	M 4	14	13	2.4
61040.W0181	18	7.5	M 6	16	20	3.0
61040.W0182	18	8.5	M 6	16	20	3.0
61040.W0183	18	12	M 6	16	18	3.0
61040.W0202	20	9	M 6	13-16	27	5.0
61040.W0203	20	10	M 6	16	30	5.0
61040.W0204	20	15	M 6	16	25	5.0
61040.W0205	20	20	M 6	18	21	4.5
61040.W0206	20	25	M 6	16	20	4.0
61040.W0207	20	30	M 6	16	18	3.5
61040.W0251	20	35	M 6	13-16	18	3.5
61040.W0252	25	10	M 6	10-18	46	9.0
61040.W0253	25	15	M 6	18	44	8.5
61040.W0254	25	20	M 6	18	41	8.0
61040.W0255	25	25	M 6	18	40	7.5
61040.W0256	25	30	M 6	18	40	7.0
61040.W0258	25	40	M 6	18	36	4.0

Anti-vibration Cylinders

male:male

Order No.	d_1	h_1	d_2	l_1	Axial load kgf max.	Radial load kgf max.
61040.W0303	30	15	M 8	20	90	12.0
61040.W0304	30	20	M 8	20	90	10.5
61040.W0305	30	25	M 8	20	85	10.5
61040.W0306	30	30	M 8	20	80	10.5
61040.W0351	35	40	M 8	23	54	13.0
61040.W0401	40	12	M 8	23	120	20.0
61040.W0402	40	20	M 8	20	160	20.0
61040.W0403	40	25	M 8	20	155	18.0
61040.W0404	40	28	M 8	20	155	16.0
61040.W0405	40	30	M 8	23	150	21.0
61040.W0406	40	40	M 8	23	120	22.0
61040.W0407	40	50	M 8	23	80	19.0
61040.W0451	45	30	M 8	23	112	24.0
61040.W0501	50	20	M10	25	250	30.0
61040.W0503	50	30	M10	25	250	29.0
61040.W0504	50	40	M10	25	220	29.0
61040.W0505	50	50	M10	25	200	29.0
61040.W0601	60	20	M10	28	285	35.0
61040.W0602	60	30	M10	28	200	37.0
61040.W0603	60	35	M10	30	350	39.0
61040.W0604	60	45	M10	30	300	42.0
61040.W0605	60	50	M10	37	185	42.0
61040.W0701	70	45	M10	35	270	55.0
61040.W0702	70	50	M10	30	350	52.0
61040.W0751	75	25	M12	35	650	75.0
61040.W0752	75	30	M12	37	350	75.0
61040.W0753	75	40	M12	35	500	75.0
61040.W0754	75	50	M12	37	330	65.0
61040.W0755	75	55	M12	35	450	60.0
61040.W0801	80	30	M14	35	900	75.0
61040.W0802	80	40	M14	35	600	50.0
61040.W0803	80	50	M14	35	750	65.0
61040.W0804	80	80	M14	51	280	60.0
61040.W0951	95	40	M16	45	1200	70
61040.W0952	95	55	M16	45	1000	70
61040.W0953	95	60	M16	45	800	70
61040.W0954	95	75	M16	45	800	70
61040.W1001	100	40	M16	45	1200	95
61040.W1002	100	60	M16	45	1100	90
61040.W1003	100	75	M16	45	1000	90
61040.W1201	120	50	M16	45	1500	100
61040.W1202	120	75	M16	45	1200	100
61040.W1203	120	100	M16	45	1000	100
61040.W1301	130	40	M16	45	1900	110
61040.W1302	130	50	M16	45	1600	110
61040.W1303	130	75	M16	45	1450	100
61040.W1304	130	100	M16	45	1200	120
61040.W1501	150	50	M20	50	1800	150
61040.W1502	150	60	M16	50	2200	150
61040.W1503	150	75	M16	50	2000	150
61040.W1504	150	100	M16	50	1400	150
61040.W1505	150	120	M16	50	1300	150
61040.W1506	150	140	M16	50	1200	150





61042

Material
Rubber on stainless steel, A2 (rubber hardness - 55 Shore A).

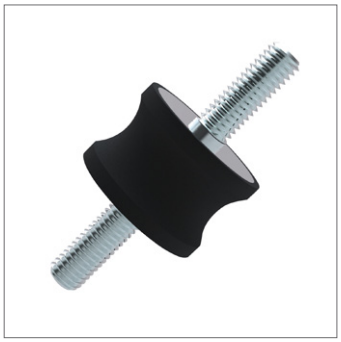
Technical Notes
For rubber mounted on silver zinc plated steel - see part no. 61040.

Tips
These cylinders are used to reduce vibration by allowing some movement (in axial and radial as shown).

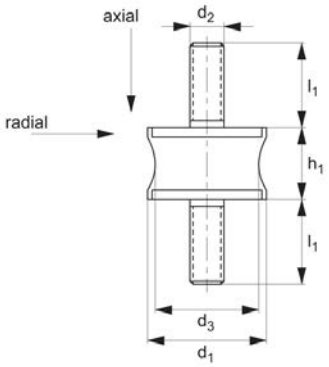
Typically used in machinery, compressors, air conditioning units, light engineering equipment etc.

Order No.	d_1	h_1	d_2	l_1	Compression max.	Axial load kgf max.	Radial load kgf max.
61042.W0200	20	20	M 6	18	4	25	4.5
61042.W0201	20	25	M 6	18	5	25	4.0
61042.W0250	25	25	M 8	18	5	40	7.5
61042.W0251	25	30	M 8	18	6	35	7.0
61042.W0300	30	30	M 8	18	6	80	10.5
61042.W0301	30	40	M 8	18	8	60	13.0
61042.W0302	35	35	M 8	18	8	90	13.0
61042.W0400	40	30	M10	27	8	150	21.0
61042.W0401	40	40	M10	27	10	120	22.0
61042.W0500	50	30	M10	27	8	250	29.0
61042.W0501	50	40	M10	27	10	220	29.0
61042.W0502	50	50	M10	27	12	200	29.0
61042.W0600	60	45	M10	27	10	300	42.0
61042.W0601	60	60	M10	27	12	250	44.0

Anti-vibration Cylinders Waisted
male



61100



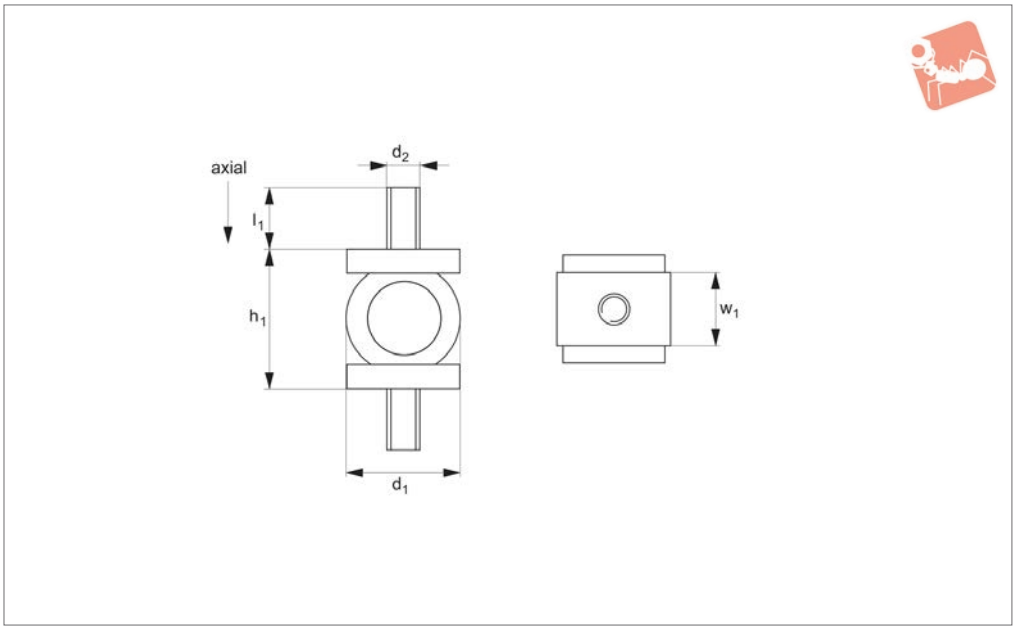
Material
Rubber on silver zinc plated steel (rubber hardness - 55 Shore A).
Available in stainless steel on request.

Technical Notes
For rubber mounted on silver zinc plated steel see part no. 61102 (female:female) or 61110 (male:female).

Tips
These cylinders are used to reduce vibration by allowing some movement (in axial and radial as shown in drawing).

Typically used in machinery, compressors, air conditioning units, light engineering equipment etc.

Order No.	d_1	h_1	d_2	d_3	l_1	Axial load kgf max.	Radial load N max.
61100.W0012	12	14	M 4	7	10	2.5	1.0
61100.W0020	20	15	M 6	14	13-16	10	2.5
61100.W0021	20	20	M 6	12	18	15	2.5
61100.W0025	25	20	M 6	18	18	25	6.0
61100.W0030	30	20	M 8	25	23	35	6.0
61100.W0031	30	25	M 8	24	20	40	6.0
61100.W0040	40	28	M10	22	25	60	12
61100.W0045	45	50	M 8	25	23	60	-
61100.W0050	50	30	M10	42	28	120	25
61100.W0057	57	44	M 8	25	20	40	-
61100.W0060	60	36	M10	37	30	90	-
61100.W0061	60	43	M10	35	30	70	12
61100.W0062	60	60	M10	51	30	150	30
61100.W0070	70	56	M12	50	35	220	-
61100.W0080	80	70	M14	70	50	170	55
61100.W0090	90	77	M16	79	45	500	-
61100.W0095	95	76	M16	80	46	250	-
61100.W0108	108	85	M16	95	45	800	-
61100.W0130	130	96	M16	115	45	1400	-



61115

Material
Rubber on silver zinc-plated steel (rubber hardness - 55 Shore A).

Technical Notes
The spherical mounts are designed for low frequencies with low loads as little as 0.5 kg.

Tips
These mounts are not to be used for radial loads.

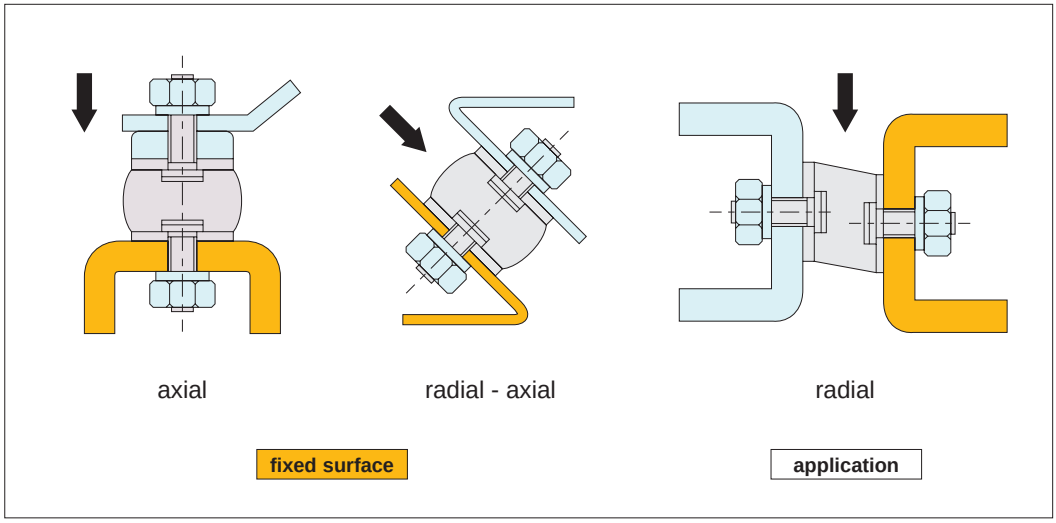
Order No.	d_1	h_1	d_2	w_1	l_1	Compression max.	Axial load kgf max.
61115.W0150	15	18	M4	14	8	5	1.25
61115.W0151	15	18	M4	14	8	5	2.50
61115.W0300	30	30	M8	30	20	11	3.50

General Anti-vibration Cylinders

installation methods for cylinders

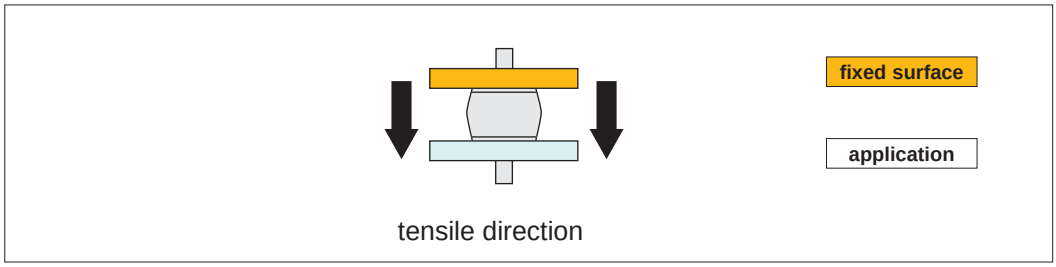
Acceptable loads

Cylindrical mounts are never to be used in tension, they should only be used in axial or radial. Radial loads are however considerably less than axial loads. Parts with small diameters (d_1) and relatively long lengths (h) cannot accept radial loads.



Installation

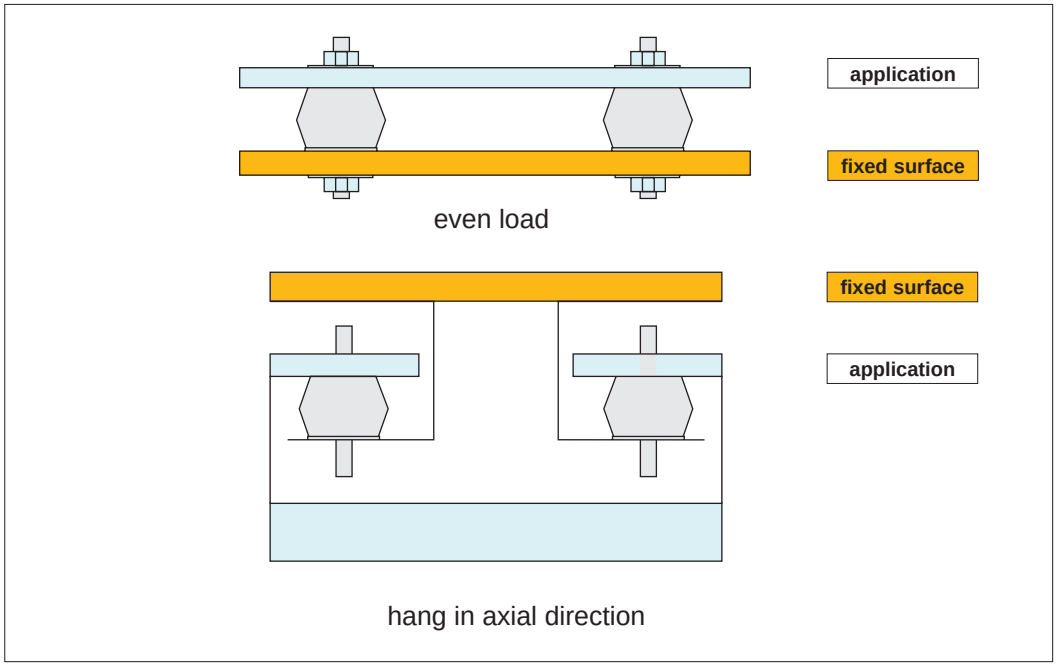
Incorrect installation



Correct installation

The height of the insulator may vary as the rubber is compressed under load.

Do not remove the rubber burr around the edge of the metal, this could cause detachment of rubber from the metal studs.



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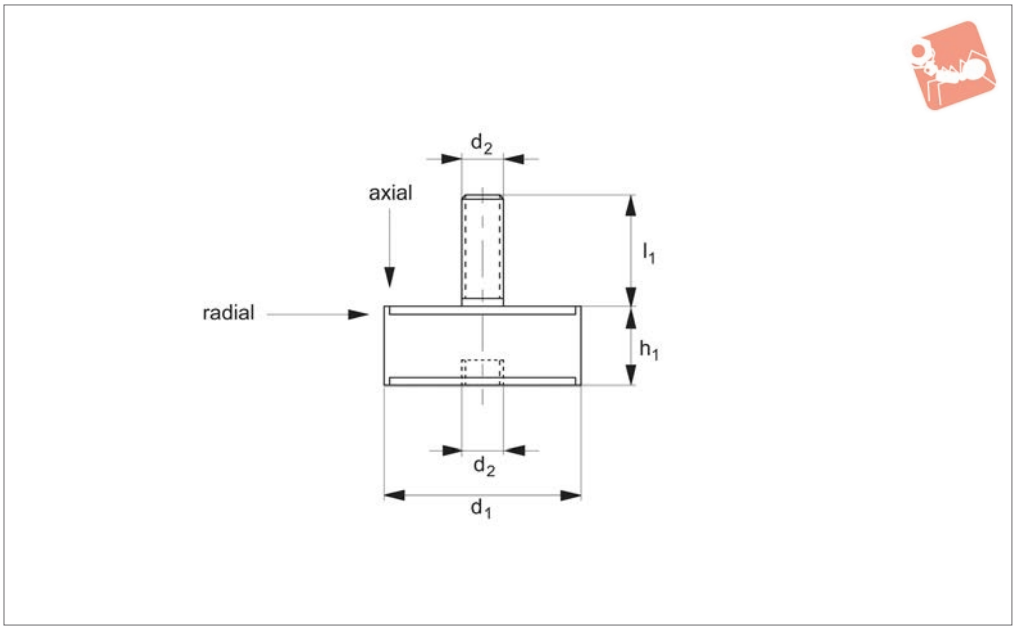
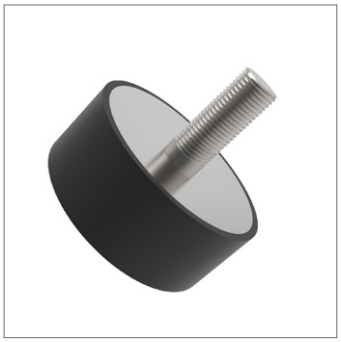




61060

Material
Rubber on silver zinc plated steel (rubber hardness - 55 Shore A).

Technical Notes
Load tolerance parts with small diameters (d_1) and relatively long length (h) cannot accept radial loads (as shown in table).

Tips
These cylinders are used to reduce vibration by allowing some movement (in axial and radial as shown).
Typically used in machinery, compressors, air conditioning units, light engineering equipment etc.

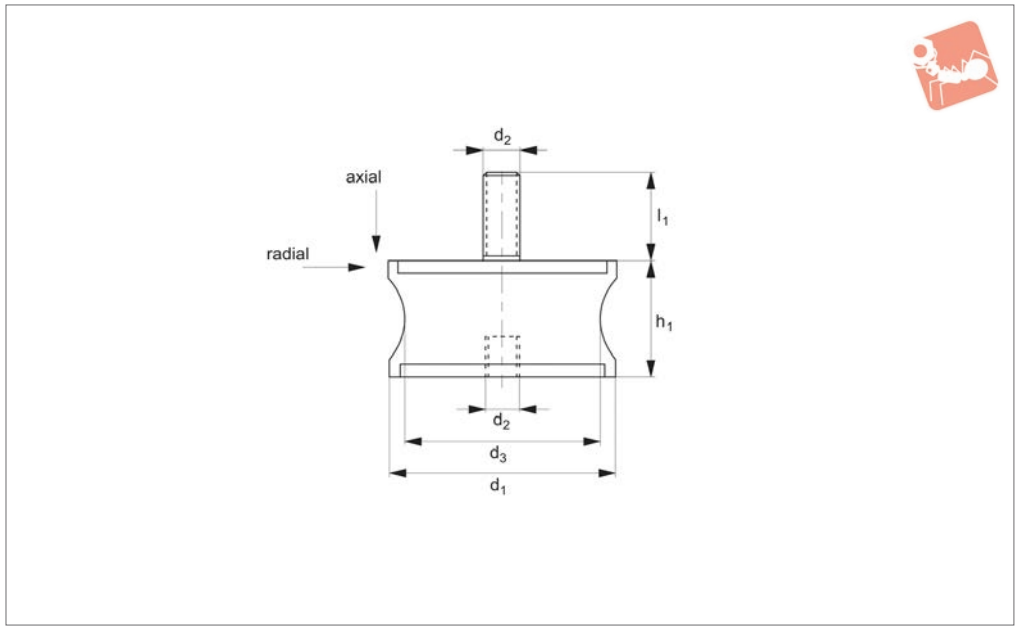
Order No.	d_1	h_1	d_2	l_1	Compression max.	Axial load kgf max.	Radial load kgf max.
61060.W0153	15	22	M 4	14	4.5	10	2.5
61060.W0081	8	8	M 3	10	1.5	3.5	-
61060.W0101	10	10	M 4	10	2.0	10	1.2
61060.W0121	12	31	M 5	20	3.5	6	1.3
61060.W0152	15	20	M 4	10	4.0	10	2.0
61060.W0154	15	25	M 4	10	5.0	9.5	2.0
61060.W0201	20	15	M 6	13	3.0	25	5.0
61060.W0202	20	20	M 6	18	4.0	25	4.0
61060.W0203	20	25	M 6	18	5.0	25	4.0
61060.W0204	20	30	M 6	18	7.0	25	3.0
61060.W0205	20	35	M 6	16	8.0	18	2.0
61060.W0251	25	15	M 6	16	3.0	50	8.0
61060.W0252	25	20	M 6	16	4.0	50	8.0
61060.W0253	25	25	M 6	18	5.0	40	7.0
61060.W0254	25	30	M 6	16	6.0	40	7.0
61060.W0255	25	35	M 6	18	8.0	36	6.0
61060.W0301	30	15	M 8	20	3.0	90	12.0
61060.W0302	30	20	M 8	20	4.0	90	11.0
61060.W0303	30	25	M 8	20	5.0	85	10.0
61060.W0304	30	30	M 8	20	6.0	80	10.0
61060.W0351	35	40	M 8	20	8.5	60	13.0
61060.W0401	40	30	M 8	20	8.0	150	21.0
61060.W0402	40	40	M 8	20	10.0	120	22.0
61060.W0403	40	50	M 8	23	13.0	80	18.0
61060.W0451	45	30	M 8	23	9.0	112	24.0
61060.W0500	50	30	M10	25	8.0	250	29.0
61060.W0501	50	40	M10	25	10.0	220	29.0
61060.W0502	50	45	M10	25	11.0	210	28.0
61060.W0503	50	50	M10	25	12.0	200	28.0
61060.W0504	50	60	M10	28	13.5	110	28.0
61060.W0601	60	30	M10	28	6.0	200	37.0

Anti-vibration Cylinders

male:female

Order No.	d_1	h_1	d_2	l_1	Compression max.	Axial load kgf max.	Radial load kgf max.
61060.W0602	60	35	M10	30	7.0	350	39.0
61060.W0603	60	45	M10	30	10.0	300	42.0
61060.W0604	60	50	M10	37	11.0	185	42.0
61060.W0701	70	45	M10	35	8.5	270	55.0
61060.W0702	70	50	M10	30	10.0	350	52.0
61060.W0703	70	55	M10	35	10.5	240	49.0
61060.W0751	75	25	M12	35	5.0	350	75.0
61060.W0752	75	30	M12	37	7.0	345	72.0
61060.W0753	75	40	M12	35	9.0	500	65.0
61060.W0755	75	55	M12	35	13.0	450	65.0
61060.W0801	80	30	M14	35	5.5	900	75.0
61060.W0802	80	40	M14	35	9.0	600	72.0
61060.W0803	80	50	M14	35	10.0	750	65.0
61060.W0804	80	70	M14	35	15.0	550	65.0
61060.W0951	95	40	M14	45	8.0	1200	70.0
61060.W0952	95	55	M14	45	11.0	1000	70.0
61060.W0953	95	60	M16	45	12.0	800	70.0
61060.W0954	95	75	M16	45	13.0	700	70.0
61060.W1001	100	40	M16	45	8.0	1200	95.0
61060.W1002	100	60	M16	45	15.0	1100	90.0
61060.W1003	100	75	M16	45	17.0	1000	80.0
61060.W1201	120	50	M16	45	9.0	1500	100.0
61060.W1202	120	75	M16	45	13.0	1500	100.0
61060.W1203	120	100	M16	45	16.0	1000	100.0
61060.W1301	130	40	M16	45	16.0	1900	120.0
61060.W1302	130	50	M16	45	9.0	1600	120.0
61060.W1303	130	75	M16	45	13.0	1450	120.0
61060.W1304	130	100	M16	45	16.0	1200	120.0
61060.W1501	150	50	M20	20	9.0	1800	150.0
61060.W1502	150	60	M20	20	14.0	1800	150.0
61060.W1503	150	75	M20	20	16.0	2000	150.0
61060.W1504	150	100	M20	20	16.0	1400	150.0
61060.W1505	150	120	M20	20	16.0	1300	150.0
61060.W1506	150	140	M20	20	16.0	1200	150.0

Anti-vibration Cylinders Waisted
male:female



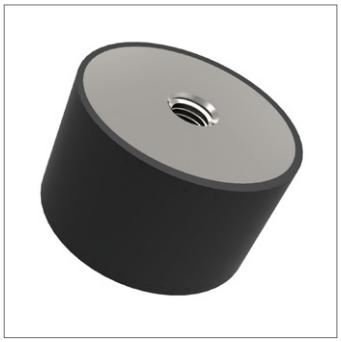
61110

Material
Rubber on silver zinc plated steel (rubber hardness - 55 Shore A).

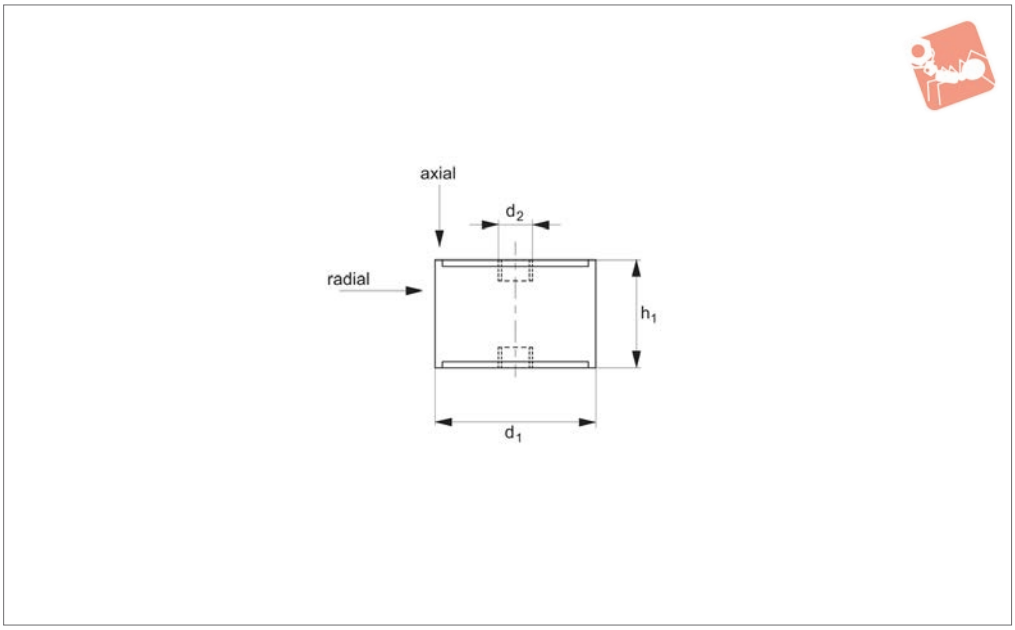
Tips
These cylinders are used to reduce vibration by allowing some movement (in axial and radial as shown).
Typically used in machinery, compressors, air conditioning units, light engineering equipment etc.

Order No.	d_1	h_1	d_2	l_1	d_3	Compression max.	Axial load kgf max.	Radial load kgf max.
61110.W0200	20	20	M 6	18	12	2.5	15	3.0
61110.W0250	30	25	M 8	20	24	4	40	4.0
61110.W0400	40	28	M10	25	22	5	60	2.5
61110.W0600	60	36	M10	30	37	5	90	7.0
61110.W0601	60	43	M10	30	35	4	70	12.0
61110.W0602	60	60	M10	30	51	6	150	30.0
61110.W0700	70	56	M12	35	50	6	220	45.0
61110.W0800	80	65	M12	35	70	8	400	55.0
61110.W0900	90	50	M12	45	80	4	800	65.0
61110.W1300	130	96	M16	45	115	13	1400	70.0

Anti-vibration Cylinders
female:female



61080



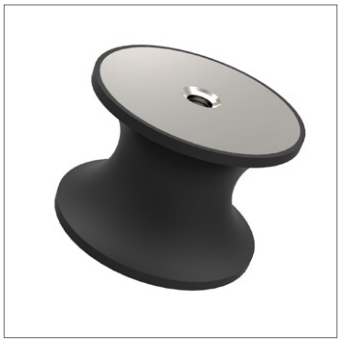
Material
Rubber on silver zinc plated steel (rubber hardness - 55 Shore A).

Tips
These cylinders are used to reduce vibration by allowing some movement (in axial and radial as shown).
Typically used in machinery, compressors, air conditioning units, light engineering equipment etc.

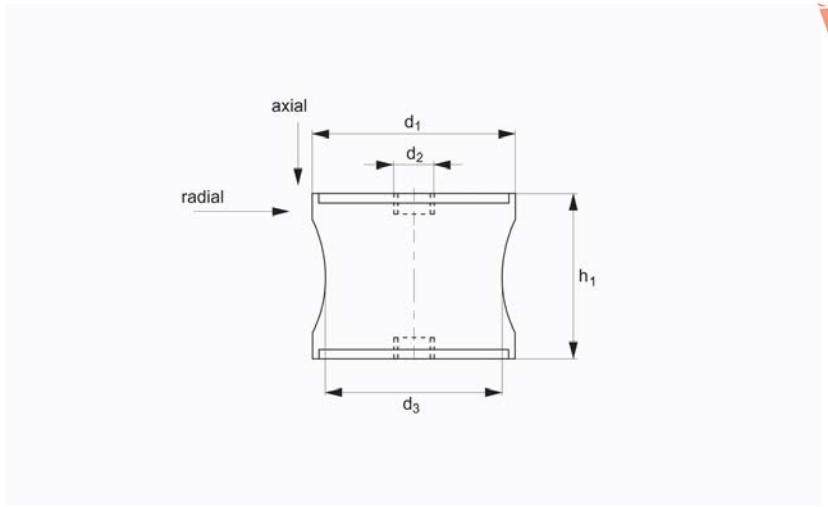
Order No.	Compression max.	d_1	h_1	d_2	Axial load kgf max.	Radial load N max.
61080.W0151	3.0	15	15	M 4	13	3
61080.W0152	4.0	15	20	M 4	10	3
61080.W0153	4.5	15	22	M 4	10	2.5
61080.W0154	5.0	15	25	M 4	9	2
61080.W0155	5.5	15	28	M 4	9	2
61080.W0201	4.0	20	20	M 6	25	4
61080.W0202	5.0	20	25	M 6	25	5
61080.W0203	7.0	20	30	M 6	25	3
61080.W0204	8.0	20	35	M 6	16	2
61080.W0251	4.0	25	20	M 6	50	8
61080.W0252	5.0	25	25	M 6	40	8
61080.W0253	6.0	25	30	M 6	30	8
61080.W0254	8.0	25	35	M 6	35	9
61080.W0301	4.0	30	20	M 8	90	11
61080.W0302	5.0	30	25	M 8	85	10
61080.W0303	6.0	30	30	M 8	80	10
61080.W0351	8.5	35	40	M 8	60	13
61080.W0401	8.0	40	30	M 8	150	18
61080.W0402	10.0	40	40	M 8	120	18
61080.W0403	12.5	40	50	M 8	80	18
61080.W0501	8.0	50	30	M10	250	29
61080.W0502	10.0	50	40	M10	220	29
61080.W0503	12.0	50	50	M10	200	28
61080.W0601	7.0	60	35	M10	350	39
61080.W0602	10.0	60	45	M10	300	42
61080.W0603	11.0	60	50	M10	285	42
61080.W0751	9.0	75	40	M12	500	72
61080.W0702	10.0	70	50	M10	350	52
61080.W0703	10.5	70	55	M10	230	52
61080.W0752	11.5	75	50	M12	330	65
61080.W0753	13.0	75	55	M12	450	65

Order No.	Compression max.	d_1	h_1	d_2	Axial load kgf max.	Radial load N max.
61080.W0801	15.0	80	70	M14	550	65
61080.W0901	8.0	100	40	M16	1200	95
61080.W0902	16.0	100	55	M16	775	97
61080.W0903	15.0	100	60	M16	1100	97
61080.W0904	16.0	100	100	M16	500	80
61080.W0931	6.0	130	40	M16	1900	120
61080.W0932	11.0	130	60	M16	680	100

Anti-vibration Cylinders Waisted
female:female



61102



Material
Rubber on silver zinc plated steel (rubber hardness - 55 Shore A).

Technical Notes
For rubber mounted on stainless steel see part no. 61104

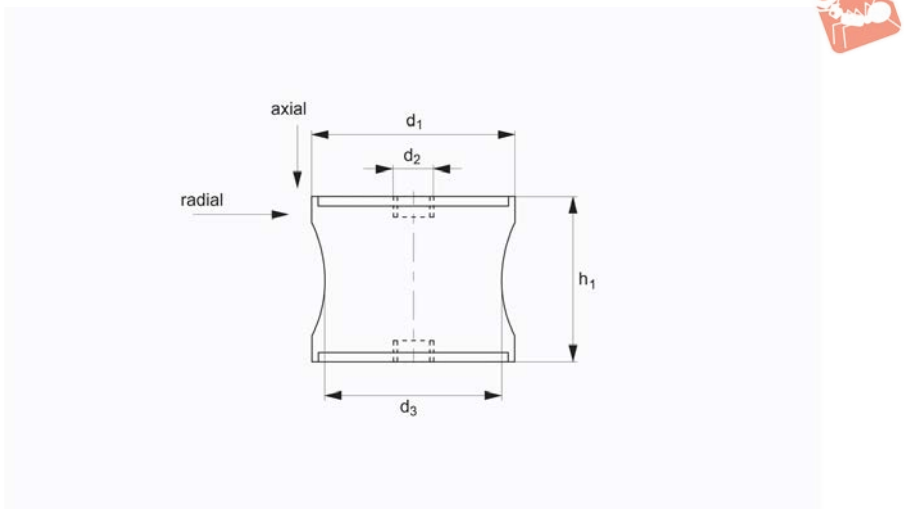
Tips
These cylinders are used to reduce vibration by allowing some movement (in axial and radial as shown in drawing).

Typically used in machinery, compressors, air conditioning units, light engineering equipment etc.

Order No.	Compression max.	d_1	h_1	d_2	d_3	Axial load kgf max.	Radial load kgf max.
61102.W0200	2.5	20	20	M 6	12	12	3.0
61102.W0300	4	30	25	M 8	24	40	4.0
61102.W0400	5	40	28	M10	22	30	2.5
61102.W0600	5	60	36	M10	37	40	7.0
61102.W0601	4	60	43	M10	35	75	12
61102.W0602	6	60	60	M10	51	150	30
61102.W0700	6	70	56	M12	50	220	45
61102.W0900	4	90	50	M12	80	800	65
61102.W0950	9.5	95	76	M12	80	400	70
61102.W1080	10	108	85	M16	95	800	75

Anti-vibration Cylinders Waisted

stainless female:female



61104

Material
Rubber on A2 stainless steel (rubber hardness - 55 Shore A).

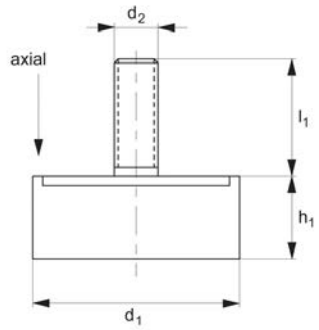
Tips
These cylinders are used to reduce vibration by allowing some movement (in axial and shear as shown in drawing).

Typically used in machinery, compressors, air conditioning units, light engineering equipment etc.

Order No.	Compression max.	d_1	h_1	d_2	d_3	Axial load kgf max.	Radial load N max.
61104.W0600	5	60	36	M10	37	90	7
61104.W0601	6	60	60	M10	51	150	30
61104.W0700	6	70	56	M12	50	220	45
61104.W0900	7	90	77	M12	79	500	70
61104.W1080	10	108	85	M16	95	800	75

Anti-vibration Feet
male

61200



Material
Rubber on silver zinc plated steel (rubber hardness - 55 Shore A).

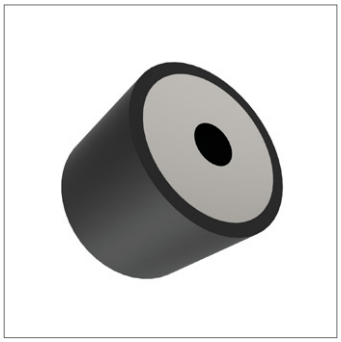
Tips
These feet or bumpers reduce shock and vibration.

Used widely as shock absorbers and feet for machine elements.

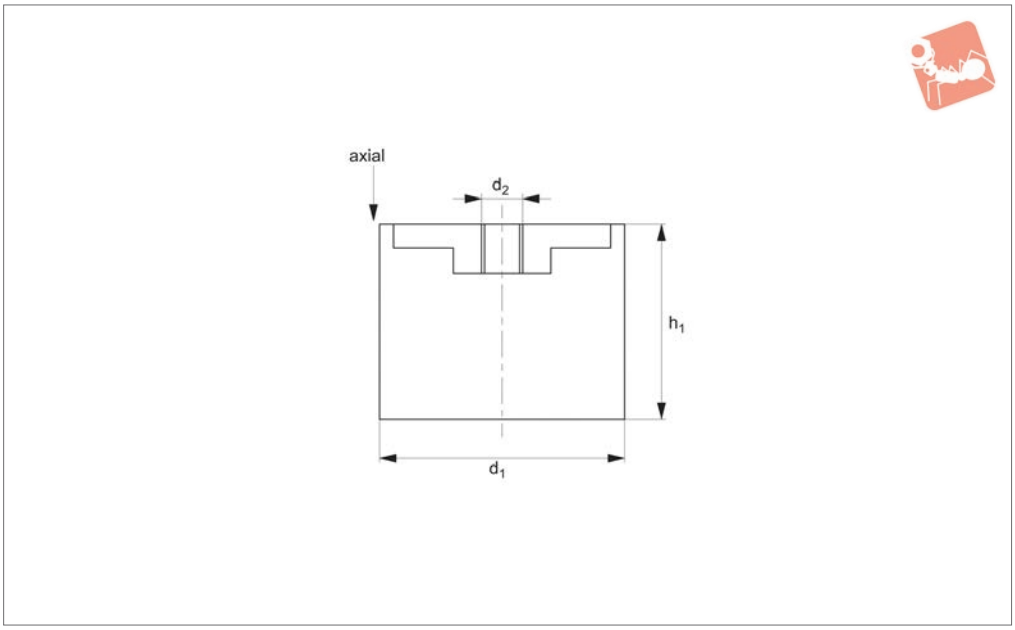
Order No.	d_1	h_1	d_2	l_1	Compression max.	Axial load kgf max.
61200.W0091	9	12	M 4	14	2.0	6
61200.W0151	15	10	M 4	14	1.5	13
61200.W0152	15	15	M 4	14	3.0	13
61200.W0153	15	20	M 4	14	4.0	10
61200.W0154	15	25	M 4	14	5.0	9
61200.W0201	20	10	M 6	13	2.0	30
61200.W0202	20	20	M 6	13	4.0	25
61200.W0251	25	10	M 6	18	1.5	50
61200.W0252	25	13	M 6	18	3.0	46
61200.W0253	25	15	M 6	18	3.0	44
61200.W0254	25	17	M 6	18	3.0	42
61200.W0255	25	20	M 6	18	4.0	41
61200.W0256	25	25	M 6	18	5.0	40
61200.W0257	25	30	M 6	18	6.0	35
61200.W0302	30	12	M 8	23	2.0	58
61200.W0303	30	15	M 8	20	3.0	58
61200.W0304	30	20	M 8	20	4.0	55
61200.W0305	30	25	M 8	20	5.0	50
61200.W0306	30	30	M 8	20	6.0	47
61200.W0351	35	11.5	M10	48	3.0	80
61200.W0352	35	40	M 8	23	8.0	68
61200.W0401	40	12	M 8	23	3.0	120
61200.W0402	40	20	M 8	23	4.0	117
61200.W0403	40	25	M 8	20	6.0	117
61200.W0404	40	30	M 8	20	8.0	100
61200.W0405	40	40	M 8	20	10.0	85
61200.W0406	40	45	M 8	20	12.0	85
61200.W0451	45	30	M 8	23	8.0	110
61200.W0452	45	50	M 8	35	12.0	85
61200.W0501	50	10	M10	28	2.0	230
61200.W0502	50	20	M10	25	4.0	250
61200.W0503	50	25	M10	25	5.5	250
61200.W0504	50	30	M10	25	8.0	150
61200.W0505	50	35	M10	25	9.0	230

Order No.	d_1	h_1	d_2	l_1	Compression max.	Axial load kgf max.
61200.W0506	50	45	M10	25	11.0	130
61200.W0507	50	50	M10	25	12.0	125
61200.W0508	50	60	M10	28	14.0	110
61200.W0601	60	20	M10	28	4.0	280
61200.W0602	60	30	M10	28	8.0	280
61200.W0603	60	45	M10	30	10.0	190
61200.W0604	60	50	M12	37	11.0	185
61200.W0605	60	60	M10	30	12.0	185
61200.W0702	70	50	M12	35	10.0	250
61200.W0703	70	55	M12	35	12.0	240
61200.W0704	70	70	M10	30	13.0	300
61200.W0751	75	25	M12	35	5.0	295
61200.W0752	75	30	M12	37	8.0	320
61200.W0753	75	40	M12	35	9.0	320
61200.W0754	75	45	M12	35	10.0	500
61200.W0755	75	55	M12	35	13.0	450
61200.W0801	80	30	M14	35	5.5	900
61200.W0802	80	40	M14	35	9.0	600
61200.W0803	80	50	M14	35	10.0	750
61200.W0804	80	70	M14	35	15.0	550
61200.W1005	100	100	M16	56	19.0	500
61200.W1101	110	124	M12	37	19.0	550
61200.W1301	130	40	M16	45	6.0	550
61200.W1305	130	50	M16	45	9.0	550
61200.W1302	130	60	M16	56	14.0	680
61200.W1303	130	75	M16	45	13.0	1450
61200.W1304	130	100	M16	45	16.0	1200
61200.W1501	150	50	M20	20	9.0	1800
61200.W1502	150	60	M20	20	14.0	2200
61200.W1503	150	75	M20	20	16.0	2000
61200.W1504	150	100	M20	20	16.0	1400
61200.W1505	150	120	M20	20	16.0	1300
61200.W1506	150	140	M20	20	16.0	1200
61200.W0951	95	40	M16	45	8.0	1200
61200.W0952	95	55	M16	45	11.0	1000
61200.W0953	95	60	M16	45	12.0	800
61200.W0954	95	75	M16	45	13.0	700
61200.W1001	100	40	M16	45	8.0	660
61200.W1002	100	50	M16	56	10.0	550
61200.W1003	100	55	M16	56	11.0	520
61200.W0805	80	80	M14	50	18.0	370
61200.W1004	100	60	M16	45	15.0	515

Anti-vibration Feet
female



61202



Material
Rubber on silver zinc plated steel (rubber hardness - 55 Shore A).

Tips
These feet or bumpers reduce shock and vibration.

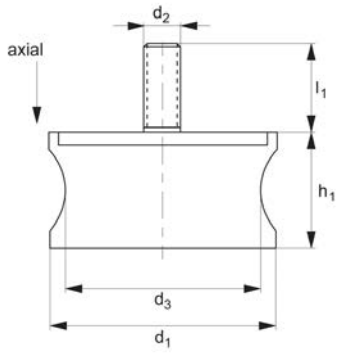
Used widely as shock absorbers and feet for machine elements.

Order No.	d_1	h_1	d_2	Compression max.	Axial load kgf max.
61202.W0100	10	10	M 4	2	10
61202.W0101	10	15	M 4	3	8
61202.W0130	13	10	M 5	1.5	12
61202.W0131	13	15	M 5	3	10
61202.W0132	13	20	M 5	3.5	20
61202.W0160	16	8	M 5	1.5	15
61202.W0161	16	10	M 5	1.5	20
61202.W0162	16	15	M 5	3	20
61202.W0163	16	20	M 5	4	20
61202.W0164	16	25	M 5	5	15
61202.W0200	20	10	M 6	2	30
61202.W0201	20	15	M 6	3	25
61202.W0202	20	20	M 6	4	25
61202.W0203	20	25	M 6	5	25
61202.W0204	20	30	M 6	7	25
61202.W0250	25	10	M 6	1.5	50
61202.W0251	25	15	M 6	3	50
61202.W0252	25	20	M 6	4	50
61202.W0253	25	22	M 6	4	45
61202.W0254	25	25	M 6	5	40
61202.W0256	25	30	M 6	6	35
61202.W0300	30	10	M 8	2	90
61202.W0301	30	15	M 8	3	90
61202.W0302	30	20	M 8	4	90
61202.W0303	30	22	M 8	4	90
61202.W0304	30	25	M 8	5	85
61202.W0305	30	30	M 8	6	80
61202.W0306	30	40	M 8	8	60
61202.W0350	35	35	M 8	8	90
61202.W0400	40	20	M 8	4	160
61202.W0401	40	25	M 8	6	155
61202.W0402	40	28	M 8	6	150
61202.W0403	40	30	M 8	8	150
61202.W0404	40	35	M 8	8	120

Order No.	d_1	h_1	d_2	Compression max.	Axial load kgf max.
61202.W0405	40	40	M 8	10	120
61202.W0406	40	45	M 8	12	110
61202.W0504	50	40	M10	10	220
61202.W0505	50	45	M10	11	210
61202.W0506	50	50	M10	12	200
61202.W0507	50	55	M10	13	200
61202.W1001	100	60	M16	15	1100
61202.W1002	100	75	M16	17	1000
61202.W1200	120	50	M16	9	1500
61202.W1201	120	75	M16	13	1200
61202.W1202	120	100	M16	16	1000
61202.W1300	130	40	M16	6	1900
61202.W1301	130	50	M16	9	1600
61202.W1302	130	75	M16	13	1450
61202.W1303	130	100	M16	16	1200
61202.W1500	150	40	M20	9	1800
61202.W1501	150	60	M20	14	2200
61202.W1502	150	75	M20	16	2000
61202.W1503	150	100	M20	16	1400
61202.W1504	150	120	M20	16	1300
61202.W1505	150	140	M20	16	1200
61202.W0500	50	20	M10	4	250
61202.W0501	50	25	M10	5.5	250
61202.W0502	50	30	M10	8	250
61202.W0503	50	35	M10	9	230
61202.W0752	75	45	M12	10	500
61202.W0602	60	45	M10	10	300
61202.W0802	80	50	M14	10	750
61202.W0702	70	70	M10	13	300
61202.W0753	75	55	M12	13	450
61202.W0803	80	70	M14	15	550
61202.W0950	95	40	M16	8	1200
61202.W0951	95	55	M16	11	1000
61202.W0952	95	60	M16	12	800
61202.W0953	95	75	M16	13	700
61202.W0603	60	60	M10	12	250
61202.W0700	70	35	M10	7	450
61202.W0750	75	25	M12	5	650
61202.W0600	60	25	M10	5	400
61202.W0601	60	35	M10	7	350
61202.W0800	80	30	M14	5.5	900
61202.W0801	80	40	M14	9	600
61202.W0751	75	40	M12	9	500
61202.W1000	100	40	M16	8	1200
61202.W0701	70	50	M10	10	350

Anti-vibration Cylinders Waisted
male feet

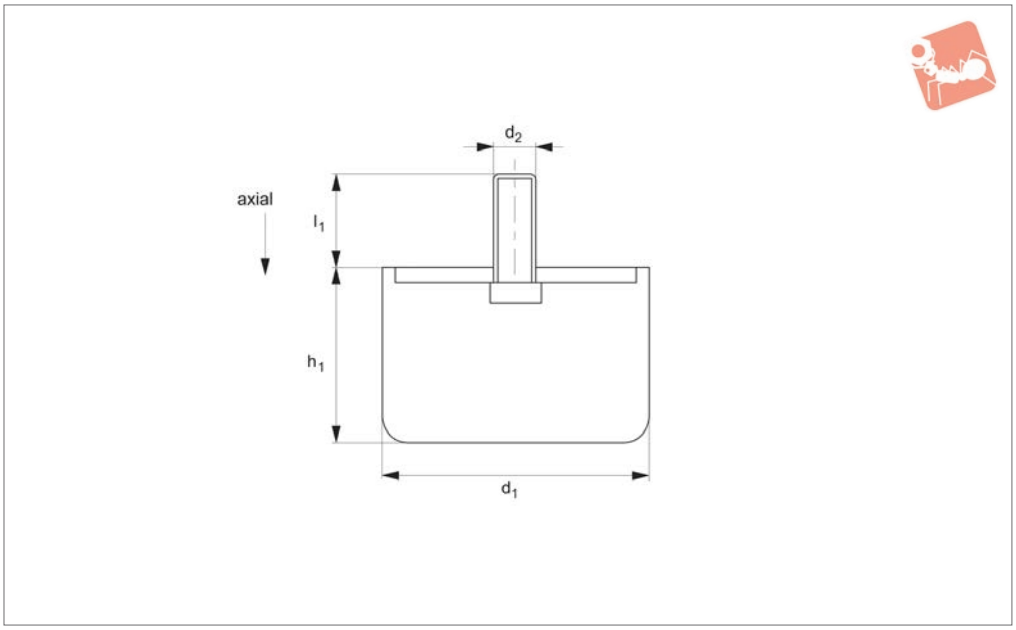
61206



Material
Rubber on silver zinc plated steel (rubber hardness - 55 Shore A).

Tips
These cylinders are used to reduce vibration by allowing some movement (in axial and radial as shown in drawing).
Typically used in machinery, compressors, air conditioning units, light engineering equipment etc.

Order No.	d_1	h_1	d_2	d_3	l_1	Compression max.	Axial load kgf max.
61206.W0200	20	20	M 6	12	18	2.5	15
61206.W0300	30	25	M 8	24	20	4	40
61206.W0400	40	28	M10	22	25	5	60
61206.W0600	60	36	M10	37	30	5	90
61206.W0601	60	43	M10	35	30	4	70
61206.W0602	60	60	M10	51	30	6	150
61206.W0700	70	56	M12	50	35	6	220
61206.W0800	80	65	M12	70	35	8	400
61206.W0900	90	50	M12	80	45	4	800
61206.W0950	95	76	M16	80	45	9.5	400
61206.W1080	108	85	M16	95	45	10	800



61210

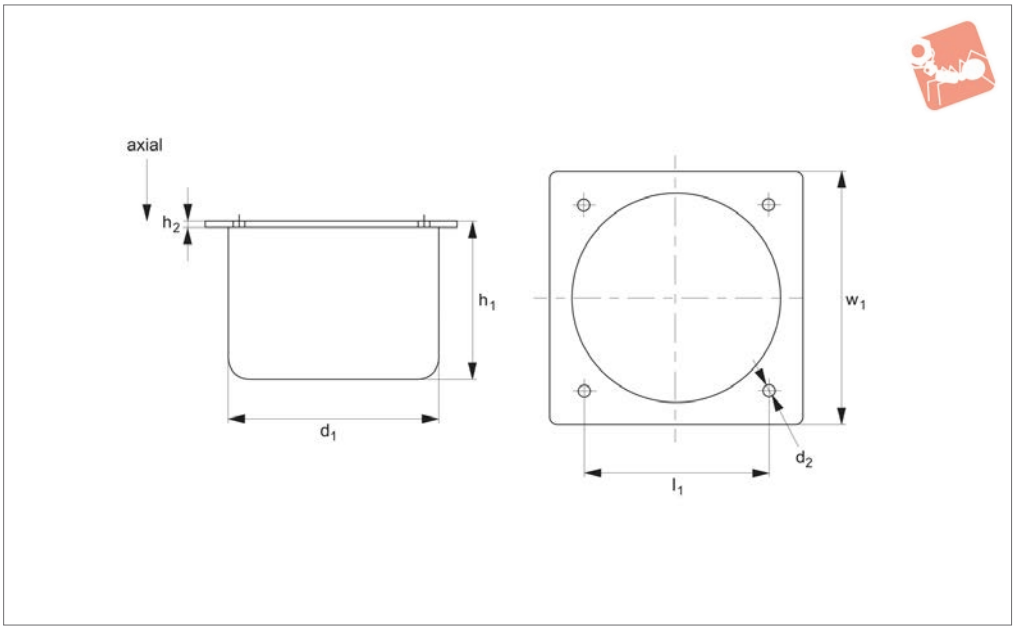
Material
Rubber on silver zinc plated steel (rubber hardness - 55 Shore A).

Tips
These anti-vibration bumpers are used to reduce vibration and shock. Their cylindrical shape ensures that when used in a row, the buffers spread the loads over a number of buffers - reducing the chances of possible overloading.

Order No.	d_1	h_1	d_2	l_1	Compression max.	Axial load kgf max.
61210.W0040	40	32	M 8	30	14	850
61210.W0050	50	40	M10	25	17	1270
61210.W0063	63	50	M10	25	20	1950
61210.W0080	80	63	M12	24	25	3250
61210.W1000	100	80	M12	27	30	4900
61210.W1250	125	100	M16	45	40	7800
61210.W1600	160	125	M16	45	52	12300
61210.W2000	200	160	M20	49	65	19100
61210.W2500	250	200	M20	49	80	30500

Anti-vibration Bumpers
flanged

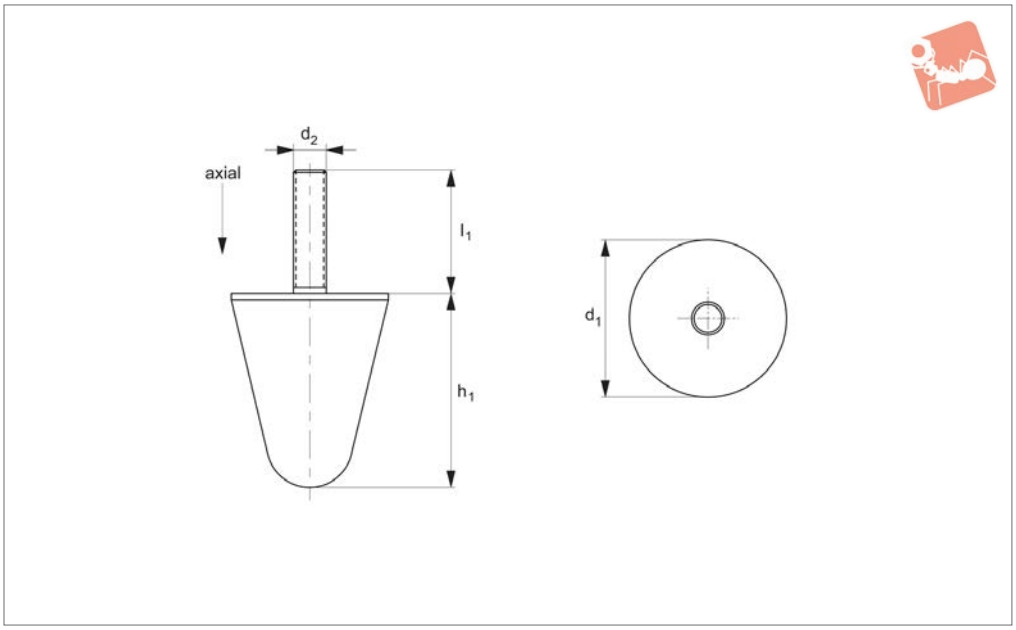
61250



Material
Rubber on silver zinc plated steel (rubber hardness - 55 Shore A).

Tips
These anti-vibration bumpers are used to reduce vibration and shock. Their cylindrical shape ensures that, when used in a row, the buffers spread loads over a number of buffers - reducing the chances of possible overloading.

Order No.	d_1	h_1	d_2	l_1	w_1	h_2	Axial load kgf max.	Momentum kg·m/s	Deflection m/m max.
61250.W0400	40	32	5.5	40	50	3	850	5	14
61250.W0500	50	40	6.5	50	63	4	1270	10	17
61250.W0630	63	50	6.5	63	80	6	1950	20	20
61250.W0800	80	63	9.0	80	100	6	3250	40	25
61250.W1000	100	80	9.0	100	125	8	4900	80	30
61250.W1250	125	100	11.0	125	160	8	7800	160	40
61250.W1600	160	125	11.0	160	200	10	15000	320	50
61250.W2000	200	160	13.0	200	250	10	19100	630	65
61250.W2500	250	200	13.0	250	315	12	30500	1250	80



61240

Material
Rubber on silver zinc plated steel (rubber hardness - 65 Shore A).

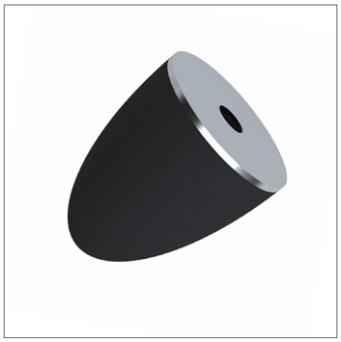
Tips
These anti-vibration cones or bumpers are used to reduce vibration and shock. Their conical shape ensures that, when used in a row, the buffers spread loads over a number of cones - reducing the chances of possible overloading.

Important Notes
The working load should not exceed 65% of the maximum load.

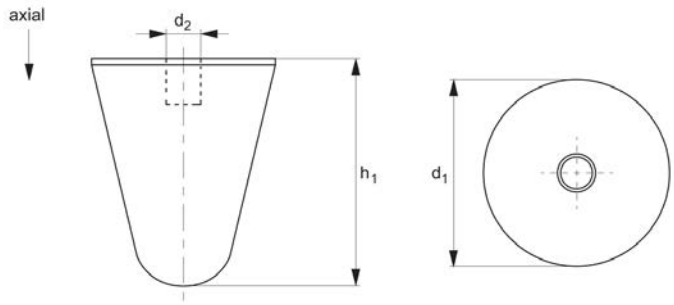
Order No.	d_1	h_1	d_2	l_1	Axial load kgf max.
61240.W0200	20	20	M 6	18	70
61240.W0250	25	20	M 8	20	100
61240.W0300	30	30	M 6	17	150
61240.W0301	30	30	M 8	20	150
61240.W0400	40	30	M 8	23	240
61240.W0401	40	50	M 8	23	200
61240.W0500	50	48	M10	25	380
61240.W0501	50	58	M 8	20	400
61240.W0502	50	64	M 8	35	370
61240.W0630	63	60	M12	37	440
61240.W0750	75	90	M12	37	520
61240.W0900	90	74	M16	45	1100
61240.W0950	95	82	M16	45	1100

Anti-vibration Cones female

female



61242

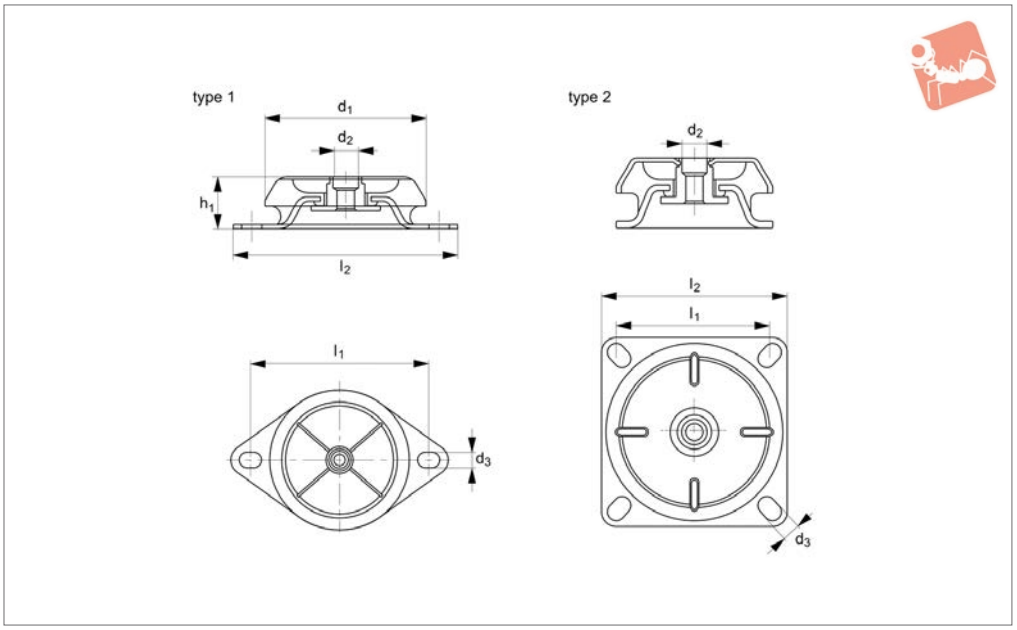


Material
Rubber on silver zinc plated steel (rubber hardness - 65 Shore A).

Tips
These anti-vibration cones or bumpers are used to reduce vibration and shock. Their conical shape ensures that when used in a row, the buffers spread loads over a number of cones - reducing the chances of possible overloading.

Important Notes
The working load should not exceed 65% of the maximum load.

Order No.	d_1	h_1	d_2	Axial load kgf max.
61242.W0200	20	20	M 6	70
61242.W0250	25	20	M 8	100
61242.W0300	30	30	M 6	150
61242.W0500	50	48	M10	380
61242.W0700	70	60	M12	550
61242.W0900	90	74	M16	1100
61242.W0950	95	82	M16	1100



61280

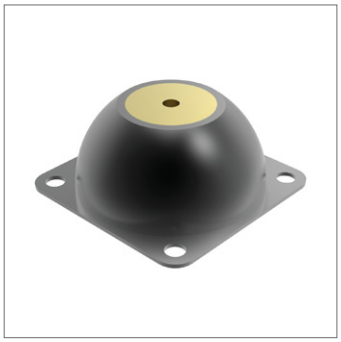
Material
Rubber on silver zinc plated steel (rubber hardness - 60 Shore A).

Technical Notes
Provides an elastic support mechanism for equipment isolation. Used in generator sets, motors, pumps and most other machine parts.
Please note for marine applications or very demanding use we recommend the mounts with ‚fail-safe' features part numbers P2100, 61292 and 61294.

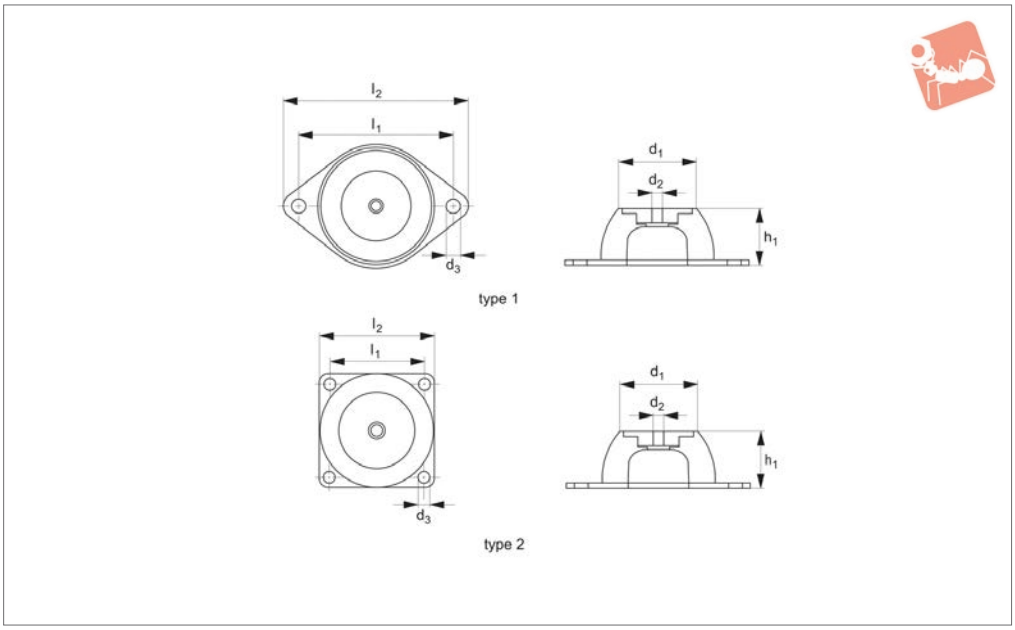
Tips
These are a very popular anti-vibration mount for light to heavy duty applications. Take the total weight of the load to be supported, divide it by the number of mounts to be used and select an appropriate mount from the above table. Type 2 is ‚fail-safe'.

Order No.	Type	d_1	d_2	d_3	h_1	l_1	l_2	Axial load kgf max.	Shore
61280.W0504	Type 1	50	M 8	6.5	25	61-70	85	20	40
61280.W0505	Type 1	50	M 8	6.5	25	61-70	85	40	50
61280.W0506	Type 1	50	M 8	6.5	25	61-70	85	60	60
61280.W0604	Type 1	64	M10	9.0	35	76-91	110	30	40
61280.W0605	Type 1	64	M10	9.0	35	76-91	110	45	50
61280.W0606	Type 1	64	M10	9.0	35	76-91	110	65	60

Anti-vibration Dome Mounts



61345

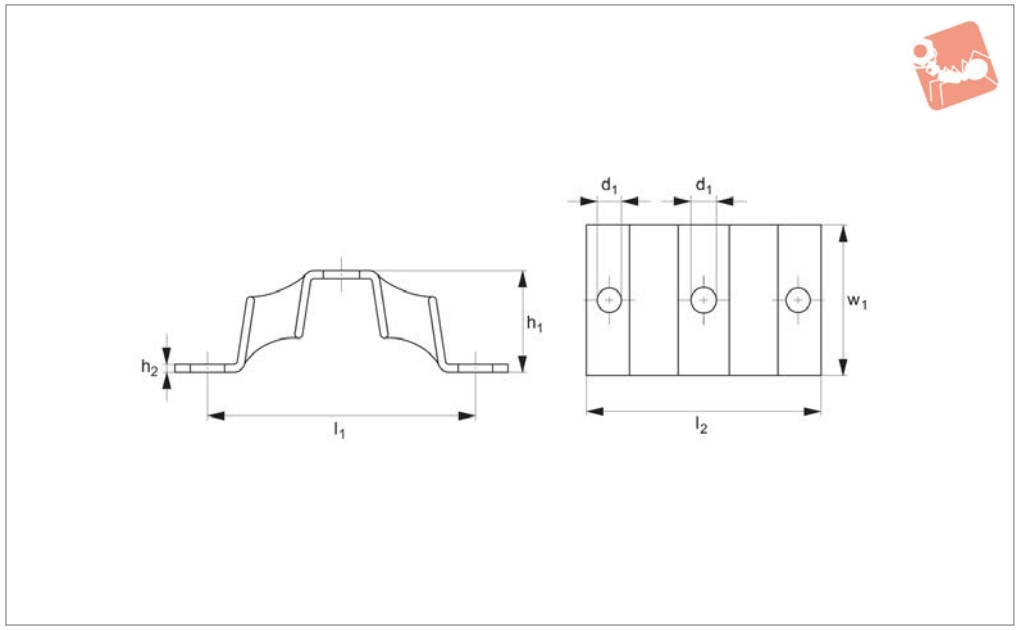


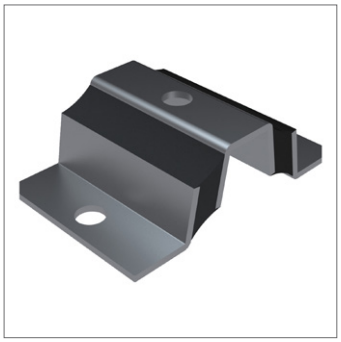
Material
Rubber on yellow zinc plated steel (rubber hardness 45-65 Shore A).

Technical Notes
The design of the mount makes them ideal for machines that move in three directions. Oil anti-drip hoods can be supplied on request.

Tips
These mounts are found on compressors, air conditioners, ventilators and vibrating tables.

Order No.	Type	d_1	d_2	d_3	h_1	h_2	l_1	l_2	Load kgf max.	Weight g
61345.W0450	Type 1	33.0	M 8	8.0	25	2.0	66	85	20	70
61345.W0451	Type 1	33.0	M 8	8.0	25	2.0	66	85	50	70
61345.W0650	Type 1	52.0	M10	10.5	35	2.5	92	114	40	170
61345.W0651	Type 1	66	M10	10.5	35	2.5	92	114	75	170
61345.W0850	Type 1	52.0	M10	11.5	40	3.0	110	136	75	303
61345.W0851	Type 1	52.0	M10	11.5	40	3.0	110	136	120	303
61345.W0900	Type 1	57.5	M10	12.5	45	3.0	125	150	130	430
61345.W0901	Type 1	57.5	M10	12.5	45	3.0	125	150	220	430
61345.W1300	Type 2	78.0	M12	14.5	63	5.0	120	150	280	1080
61345.W1301	Type 2	78.0	M12	14.5	63	5.0	120	150	500	1080
61345.W1700	Type 2	100	M16	14.5	84	4.0	160	200	380	2390
61345.W1701	Type 2	100	M16	14.5	84	4.0	160	200	750	2390
61345.W2500	Type 2	187	M24	18.5	158	6.0	250	310	1400	10400
61345.W2501	Type 2	187	M24	18.5	158	6.0	250	310	2500	10400





61510

Material
Rubber on silver zinc plated steel (rubber hardness 45-65 Shore A).

Technical Notes
Has a three point anchorage, two to a base and one to the piece of equipment. Very good as a shock/isolating mount for oscillations higher than 15Hz.

Tips
Can be used to hang compressers, speakers and air conditioning units from the wall.

Order No.	Shore hardness	d_1	Compression max.	h_1	h_2	l_1	w_1	l_2	Axial load kgf max.	Radial load kgf max.
61510.W0045	45	12	2.5	35	3	90	73	112	60	60
61510.W0055	55	12	3.5	35	3	90	73	112	65	65
61510.W0065	65	12	6.0	35	3	90	73	112	70	70

General Anti-vibration Machine Mounts

Installation methods for machine mounts

Recommendations for machine mounts

Machine mounts should be installed between two parallel and perfectly flat surfaces. Mounts operating tilted or twisted do not work properly. This may be due to incorrect alignment, tolerances in the building of the structure or over-tightened torque during the installation of the anti-vibration mounts.

incorrect ✘ correct ✓

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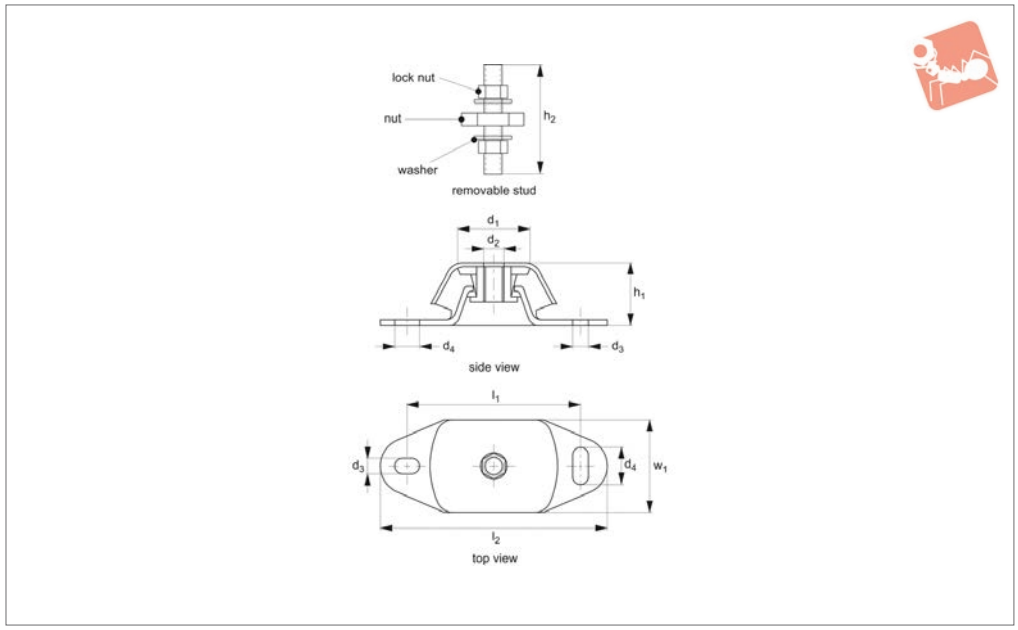


61290

Material
Rubber on silver zinc plated steel (rubber hardness - 45-75 Shore A).

Technical Notes
These mounts control vibration in three axes.
Primarily used for marine applications, engines, compressors, pumps, generators etc.
Fitted with a mechanical fail-safe stop. They are very robust to cope with high start/stop forces and vibrations from marine and other engines.

For stainless steel versions please see part nos. 61292 and 61294. Stud and nuts on request.

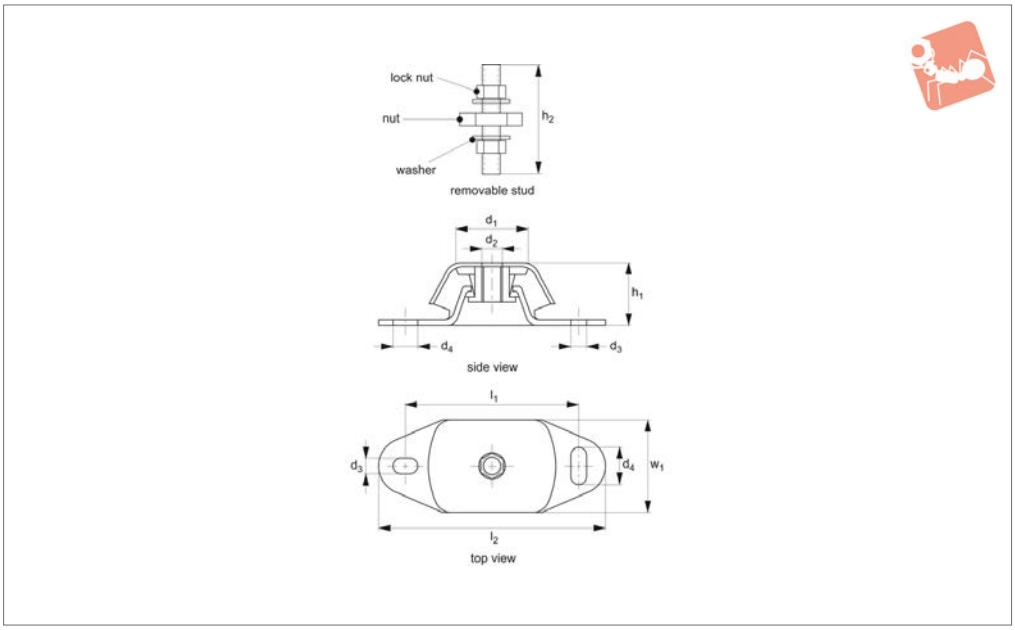
Tips
These are a very popular anti-vibration mount for light to heavy duty applications. Take the total weight of the load to be supported, divide it by the number of mounts to be used and select an appropriate mount from the table.

Order No.	d_1	d_2	l_1	l_2	w_1	d_3	d_4	h_1	h_2	Load N max.
61290.W0010	60	M12	100	120	60	11	14	40	95	50
61290.W0011	60	M12	100	120	60	11	14	40	95	65
61290.W0012	60	M12	100	120	60	11	14	40	95	100
61290.W0014	75	M16	140	183	75	13	20	50	110	150
61290.W0015	75	M16	140	183	75	13	20	50	110	200
61290.W0016	75	M16	140	183	75	13	20	50	110	300
61290.W0017	75	M16	140	183	75	13	20	50	110	550
61290.W0020	80	M20	182	230	112	18	25	70	110	750

Anti-vibration Fail-Safe Mounts

A2 stainless

61292



Material

Stainless steel (AISI 304), (rubber hardness 45-65 Shore A).

Technical Notes

These mounts control vibration in three axes.
Primarily used for marine applications, engines, compressors, pumps, generators etc.

Fitted with a mechanical fail-safe stop. They are very robust to cope with high start/stop forces and vibrations from marine and other engines.

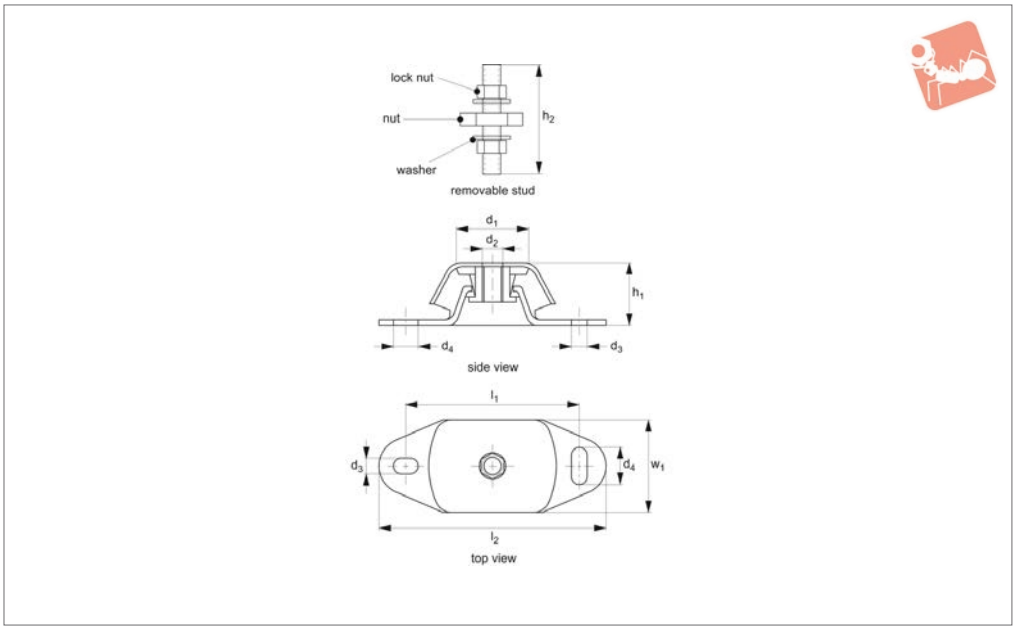
The stainless steel versions are widely used for marine engine mounts or outdoor applications. For offshore or highly corrosive environments use part no. 61294.

Stud and nuts on request.

Tips

These are a very popular anti-vibration mount for light to heavy duty applications. Take the total weight of the load to be supported, divide it by the number of mounts to be used and select an appropriate mount from the table.

Order No.	d_1	d_2	l_1	l_2	w_1	d_3	d_4	h_1	h_2	Load N max.
61292.W0602	60	M12	100	120	60	11	14	40	95	100
61292.W0752	75	M16	140	183	75	13	20	50	110	300
61292.W0600	60	M12	100	120	60	11	14	40	95	50
61292.W0601	60	M12	100	120	60	11	14	40	95	65
61292.W0750	75	M16	140	183	75	13	20	50	110	150
61292.W0751	75	M16	140	183	75	13	20	50	110	200



61294

Material
Stainless steel (A4, 316). Rubber hardness 65-75 Shore A.

Technical Notes
These mounts control vibration in three axes.
Primarily used for marine applications, engines, compressors, pumps, generators etc.

Fitted with a mechanical fail-safe stop. They are very robust to cope with high start/stop forces and vibrations from marine and other engines.

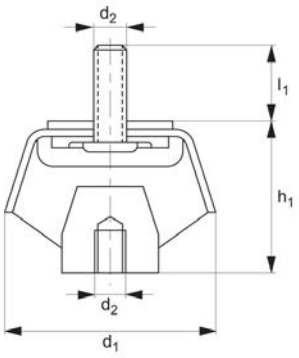
These stainless steel versions are widely used for marine engine mounts or applications that are either offshore or have a very high corrosion level. Stud and nuts on request.

Tips
These are a very popular anti-vibration mount for light to heavy duty applications. Take the total weight of the load to be supported, divide it by the number of mounts to be used and select an appropriate mount from the table.

Order No.	d_1	d_2	l_1	l_2	w_1	d_3	d_4	h_1	h_2	Load N max.
61294.W0600	60	M12	100	120	60	11	14	40	95	100
61294.W0750	75	M16	140	183	75	13	20	50	110	550

Anti-vibration Mounts
engine

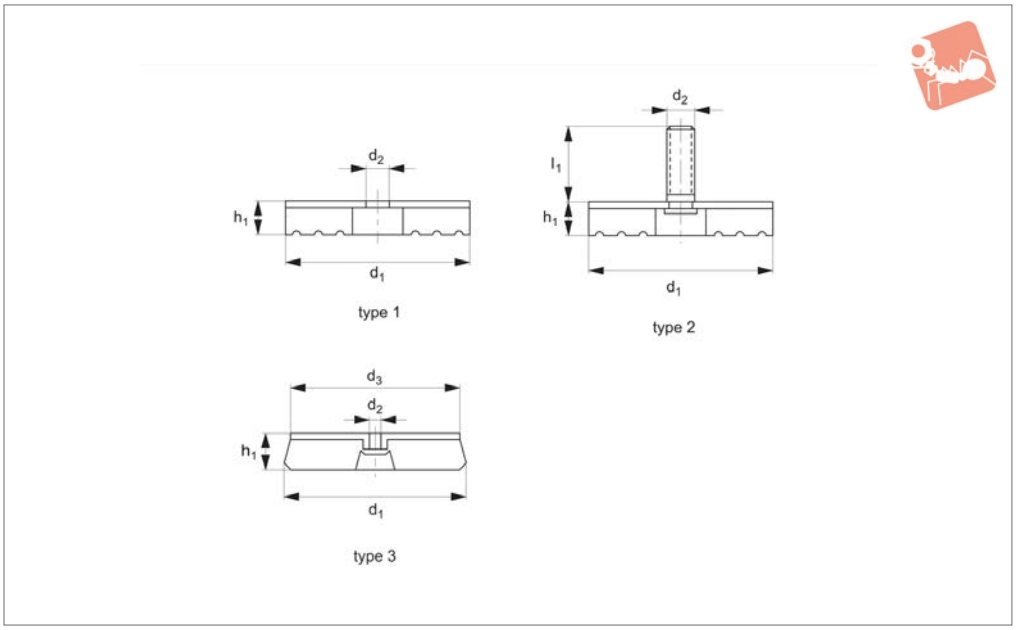
61340



Material
Rubber on silver zinc plated steel.

Technical Notes
With a bell-like base this unit is suitable for supporting most applications, such as engine suspensions.
It can also be used to carry horizontal loads.

Order No.	Shore hardness	d_1	l_1	d_2	h_1	Load kgf max.
61340.W0050	50 A	55	23	M10	40	30
61340.W0060	60 A	55	23	M10	40	60
61340.W0070	70 A	55	23	M10	40	120

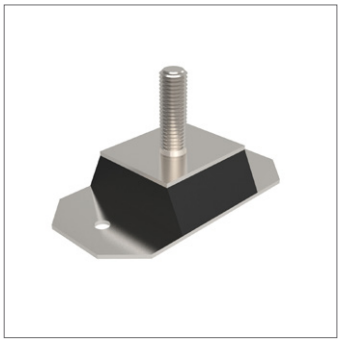


61350

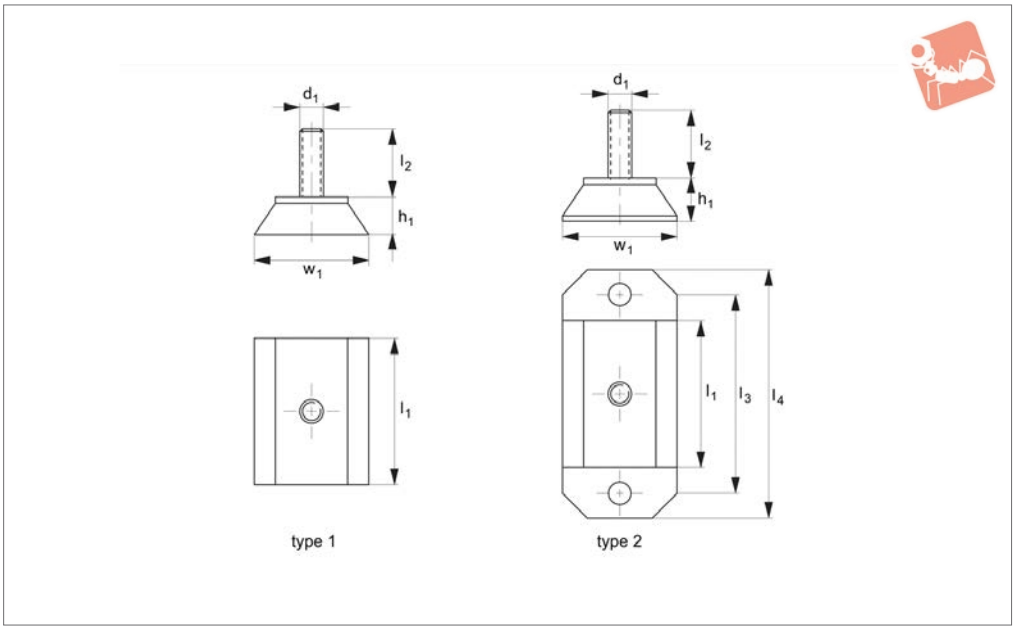
Material
Rubber on zinc plated steel.

Order No.	Type	d_1	l_1	d_2	d_3	h_1	Compression max.	Static load kgf max.
61350.W0105	Type 1	50	-	10.5	-	15	2.2	180
61350.W0108	Type 1	85	-	10.5	-	15	1.6	450
61350.W0205	Type 2	55	25	M12	-	16	2.2	180
61350.W0208	Type 2	85	25	M12	-	16	1.6	450
61350.W0212	Type 2	125	25	M12	-	16	2.2	800
61350.W0305	Type 3	50	-	6.0	45	18	2	50
61350.W0309	Type 3	91	-	6.5	86	18	2	350
61350.W0313	Type 3	138	-	10.5	130	25	2.6	900

Anti-vibration Mounts
rectangular



61460

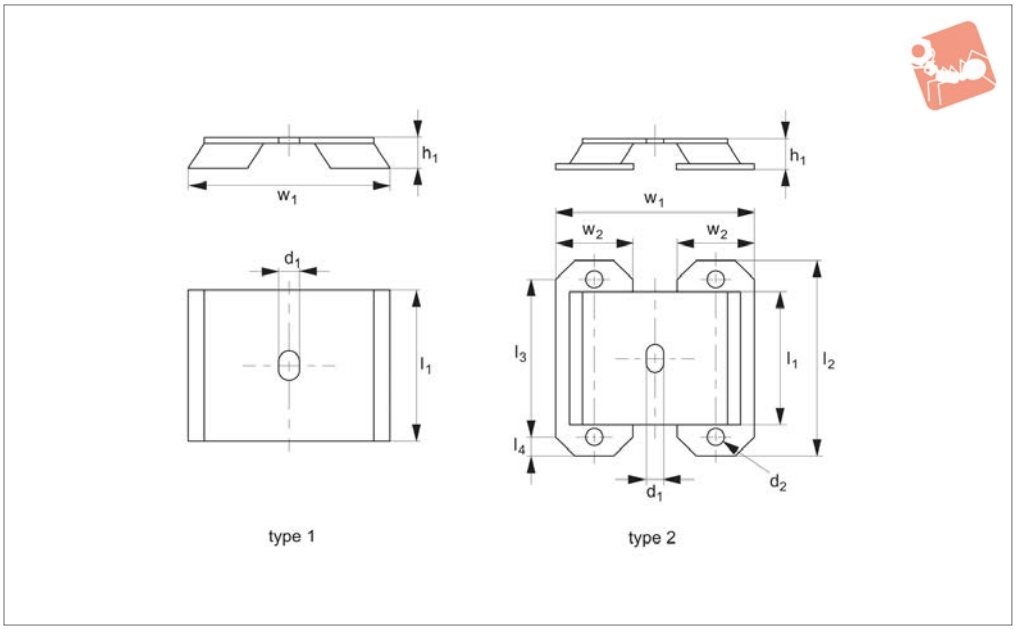


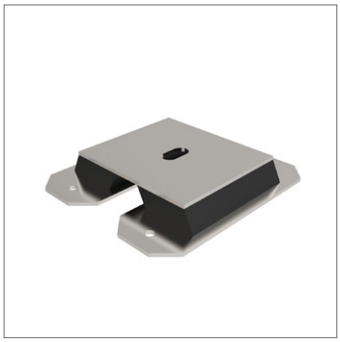
Material
Rubber on silver zinc plated steel (rubber hardness - 55 Shore A).

Technical Notes
Used to support machine tools and packaging machinery.

Provides vibration isolation for frequencies higher than 20Hz.

Order No.	Type	d_1	l_1	h_1	l_2	l_3	l_4	w_1	Axial load kgf max.	Compression max.
61460.W0105	Type 1	M12	50	20	37	-	-	60	250	2
61460.W0110	Type 1	M12	100	20	37	-	-	60	500	2
61460.W0115	Type 1	M12	150	20	37	-	-	60	750	2
61460.W0120	Type 1	M12	200	20	37	-	-	60	1000	2
61460.W0205	Type 2	M12	50	23	37	85	115	60	250	2
61460.W0210	Type 2	M12	100	23	37	135	165	60	500	2
61460.W0215	Type 2	M12	150	23	37	185	215	60	750	2
61460.W0220	Type 2	M12	200	23	37	235	265	60	1000	2





61470

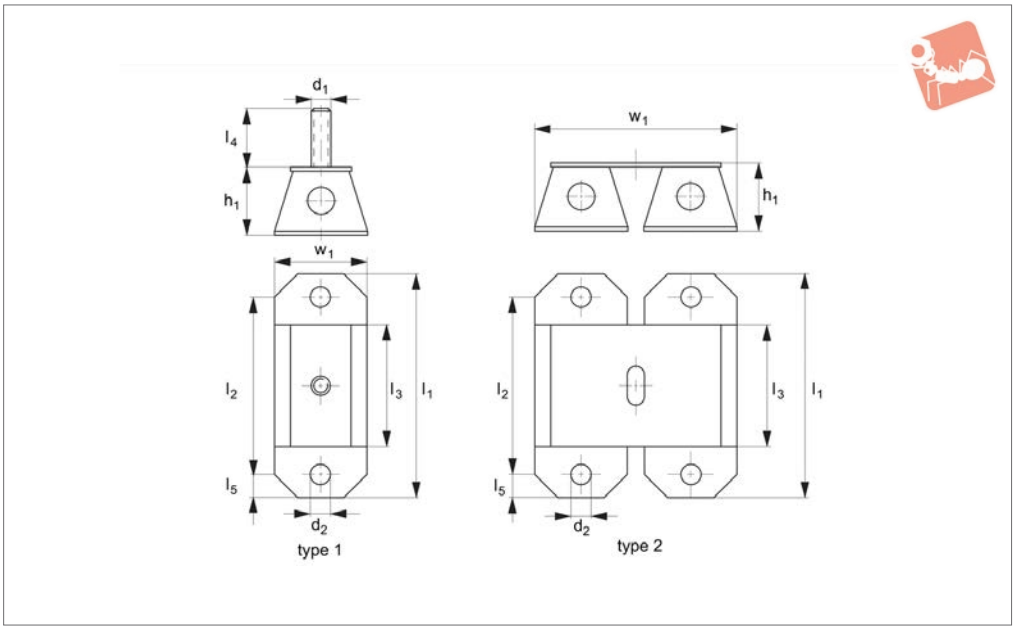
Material
Rubber on silver zinc plated steel (rubber hardness - 55 Shore A).

Technical Notes
Used where transverse loads are present.

Order No.	Type	d_1	l_1	h_1	l_2	l_3	l_4	w_1	w_2	Compression max.	Static load kgf max.
61470.W0100	Type 1	13	100	20	-	-	-	130	-	2	850
61470.W0150	Type 2	13	150	23	215	185	15	145	60	2	1300
61470.W0200	Type 2	13	200	23	265	235	15	145	60	2	1700

Anti-vibration Mounts
with through holes

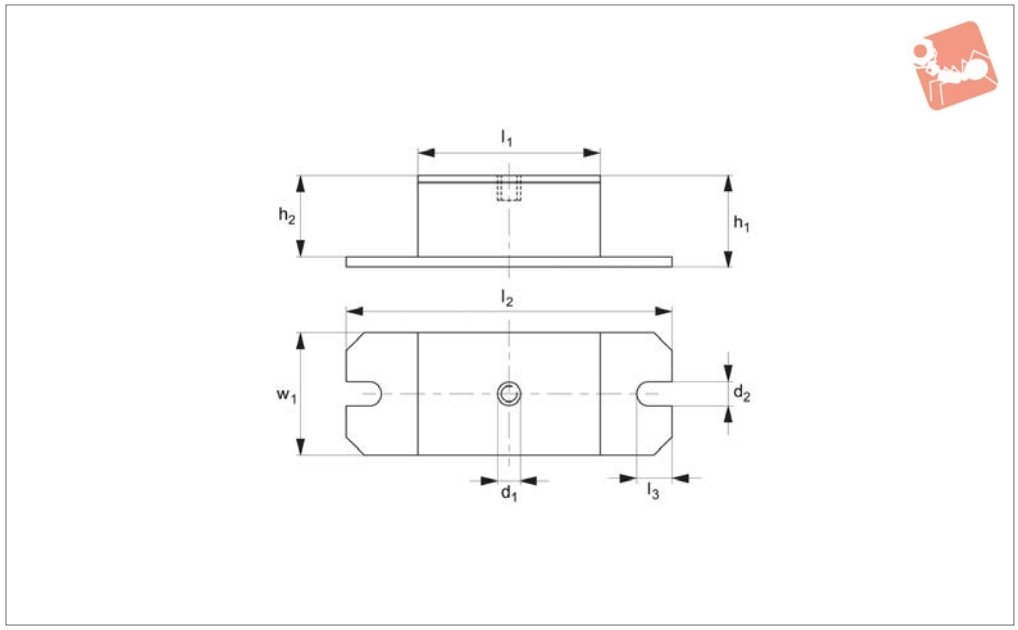
61480

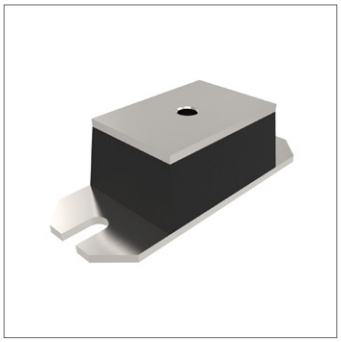


Material
Rubber on silver zinc plated steel (rubber hardness - 55 Shore A).

Technical Notes
Type 1: M12 thread supplied as separate item to be screwed in if required.
Type 2: A twin version of type 1 and so therefore take heavier loads.
The central hole in the rubber pad increases the flexibility of the unit - improving anti-vibration properties.
Used where good deflection properties are needed and for isolating of frequencies higher than 10Hz.

Order No.	Type	d_1	l_1	d_2	h_1	l_2	l_3	l_4	l_5	w_1	Axial load kgf max.	Compression max.
61480.W0001	Type 1	M12	115	13	45	85	50	37	15	60	120	8
61480.W0002	Type 1	M12	165	13	45	135	100	37	15	60	250	8
61480.W0003	Type 1	M12	215	13	45	185	150	37	15	60	350	8
61480.W0004	Type 1	M12	265	13	45	235	200	37	15	60	500	8
61480.W0005	Type 2	-	165	13	45	135	100	-	15	130	500	8
61480.W0006	Type 2	-	215	13	45	185	150	-	15	130	700	8
61480.W0007	Type 2	-	265	13	45	235	200	-	15	130	1000	8





61500

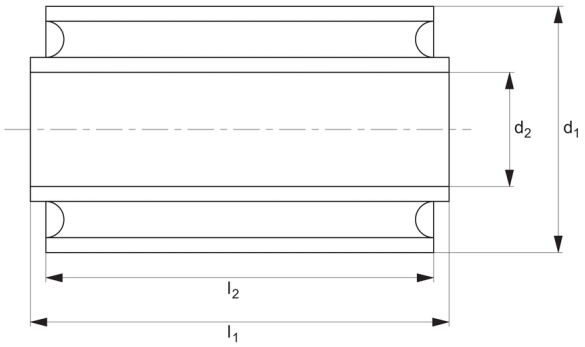
Material
Rubber on silver zincplated steel.

Tips
Particularly useful for fans, generators, motors etc.

Order No.	Shore hardness	d_1	l_1	d_2	h_1	h_2	l_2	l_3	w_1	Load kgf max.
61500.W0070	70 A	M12	100	13	50	45	180	25	70	1000
61500.W0055	55 A	M12	100	13	50	45	180	25	70	500
61500.W0080	80 A	M12	100	13	50	45	180	25	70	1200

Anti-vibration Bushes
metal-rubber

61700



Material
Rubber on steel.

Technical Notes
Useful to isolate vibration and reduce noise. The internal bush can move axially, radially, torsionally and pendular.

Tips
Install by only pushing on external ring when putting into place.

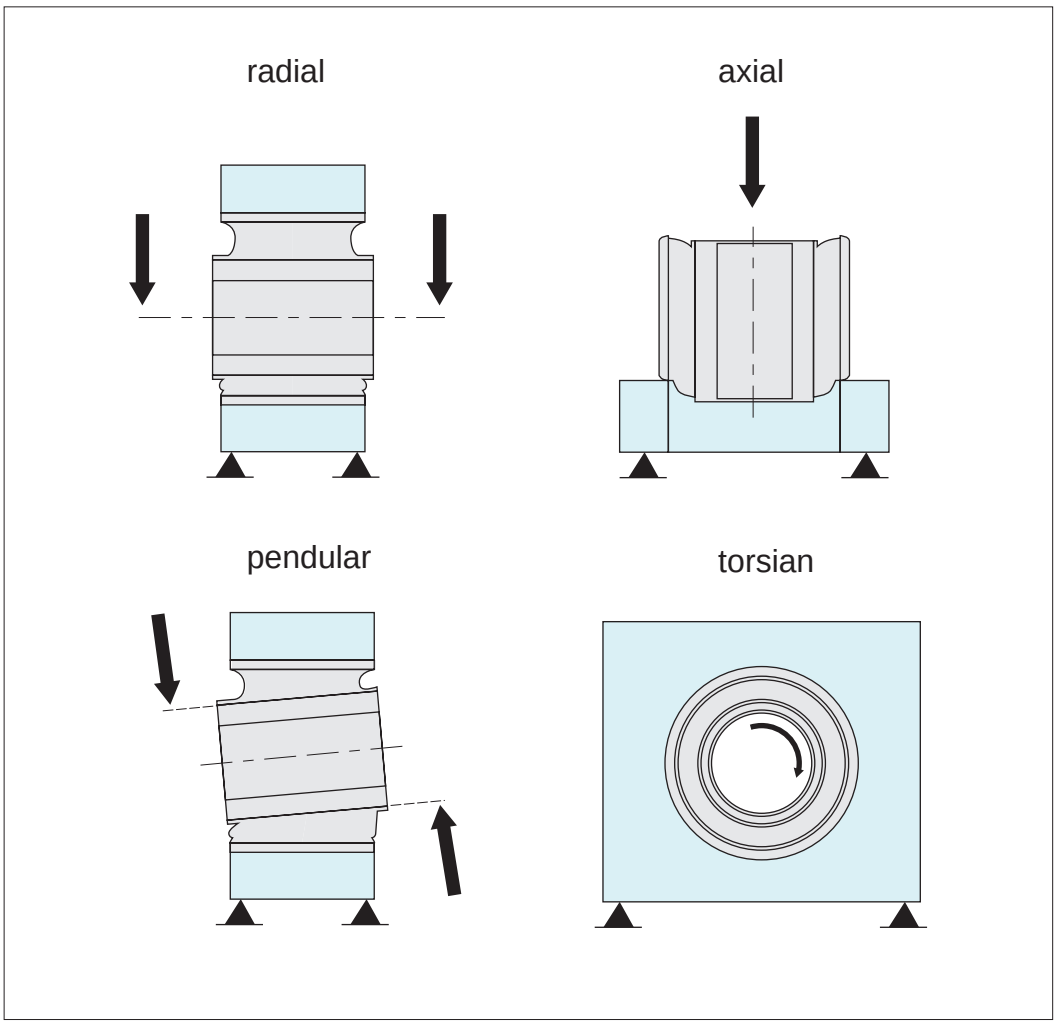
Order No.	d_1	d_2	l_1	l_2	Radial compression mm	Axial load kgf max.	Radial load kgf max.	Axial compression mm
61700.W0081	16	8	15	15	0.2	15	30	0.8
61700.W0091	20.5	9.5	15	13	0.2	15	35	1.0
61700.W0101	21	10	26	24	0.4	25	70	1.5
61700.W0102	27	10	20	20	0.2	25	80	1.0
61700.W0111	24	11	18	16	0.3	24	90	0.8
61700.W0121	26	12	24	20	0.5	27	70	1.7
61700.W0123	50	12	50	45	1.1	60	200	2.1
61700.W0124	54	12.8	44.5	40	1.0	50	180	2.0
61700.W0141	27	14	54	48	0.4	95	330	1.5
61700.W0142	30	14	28	25	0.3	40	120	2.0
61700.W0144	31	14	35	33	0.3	70	170	2.0
61700.W0145	30	14.5	42	38	0.2	48	150	1.8
61700.W0146	50	14.5	24	20	0.9	45	70	2.0
61700.W0161	44	16	32	28	0.7	47	88	1.6
61700.W0163	54	16	28	22	1.5	40	80	3.4
61700.W0181	35	18	40	40	0.3	80	190	2.0
61700.W0182	43.5	18	42	35	0.8	85	200	3.8
61700.W0201	40	20	46	40	0.4	80	250	1.2
61700.W0202	41	20	20.5	20.5	0.4	40	100	1.0
61700.W0221	40	22	45	40	0.5	115	850	2.2
61700.W0222	63	22	72	65	0.6	265	670	4.0
61700.W0241	42	24	55	50	0.5	150	550	1.8
61700.W0242	50	24	71	65	0.7	220	750	2.4
61700.W0251	45	25	50	50	0.5	150	550	1.8
61700.W0253	65	25	55	45	0.6	180	450	3.8
61700.W0254	83	25	100	90	2.0	130	400	5.0
61700.W0281	48	28	36	34	0.7	100	210	2.5
61700.W0283	65	28	70	65	1.7	280	600	4.8
61700.W0284	75	28	135	125	0.5	480	1600	2.3
61700.W0381	64	38	76	70	0.4	380	860	2.6
61700.W0401	75	40	70	57	0.6	350	600	2.8
61700.W0421	78	42	86	80	0.5	350	1100	2.4
61700.W0481	93	48	80	76	0.6	800	1500	5.3

Order No.	d_1	d_2	l_1	l_2	Radial compression mm	Axial load kgf max.	Radial load kgf max.	Axial compression mm
61700.W0501	90	50	100	86	0.5	800	1500	5.1
61700.W0581	85	58	142	90	0.5	350	1800	1.6
61700.W0601	110	60	182	170	0.6	800	3000	1.8
61700.W0701	120	70	115	110	1.0	800	3500	3.5
61700.W0801	140	80	180	170	0.5	1500	7500	2.5
61700.W0901	145	100	120	110	0.4	850	2700	2.2

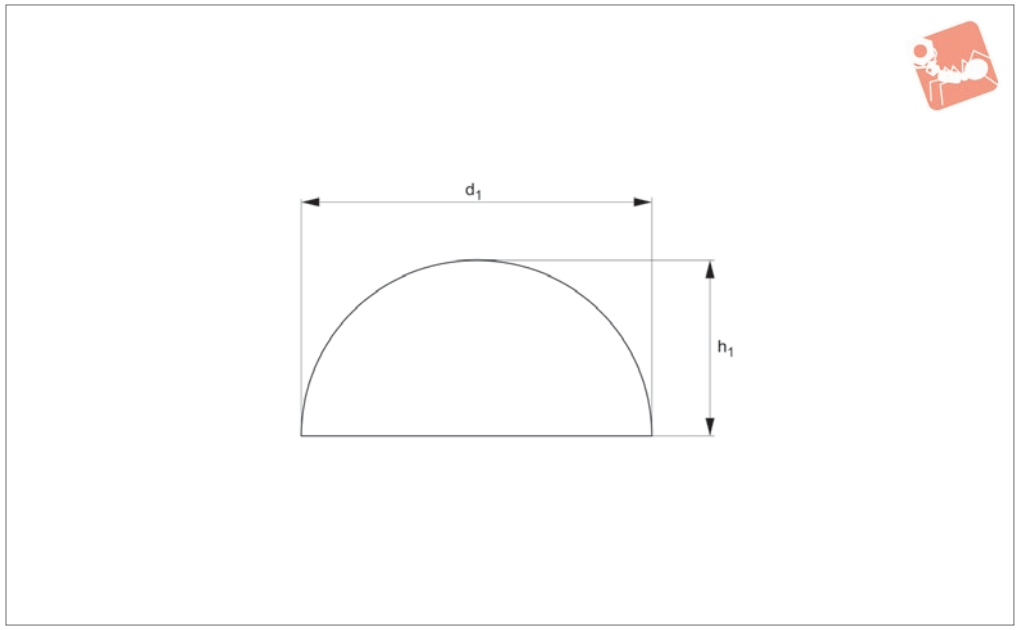
Anti-vibration Bushes

metal-rubber

Range of movement



Inside diameter (d_2)	Tolerances	Inside diameter (d_1)	Tolerances
From 8mm to 15mm	-0 / + 0,15	From 16mm to 30mm	-0 / + 0,10
From 16mm to 25mm	-0 / + 0,30	From 31mm to 70mm	-0 / + 0,15
From 26mm to 50mm	-0 / + 0,30	From 71mm to 100mm	-0 / + 0,10

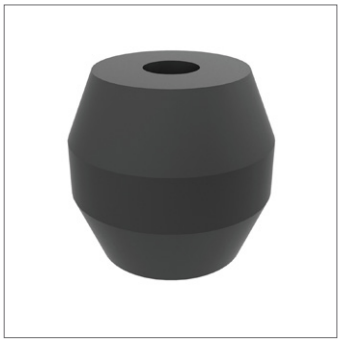


61820

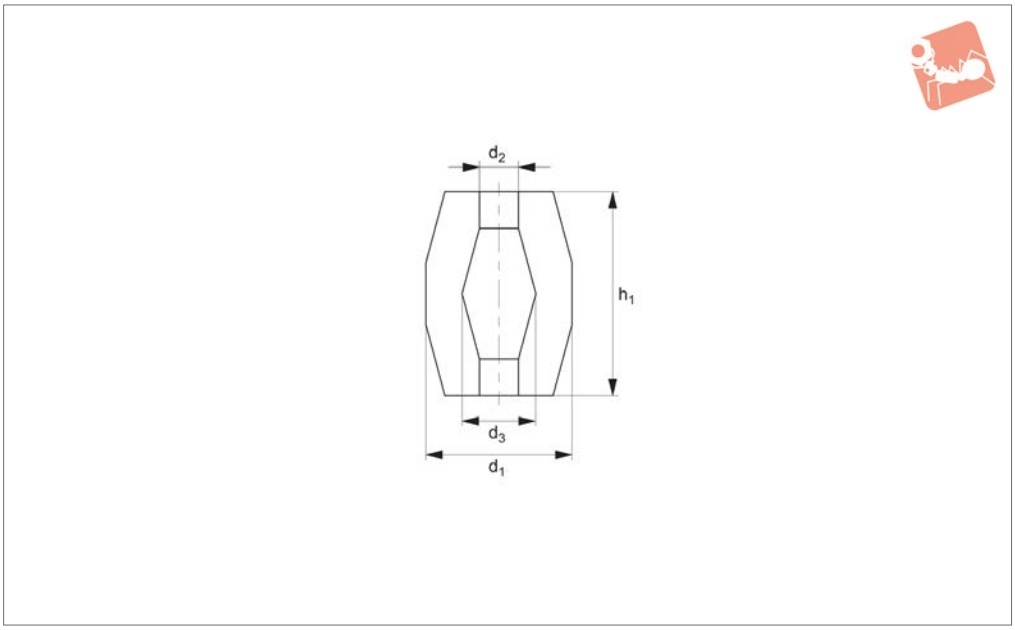
Material
Sorbothane.

Technical Notes
Sorbothane hemisphere mounts provide a quick, cost effective method of isolating bench equipment and small machinery. Simply place the hemisphere under the unit to be isolated with the curved surface up. Expect a 25-30% deflection when statically loaded.

Anti-vibration Bushes



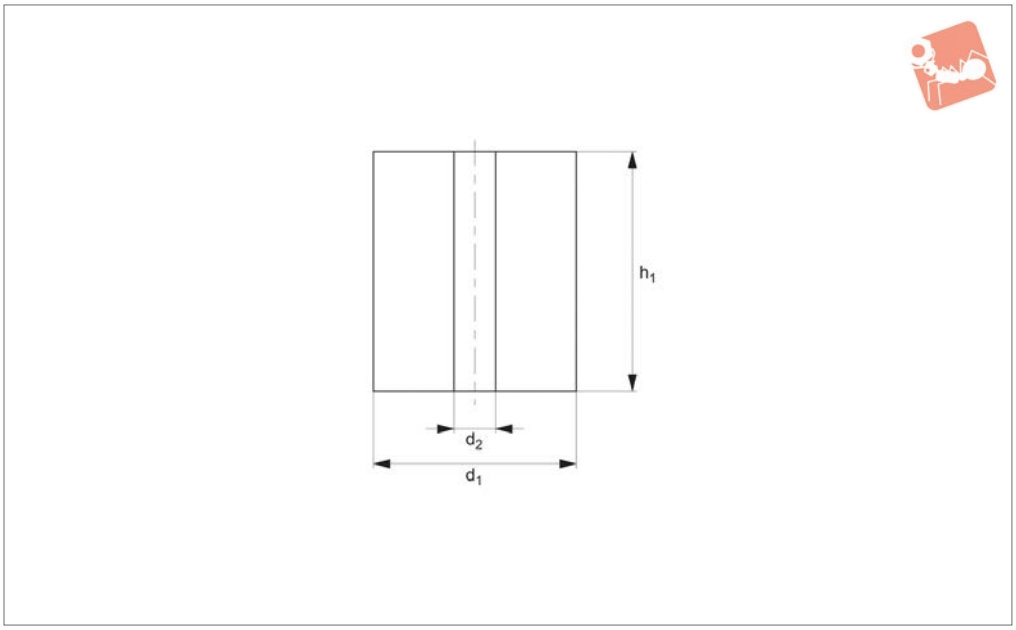
61830



Material
Rubber (hardness - 55 Shore A).

Technical Notes
Used in a wide range of vibrating machines.
Allows high deformation with excellent spring back characteristics.
Supports axial and radial loads but not designed for traction or tension loads. For radial loads please contact our Technical Department.

Order No.	d_1	h_1	d_2	d_3	Compression max.	Axial load kgf max.
61830.W0001	95	88	23	30	28	200
61830.W0002	100	110	20	30	36	500
61830.W0004	150	90	35	35	24	2000
61830.W0006	188	180	41	41	80	3500
61830.W0005	155	150	30	25	64	2500
61830.W0003	144	122	40	23	48	1000



61850

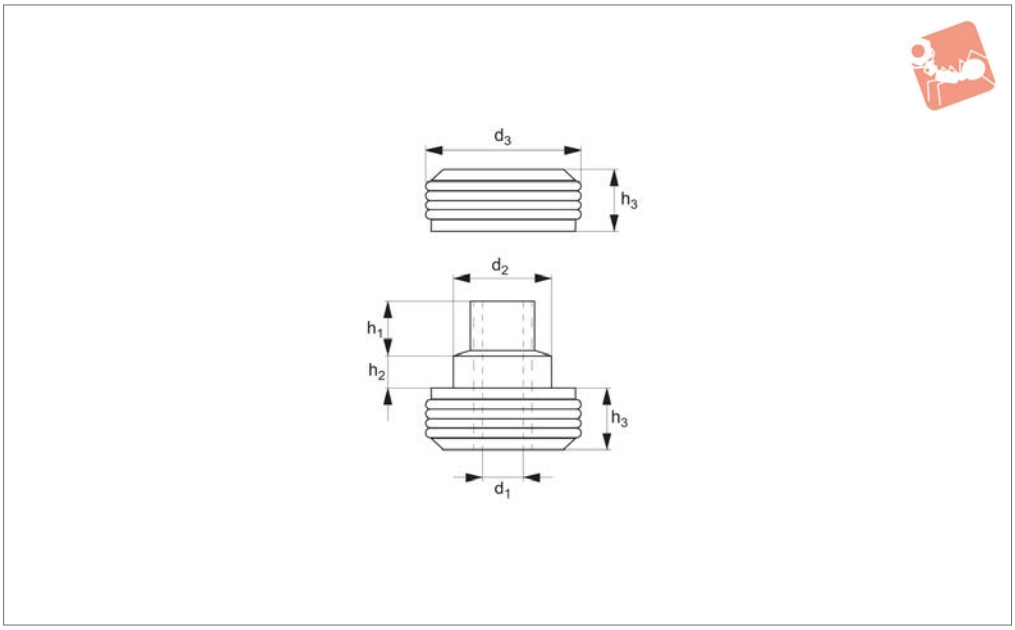
Material
Rubber (hardness - Shore 55 A).

Technical Notes
Used in a wide range of vibrating machines.
Allows high deformation with excellent spring back characteristics.
Supports axial and radial loads but not designed for traction or tension loads. For radial loads please contact our technical team.

Order No.	d_1	h_1	d_2
61850.W0020	20	15	6
61850.W0030	30	20	8
61850.W0031	30	22	8
61850.W0035	35	30	12
61850.W0036	35	40	12
61850.W0040	40	30	10
61850.W0045	45	35	10
61850.W0046	45	45	10
61850.W0050	50	45	10
61850.W0060	60	40	12
61850.W0070	70	45	14
61850.W0080	80	50	16
61850.W0081	80	80	20
61850.W0093	93	120	20
61850.W0100	100	60	20
61850.W0102	100	147	20
61850.W0110	110	70	22
61850.W0130	130	60	25
61850.W0148	148	190	50
61850.W0160	160	100	30
61850.W0170	170	110	31
61850.W0200	200	125	70
61850.W0250	250	300	60

Anti-vibration Bushes
rubber, two-piece

61855

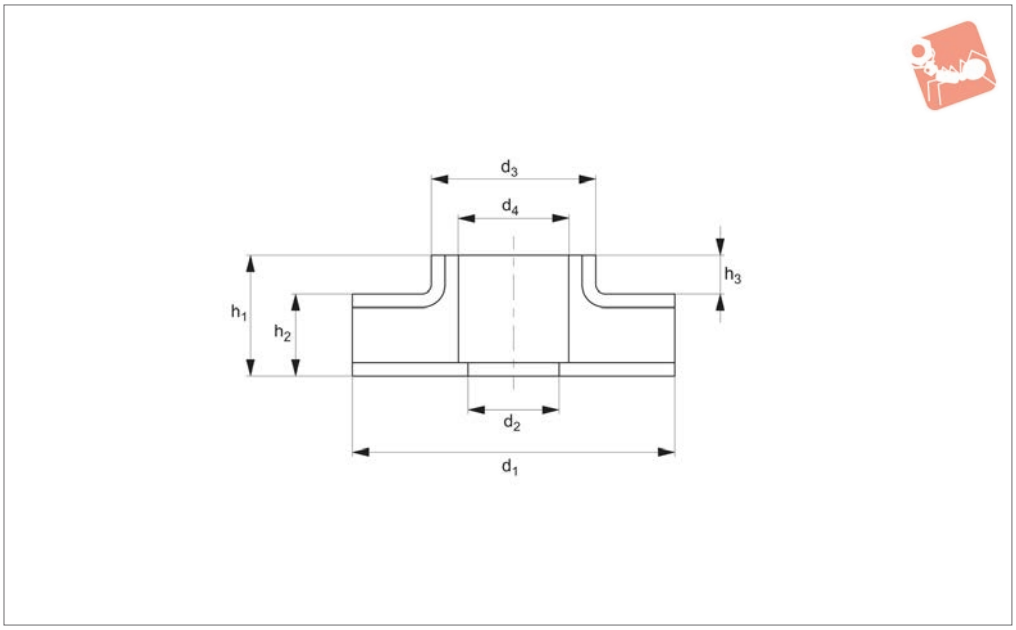


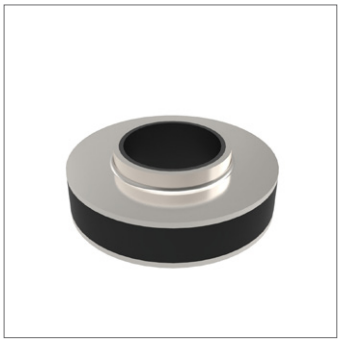
Material
Rubber on silver zinc plated steel

Technical Notes
This anti-vibration mount is ideal for applications of major dynamic loads where movement control is necessary, such as in the cabin of all types of mobile vehicles. It also offers optimal stability, as well as good attenuation of impacts and vibrations.

Important Notes
The double washer mounts are made of two parts of rubber, one of which bears an inside metal bushing which acts as a guide through the machine anchoring screw.

Order No.	d_1	h_1	d_2	d_3	h_2	h_3	Load kgf	Plate min.	Plate max.	Weight g
61855.W0500	13.5	18.5	31.5	49	11	20	80	12.5	14	153
61855.W0501	13.5	18.5	31.5	49	11	20	130	12.5	14	153
61855.W0650	17.0	24.0	39.5	64	15	23	120	19.0	22	350
61855.W0651	17.0	24	39.5	64	15	23	260	19.0	22	350
61855.W0900	23.0	31.0	58.0	88	17	25	260	25.0	29	675
61855.W0901	23.0	31.0	58.0	88	17	25	450	25.0	29	675





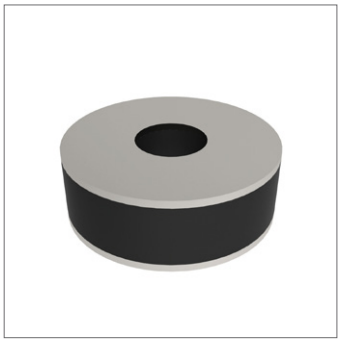
61640

Material
Rubber on silver zinc plated steel.

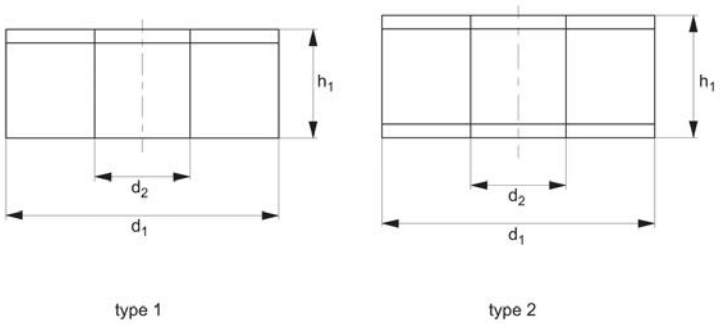
Technical Notes
Static load relates to the load the unit can withstand under compression.
Used where axial and radial loads are present. For frequencies higher than 20Hz.

Order No.	d_1	d_2	d_3	d_4	h_1	h_2	h_3	Static load N max.
61640.W0036	36	8.5	18	12	14	10	4	100
61640.W0032	36	16.5	20	16.5	11.5	8.5	3	120
61640.W0050	50	16.5	23	20	22	13.5	8.5	150
61640.W0051	50	28	34	28	18	10.5	7.5	100
61640.W0055	55	24	31	28	15	11.5	3.5	175
61640.W0060	60	20.5	27	24	22	13	9	240
61640.W0075	75	24.5	33	29.5	27	20	8	300

Anti-vibration Washers



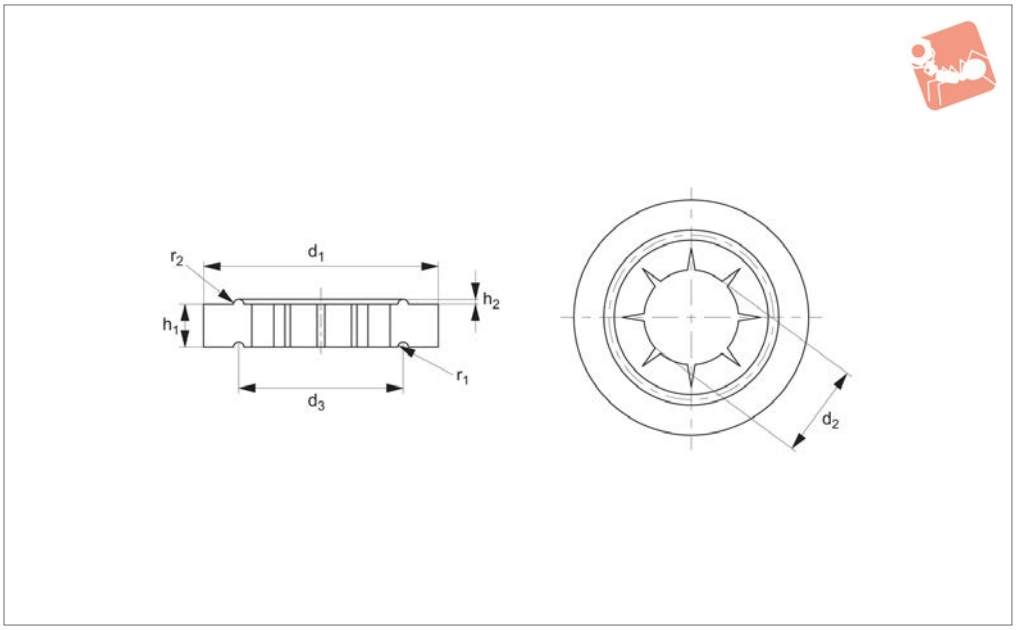
61650



Material
Rubber on silver zinc plated steel.

Technical Notes
Static load relates to the load the unit can withstand under compression. Used where axial and radial loads are present.
For frequencies higher than 20Hz.

Order No.	Type	d_1	d_2	h_1
61650.W0140	Type 1	40	12	20
61650.W0141	Type 1	40	14	15
61650.W0150	Type 1	50	16	20
61650.W0160	Type 1	60	22	30
61650.W0175	Type 1	75	25	25
61650.W0199	Type 1	100	32	60
61650.W0250	Type 2	50	15	30
61650.W0260	Type 2	60	20	30
61650.W0270	Type 2	70	20	30
61650.W0299	Type 2	100	41	35



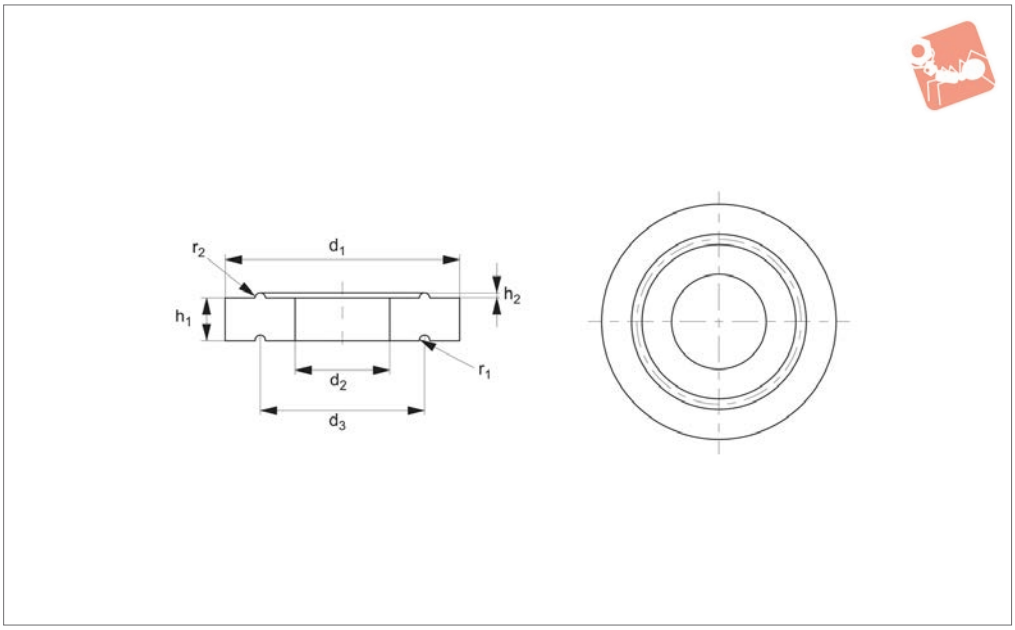
61730

Material
Rubber on silver zinc plated steel (rubber hardness - 65 Shore A).

Order No.	d_1	d_2	d_3	h_1	h_2	r_1	r_2	Compression max.	Axial load kgf max.
61730.W0001	162	66	114	30	2.5	4.5	2.5	5	2000
61730.W0002	170	95	125	23	2.5	5	2.5	4	2000
61730.W0003	210	88	164	24	2	4	2	4.5	6000

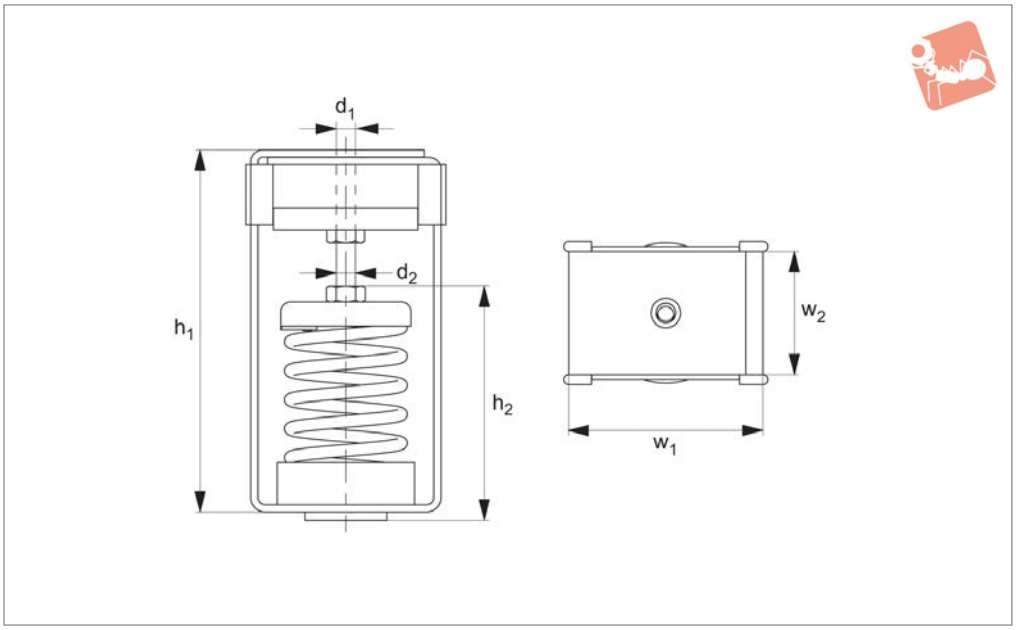
Anti-vibration Rings

61760



Material
Rubber (hardness 70 Shore A).

Order No.	d_1	d_2	d_3	h_1	h_2	r_1	r_2	Compression max.	Axial load kgf max.
61760.W0010	70	30	50	14	2	7	4	2	200
61760.W0020	72	32	52	23	2	2	2	7	400
61760.W0021	72	32	52	23	2	2	2	8.5	900
61760.W0022	76	37	58	12.5	3.5	2.5	2.5	2	550
61760.W0023	114	66	90	15	3	3	3	3.2	500
61760.W0024	114	66	90	15	3	3	3	5	1500
61760.W0030	116	52	84	23.5	2.5	3.5	2.5	3.5	800
61760.W0031	116	52	84	23.5	2.5	3.5	2.5	3.5	1000
61760.W0040	120	50	85	27.5	2.5	2.5	2.5	3.5	1000
61760.W0050	174	126	150	15	3	3	3	2	2000
61760.W0065	192	55	122	31	3	4	3	3.1	4340
61760.W0070	207	108	160	28	2	4	4	2.5	3000



61930

Material
Zinc plated steel (anti-corrosive treatment) with Sylomer® pad and steel spring.

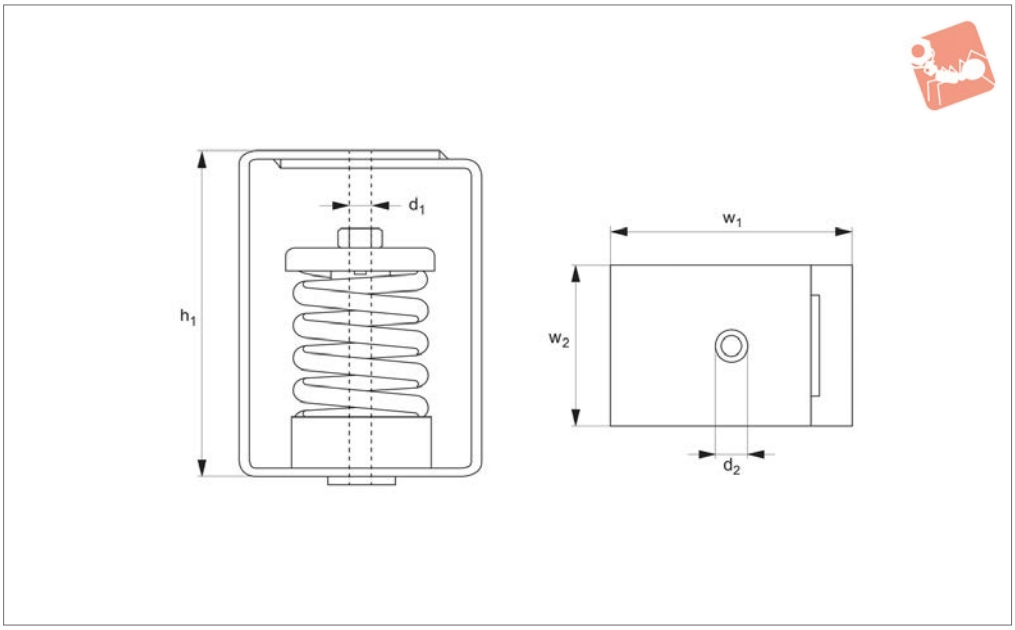
Technical Notes
These hangers come in six different steel spring strengths for increasing loads. The metal housing has an anti-corrosive treatment, which can with stand very harsh conditions and also resist high tensile stresses up to 1000kg.

Order No.	d_1	w_1	h_1	d_2	h_2	w_2	Compression max.	Load kgf max.
61930.W0025	12	79	150	M8	94	50	18	25
61930.W0050	12	79	150	M8	94	50	18	50
61930.W0075	12	79	150	M8	94	50	18	75
61930.W0100	12	79	150	M8	94	50	18	100
61930.W0125	12	79	150	M8	94	50	20	125
61930.W0150	12	79	150	M8	94	50	20	150

Acoustic Suspension Hanger spring

spring

61931

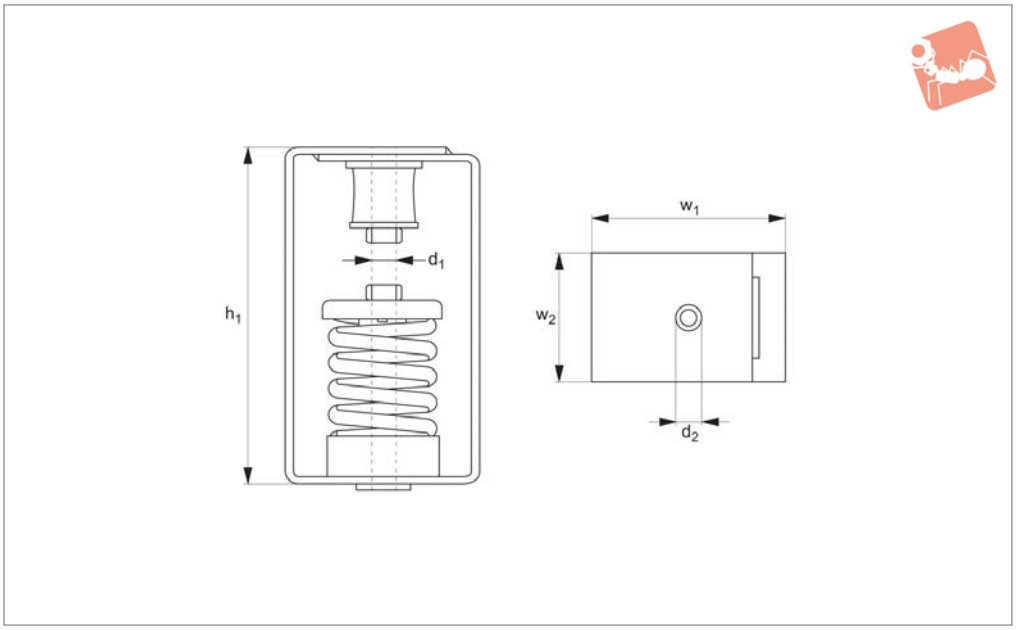


Material
Zinc plated steel (anti-corrosive treatment).

Technical Notes
These units are designed for installations where objects are suspended from ceilings. The spring in the body provides good anti-vibration properties.

Tips
Select the damper corresponding to the load to be carried per unit.
These hanger can be used for fans, distribution pipes, ducts and acoustic ceilings.

Order No.	d_1	w_1	h_1	d_2	w_2	Load kgf max.
61931.W0025	M 8	75	120	12	50	25
61931.W0050	M 8	75	120	12	50	50
61931.W0075	M 8	75	120	12	50	75
61931.W0100	M 8	75	120	12	50	100
61931.W0125	M 8	75	120	12	50	125
61931.W0150	M12	120	160	16	80	150
61931.W0200	M12	120	160	16	80	200
61931.W0250	M12	120	160	16	80	250
61931.W0350	M12	120	160	16	80	350
61931.W0500	M14	140	180	18	100	500
61931.W0750	M14	140	180	18	100	750



61932

Material
Zinc plated steel and rubber.

Technical Notes
These units are designed for installations where objects are suspended from ceilings.

The spring in the body provides good anti-vibration properties.

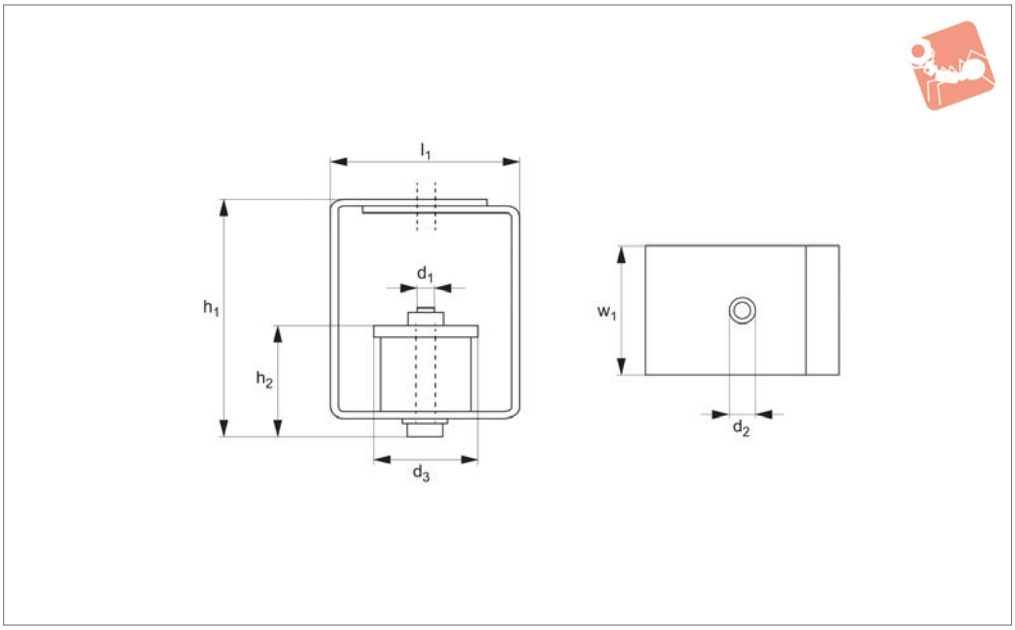
Tips
Select the damper corresponding to the load to be carried per unit.

These hanger can be used for fans, distribution pipes, ducts and acoustic ceilings.

Order No.	d_1	w_1	h_1	d_2	w_2	Load kgf max.
61932.W0025	M8	75	150	12	50	25
61932.W0050	M8	75	150	12	50	50
61932.W0075	M8	75	150	12	50	75
61932.W0100	M8	75	150	12	50	100

Acoustic Suspension Hanger without
without nut

61933



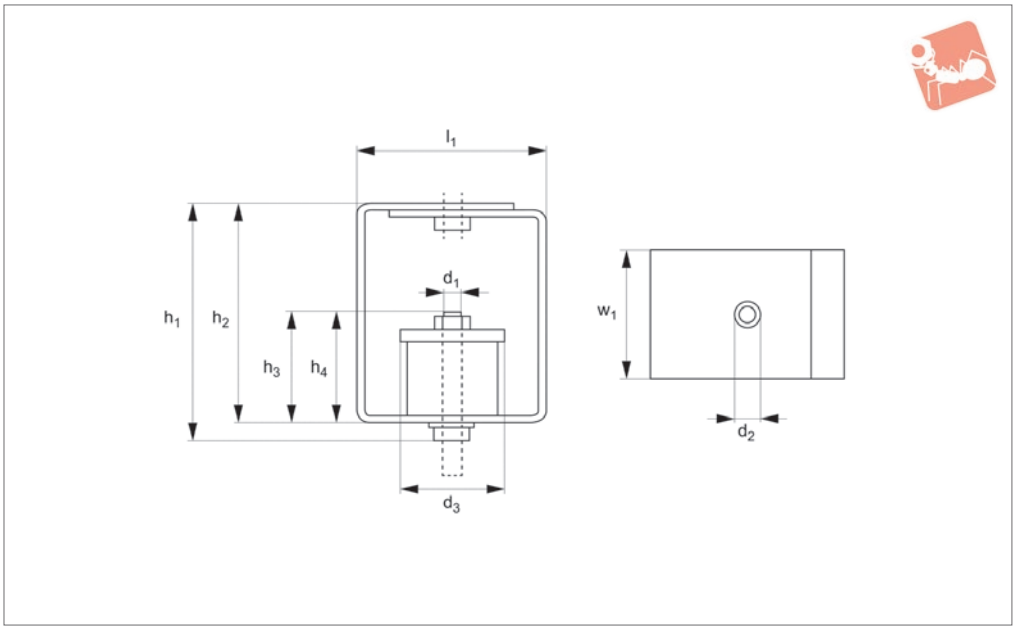
Material
Steel anti-corrosive zinc plated, with rubber (50 shore A) cylinder.

Technical Notes
These units are designed for installations where objects are suspended from ceilings. The spring in the body provides good anti-vibration properties.

Tips
Select the damper corresponding to the load to be carried per unit.
These hanger can be used for fans, distribution pipes, ducts and acoustic ceilings.

Order No.	d_1	w_1	h_1	d_2	d_3	h_2	l_1	Load kgf max.
61933.W0030	M6	40	47	8	30	30	40	30
61933.W0060	M6	40	47	8	30	30	40	60

Acoustic Suspension Hanger
with nut



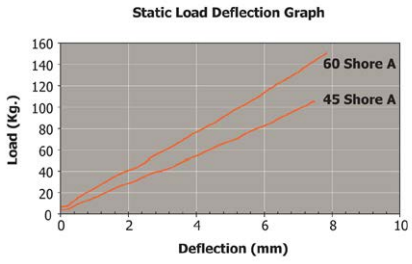
61934

Material
Steel anti-corrosive zinc plated, with rubber (50 shore A) cylinder.

Technical Notes
These units are designed for installations where objects are suspended from ceilings. The spring in the body provides good anti-vibration properties.
The metal hanger is designed to cope with loads up to 1000kg.

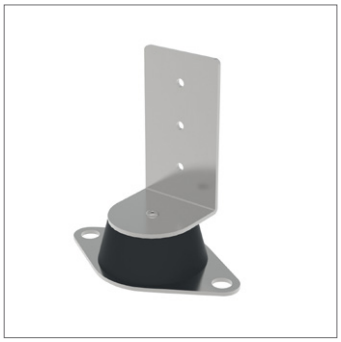
Tips
Select the damper corresponding to the load to be carried per unit.
These hanger can be used for fans, distribution pipes, ducts and acoustic ceilings.

Order No.	d_1	w_1	h_1	d_2	d_3	d_4	h_2	h_3	h_4	l_1	Load range kgf
61934.W0030	M 6	40	55.03	M 6	30	18	46.3	38	30	40	8-30
61934.W0060	M 6	40	55.03	M 6	30	18	46.3	38	30	40	25-60
61934.W0100	M 8	55	76.40	M 8	40	16	68.0	43	34	55	40-100
61934.W0150	M 8	55	76.40	M 8	40	16	68.0	43	34	55	80-150

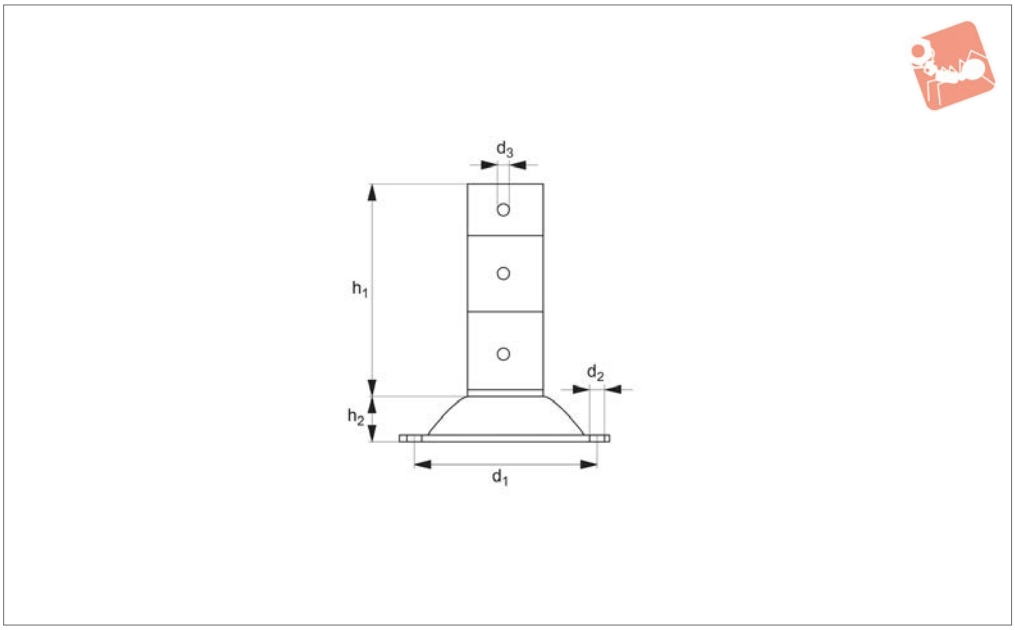


Acoustic Wall Damper right angle

right angle fixing



61936



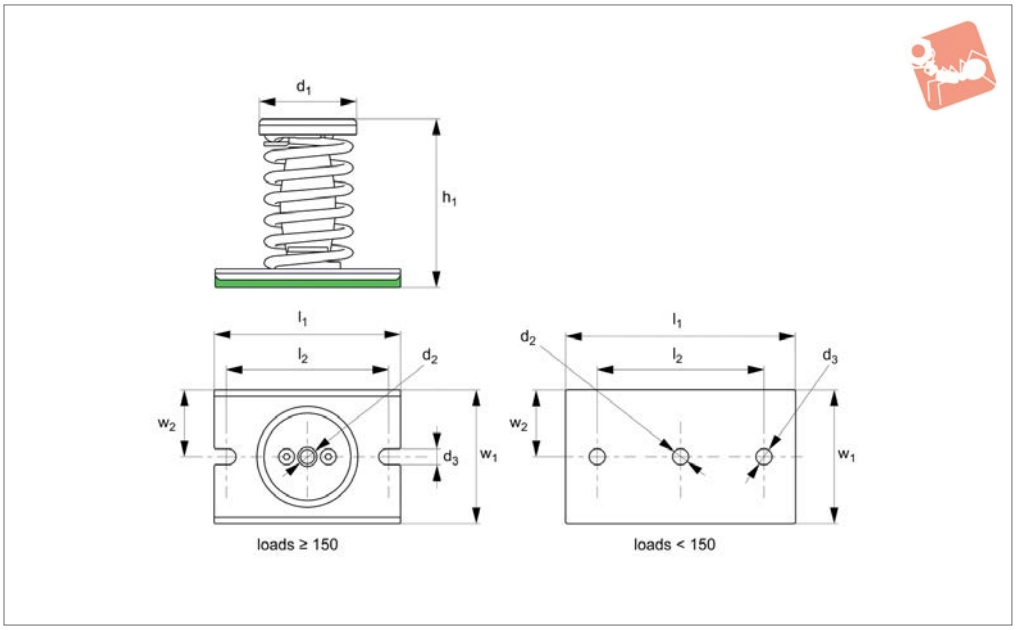
Material
Rubber on steel (zinc plated).

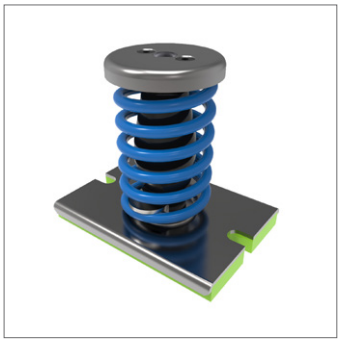
Technical Notes
These units are designed for installations where objects are suspended from the ceiling or the wall. The spring in the body provides good anti-vibration properties.

Tips
Select the damper corresponding to the load to be carried per unit.

These hanger can be used for fans, distribution pipes, ducts and acoustic ceilings/ walls.

Order No.	d_1	h_1	d_2	d_3	h_2	Load kgf max.
61936.W0076	76	72	6.5	4	24	10





61922

Material
High tensile steel with sylomer anti-slide base.

Technical Notes
The sylomer mat that these dampers incorporate, isolates the mid-high frequency vibrations which are transmitted through the coils of the metal springs.

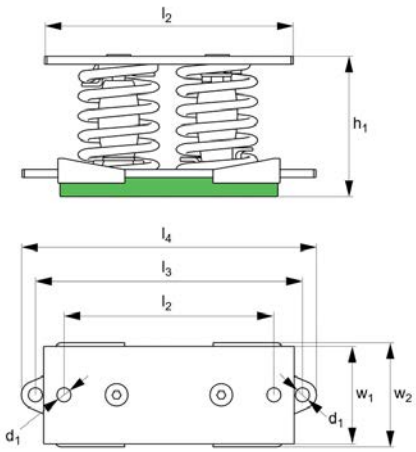
Tips
These are used in sectors such as air compressors, pump and pumping equipment and acoustic isolation of premises.

Order No.	Spring colour	l_1	h_1	d_1	w_1	d_2	d_3	l_2	w_2	Compression max.	Load kgf max.	Weight kg
61922.W0080	Black	100	78	54	69.5	M 8	8.5	80	34.75	20	25	0.29
61922.W0081	Blue	100	78	54	69.5	M 8	8.5	80	34.75	20	50	0.27
61922.W0082	Grey	100	78	54	69.5	M 8	8.5	80	34.75	20	75	0.30
61922.W0083	Beige	100	78	54	69.5	M 8	8.5	80	34.75	20	100	0.35
61922.W0084	White	100	78	54	69.5	M 8	8.5	80	34.75	20	125	0.395
61922.W0120	Blue	140	127	75	98.5	M12	12	120	49.25	30	150	1.10
61922.W0121	White	140	127	75	98.5	M12	12	120	49.25	30	200	1.14
61922.W0122	Black	140	127	75	98.5	M12	12	120	49.25	30	250	1.23
61922.W0123	Cream	140	127	75	98.5	M12	12	120	49.25	30	350	1.39
61922.W0140	Light Grey	140	127	93	98.5	M14	12	120	49.25	18	500	2.56
61922.W0141	Green	140	127	93	98.5	M14	12	120	49.25	18	750	3.04

Spring Vibration Damper two spring

two spring

61923

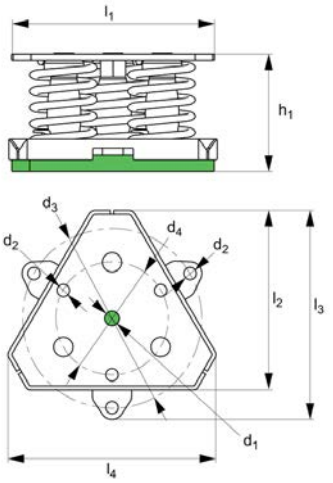


Material
High tensile steel with sylomer anti-slide base

Technical Notes
The sylomer mat that these dampers incorporate, isolates the mid-high frequency vibrations which are transmitted through the coils of the metal springs.

Tips
These are used in sectors such as air compressors, pump and pumping equipment and acoustic isolation of premises.

Order No.	Spring colour	l_1	h	d	w_1	l_2	l_3	l_4	w_2	Compression max.	Load kgf max.	Weight kg
61923.W0120	Blue	200	136	12	75	170	220	244	81	30	300	3.10
61923.W0121	White	200	136	12	75	170	220	244	81	30	400	3.17
61923.W0122	Black	200	136	12	75	170	220	244	81	30	500	3.35
61923.W0123	Cream	200	136	12	75	170	220	244	81	30	700	3.70
61923.W0140	Light Grey	250	136	14	100	210	270	298	106	17	1000	5.90
61923.W0141	Green	250	136	14	100	210	270	298	106	17	1500	6.84



61924

Material
High tensile steel with sylomer anti-slide base

Technical Notes
The sylomer mat that these dampers incorporate, isolates the mid-high frequency vibrations which are transmitted through the coils of the metal springs.

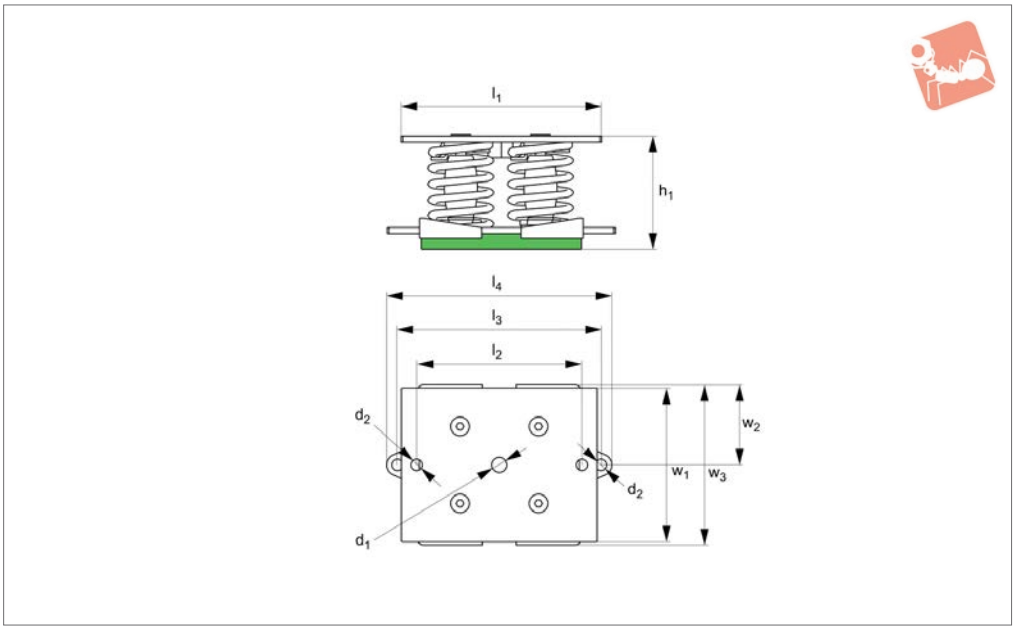
Tips
These are used in sectors such as air compressors, pump and pumping equipment and acoustic isolation of premises.

Order No.	Spring colour	l_1	h	d_1	d_2	d_3	l_2	l_3	l_4	Compression max.	Load kgf max.	Weight kg
61924.W0160	Blue	196.3	136	M16	12	180	175	207.7	201.4	30	450	4.60
61924.W0161	White	196.3	136	M16	12	180	176	207.7	201.4	30	600	4.71
61924.W0162	Black	196.3	136	M16	12	180	176	207.7	201.4	30	750	4.98
61924.W0163	Cream	196.3	136	M16	12	180	176	207.7	201.4	30	1050	5.52
61924.W0200	Light Grey	246.0	136	M20	14	220	219	255.7	251.0	17	1500	8.56
61924.W0201	Green	246.0	136	M20	14	220	219	255.7	251.0	17	2250	9.96

Spring Vibration Damper four spring

four spring

61925



Material
High tensile steel with sylomer anti-slide base.

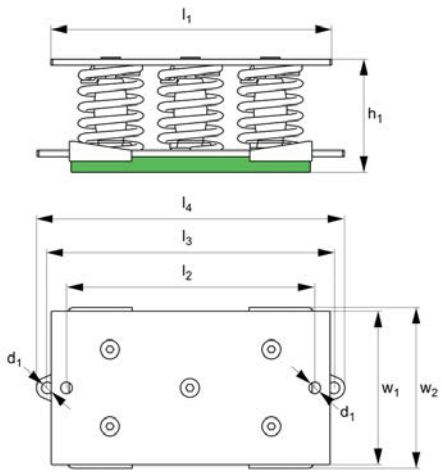
Technical Notes
The sylomer mat that these dampers incorporate, isolates the mid-high frequency vibrations which are transmitted through the coils of the metal springs.

Tips
These are used in sectors such as air compressors, pump and pumping equipment and acoustic isolation of premises.

Order No.	Spring colour	l_1	h	d_1	w_1	d_2	l_2	l_3	l_4	w_2	w_3	Compression max.	Load kgf max.	Weight kg
61925.W0160	Blue	200	136	M16	150	12	170	190	214	75	156	30	600	6.41
61925.W0161	White	200	136	M16	150	12	170	190	214	75	156	30	800	6.57
61925.W0162	Black	200	136	M16	150	12	170	190	214	75	156	30	1000	6.70
61925.W0163	Cream	200	136	M16	150	12	170	190	214	75	156	30	1400	7.64
61925.W0200	Light Grey	250	136	M20	200	14	210	260	288	100	206	18	2000	12.10
61925.W0201	Green	250	136	M20	200	14	210	260	288	100	206	18	3000	13.96

Spring Vibration Damper five spring

five spring



61926

Material
High tensile steel with sylomer anti-slide base.

Technical Notes
The sylomer mat that these dampers incorporate, isolates the mid-high frequency vibrations which are transmitted through the coils of the metal springs.

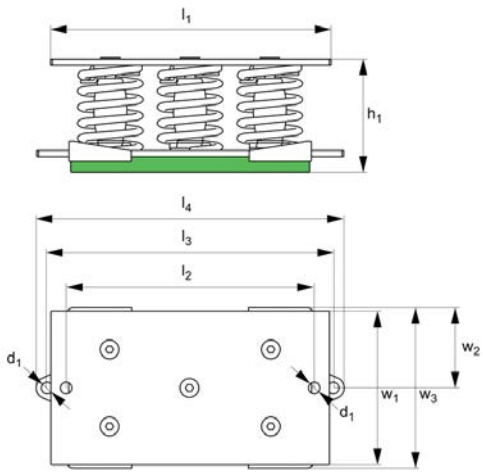
Tips
These are used in sectors such as air compressors, pump and pumping equipment and acoustic isolation of premises.

Order No.	Spring colour	l_1	h	d	w_1	l_2	l_3	l_4	w_2	Compression max.	Load kgf max.	Weight kg
61926.W0160	Blue	280	136	16	150	251	290	322	156	30	750	8.50
61926.W0161	White	280	136	16	150	251	290	322	156	30	1000	8.69
61926.W0162	Black	280	136	16	150	251	290	322	156	30	1250	9.16
61926.W0163	Cream	280	136	16	150	251	290	322	156	30	1750	10.03
61926.W0180	Light Grey	350	136	18	200	315	360	396	206	18	2500	15.71
61926.W0181	Green	350	136	18	200	315	360	396	206	18	3750	18.05

Spring Vibration Damper six spring

six spring

61927



Material

High tensile steel with sylomer anti-slide base.

Technical Notes

The sylomer mat that these dampers incorporate, isolates the mid-high frequency vibrations which are transmitted through the coils of the metal springs.

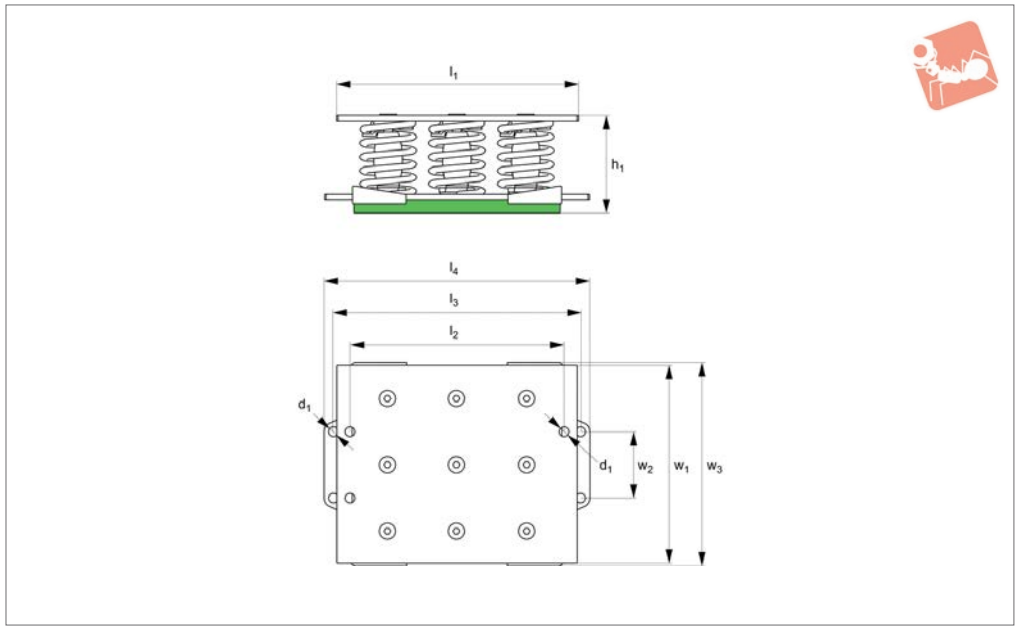
Tips

These are used in sectors such as air compressors, pump and pumping equipment and acoustic isolation of premises.

Order No.	Spring colour	l_1	h	d	w_1	l_2	l_3	l_4	w_2	w_3	Compression max.	Load kgf max.	Weight kg
61927.W0160	Blue	280	136	16	150	248	290	322	75	156	30	900	8.93
61927.W0161	White	280	136	16	150	248	290	322	75	156	30	1200	9.16
61927.W0162	Black	280	136	16	150	248	290	322	75	156	30	1500	9.68
61927.W0163	Cream	280	136	16	150	248	290	322	75	156	30	2100	10.77
61927.W0180	Light Grey	350	136	18	200	300	360	396	100	206	18	3000	16.84
61927.W0181	Green	350	136	18	200	300	360	396	100	206	18	4500	19.65

Spring Vibration Damper nine spring

nine spring



61928

Material
High tensile steel with sylomer anti-slide base.

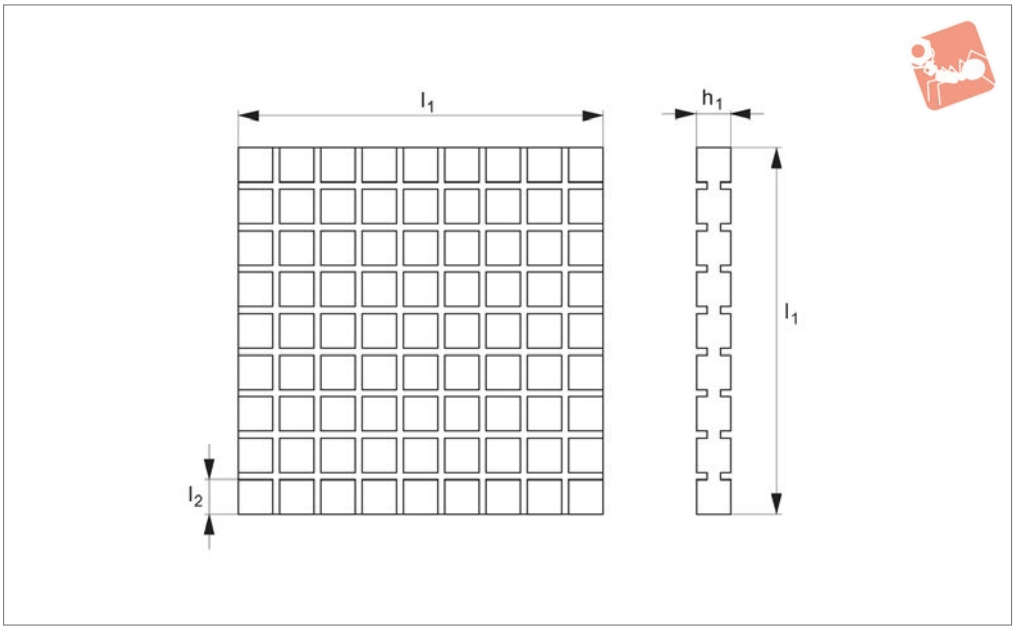
Technical Notes
The sylomer mat that these dampers incorporate, isolates the mid-high frequency vibrations which are transmitted through the coils of the metal springs.

Tips
These are used in sectors such as air compressors, pump and pumping equipment and acoustic isolation of premises.

Order No.	Spring colour	l_1	h	d	w_1	l_2	l_3	l_4	w_2	w_3	Compression max.	Load kgf max.	Weight kg
61928.W0160	Blue	280	136	16	226	248	290	322	75	232	30	1350	13.70
61928.W0161	White	280	136	16	226	248	290	322	75	232	30	1800	14.04
61928.W0162	Black	280	136	16	226	248	290	322	75	232	30	2250	14.83
61928.W0163	Cream	280	136	16	226	248	290	322	75	232	30	3150	16.46
61928.W0180	Light Grey	350	136	18	300	310	360	396	150	306	18	4500	21.54
61928.W0181	Green	350	136	18	300	310	360	396	150	306	18	6750	31.75

Anti-vibration Pads

61780

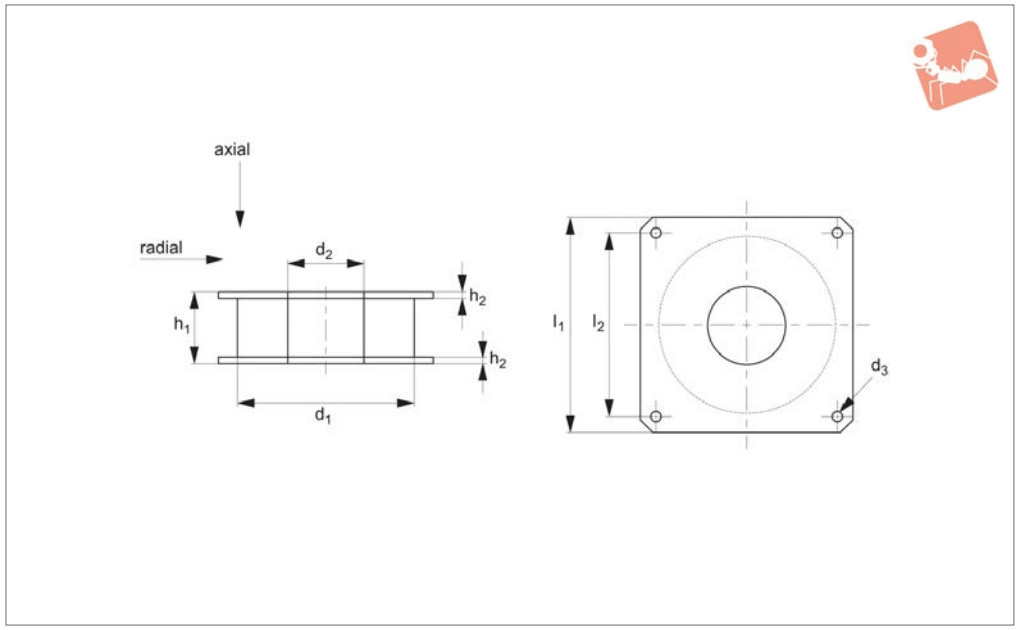


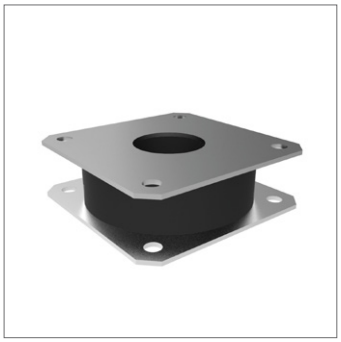
Material
Rubber (hardness - 55 Shore A).

Technical Notes
The pad can be cut to suit the application as required.
Differs from a plain rubber mat as the squared units can deform - improving its anti-vibration features.

Tips
High frequency isolation (30-40Hz).
Own frequency 18Hz.

Order No.	l_1	l_2	h_1	Compression max.	Load kgf/cm² max.
61780.W0210	210	10	14	2	8
61780.W0302	300	10	5	1	8
61780.W0301	300	10	7	1.6	8
61780.W0500	500	10	7	1	8



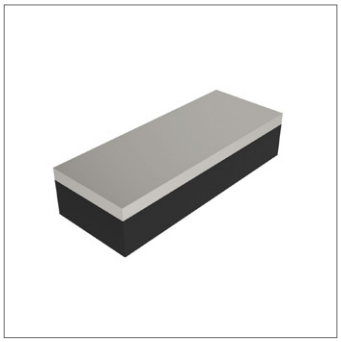


61800

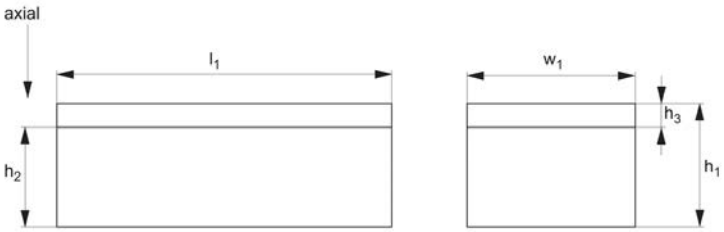
Material
Rubber on silver zinc plated steel (rubber hardness - 65 Shore A).

Order No.	l_1	d_1	d_2	d_3	l_2	h_1	h_2	Axial compression max.	Radial compression max.	Axial load kgf max.	Radial load kgf max.
61800.W0135	135	120	50	9	105	42	3	15	10	2500	300
61800.W0170	170	140	65	15	145	100	4	15	10	2500	300
61800.W0180	180	160	60	9	140	46	4	15	10	2500	300
61800.W0210	210	185	70	11	165	55	5	15	10	2500	300
61800.W0250	250	230	100	16	215	48	4	15	10	2500	300

Anti-vibration Impact Plates
metal-rubber



61600

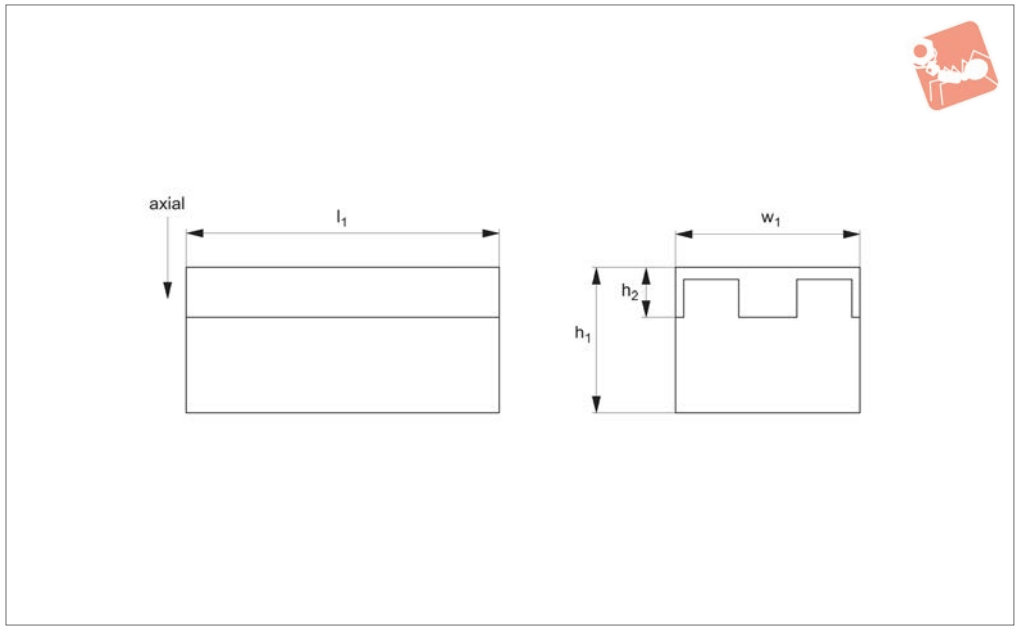


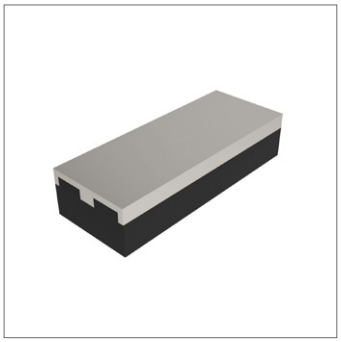
Material
Rubber on silver zinc plated steel (rubber hardness - 60 Shore A).

Technical Notes
The metal plate is provided blank so it can be drilled to suit the number of threads, thread sizes and the pitch you require.

Part no. 61600.0500-125 has a ribbed base. Other sizes can be supplied on request.

Order No.	l_1	w_1	h_1	h_2	h_3	Axial load kgf max.	Compression max.
61600.W0035	1250	35	40	30	10	2500	2.0
61600.W0070	180	70	40	30	10	1000	2.8
61600.W0071	245	70	40	30	10	1300	3.7
61600.W0072	285	70	40	30	10	2000	3.6
61600.W0073	320	70	40	30	10	2700	3.5
61600.W0120	250	120	40	28	12	5000	3.3
61600.W0125	500	125	30	15	15	10000	4.0





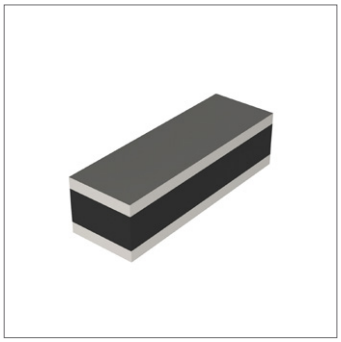
61610

Material
Rubber on silver zinc plated steel (rubber hardness - 60 Shore A).

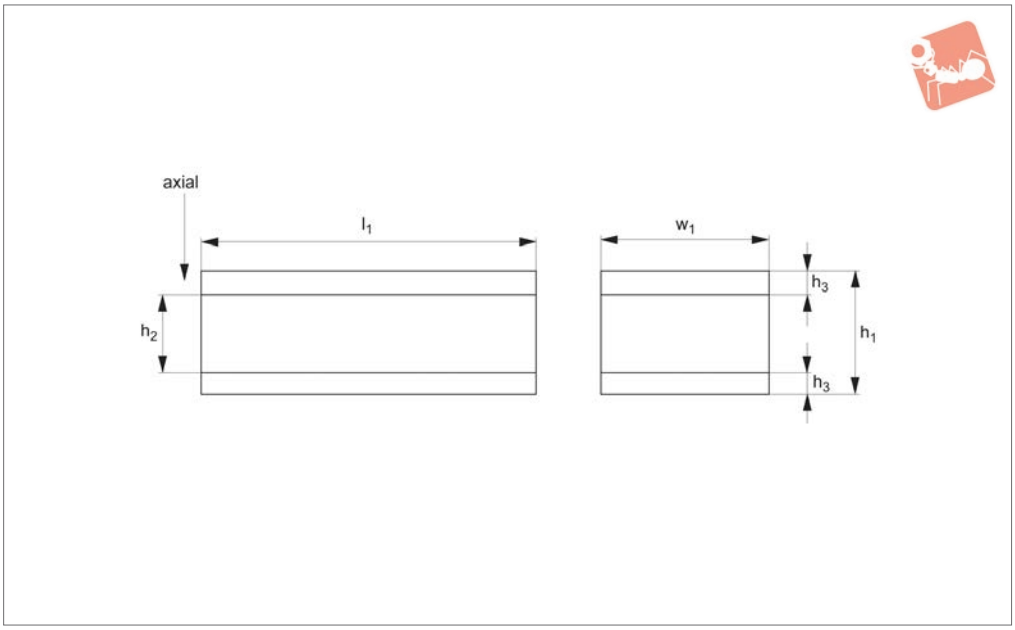
Technical Notes
The metal plate is provided blank so it can be drilled to suit the number of threads, thread sizes and the pitch you require. Other sizes can be supplied on request.

Order No.	l_1	w_1	h_1	h_2	Axial load kgf max.
61610.W0060	350	60	40	13	1000
61610.W0061	450	60	40	13	1500
61610.W0062	550	60	40	13	2000

Anti-vibration Sandwich Plates



61620



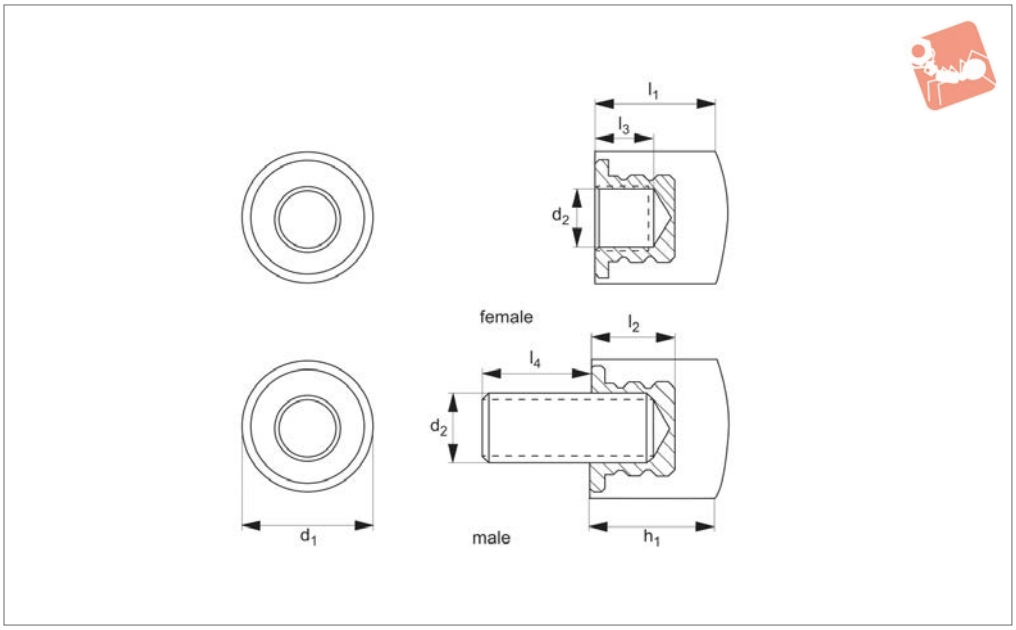
Material

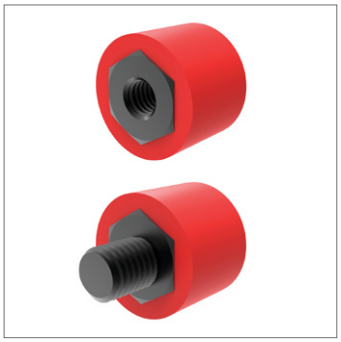
Rubber on silver zinc plated steel (rubber hardness - 60Shore A).

Technical Notes

The metal plates are provided blank so they can be drilled to suit the number of threads, thread sizes and the pitch you require. Other sizes can be supplied on request. Suitable for very heavy loads.

Order No.	l_1	w_1	h_1	h_2	h_3	Axial load kgf max.
61620.W0040	550	40	40	24	8	2200
61620.W0050	515	50	40	20	10	2800
61620.W0051	515	50	50	30	10	2570
61620.W0060	650	60	50	30	10	3900
61620.W0061	650	60	60	40	10	3500
61620.W0070	600	70	50	30	10	4200
61620.W0171	600	70	55	35	10	4000
61620.W0180	600	80	80	50	15	4320
61620.W0100	415	100	60	30	15	4150
61620.W0101	415	100	80	50	15	3740
61620.W0150	500	150	80	50	15	6750





60880

Material

Black Neoprene: flame and weather resistant. Resists: oil, ozone and gasoline. Temperature resistance: -5°C to +93°C (shortly +120°C).
Urethane: highly abrasion resistant, high strength and load bearing. High elongation and hardness. Resists ozone and oxygen. Temperature resistance: -18°C to +93°C (shortly +120°C).

Technical Notes

Bumpers are moulded to solid steel cores. They are used to guard, stop, align, position, or protect parts through stages of manufacturing.

Tips

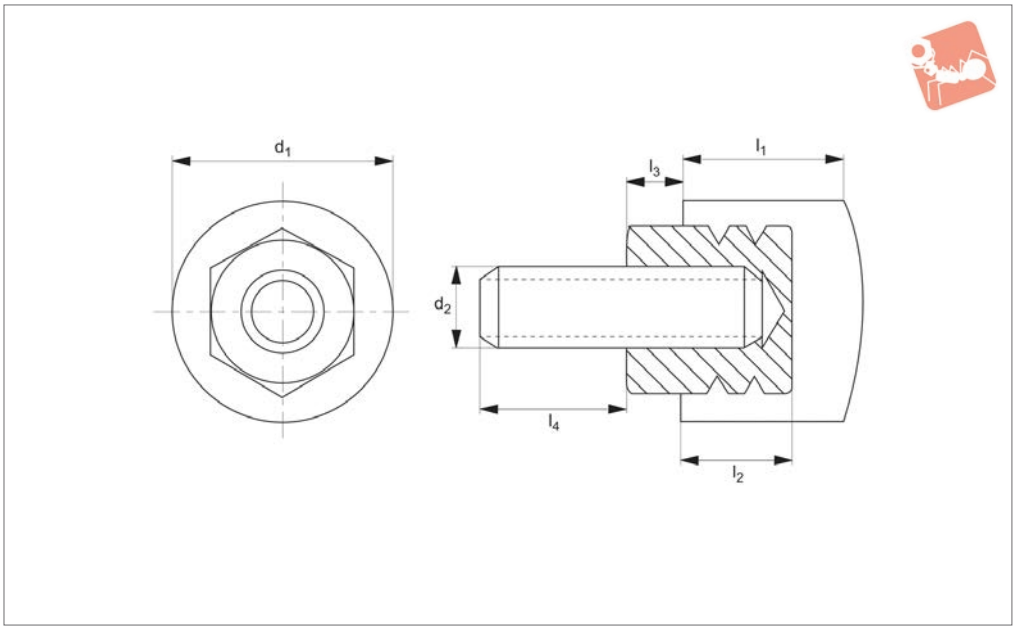
All dimensions metric.

Order No.	Material	Type	l_1	d_1	d_2	l_2	l_3	l_4	Durometer	Duro. urethane
60880.W0411	Neoprene	Female	16	19	M 6 x 1,00	9.0	6	-	70	80
60880.W0412	Neoprene	Female	16	19	M 8 x 1,25	9.0	6	-	70	80
60880.W0413	Neoprene	Female	32	32	M10 x 1,50	19.0	13	-	40	80
60880.W0414	Neoprene	Female	32	32	M10 x 1,25	19.0	13	-	40	80
60880.W0415	Neoprene	Female	32	32	M12 x 1,75	19.0	13	-	40	80
60880.W0416	Neoprene	Female	32	32	M12 x 1,25	19.0	13	-	40	80
60880.W0417	Neoprene	Female	32	32	M16 x 2,00	19.0	13	-	40	80
60880.W0418	Neoprene	Female	42	45	M16 x 2,00	22.5	16	-	40	80
60880.W0419	Neoprene	Female	57	57	M20 x 2,50	35.0	26	-	40	80
60880.W0420	Neoprene	Female	57	57	M24 x 3,00	35.0	25	-	40	80
60880.W0615	Neoprene	Male	32	32	M10 x 1,50	19.0	-	15	40	80
60880.W0616	Neoprene	Male	32	32	M10 x 1,50	19.0	-	30	40	80
60880.W0617	Neoprene	Male	32	32	M12 x 1,75	19.0	-	15	40	80
60880.W0618	Neoprene	Male	19	32	M12 x 1,75	19.0	-	30	40	80
60880.W0619	Neoprene	Male	32	32	M16 x 2,00	19.0	-	15	40	80
60880.W0620	Neoprene	Male	32	32	M16 x 2,00	19.0	-	30	40	80
60880.W0621	Neoprene	Male	42	45	M16 x 2,00	22.5	-	15	40	80
60880.W0622	Neoprene	Male	42	45	M16 x 2,00	22.5	-	30	40	80
60880.W0451	Urethane	Female	16	19	M 6 x 1,00	9.0	6	-	70	80
60880.W0452	Urethane	Female	16	19	M 8 x 1,25	9.0	6	-	70	80
60880.W0453	Urethane	Female	32	32	M10 x 1,50	19.0	13	-	40	80
60880.W0454	Urethane	Female	32	32	M10 x 1,25	19.0	13	-	40	80
60880.W0455	Urethane	Female	32	32	M12 x 1,75	19.0	13	-	40	80
60880.W0456	Urethane	Female	32	32	M12 x 1,25	19.0	13	-	40	80
60880.W0457	Urethane	Female	32	32	M16 x 2,00	19.0	13	-	40	80
60880.W0458	Urethane	Female	42	45	M16 x 2,00	22.5	16	-	40	80
60880.W0459	Urethane	Female	57	57	M20 x 2,50	35.0	25	-	40	80
60880.W0460	Urethane	Female	57	57	M24 x 3,00	35.0	25	-	40	80
60880.W0635	Urethane	Male	32	32	M10 x 1,50	19.0	-	15	40	80
60880.W0636	Urethane	Male	32	32	M10 x 1,50	19.0	-	30	40	80
60880.W0637	Urethane	Male	32	32	M12 x 1,75	19.0	-	15	40	80

Metric Bumpers - Round

male and female

Order No.	Material	Type	l_1	d_1	d_2	l_2	l_3	l_4	Durometer	Duro. urethane
60880.W0638	Urethane	Male	19	32	M12 x 1,75	19.0	-	30	40	80
60880.W0639	Urethane	Male	32	32	M16 x 2,00	19.0	-	15	40	80
60880.W0640	Urethane	Male	32	32	M16 x 2,00	19.0	-	30	40	80
60880.W0641	Urethane	Male	42	45	M16 x 2,00	22.5	-	15	40	80
60880.W0642	Urethane	Male	42	45	M16 x 2,00	22.5	-	30	40	80



60890

Material

Black Neoprene: flame and weather resistant. Resists: oil, ozone and gasoline. Temperature resistance: -5°C to +93°C (shortly +120°C).
Urethane: highly abrasion resistant, high strength and load bearing. High elongation and hardness. Resists ozone and oxygen. Temperature resistance: -18°C to +93°C (shortly +120°C).

Technical Notes

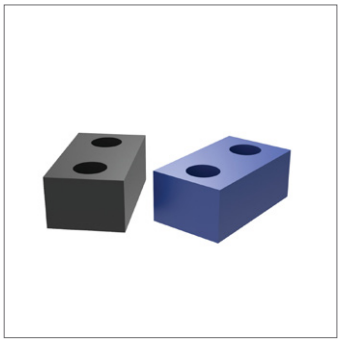
Bumpers are moulded to solid steel cores. They are used to guard, stop, align, position, or protect parts through stages of manufacturing.

Tips

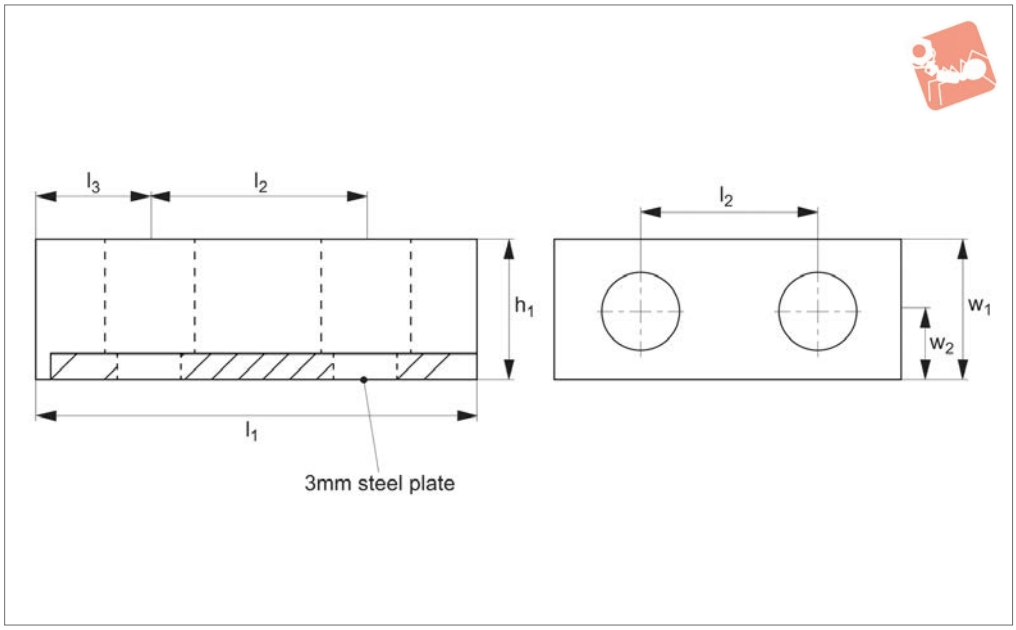
All dimensions metric.

Order No.	Material	l_1	d_1	d_2	l_2	l_3	l_4
60890.W0501	Neoprene	16	19	M 6 x 1,00	9	3.2	15
60890.W0502	Neoprene	16	19	M 6 x 1,00	9	3.2	30
60890.W0503	Neoprene	16	19	M 8 x 1,25	9	4.0	15
60890.W0504	Neoprene	16	19	M 8 x 1,25	9	4.0	30
60890.W0701	Urethane	16	19	M 6 x 1,00	9	3.2	15
60890.W0702	Urethane	16	19	M 6 x 1,00	9	3.2	30
60890.W0703	Urethane	16	19	M 8 x 1,25	9	4.0	15
60890.W0704	Urethane	16	19	M 8 x 1,25	9	4.0	30

Metric Bumpers - Rectangular and



60900



Material

Black Neoprene: flame and weather resistant. Resists: oil, ozone and gasoline. Temperature resistance: -5°C to +93°C (shortly +120°C).
Urethane: highly abrasion resistant, high strength and load bearing. High elongation and hardness. Resists ozone and oxygen. Temperature resistance: -18°C to +93°C (shortly +120°C).

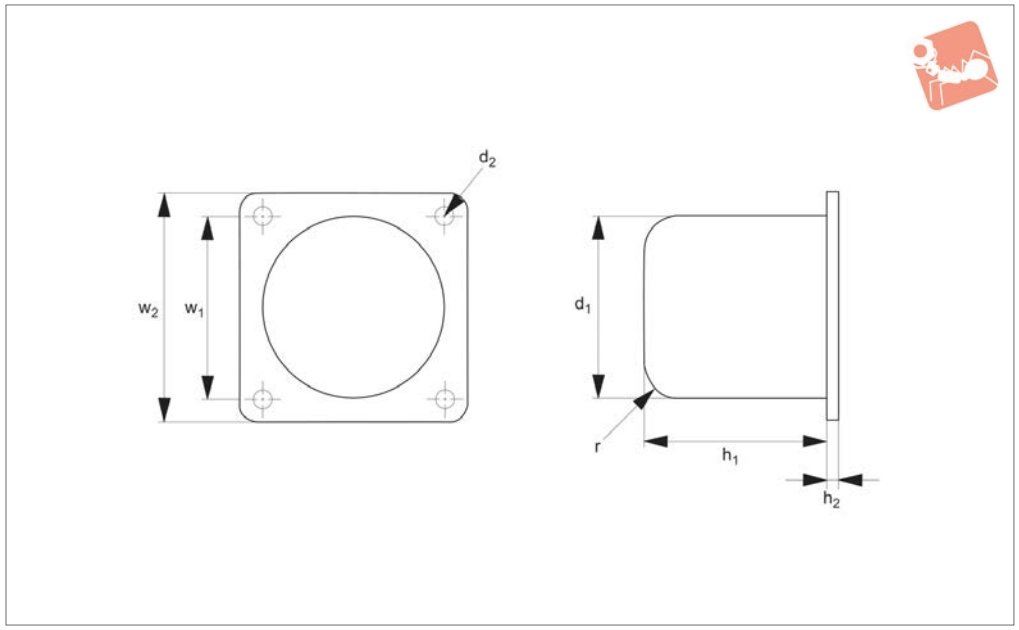
Technical Notes

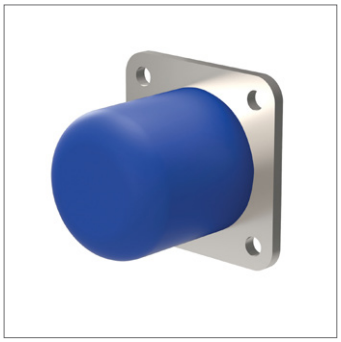
Bumpers bonded to steel plate. They are used to guard, stop, align, position, or protect parts through stages of manufacturing.

Tips

All dimensions metric. Special cut bumpers available on request.

Order No.	Material	l_1	d_1	h_1	w_1	l_2	l_3	w_2	Duro.	No. of holes
60900.W0510	Neoprene	44.45	6	19.0	25.4	25.4	9.5	12.7	35	2
60900.W0511	Neoprene	19.0	6	16.0	19.0	-	9.5	9.5	80	1
60900.W0512	Neoprene	63.5	6	16.0	16.0	38.1	12.7	7.9	80	2
60900.W0515	Neoprene	44.45	6	19.0	25.4	25.4	9.5	12.7	80	2
60900.W0516	Neoprene	50.8	-	50.8	50.8	-	-	-	80	-
60900.W0701	Urethane	19.0	6	16.0	19.0	-	9.5	9.5	60	1
60900.W0702	Urethane	63.5	6	16.0	16.0	38.1	12.7	7.9	60	2
60900.W0703	Urethane	44.45	6	9.5	25.4	25.4	9.5	12.7	60	2
60900.W0704	Urethane	44.45	6	12.7	25.4	25.4	9.5	12.7	60	2
60900.W0705	Urethane	44.45	6	19.0	25.4	25.4	9.5	12.7	60	2
60900.W0711	Urethane	19.0	6	16.0	19.0	-	9.5	9.5	80	1
60900.W0712	Urethane	63.5	6	16.0	16.0	38.1	12.7	7.9	80	2
60900.W0713	Urethane	44.45	6	9.5	25.4	25.4	9.5	12.7	80	2
60900.W0714	Urethane	44.45	6	12.7	25.4	25.4	9.5	12.7	80	2
60900.W0715	Urethane	44.45	6	19.0	25.4	25.4	9.5	12.7	80	2
60900.W0716	Urethane	50.8	-	50.8	50.8	-	-	-	80	-





60910

Material
Urethane: highly abrasion resistant, high strength and load bearing. High elongation and hardness. Resists ozone and oxygen. Temperature resistance: -18°C to +93°C (shortly +120°C).

Technical Notes
Used for stops, guides, bumpers and protection. Moulded urethane bonded to steel plate.

Tips
All dimensions metric.

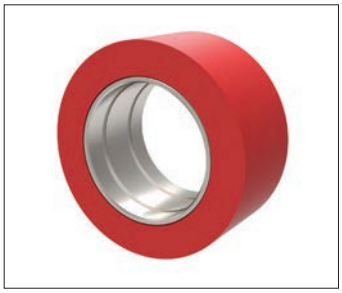
Order No.	d_1	h_1	w_1	d_2	l_2	w_2	R	Durometer
60910.W0701	50.8	50.8	50.8	7.13	4.76	63.50	9.53	60
60910.W0702	63.5	63.5	63.5	7.13	4.76	82.55	12.70	60
60910.W0703	76.2	76.2	76.2	10.31	6.35	101.60	15.88	60
60910.W0704	101.6	101.6	101.6	10.31	6.35	127.00	19.05	60
60910.W0711	50.8	50.8	50.8	7.13	4.76	63.50	9.53	80
60910.W0712	63.5	63.5	63.5	7.13	4.76	82.55	12.70	80
60910.W0713	76.2	76.2	76.2	10.31	6.35	101.60	15.88	80
60910.W0714	101.6	101.6	101.6	10.31	6.35	127.00	19.05	80

Wixroyd Rollers

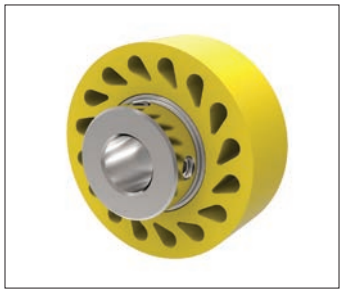
overview

Wixroyd Rollers

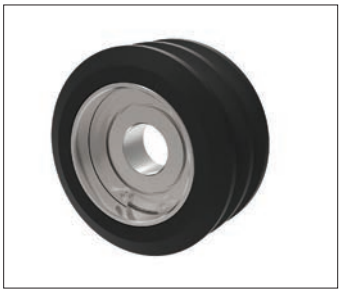
Product overview



Solid rollers - have a smooth surface and a solid body



Durasoft rollers - have a smooth contact surface with teardrop holes to allow greater roller compression under load.



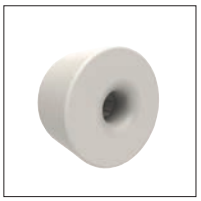
Finned rollers - are grooved and provide self-cleaning as dirt, debris and liquid pass under the contact surface of the roller.

Durability levels

20 durometer:
Stiff foam rubber

35 durometer:
Pencil rubber top

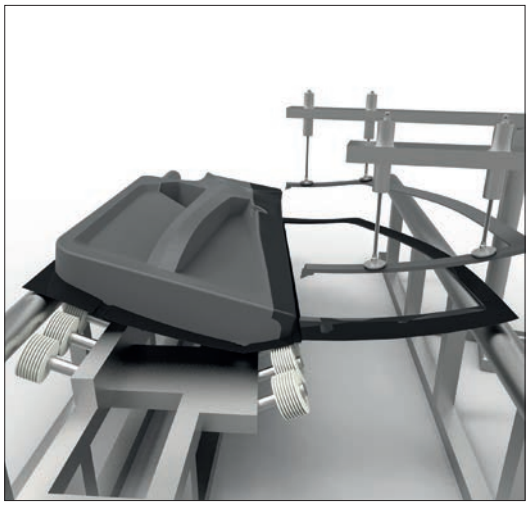
60 durometer:
Car tyre



80 durometer:
Skateboard wheel

90 durometer:
Hockey puck

Applications



Rollers are used in car manufacturing to guide and align doors during bonding and curing applications

Bumpers have found their way into commercial exercise equipment to provide protection and stability during use.

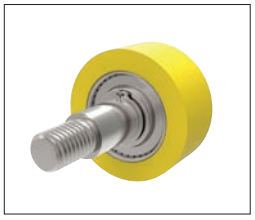
Materials colour guide and properties

Nitrile and neoprene

Nitrile - one colour

Neoprene - one colour

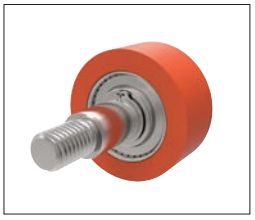
Urethane



35 Durometer (Yellow)

60 Durometer (Blue)

80 Durometer (Red)



95 Durometer (Orange)

Material properties

Base Elastomer	Chemical Name	Advantages	Disadvantages	Max. Temp	Min. Temp
Nitrile	Nitrile Butadiene	Resistant to petrolium, oil, alcohol & abrasion.	Affected by degreaser solvents.	Continuous 79°C Intermittent 107°C	-51°C
Neoprene	Chloroprene	Flame and weather resistant. Resistant to Petroleum, oil, ozone & high temp.	Affected by phosphate hydraulic fluids, aromatic hydrocarbons.	Continuous 93°C Intermittent 121°C	-40°C
Urethane	Di-Isocyante Polyurethane	Highest abrasion resistance, strength & load bearing. High elongation, hardness. Resistance to Ozone & Oxygen.	Affected by ether, esters, acid, aromatics, alkallis.	Continuous 93°C Intermittent 121°C	-54°C

Property:	Nitrile	Neoprene	Urethane
Tensile Strength	✓ ✓	✓ ✓ ✓	✓ ✓ ✓ ✓
Ozone Resistance	✓	✓ ✓	✓ ✓ ✓ ✓
Cut Resistance	✓ ✓	✓ ✓ ✓	✓ ✓ ✓ ✓
Abrasion Resistance	✓ ✓	✓ ✓ ✓	✓ ✓ ✓ ✓

Resistance To:	Nitrile	Neoprene	Urethane
Compression Set	✓ ✓	✓ ✓ ✓	✓ ✓ ✓
ASTM #1 Oil	✓ ✓ ✓ ✓	✓ ✓	✓ ✓ ✓ ✓
ASTM #2 Oil	✓ ✓ ✓ ✓	✓ ✓	✓ ✓ ✓ ✓
Reference Fuel B	✓ ✓ ✓	✓ ✓	✓ ✓ ✓ ✓
Ketones: MEK	✓	✓ ✓	✓
Aromatics: Toluene	✓ ✓ ✓	✓	✓ ✓ ✓ ✓
Aliphatics: Hexane	✓ ✓ ✓ ✓	✓ ✓ ✓	✓ ✓ ✓ ✓
Ethyl Acetate	✓	✓ ✓ ✓	✓
Cellosolve	✓ ✓	✓ ✓ ✓ ✓	✓
Methylene Chloride	✓	✓	✓ ✓ ✓ ✓
Trichloroethylene	✓	✓	✓ ✓ ✓ ✓
Diethylene Glycol	✓ ✓ ✓ ✓	✓ ✓ ✓ ✓	✓ ✓ ✓
Isopropyl Alcohol	✓ ✓ ✓	✓ ✓ ✓	✓ ✓ ✓
Caustics: 10% NaOH	✓ ✓ ✓	✓ ✓ ✓	✓
Acids: H2S04	✓ ✓	✓ ✓ ✓	✓
Excellent ✓ ✓ ✓ ✓	Good ✓ ✓ ✓	Fair ✓ ✓	Poor ✓

Wixroyd Rollers
bearings

The tables below show the maximum theoretical radius loads that can be applied to the respective bearings.Refer to individual product tables to identify bearing type supplied with roller.

Standard bearings

Bearing Type	Inside diameter (inches)	Outside diameter (inches)	Width (inches)	Load (Kg)	Speed (rpm)
A - Standard Double	.313/.317	.870/.875	.498/.502	55 36 24 20	50 100 250 500
B - Standard Single	.500/505	1.245/1.250	.370/.380	119 79 51 47	50 100 250 500
C - Standard Double	.500/505	1.245/1.250	.745/.755	192 128 83 70	50 100 250 500

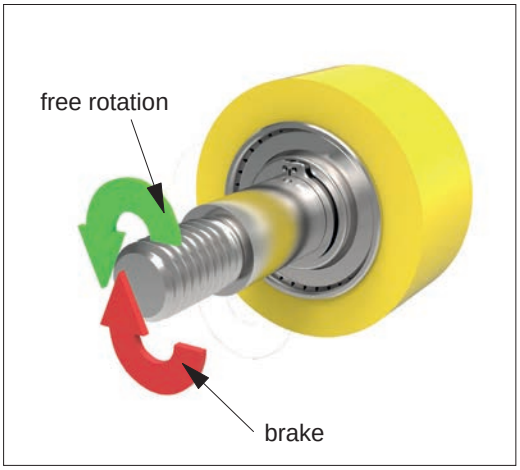
With the calculations above, typical life is approximately 2500 hours.

Clutch bearings

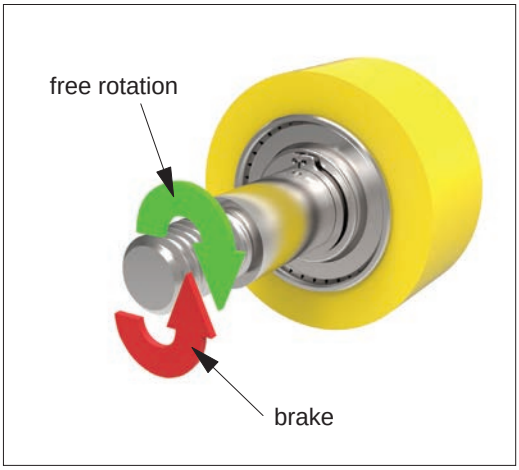
Bearing Type	Inside diameter (inches)	Outside diameter (inches)	Width (inches)	Load (Kg)	Speed (rpm)
H	.3745/.3750	.6245/.6255	.865/.875	167 146 116 85	33 50 100 250
I	.6245/.6250	.8745/.8755	.990/1.000	277 242 192 142	33 50 100 250

With the calculations above, typical life is approximately 1,000,000 revolutions or 500 hours. The bearings are shielded and pre-lubricated for life with grease.

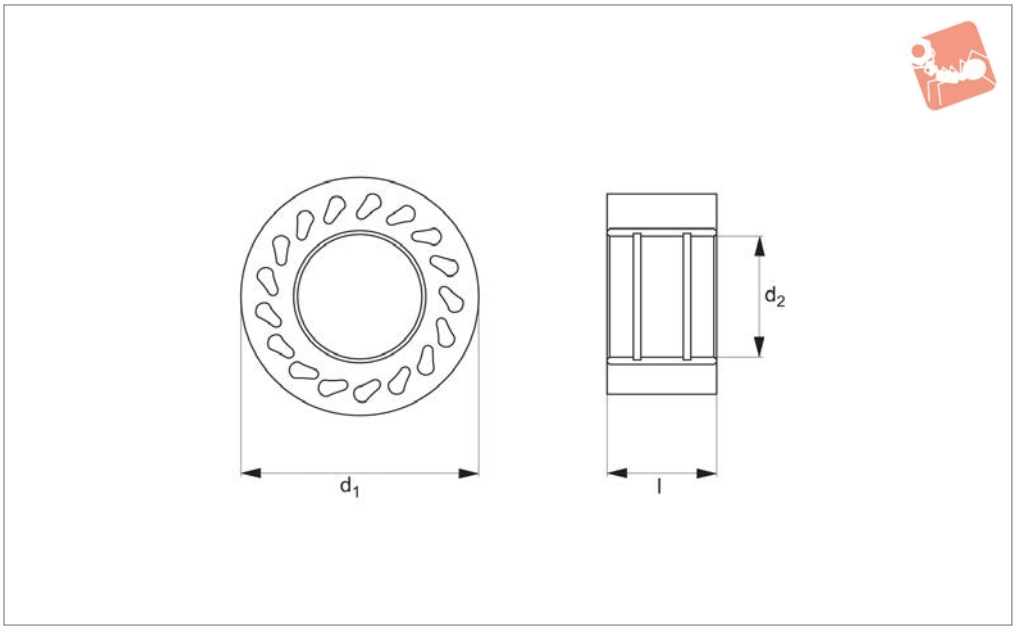
A clutch roller can only be used in one direction, as shown. See data table for clutch direction of particular part.



Left clutch bearing



Right clutch bearing



60640

Material
Urethane bonded to a steel insert. Hardness from 35-95 durometer (Shore A).

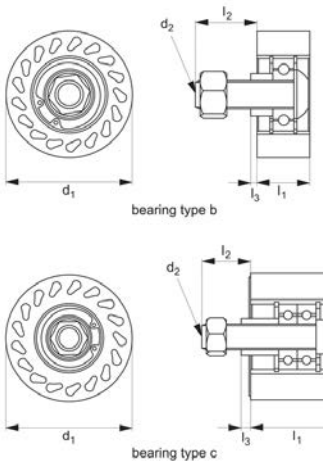
Technical Notes
Roller only - allows for custom mounting.

Tips
Durasoft rollers have „teardrop“ holes to allow the roller to flex for firm but non-damaging contact.

Order No.	Durometer	d_1	l	d_2 min.|max.
60640.W1003	35	63,5 (2,5“)	23.37	28,58/28,65
60640.W1006	60	63,5 (2,5“)	23.37	28,58/28,65
60640.W1008	80	63,5 (2,5“)	23.37	28,58/28,65
60640.W1009	95	63,5 (2,5“)	23.37	28,58/28,68
60640.W1013	35	63,5 (2,5“)	49.28	31,80/31,90
60640.W1016	60	63,5 (2,5“)	49.28	31,80/31,90
60640.W1018	80	63,5 (2,5“)	49.28	31,80/31,90
60640.W1019	95	63,5 (2,5“)	49.28	31,80/31,90
60640.W1023	35	101,6 (4“)	23.37	31,80/31,90
60640.W1026	60	101,6 (4“)	23.37	31,80/31,90
60640.W1028	80	101,6 (4“)	23.37	31,80/31,90
60640.W1029	95	101,6 (4“)	23.37	31,80/31,90
60640.W1033	35	101,6 (4“)	49.28	31,80/31,90
60640.W1036	60	101,6 (4“)	49.28	31,80/31,90
60640.W1038	80	101,6 (4“)	49.28	31,80/31,90
60640.W1039	95	101,6 (4“)	49.28	31,80/31,90

Durasoft Roller
stud mount

60644

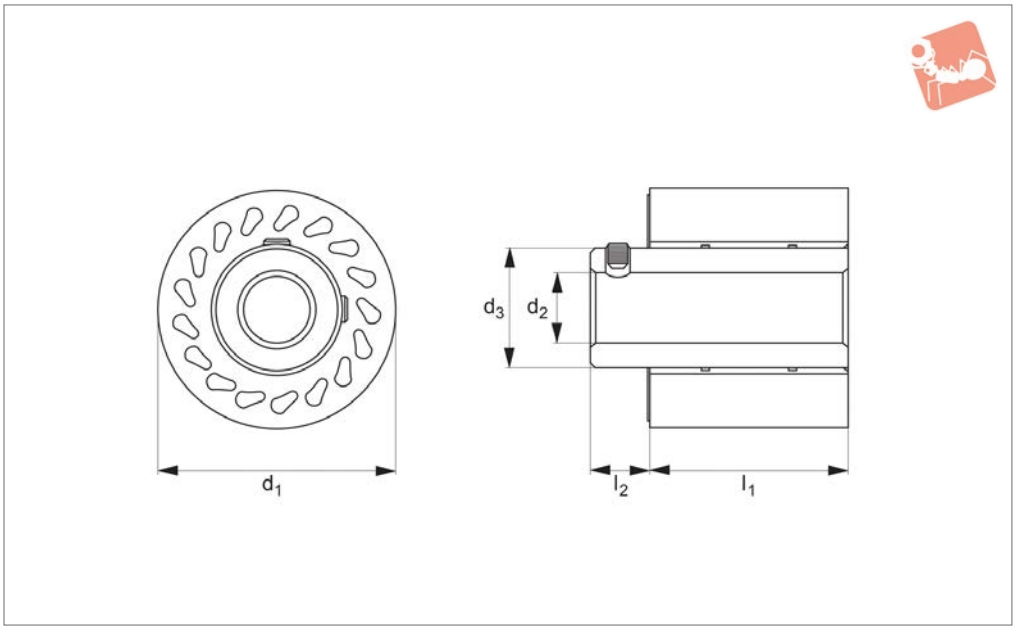


Material
Urethane bonded to a steel insert. Hardness from 35-80 durometer (Shore A).

Technical Notes
Bearings included (held in place with snap rings). For more details on bearings please see technical pages. Assembled with socket head cap screw, spacer and lock nut.

Tips
Durasoft rollers have „teardrop“ holes to allow the roller to flex for firm but non-damaging contact.

Order No.	Durometer	d_1	l_1	d_2	l_2	l_3	Bearing type
60644.W1003	35	62,5 (2,5“)	23.37	1/2-13	27.94	3.05	B
60644.W1006	60	62,5 (2,5“)	23.37	1/2-13	27.94	3.05	B
60644.W1008	80	62,5 (2,5“)	23.37	1/2-13	27.94	3.05	B
60644.W1013	35	62,5 (2,5“)	49.28	1/2-13	35.81	6.35	C
60644.W1016	60	62,5 (2,5“)	49.28	1/2-13	35.81	6.35	C
60644.W1018	80	62,5 (2,5“)	49.28	1/2-13	35.81	6.35	C
60644.W1023	35	101,6 (4“)	23.37	1/2-13	27.94	3.05	B
60644.W1026	60	101,6 (4“)	23.37	1/2-13	27.94	3.05	B
60644.W1028	80	101,6 (4“)	23.37	1/2-13	27.94	3.05	B
60644.W1033	35	101,6 (4“)	49.28	1/2-13	35.81	6.35	C
60644.W1036	60	101,6 (4“)	49.28	1/2-13	35.81	6.35	C
60644.W1038	80	101,6 (4“)	49.28	1/2-13	35.81	6.35	C



60646

Material
Urethane bonded to a steel insert. Hardness from 35-80 durometer (Shore A).

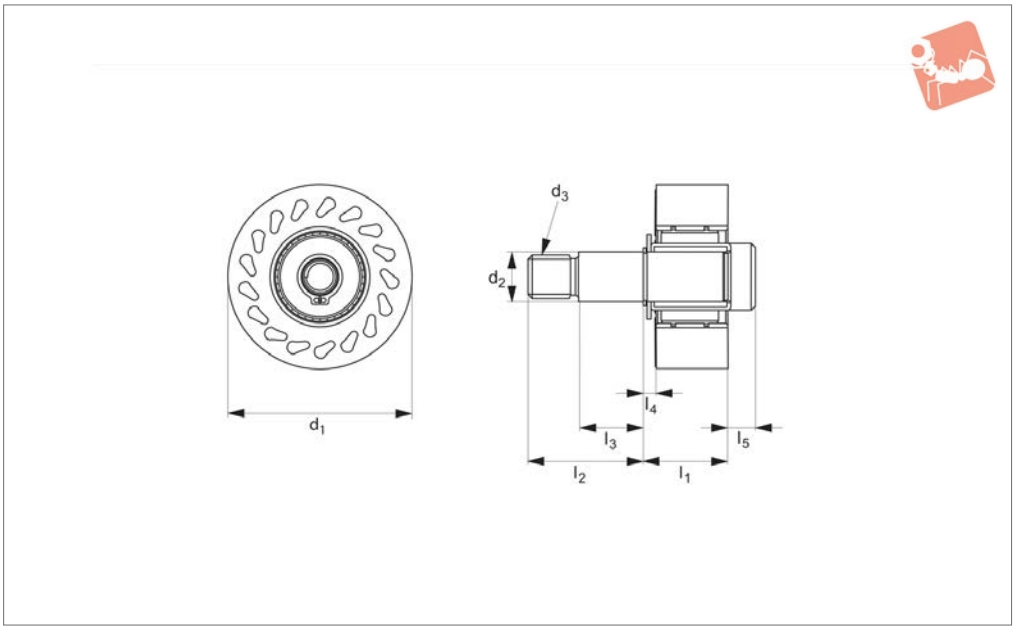
Technical Notes
Designed to be mounted onto a shaft. A hub extends past the roller and is supplied with two set screws at 90°.

Tips
Durasoft rollers have „teardrop“ holes to allow the roller to flex for firm but non-damaging contact.

Order No.	Durometer	d_1	l_1	d_2 min.|max.	l_2	d_3
60646.W1003	35	63,5 (2,5“)	23.37	12,73/12,83	12.7	31.75
60646.W1006	60	63,5 (2,5“)	23.37	12,73/12,83	12.7	31.75
60646.W1008	80	63,5 (2,5“)	23.37	12,73/12,83	12.7	31.75
60646.W1009	95	63,5 (2,5“)	23.37	12,73/12,83	12.7	31.75
60646.W1013	35	63,5 (2,5“)	23.37	15,90/16,03	12.7	31.75
60646.W1016	60	63,5 (2,5“)	23.37	15,90/16,03	12.7	31.75
60646.W1018	80	63,5 (2,5“)	23.37	15,90/16,03	12.7	31.75
60646.W1019	95	63,5 (2,5“)	23.37	15,90/16,03	12.7	31.75
60646.W1023	35	63,5 (2,5“)	23.27	19,08/19,20	12.7	31.75
60646.W1026	60	63,5 (2,5“)	23.27	19,08/19,20	12.7	31.75
60646.W1028	80	63,5 (2,5“)	23.27	19,08/19,20	12.7	31.75
60646.W1029	95	63,5 (2,5“)	23.27	19,08/19,20	12.7	31.75

Durasoft Roller
clutch bearing

60648

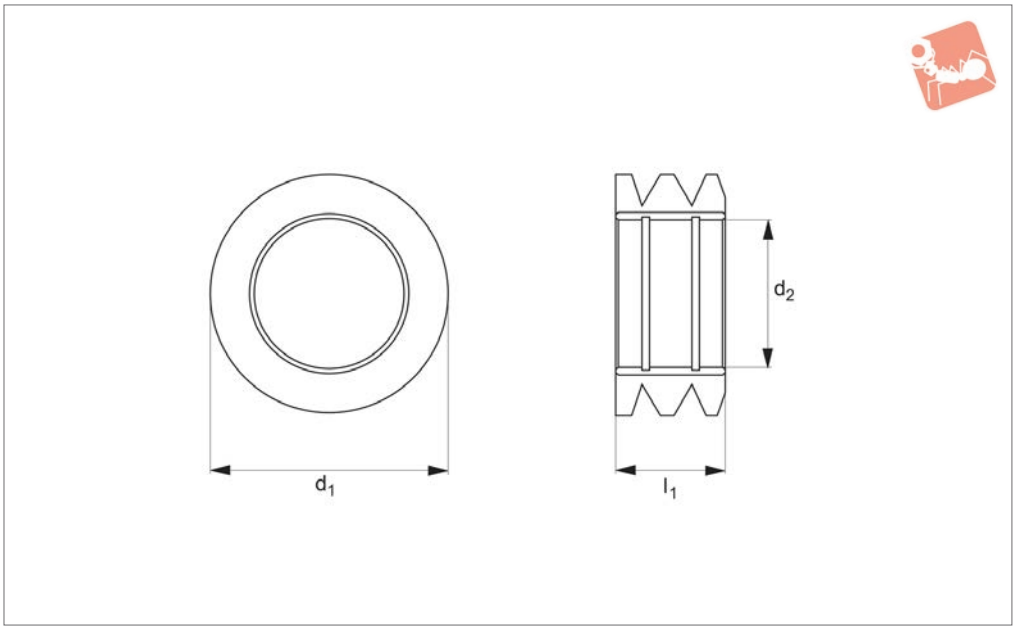


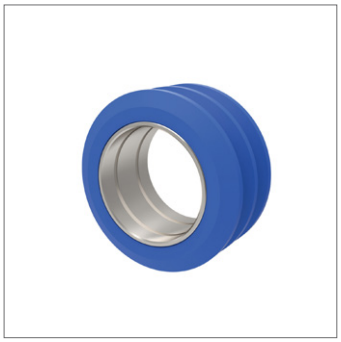
Material
Urethane bonded to a steel insert. Hardness from 35-80 durometer (Shore A).

Technical Notes
A clutch bearing allows the roller to turn in only one direction. Available in left or right hand rotation (with the stud pointed upwards, a right hand rotation turns clockwise).
Type R= right hand clutch bearing.
Type L= left hand clutch bearing.

Tips
Durasoft rollers have „teardrop“ holes to allow the roller to flex for firm but non-damaging contact. All clutch bearing are type I. Please see technical page for more information on the bearing.

Order No.	Type	Durometer	d_1	l_1	d_2 min. | max.	l_2	d_3	l_3	l_4	l_5
60648.W1003	R	35	63,50 (2,5“)	23.37	15,77/15,82	45.47	1/2-13“	26.42	3.05	10.41
60648.W1006	R	60	63,50 (2,5“)	23.37	15,77/15,82	45.47	1/2-13“	26.42	3.05	10.41
60648.W1008	R	80	63,50 (2,5“)	23.37	15,77/15,82	45.47	1/2-13“	26.42	3.05	10.41
60648.W1013	L	35	63,50 (2,5“)	23.37	15,77/15,82	45.47	1/2-13“	26.42	3.05	10.41
60648.W1016	L	60	63,50 (2,5“)	23.37	15,77/15,82	45.47	1/2-13“	26.42	3.05	10.41
60648.W1018	L	80	23.37	23.37	15,77/15,82	45.47	1/2-13“	26.42	3.05	10.41
60648.W1023	R	35	63,50 (2,5“)	49.28	15,77/15,82	31.75	1/2-13“	12.70	10.92	-
60648.W1026	R	60	63,50 (2,5“)	49.28	15,77/15,82	31.75	1/2-13“	12.70	10.92	-
60648.W1028	R	80	63,50 (2,5“)	49.28	15,77/15,82	31.75	1/2-13“	12.70	10.92	-
60648.W1033	L	35	63,50 (2,5“)	49.28	15,77/15,82	31.75	1/2-13“	12.70	10.92	-
60648.W1036	L	60	63,50 (2,5“)	49.28	15,77/15,82	31.75	1/2-13“	12.70	10.92	-
60648.W1038	L	80	63,50 (2,5“)	49.28	15,77/15,82	31.75	1/2-13“	12.70	10.92	-
60648.W1043	R	35	101,60 (4“)	23.37	15,77/15,82	45.47	1/2-13“	26.42	3.05	10.41
60648.W1046	R	60	101,60 (4“)	23.37	15,77/15,82	45.47	1/2-13“	26.42	3.05	10.41
60648.W1048	R	80	101,60 (4“)	23.37	15,77/15,82	45.47	1/2-13“	26.42	3.05	10.41
60648.W1053	L	35	101,60 (4“)	23.37	15,77/15,82	45.47	1/2-13“	26.42	3.05	10.41
60648.W1056	L	60	101,60 (4“)	23.37	15,77/15,82	45.47	1/2-13“	26.42	3.05	10.41
60648.W1058	L	80	101,60 (4“)	23.37	15,77/15,82	45.47	1/2-13“	26.42	3.05	10.41
60648.W1063	R	35	101,60 (4“)	49.28	15,77/15,82	31.75	1/2-13“	12.70	10.92	-
60648.W1066	R	60	101,60 (4“)	49.28	15,77/15,82	31.75	1/2-13“	12.70	10.92	-
60648.W1068	R	80	101,60 (4“)	49.28	15,77/15,82	31.75	1/2-13“	12.70	10.92	-
60648.W1073	L	35	101,60 (4“)	49.28	15,77/15,82	31.75	1/2-13“	12.70	10.92	-
60648.W1076	L	60	101,60 (4“)	49.28	15,77/15,82	31.75	1/2-13“	12.70	10.92	-
60648.W1078	L	80	101,60 (4“)	49.28	15,77/15,82	31.75	1/2-13“	12.70	10.92	-





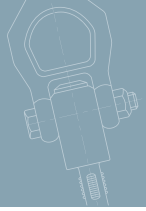
60680

Material
Nitrile, urethane or neoprene bonded to a steel insert. Hardness from 20-60 durometer (Shore A).

Technical Notes
Roller only - allows for custom mounting.

Tips
Finned rollers have grooves on the surface, creating less surface contact with the workpiece, and allowing dirt, debris and liquid to pass.

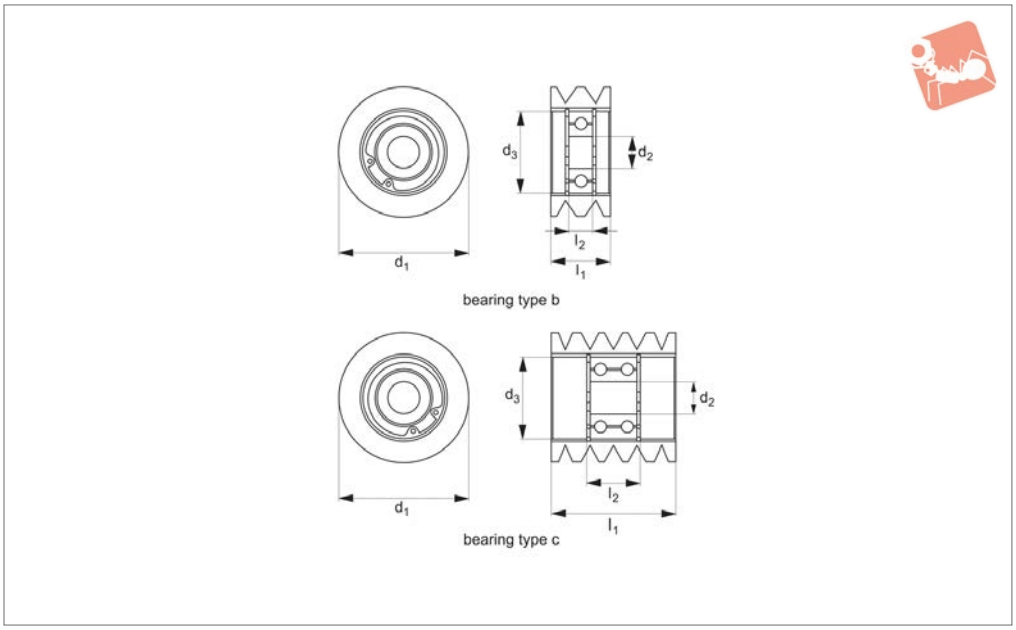
Order No.	Material	Durometer	d_1	l_1	d_2 min.|max.	No. of fins
60680.W1002	Nitrile	20	50,8 (2“)	23.37	28,58/28,65	3
60680.W1003	Nitrile	35	50,8 (2“)	23.37	28,58/28,65	3
60680.W1006	Nitrile	60	50,8 (2“)	23.37	28,58/28,65	3
60680.W1012	Nitrile	20	50,8 (2“)	23.37	28,58/28,65	3
60680.W1013	Nitrile	35	50,8 (2“)	23.37	28,58/28,65	3
60680.W1016	Nitrile	60	50,8 (2“)	23.37	28,58/28,65	3
60680.W1022	Nitrile	20	50,8 (2“)	23.37	28,58/28,65	3
60680.W1023	Nitrile	35	50,8 (2“)	23.37	28,58/28,65	3
60680.W1026	Nitrile	60	50,8 (2“)	23.37	31,80/31,90	3
60680.W1032	Nitrile	20	50,8 (2“)	23.37	31,80/31,90	3
60680.W1033	Nitrile	35	50,8 (2“)	23.37	31,80/31,90	3
60680.W1036	Nitrile	60	50,8 (2“)	23.37	31,80/31,90	3
60680.W1042	Nitrile	20	50,8 (2“)	23.37	31,80/31,90	3
60680.W1043	Nitrile	35	50,8 (2“)	23.37	31,80/31,90	3
60680.W1046	Nitrile	60	50,8 (2“)	23.37	31,80/31,90	3
60680.W1052	Nitrile	20	50,8 (2“)	23.37	31,80/31,90	3
60680.W1053	Nitrile	35	50,8 (2“)	49.28	28,58/28,65	6
60680.W1056	Nitrile	60	50,8 (2“)	49.28	28,58/28,65	6
60680.W1062	Nitrile	20	50,8 (2“)	49.28	28,58/28,65	6
60680.W1063	Nitrile	35	50,8 (2“)	49.28	28,58/28,65	6
60680.W1066	Nitrile	60	50,8 (2“)	49.28	28,58/28,65	6
60680.W1072	Nitrile	20	50,8 (2“)	49.28	28,58/28,65	6
60680.W1073	Nitrile	35	50,8 (2“)	49.28	28,58/28,65	6
60680.W1076	Nitrile	60	50,8 (2“)	49.28	28,58/28,65	6
60680.W1083	Nitrile	35	50,8 (2“)	49.28	31,80/31,90	6
60680.W1086	Nitrile	60	50,8 (2“)	49.28	31,80/31,90	6
60680.W1093	Nitrile	35	50,8 (2“)	49.28	31,80/31,90	6
60680.W1096	Nitrile	60	50,8 (2“)	49.28	31,80/31,90	6
60680.W2003	Urethane	35	50,8 (2“)	49.28	31,80/31,90	6
60680.W2006	Urethane	60	50,8 (2“)	49.28	31,80/31,90	6
60680.W2013	Urethane	35	50,8 (2“)	49.28	31,80/31,90	6

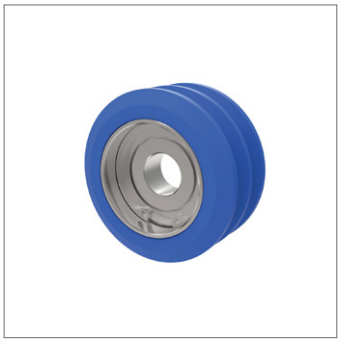


Finned Roller

roller only

Order No.	Material	Durometer	d_1	l_1	d_2 min.|max.	No. of fins
60680.W2016	Urethane	60	50,8 (2“)	49.28	31,80/31,90	6
60680.W2023	Urethane	35	50,8 (2“)	23.37	28,58/28,65	3
60680.W2026	Urethane	60	50,8 (2“)	23.37	28,58/28,65	3
60680.W2033	Urethane	35	50,8 (2“)	23.37	28,58/28,65	3
60680.W2036	Urethane	60	50,8 (2“)	23.37	28,58/28,65	3
60680.W2043	Urethane	35	50,8 (2“)	23.37	28,58/28,65	3
60680.W2046	Urethane	60	50,8 (2“)	23.37	28,58/28,65	3
60680.W2053	Urethane	35	50,8 (2“)	23.37	28,58/28,65	3
60680.W2056	Urethane	60	50,8 (2“)	23.37	28,58/28,65	3
60680.W2063	Urethane	35	63,5 (2,5“)	23.37	31,80/31,90	3
60680.W2066	Urethane	60	63,5 (2,5“)	23.37	31,80/31,90	3
60680.W2073	Urethane	35	63,5 (2,5“)	23.37	31,80/31,90	3
60680.W2076	Urethane	60	63,5 (2,5“)	23.37	31,80/31,90	3
60680.W2083	Urethane	35	63,5 (2,5“)	23.37	31,80/31,90	3
60680.W2086	Urethane	60	63,5 (2,5“)	23.37	31,80/31,90	3
60680.W2093	Urethane	35	63,5 (2,5“)	23.37	31,80/31,90	3
60680.W2096	Urethane	60	63,5 (2,5“)	23.37	31,80/31,90	3
60680.W3002	Neoprene	20	63,5 (2,5“)	49.28	28,58/28,65	6
60680.W3003	Neoprene	35	63,5 (2,5“)	49.28	28,58/28,65	6
60680.W3006	Neoprene	60	63,5 (2,5“)	49.28	28,58/28,65	6
60680.W3012	Neoprene	20	63,5 (2,5“)	49.28	28,58/28,65	6
60680.W3013	Neoprene	35	63,5 (2,5“)	49.28	28,58/28,65	6
60680.W3016	Neoprene	60	63,5 (2,5“)	49.28	28,58/28,65	6
60680.W3022	Neoprene	20	63,5 (2,5“)	49.28	28,58/28,65	6
60680.W3023	Neoprene	35	63,5 (2,5“)	49.28	28,58/28,65	6
60680.W3026	Neoprene	60	63,5 (2,5“)	49.28	31,80/31,90	6
60680.W3032	Neoprene	20	63,5 (2,5“)	49.28	31,80/31,90	6
60680.W3033	Neoprene	35	63,5 (2,5“)	49.28	31,80/31,90	6
60680.W3036	Neoprene	60	63,5 (2,5“)	49.28	31,80/31,90	6
60680.W3042	Neoprene	20	63,5 (2,5“)	49.28	31,80/31,90	6
60680.W3043	Neoprene	35	63,5 (2,5“)	49.28	31,80/31,90	6
60680.W3046	Neoprene	60	63,5 (2,5“)	49.28	31,80/31,90	6
60680.W3052	Neoprene	20	63,5 (2,5“)	49.28	31,80/31,90	6
60680.W3053	Neoprene	35	101,6 (4“)	49.28	28,58/28,65	8
60680.W3056	Neoprene	60	101,6 (4“)	49.28	28,58/28,65	8
60680.W3062	Neoprene	20	101,6 (4“)	49.28	28,58/28,65	8
60680.W3063	Neoprene	35	101,6 (4“)	49.28	28,58/28,65	8
60680.W3066	Neoprene	60	101,6 (4“)	49.28	28,58/28,65	8
60680.W3072	Neoprene	20	101,6 (4“)	49.28	28,58/28,65	8
60680.W3073	Neoprene	35	101,6 (4“)	49.28	31,80/31,90	8
60680.W3076	Neoprene	60	101,6 (4“)	49.28	31,80/31,90	8
60680.W3083	Neoprene	35	101,6 (4“)	49.28	31,80/31,90	8
60680.W3086	Neoprene	60	101,6 (4“)	49.28	31,80/31,90	8
60680.W3093	Neoprene	35	101,6 (4“)	49.28	31,80/31,90	8
60680.W3096	Neoprene	60	101,6 (4“)	49.28	31,80/31,90	8





60682

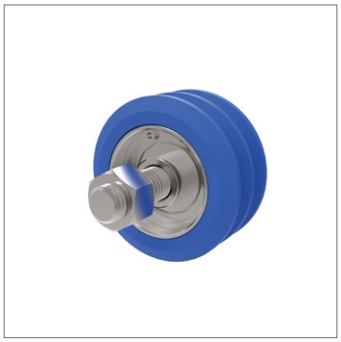
Material
Nitrile, urethane or neoprene bonded to a steel insert. Hardness from 20-60 durometer (Shore A).

Technical Notes
Bearings included (held in place with snap rings). For more details on bearings please see technical pages.

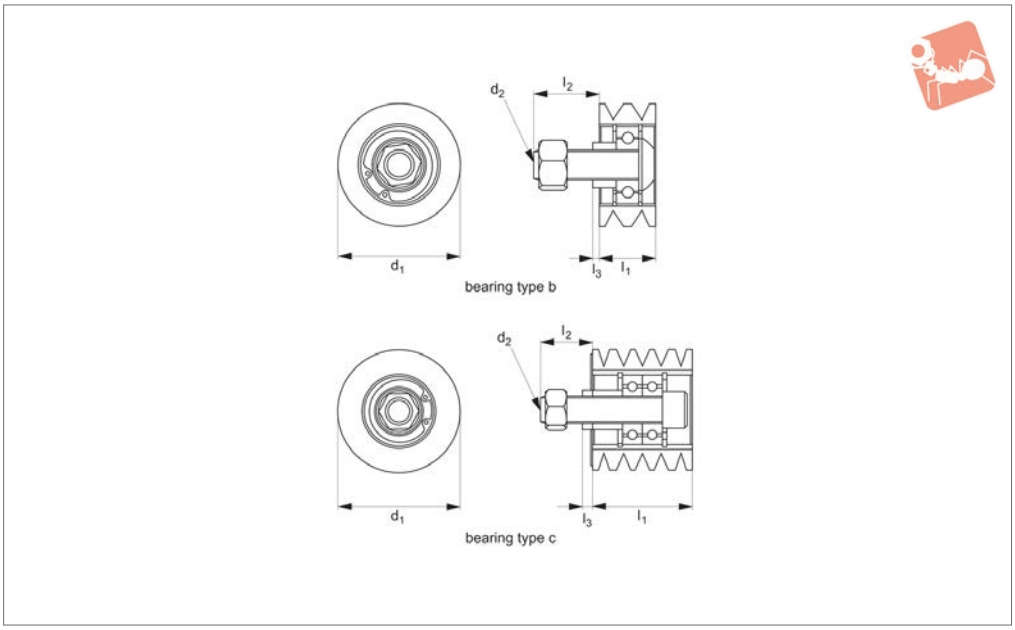
Tips
Finned rollers have grooves on the surface, creating less surface contact with the workpiece, and allowing dirt, debris and liquid to pass.

Order No.	Material	Durometer	Bearing type	d_1	l_1	d_2 -0|+0.13	d_3 -0|+0.13	l_2 -0|+0.13	No. of fins
60682.W1002	Nitrile	20	B	50,8 (2“)	23.37	12.7	31.62	9.40	3
60682.W1003	Nitrile	35	B	50,8 (2“)	23.37	12.7	31.62	9.40	3
60682.W1006	Nitrile	60	B	50,8 (2“)	23.37	12.7	31.62	9.40	3
60682.W1012	Nitrile	20	C	50,8 (2“)	49.28	12.7	31.62	18.92	6
60682.W1013	Nitrile	35	C	50,8 (2“)	49.28	12.7	31.62	18.92	6
60682.W1016	Nitrile	60	C	50,8 (2“)	49.28	12.7	31.62	18.92	6
60682.W1022	Nitrile	20	B	63,5 (2,5“)	23.37	12.7	31.62	9.40	3
60682.W1023	Nitrile	35	B	63,5 (2,5“)	23.37	12.7	31.62	9.40	3
60682.W1026	Nitrile	60	B	63,5 (2,5“)	23.37	12.7	31.62	9.40	3
60682.W2003	Urethane	35	B	50,8 (2“)	23.37	12.7	31.62	9.40	3
60682.W2006	Urethane	60	B	50,8 (2“)	23.37	12.7	31.62	9.40	3
60682.W2013	Urethane	35	C	50,8 (2“)	49.28	12.7	31.62	18.92	6
60682.W2016	Urethane	60	C	50,8 (2“)	49.28	12.7	31.62	18.92	6
60682.W2023	Urethane	35	B	63,5 (2,5“)	23.37	12.7	31.62	9.40	3
60682.W2026	Urethane	60	B	63,5 (2,5“)	23.37	12.7	31.62	9.40	3
60682.W3002	Neoprene	20	B	50,8 (2“)	23.37	12.7	31.62	9.40	3
60682.W3003	Neoprene	35	B	50,8 (2“)	23.37	12.7	31.62	9.40	3
60682.W3006	Neoprene	60	B	50,8 (2“)	23.37	12.7	31.62	9.40	3
60682.W3012	Neoprene	20	C	50,8 (2“)	49.28	12.7	31.62	18.92	6
60682.W3013	Neoprene	35	C	50,8 (2“)	49.28	12.7	31.62	18.92	6
60682.W3016	Neoprene	60	C	50,8 (2“)	49.28	12.7	31.62	18.92	6
60682.W3022	Neoprene	20	B	63,5 (2,5“)	23.37	12.7	31.62	9.40	3
60682.W3023	Neoprene	35	B	63,5 (2,5“)	23.37	12.7	31.62	9.40	3
60682.W3026	Neoprene	60	B	63,5 (2,5“)	23.37	12.7	31.62	9.40	3

Finned Roller
stud mount



60684

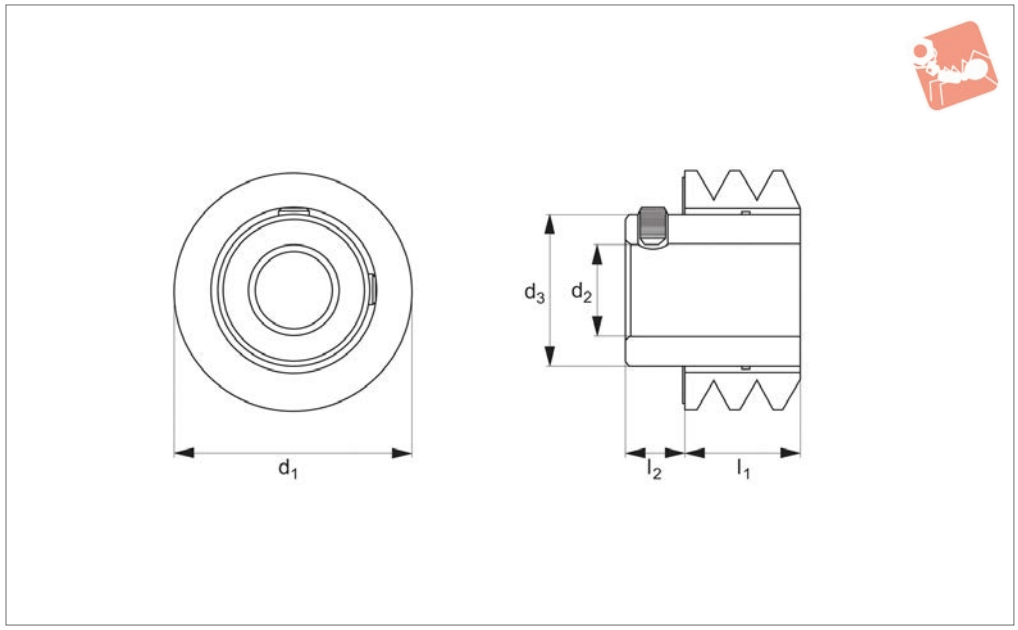


Material
Nitrile, urethane or neoprene bonded to a steel insert. Hardness from 20-60 durometer (Shore A).

Technical Notes
Bearings included (held in place with snap rings). For more details on bearings please see technical pages. Assembled with socket head cap screw, spacer and lock nut.

Tips
Finned rollers have grooves on the surface, creating less surface contact with the workpiece, and allowing dirt, debris and liquid to pass.

Order No.	Material	Duro.	Bearing type	d_1	l_1	d_2	l_2	l_3	No. of bearings	No. of fins
60684.W1002	Nitrile	20	B	50,8 (2“)	23.37	41306	27.94	3.05	1	3
60684.W1003	Nitrile	35	B	50,8 (2“)	23.37	41306	27.94	3.05	1	3
60684.W1006	Nitrile	60	B	50,8 (2“)	23.37	41306	27.94	3.05	1	3
60684.W1012	Nitrile	20	C	50,8 (2“)	49.27	41306	35.81	6.35	1	6
60684.W1013	Nitrile	35	C	50,8 (2“)	49.27	41306	35.81	6.35	1	6
60684.W1016	Nitrile	60	C	50,8 (2“)	49.27	41306	35.81	6.35	1	6
60684.W1022	Nitrile	20	B	63,5 (2“)	49.27	41306	27.94	3.05	1	3
60684.W1023	Nitrile	35	B	50,8 (2“)	49.27	41306	27.94	3.05	1	3
60684.W1026	Nitrile	60	B	50,8 (2“)	49.27	41306	27.94	3.05	1	3
60684.W2003	Urethane	35	B	50,8 (2“)	23.37	41306	27.94	3.05	1	3
60684.W2006	Urethane	60	B	50,8 (2“)	23.37	41306	27.94	3.05	1	3
60684.W2013	Urethane	35	C	50,8 (2“)	49.27	41306	35.81	6.35	1	6
60684.W2016	Urethane	60	C	50,8 (2“)	49.27	41306	35.81	6.35	1	6
60684.W2023	Urethane	35	B	50,8 (2“)	49.27	41306	27.94	3.05	1	3
60684.W2026	Urethane	60	B	50,8 (2“)	49.27	41306	27.94	3.05	1	3
60684.W3002	Neoprene	20	B	50,8 (2“)	23.37	41306	27.94	3.05	1	3
60684.W3003	Neoprene	35	B	50,8 (2“)	23.37	41306	27.94	3.05	1	3
60684.W3006	Neoprene	60	B	50,8 (2“)	23.37	41306	27.94	3.05	1	3
60684.W3012	Neoprene	20	C	50,8 (2“)	49.27	41306	35.81	6.35	1	6
60684.W3013	Neoprene	35	C	50,8 (2“)	49.27	41306	35.81	6.35	1	6
60684.W3016	Neoprene	60	C	50,8 (2“)	49.27	41306	35.81	6.35	1	6
60684.W3022	Neoprene	20	B	63,5 (2“)	49.27	41306	27.94	3.05	1	3
60684.W3023	Neoprene	35	B	50,8 (2“)	49.27	41306	27.94	3.05	1	3
60684.W3026	Neoprene	60	B	50,8 (2“)	49.27	41306	27.94	3.05	1	3



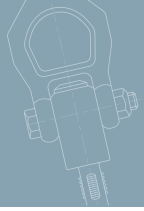
60686

Material
Nitrile, urethane or neoprene bonded to a steel insert. Hardness from 20-60 durometer (Shore A).

Technical Notes
Designed to be mounted onto a shaft. A hub extends past the roller and is supplied with two set screws at 90°.

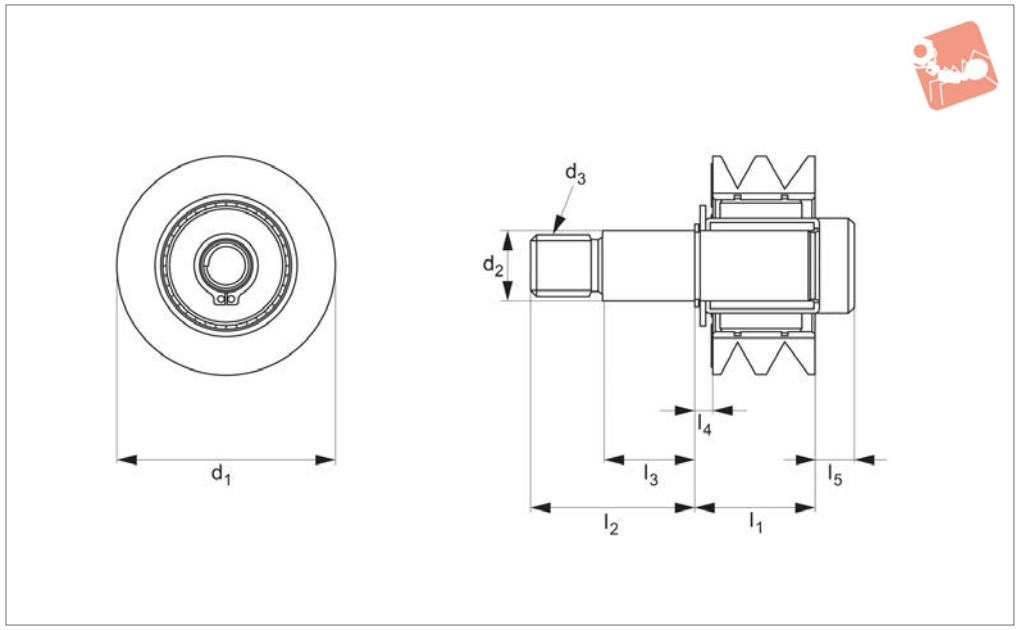
Tips
Finned rollers have grooves on the surface, creating less surface contact with the workpiece, and allowing dirt, debris and liquid to pass.

Order No.	Material	Duro.	d_1	l_1	d_2 min.|max.	d_3	l_2	No. of fins
60686.W1002	Nitrile	20	50,80 (2“)	23.37	12,73/12,83	31.75	12.70	3
60686.W1003	Nitrile	35	50,80 (2“)	23.37	12,73/12,83	31.75	12.70	3
60686.W1006	Nitrile	60	50,80 (2“)	23.37	12,73/12,83	31.75	12.70	3
60686.W1012	Nitrile	20	50,80 (2“)	23.37	15,90/16,03	31.75	12.70	3
60686.W1013	Nitrile	35	50,80 (2“)	23.37	15,90/16,03	31.75	12.70	3
60686.W1016	Nitrile	60	50,80 (2“)	23.37	15,90/16,03	31.75	12.70	3
60686.W1022	Nitrile	20	50,80 (2“)	23.37	19,08/19,20	31.75	12.70	3
60686.W1023	Nitrile	35	50,80 (2“)	23.37	19,08/19,20	31.75	12.70	3
60686.W1026	Nitrile	60	50,80 (2“)	23.37	19,08/19,20	31.75	12.70	3
60686.W1032	Nitrile	20	50,80 (2“)	23.27	25,43/25,55	34.80	12.70	3
60686.W1033	Nitrile	35	50,80 (2“)	23.27	25,43/25,55	34.80	12.70	3
60686.W1036	Nitrile	60	50,80 (2“)	23.27	25,43/25,55	34.80	12.70	3
60686.W1042	Nitrile	20	50,80 (2“)	49.28	12,73/12,83	31.75	12.70	6
60686.W1043	Nitrile	35	50,80 (2“)	49.28	12,73/12,83	31.75	12.70	6
60686.W1046	Nitrile	60	50,80 (2“)	49.28	12,73/12,83	31.75	12.70	6
60686.W2003	Urethane	35	50,80 (2“)	23.37	12,73/12,83	31.75	12.70	3
60686.W2006	Urethane	60	50,80 (2“)	23.37	12,73/12,83	31.75	12.70	3
60686.W2013	Urethane	35	50,80 (2“)	23.37	15,90/16,03	31.75	12.70	3
60686.W2016	Urethane	60	50,80 (2“)	23.37	15,90/16,03	31.75	12.70	3
60686.W2023	Urethane	35	50,80 (2“)	23.37	19,08/19,20	31.75	12.70	3
60686.W2026	Urethane	60	50,80 (2“)	23.37	19,08/19,20	31.75	12.70	3
60686.W2033	Urethane	35	50,80 (2“)	23.27	25,43/25,55	34.80	12.70	3
60686.W2036	Urethane	60	50,80 (2“)	23.27	25,43/25,55	34.80	12.70	3
60686.W2043	Urethane	35	50,80 (2“)	49.28	12,73/12,83	31.75	12.70	6
60686.W2046	Urethane	60	50,80 (2“)	49.28	12,73/12,83	31.75	12.70	6
60686.W3002	Neoprene	20	50,80 (2“)	23.37	12,73/12,83	31.75	12.70	3
60686.W3003	Neoprene	35	50,80 (2“)	23.37	12,73/12,83	31.75	12.70	3
60686.W3006	Neoprene	60	50,80 (2“)	23.37	12,73/12,83	31.75	12.70	3
60686.W3012	Neoprene	20	50,80 (2“)	23.37	15,90/16,03	31.75	12.70	3
60686.W3013	Neoprene	35	50,80 (2“)	23.37	15,90/16,03	31.75	12.70	3
60686.W3016	Neoprene	60	50,80 (2“)	23.37	15,90/16,03	31.75	12.70	3



Finned Roller
shaft drive

Order No.	Material	Duro.	d_1	l_1	d_2 min.|max.	d_3	l_2	No. of fins
60686.W3022	Neoprene	20	50,80 (2“)	23.37	19,08/19,20	31.75	12.70	3
60686.W3023	Neoprene	35	50,80 (2“)	23.37	19,08/19,20	31.75	12.70	3
60686.W3026	Neoprene	60	50,80 (2“)	23.37	19,08/19,20	31.75	12.70	3
60686.W3032	Neoprene	20	50,80 (2“)	23.27	25,43/25,55	34.80	12.70	3
60686.W3033	Neoprene	35	50,80 (2“)	23.27	25,43/25,55	34.80	12.70	3
60686.W3036	Neoprene	60	50,80 (2“)	23.27	25,43/25,55	34.80	12.70	3
60686.W3042	Neoprene	20	50,80 (2“)	49.28	12,73/12,83	31.75	12.70	6
60686.W3043	Neoprene	35	50,80 (2“)	49.28	12,73/12,83	31.75	12.70	6
60686.W3046	Neoprene	60	50,80 (2“)	49.28	12,73/12,83	31.75	12.70	6



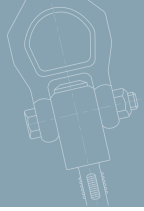
60688

Material
Nitrile, urethane or neoprene bonded to a steel insert. Hardness from 20-60 durometer (Shore A).

Technical Notes
A clutch bearing allows the roller to turn in only one direction. Available in left or right hand rotation (with the stud pointed upwards, a right hand rotation turns clockwise.
Type R = right hand clutch bearing.
Type L = left hand clutch bearing.
Supplied with type I bearings, please see technical page for more information on bearings.

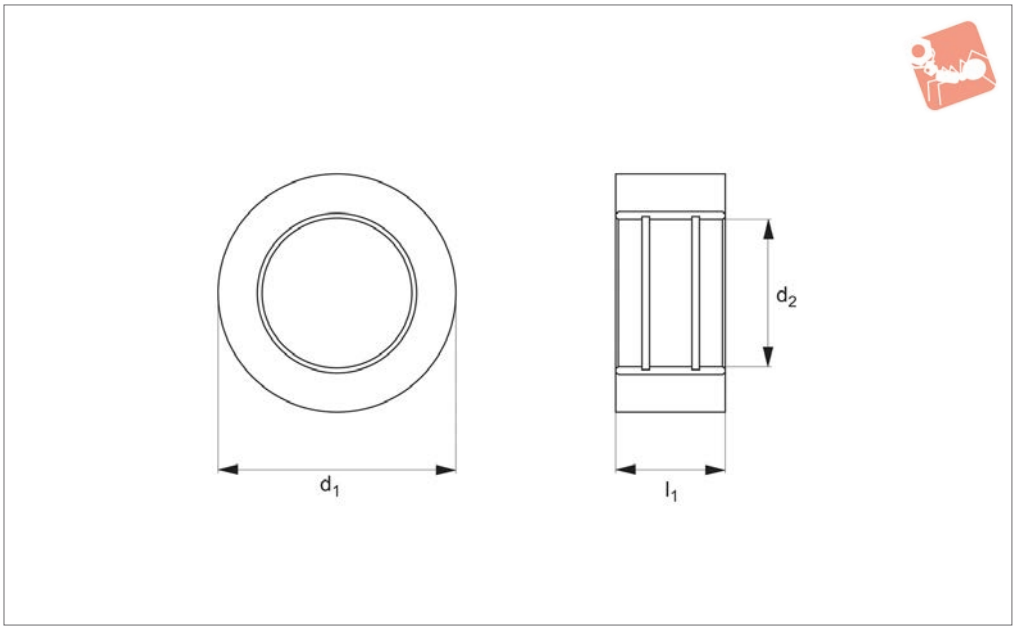
Tips
Finned rollers have grooves on the surface, creating less surface contact with the workpiece, and allowing dirt, debris and liquid to pass.
No. of fins:
l_1 = 23,37 3 fins
l_1 = 49,28 6 fins

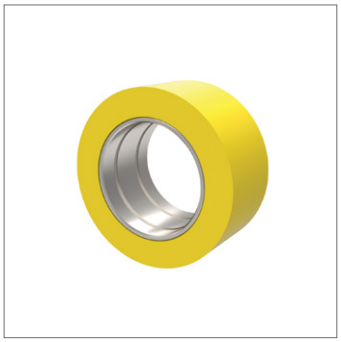
Order No.	Material	Duro.	Type	d_1	l_1	d_2 +0.05	d_3	l_2	l_3	l_4	l_5
60688.W1002	Nitrile	20	R	50.80	23.37	15.77	1/2-13“	45.47	26.42	3.05	10.41
60688.W1003	Nitrile	35	R	50.80	23.37	15.77	1/2-13“	45.47	26.42	3.05	10.41
60688.W1006	Nitrile	60	R	50.80	23.37	15.77	1/2-13“	45.47	26.42	3.05	10.41
60688.W1012	Nitrile	20	L	50.80	23.37	15.77	1/2-13“	45.47	26.42	3.05	10.41
60688.W1013	Nitrile	35	L	50.80	23.37	15.77	1/2-13“	45.47	26.42	3.05	10.41
60688.W1016	Nitrile	60	L	50.80	23.37	15.77	1/2-13“	45.47	26.42	3.05	10.41
60688.W1022	Nitrile	20	R	50.80	49.28	15.77	1/2-13“	31.75	23.62	10.42	-
60688.W1023	Nitrile	35	R	50.80	49.28	15.77	1/2-13“	31.75	23.62	10.42	-
60688.W1026	Nitrile	60	R	50.80	49.28	15.77	1/2-13“	31.75	23.62	10.42	-
60688.W1032	Nitrile	20	L	50.80	49.28	15.77	1/2-13“	31.75	23.62	10.42	-
60688.W1033	Nitrile	35	L	50.80	49.28	15.77	1/2-13“	31.75	23.62	10.42	-
60688.W1036	Nitrile	60	L	50.80	49.28	15.77	1/2-13“	31.75	23.62	10.42	-
60688.W1042	Nitrile	20	R	63.50	23.37	15.77	1/2-13“	45.47	26.42	3.05	10.42
60688.W1043	Nitrile	35	R	63.50	23.37	15.77	1/2-13“	45.47	26.42	3.05	10.42
60688.W1046	Nitrile	60	R	63.50	23.37	15.77	1/2-13“	45.47	26.42	3.05	10.42
60688.W1052	Nitrile	20	L	63.50	23.37	15.77	1/2-13“	45.47	26.42	3.05	10.42
60688.W1053	Nitrile	35	L	63.50	23.37	15.77	1/2-13“	45.47	26.42	3.05	10.42
60688.W1056	Nitrile	60	L	63,50 (2,5“)	23.37	15.77	1/2-13“	45.47	26.42	3.05	10.42
60688.W2003	Urethane	35	R	50.80	23.37	15.77	1/2-13“	45.47	26.42	3.05	10.41
60688.W2006	Urethane	60	R	50.80	23.37	15.77	1/2-13“	45.47	26.42	3.05	10.41
60688.W2013	Urethane	35	L	50.80	23.37	15.77	1/2-13“	45.47	26.42	3.05	10.41
60688.W2016	Urethane	60	L	50.80	23.37	15.77	1/2-13“	45.47	26.42	3.05	10.41
60688.W2023	Urethane	35	R	50.80	49.28	15.77	1/2-13“	31.75	23.62	10.42	-
60688.W2026	Urethane	60	R	50.80	49.28	15.77	1/2-13“	31.75	23.62	10.42	-
60688.W2033	Urethane	35	L	50.80	49.28	15.77	1/2-13“	31.75	23.62	10.42	-
60688.W2036	Urethane	60	L	50.80	49.28	15.77	1/2-13“	31.75	23.62	10.42	-
60688.W2043	Urethane	35	R	63.50	23.37	15.77	1/2-13“	45.47	26.42	3.05	10.42
60688.W2046	Urethane	60	R	63.50	23.37	15.77	1/2-13“	45.47	26.42	3.05	10.42
60688.W2053	Urethane	35	L	63.50	23.37	15.77	1/2-13“	45.47	26.42	3.05	10.42



Finned Roller
clutch bearing

Order No.	Material	Duro.	Type	d_1	l_1	d_2 +0.05	d_3	l_2	l_3	l_4	l_5
60688.W2056	Urethane	60	L	63,50 (2,5“)	23.37	15.77	1/2-13“	45.47	26.42	3.05	10.42
60688.W3002	Neoprene	20	R	50.80	23.37	15.77	1/2-13“	45.47	26.42	3.05	10.41
60688.W3003	Neoprene	35	R	50.80	23.37	15.77	1/2-13“	45.47	26.42	3.05	10.41
60688.W3006	Neoprene	60	R	50.80	23.37	15.77	1/2-13“	45.47	26.42	3.05	10.41
60688.W3012	Neoprene	20	L	50.80	23.37	15.77	1/2-13“	45.47	26.42	3.05	10.41
60688.W3013	Neoprene	35	L	50.80	23.37	15.77	1/2-13“	45.47	26.42	3.05	10.41
60688.W3016	Neoprene	60	L	50.80	23.37	15.77	1/2-13“	45.47	26.42	3.05	10.41
60688.W3022	Neoprene	20	R	50.80	49.28	15.77	1/2-13“	31.75	23.62	10.42	-
60688.W3023	Neoprene	35	R	50.80	49.28	15.77	1/2-13“	31.75	23.62	10.42	-
60688.W3026	Neoprene	60	R	50.80	49.28	15.77	1/2-13“	31.75	23.62	10.42	-
60688.W3032	Neoprene	20	L	50.80	49.28	15.77	1/2-13“	31.75	23.62	10.42	-
60688.W3033	Neoprene	35	L	50.80	49.28	15.77	1/2-13“	31.75	23.62	10.42	-
60688.W3036	Neoprene	60	L	50.80	49.28	15.77	1/2-13“	31.75	23.62	10.42	-
60688.W3042	Neoprene	20	R	63.50	23.37	15.77	1/2-13“	45.47	26.42	3.05	10.42
60688.W3043	Neoprene	35	R	63.50	23.37	15.77	1/2-13“	45.47	26.42	3.05	10.42
60688.W3046	Neoprene	60	R	63.50	23.37	15.77	1/2-13“	45.47	26.42	3.05	10.42
60688.W3052	Neoprene	20	L	63.50	23.37	15.77	1/2-13“	45.47	26.42	3.05	10.42
60688.W3053	Neoprene	35	L	63.50	23.37	15.77	1/2-13“	45.47	26.42	3.05	10.42
60688.W3056	Neoprene	60	L	63.50	23.37	15.77	1/2-13“	45.47	26.42	3.05	10.42





60620

Material
Nitrile, urethane or neoprene bonded to a steel insert.

Hardness from 20-80 durometer (Shore A).

Technical Notes
Roller only - allows for custom mounting.

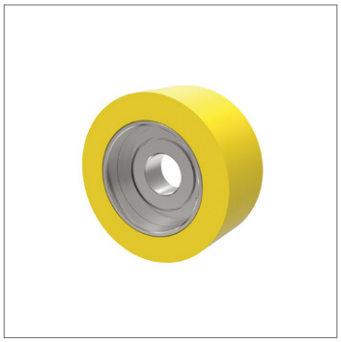
Order No.	Type	Durometer	d_1	l_1	d_2 min.|max.
60620.W1002	Nitrile	20	38,1 (1.5“)	31,75 (1.25“)	22,22 (7/8“)
60620.W1003	Nitrile	35	38,1 (1.5“)	31,75 (1.25“)	22,22 (7/8“)
60620.W1006	Nitrile	60	38,1 (1.5“)	31,75 (1.25“)	22,22 (7/8“)
60620.W1008	Nitrile	80	38,1 (1.5“)	31,75 (1.25“)	22,22 (7/8“)
60620.W1012	Nitrile	20	50,8 (2“)	23,37 (0.92“)	22,23 (1-1/8“)
60620.W1013	Nitrile	35	50,8 (2“)	23,37 (0.92“)	22,23 (1-1/8“)
60620.W1016	Nitrile	60	50,8 (2“)	23,37 (0.92“)	22,23 (1-1/8“)
60620.W1018	Nitrile	80	50,8 (2“)	23,37 (0.92“)	22,23 (1-1/8“)
60620.W1022	Nitrile	20	50,8 (2“)	49,28 (1.94“)	22,23 (1-1/8“)
60620.W1023	Nitrile	35	50,8 (2“)	49,28 (1.94“)	22,23 (1-1/8“)
60620.W1026	Nitrile	60	50,8 (2“)	49,28 (1.94“)	22,23 (1-1/8“)
60620.W1028	Nitrile	80	50,8 (2“)	49,28 (1.94“)	22,23 (1-1/8“)
60620.W1032	Nitrile	20	50,8 (2“)	49,28 (1.94“)	19,05 (1-1/4“)
60620.W1033	Nitrile	35	50,8 (2“)	49,28 (1.94“)	19,05 (1-1/4“)
60620.W1036	Nitrile	60	50,8 (2“)	49,28 (1.94“)	19,05 (1-1/4“)
60620.W1038	Nitrile	80	50,8 (2“)	49,28 (1.94“)	19,05 (1-1/4“)
60620.W1042	Nitrile	20	63,5 (2.5“)	23,37 (0.92“)	19,05 (1-1/4“)
60620.W1043	Nitrile	35	63,5 (2.5“)	23,37 (0.92“)	19,05 (1-1/4“)
60620.W1046	Nitrile	60	63,5 (2.5“)	23,37 (0.92“)	19,05 (1-1/4“)
60620.W1048	Nitrile	80	63,5 (2.5“)	23,37 (0.92“)	19,05 (1-1/4“)
60620.W1052	Nitrile	20	63,5 (2.5“)	49,28 (1.94“)	22,23 (1-1/8“)
60620.W1053	Nitrile	35	63,5 (2.5“)	49,28 (1.94“)	22,23 (1-1/8“)
60620.W1056	Nitrile	60	63,5 (2.5“)	49,28 (1.94“)	22,23 (1-1/8“)
60620.W1059	Nitrile	80	63,5 (2.5“)	49,28 (1.94“)	22,23 (1-1/8“)
60620.W1062	Nitrile	20	63,5 (2.5“)	49,28 (1.94“)	19,05 (1-1/4“)
60620.W1063	Nitrile	35	63,5 (2.5“)	49,28 (1.94“)	19,05 (1-1/4“)
60620.W1066	Nitrile	60	63,5 (2.5“)	49,28 (1.94“)	19,05 (1-1/4“)
60620.W1069	Nitrile	80	63,5 (2.5“)	49,28 (1.94“)	19,05 (1-1/4“)
60620.W1072	Nitrile	20	101,6 (4“)	23,37 (0.92“)	22,23 (1-1/8“)
60620.W1073	Nitrile	35	101,6 (4“)	23,37 (0.92“)	22,23 (1-1/8“)
60620.W1076	Nitrile	60	101,6 (4“)	23,37 (0.92“)	22,23 (1-1/8“)
60620.W1079	Nitrile	80	101,6 (4“)	23,37 (0.92“)	22,23 (1-1/8“)
60620.W1082	Nitrile	20	101,6 (4“)	23,37 (0.92“)	19,05 (1-1/4“)
60620.W1083	Nitrile	35	101,6 (4“)	23,37 (0.92“)	19,05 (1-1/4“)

Solid Roller
roller only

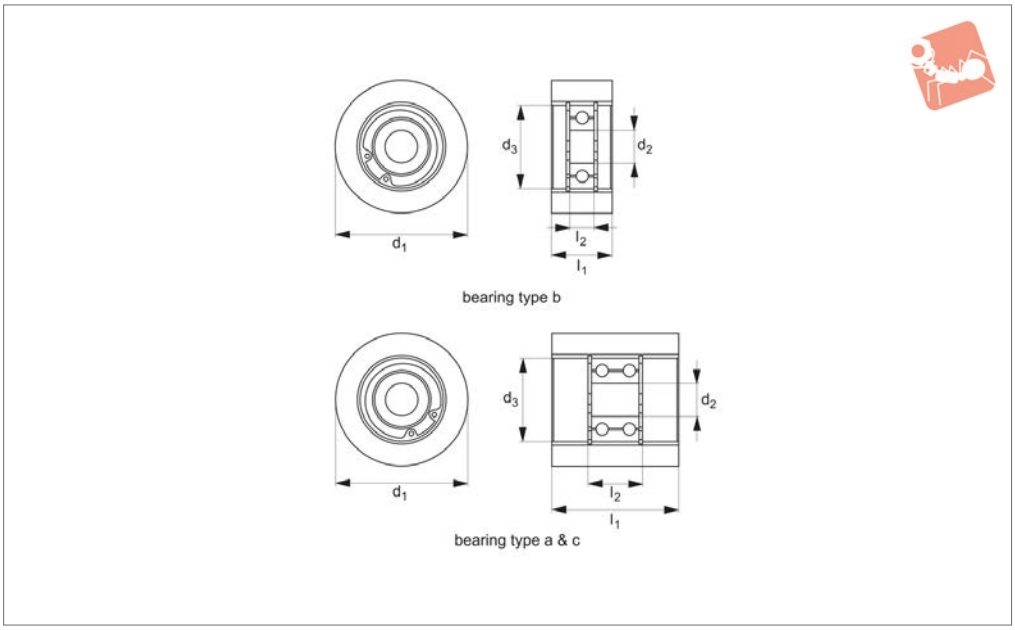
Order No.	Type	Durometer	d_1	l_1	d_2 min.|max.
60620.W1086	Nitrile	60	101,6 (4“)	23,37 (0.92“)	19,05 (1-1/4“)
60620.W1089	Nitrile	80	101,6 (4“)	23,37 (0.92“)	19,05 (1-1/4“)
60620.W1092	Nitrile	20	101,6 (4“)	49,28 (1.94“)	22,23 (1-1/8“)
60620.W1093	Nitrile	35	101,6 (4“)	49,28 (1.94“)	22,23 (1-1/8“)
60620.W1096	Nitrile	60	101,6 (4“)	49,28 (1.94“)	22,23 (1-1/8“)
60620.W1099	Nitrile	80	101,6 (4“)	49,28 (1.94“)	22,23 (1-1/8“)
60620.W1102	Nitrile	20	101,6 (4“)	49,28 (1.94“)	19,05 (1-1/4“)
60620.W1103	Nitrile	35	101,6 (4“)	49,28 (1.94“)	19,05 (1-1/4“)
60620.W1106	Nitrile	60	101,6 (4“)	49,28 (1.94“)	19,05 (1-1/4“)
60620.W1109	Nitrile	80	101,6 (4“)	49,28 (1.94“)	19,05 (1-1/4“)
60620.W2003	Urethane	35	38,1 (1.5“)	31,75 (1.25“)	22,22 (7/8“)
60620.W2006	Urethane	60	38,1 (1.5“)	31,75 (1.25“)	22,22 (7/8“)
60620.W2008	Urethane	80	38,1 (1.5“)	31,75 (1.25“)	22,22 (7/8“)
60620.W2013	Urethane	35	50,8 (2“)	23,37 (0.92“)	22,23 (1-1/8“)
60620.W2016	Urethane	60	50,8 (2“)	23,37 (0.92“)	22,23 (1-1/8“)
60620.W2018	Urethane	80	50,8 (2“)	23,37 (0.92“)	22,23 (1-1/8“)
60620.W2023	Urethane	35	50,8 (2“)	49,28 (1.94“)	22,23 (1-1/8“)
60620.W2026	Urethane	60	50,8 (2“)	49,28 (1.94“)	22,23 (1-1/8“)
60620.W2028	Urethane	80	50,8 (2“)	49,28 (1.94“)	22,23 (1-1/8“)
60620.W2033	Urethane	35	50,8 (2“)	49,28 (1.94“)	19,05 (1-1/4“)
60620.W2036	Urethane	60	50,8 (2“)	49,28 (1.94“)	19,05 (1-1/4“)
60620.W2038	Urethane	80	50,8 (2“)	49,28 (1.94“)	19,05 (1-1/4“)
60620.W2043	Urethane	35	63,5 (2.5“)	23,37 (0.92“)	19,05 (1-1/4“)
60620.W2046	Urethane	60	63,5 (2.5“)	23,37 (0.92“)	19,05 (1-1/4“)
60620.W2048	Urethane	80	63,5 (2.5“)	23,37 (0.92“)	19,05 (1-1/4“)
60620.W2056	Urethane	80	63,5 (2.5“)	49,28 (1.94“)	22,23 (1-1/8“)
60620.W2059	Urethane	95	63,5 (2.5“)	49,28 (1.94“)	22,23 (1-1/8“)
60620.W2062	Urethane	35	63,5 (2.5“)	49,28 (1.94“)	19,05 (1-1/4“)
60620.W2063	Urethane	60	63,5 (2.5“)	49,28 (1.94“)	19,05 (1-1/4“)
60620.W2066	Urethane	80	63,5 (2.5“)	49,28 (1.94“)	19,05 (1-1/4“)
60620.W2069	Urethane	95	63,5 (2.5“)	49,28 (1.94“)	19,05 (1-1/4“)
60620.W2072	Urethane	35	101,6 (4“)	23,37 (0.92“)	22,23 (1-1/8“)
60620.W2073	Urethane	60	101,6 (4“)	23,37 (0.92“)	22,23 (1-1/8“)
60620.W2076	Urethane	80	101,6 (4“)	23,37 (0.92“)	22,23 (1-1/8“)
60620.W2079	Urethane	95	101,6 (4“)	23,37 (0.92“)	22,23 (1-1/8“)
60620.W2082	Urethane	35	101,6 (4“)	23,37 (0.92“)	19,05 (1-1/4“)
60620.W2083	Urethane	60	101,6 (4“)	23,37 (0.92“)	19,05 (1-1/4“)
60620.W2086	Urethane	80	101,6 (4“)	23,37 (0.92“)	19,05 (1-1/4“)
60620.W2089	Urethane	95	101,6 (4“)	23,37 (0.92“)	19,05 (1-1/4“)
60620.W2092	Urethane	35	101,6 (4“)	49,28 (1.94“)	22,23 (1-1/8“)
60620.W2093	Urethane	60	101,6 (4“)	49,28 (1.94“)	22,23 (1-1/8“)
60620.W2096	Urethane	80	101,6 (4“)	49,28 (1.94“)	22,23 (1-1/8“)
60620.W2099	Urethane	95	101,6 (4“)	49,28 (1.94“)	22,23 (1-1/8“)
60620.W2102	Urethane	35	101,6 (4“)	49,28 (1.94“)	19,05 (1-1/4“)
60620.W2103	Urethane	60	101,6 (4“)	49,28 (1.94“)	19,05 (1-1/4“)
60620.W2106	Urethane	80	101,6 (4“)	49,28 (1.94“)	19,05 (1-1/4“)
60620.W2108	Urethane	95	101,6 (4“)	49,28 (1.94“)	19,05 (1-1/4“)
60620.W2109	Urethane	60	152,4 (6“)	49,28 (1.94“)	22,23 (1-1/8“)
60620.W2110	Urethane	60	152,4 (6“)	49,28 (1.94“)	19,05 (1-1/4“)
60620.W2111	Urethane	80	152,4 (6“)	49,28 (1.94“)	22,23 (1-1/8“)
60620.W2112	Urethane	80	152,4 (6“)	49,28 (1.94“)	19,05 (1-1/4“)
60620.W2113	Urethane	35	152,4 (6“)	49,28 (1.94“)	22,23 (1-1/8“)
60620.W2114	Urethane	35	127,0 (5“)	49,28 (1.94“)	22,23 (1-1/8“)
60620.W2116	Urethane	60	127,0 (5“)	49,28 (1.94“)	22,23 (1-1/8“)
60620.W2119	Urethane	80	127,0 (5“)	49,28 (1.94“)	22,23 (1-1/8“)
60620.W2123	Urethane	35	127,0 (5“)	49,28 (1.94“)	19,05 (1-1/4“)
60620.W2126	Urethane	60	127,0 (5“)	49,28 (1.94“)	19,05 (1-1/4“)
60620.W2129	Urethane	80	127,0 (5“)	49,28 (1.94“)	19,05 (1-1/4“)
60620.W2133	Urethane	35	152,4 (6“)	49,28 (1.94“)	19,05 (1-1/4“)
60620.W3053	Urethane	35	63,5 (2.5“)	49,28 (1.94“)	22,23 (1-1/8“)
60620.W2052	Neoprene	35	63,5 (2.5“)	49,28 (1.94“)	22,23 (1-1/8“)
60620.W3056	Neoprene	60	63,5 (2.5“)	49,28 (1.94“)	22,23 (1-1/8“)
60620.W3059	Neoprene	80	63,5 (2.5“)	49,28 (1.94“)	22,23 (1-1/8“)
60620.W3062	Neoprene	20	63,5 (2.5“)	49,28 (1.94“)	22,23 (1-1/8“)
60620.W3063	Neoprene	35	63,5 (2.5“)	49,28 (1.94“)	19,05 (1-1/4“)
60620.W3069	Neoprene	80	63,5 (2.5“)	49,28 (1.94“)	19,05 (1-1/4“)
60620.W2053	Neoprene	60	63,5 (2.5“)	49,28 (1.94“)	19,05 (1-1/4“)
60620.W3002	Neoprene	20	38,1 (1.5“)	31,75 (1.25“)	22,22 (7/8“)

Order No.	Type	Durometer	d_1	l_1	d_2 min.|max.
60620.W3003	Neoprene	35	38,1 (1.5“)	31,75 (1.25“)	22,22 (7/8“)
60620.W3006	Neoprene	60	38,1 (1.5“)	31,75 (1.25“)	22,22 (7/8“)
60620.W3008	Neoprene	80	38,1 (1.5“)	31,75 (1.25“)	22,22 (7/8“)
60620.W3012	Neoprene	20	50,8 (2“)	23,37 (0.92“)	19,05 (1-1/4“)
60620.W3013	Neoprene	35	50,8 (2“)	23,37 (0.92“)	22,23 (1-1/8“)
60620.W3016	Neoprene	60	50,8 (2“)	23,37 (0.92“)	22,23 (1-1/8“)
60620.W3018	Neoprene	80	50,8 (2“)	23,37 (0.92“)	22,23 (1-1/8“)
60620.W3022	Neoprene	20	50,8 (2“)	49,28 (1.94“)	22,23 (1-1/8“)
60620.W3023	Neoprene	35	50,8 (2“)	49,28 (1.94“)	22,23 (1-1/8“)
60620.W3026	Neoprene	60	50,8 (2“)	49,28 (1.94“)	22,23 (1-1/8“)
60620.W3028	Neoprene	80	50,8 (2“)	49,28 (1.94“)	22,23 (1-1/8“)
60620.W3032	Neoprene	20	50,8 (2“)	49,28 (1.94“)	19,05 (1-1/4“)
60620.W3033	Neoprene	35	50,8 (2“)	49,28 (1.94“)	19,05 (1-1/4“)
60620.W3036	Neoprene	60	50,8 (2“)	49,28 (1.94“)	19,05 (1-1/4“)
60620.W3038	Neoprene	80	50,8 (2“)	49,28 (1.94“)	19,05 (1-1/4“)
60620.W3042	Neoprene	20	63,5 (2.5“)	23,37 (0.92“)	19,05 (1-1/4“)
60620.W3043	Neoprene	35	63,5 (2.5“)	23,37 (0.92“)	19,05 (1-1/4“)
60620.W3046	Neoprene	60	63,5 (2.5“)	23,37 (0.92“)	19,05 (1-1/4“)
60620.W3048	Neoprene	80	63,5 (2.5“)	23,37 (0.92“)	19,05 (1-1/4“)
60620.W3072	Neoprene	20	101,6 (4“)	23,37 (0.92“)	22,23 (1-1/8“)
60620.W3073	Neoprene	35	101,6 (4“)	23,37 (0.92“)	22,23 (1-1/8“)
60620.W3076	Neoprene	60	101,6 (4“)	23,37 (0.92“)	22,23 (1-1/8“)
60620.W3079	Neoprene	80	101,6 (4“)	23,37 (0.92“)	22,23 (1-1/8“)
60620.W3082	Neoprene	20	101,6 (4“)	23,37 (0.92“)	19,05 (1-1/4“)
60620.W3083	Neoprene	35	101,6 (4“)	23,37 (0.92“)	19,05 (1-1/4“)
60620.W3086	Neoprene	60	101,6 (4“)	23,37 (0.92“)	19,05 (1-1/4“)
60620.W3089	Neoprene	80	101,6 (4“)	23,37 (0.92“)	19,05 (1-1/4“)
60620.W3092	Neoprene	20	101,6 (4“)	49,28 (1.94“)	22,23 (1-1/8“)
60620.W3093	Neoprene	35	101,6 (4“)	49,28 (1.94“)	22,23 (1-1/8“)
60620.W3096	Neoprene	60	101,6 (4“)	49,28 (1.94“)	22,23 (1-1/8“)
60620.W3099	Neoprene	80	101,6 (4“)	49,28 (1.94“)	22,23 (1-1/8“)
60620.W3102	Neoprene	20	101,6 (4“)	49,28 (1.94“)	19,05 (1-1/4“)
60620.W3103	Neoprene	35	101,6 (4“)	49,28 (1.94“)	19,05 (1-1/4“)
60620.W3106	Neoprene	60	101,6 (4“)	49,28 (1.94“)	19,05 (1-1/4“)
60620.W3109	Neoprene	80	101,6 (4“)	49,28 (1.94“)	19,05 (1-1/4“)

Solid Roller
bearing mount



60622



Material
Nitrile, urethane or neoprene bonded to a steel insert.
Hardness from 20-80 durometer (Shore A).

Technical Notes
Bearings included (held in place with snap rings). For more details on bearings please see technical pages.

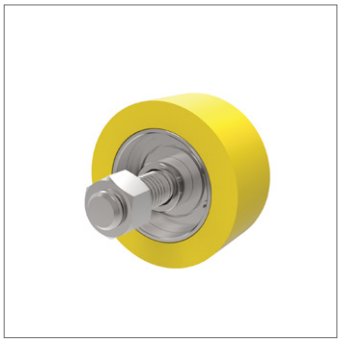
Tolerances:
When d_1=38,10
d_2 ±0.05
d_3 ±0.07
l_2 ±0.05

When d_1>38,10
d_2 ±0,065
d_3 ±0,065
l_2 ±0,08

Order No.	Material	Durometer	d_1	l_1	d_2	d_3	l_2	Bearing type
60622.W1002	Nitrile	20	38,1 (1,5“)	31.75	8.0	22.16	12.70	A
60622.W1003	Nitrile	35	38,1 (1,5“)	31.75	8.0	22.16	12.70	A
60622.W1006	Nitrile	60	38,1 (1,5“)	31.75	8.0	22.16	12.70	A
60622.W1008	Nitrile	80	38,1 (1,5“)	31.75	8.0	22.16	12.70	A
60622.W1012	Nitrile	20	50,8 (2,0“)	23.37	12.77	31.69	9.52	B
60622.W1013	Nitrile	35	50,8 (2,0“)	23.37	12.77	31.69	9.52	B
60622.W1016	Nitrile	60	50,8 (2,0“)	23.37	12.77	31.69	9.52	B
60622.W1018	Nitrile	80	50,8 (2,0“)	23.37	12.77	31.69	9.52	B
60622.W1022	Nitrile	20	50,8 (2,0“)	49.28	12.77	31.69	19.05	C
60622.W1023	Nitrile	35	50,8 (2,0“)	49.28	12.77	31.69	19.05	C
60622.W1026	Nitrile	60	50,8 (2,0“)	49.28	12.77	31.69	19.05	C
60622.W1028	Nitrile	80	50,8 (2,0“)	49.28	12.77	31.69	19.05	C
60622.W1032	Nitrile	20	63,5 (2,5“)	23.37	12.77	31.69	9.52	C
60622.W1033	Nitrile	35	63,5 (2,5“)	23.37	12.77	31.69	9.52	C
60622.W1036	Nitrile	60	63,5 (2,5“)	23.37	12.77	31.69	9.52	C
60622.W1038	Nitrile	80	63,5 (2,5“)	23.37	12.77	31.69	9.52	C
60622.W1042	Nitrile	20	63,5 (2,5“)	49.28	12.77	31.69	19.05	C
60622.W1043	Nitrile	35	63,5 (2,5“)	49.28	12.77	31.69	19.05	C
60622.W1046	Nitrile	60	63,5 (2,5“)	49.28	12.77	31.69	19.05	C
60622.W1048	Nitrile	80	63,5 (2,5“)	49.28	12.77	31.69	19.05	C
60622.W1052	Nitrile	20	101,6 (4,0“)	23.37	12.77	31.69	9.52	B
60622.W1053	Nitrile	35	101,6 (4,0“)	23.37	12.77	31.69	9.52	B
60622.W1056	Nitrile	60	101,6 (4,0“)	23.37	12.77	31.69	9.52	B
60622.W1058	Nitrile	80	101,6 (4,0“)	23.37	12.77	31.69	9.52	B
60622.W1062	Nitrile	20	101,6 (4,0“)	49.28	12.77	31.69	19.05	C
60622.W1063	Nitrile	35	101,6 (4,0“)	49.28	12.77	31.69	19.05	C
60622.W1066	Nitrile	60	101,6 (4,0“)	49.28	12.77	31.69	19.05	C
60622.W1068	Nitrile	80	101,6 (4,0“)	49.28	12.77	31.69	19.05	C
60622.W2003	Urethane	35	38,1 (1,5“)	31.75	8.0	22.16	12.70	A
60622.W2006	Urethane	60	38,1 (1,5“)	31.75	8.0	22.16	12.70	A
60622.W2008	Urethane	80	38,1 (1,5“)	31.75	8.0	22.16	12.70	A

Order No.	Material	Durometer	d_1	l_1	d_2	d_3	l_2	Bearing type
60622.W2013	Urethane	35	50,8 (2,0“)	23.37	12.77	31.69	9.52	B
60622.W2016	Urethane	60	50,8 (2,0“)	23.37	12.77	31.69	9.52	B
60622.W2018	Urethane	80	50,8 (2,0“)	23.37	12.77	31.69	9.52	B
60622.W2023	Urethane	35	50,8 (2,0“)	49.28	12.77	31.69	19.05	C
60622.W2026	Urethane	60	50,8 (2,0“)	49.28	12.77	31.69	19.05	C
60622.W2028	Urethane	80	50,8 (2,0“)	49.28	12.77	31.69	19.05	C
60622.W2033	Urethane	35	63,5 (2,5“)	23.37	12.77	31.69	9.52	C
60622.W2036	Urethane	60	63,5 (2,5“)	23.37	12.77	31.69	9.52	C
60622.W2038	Urethane	80	63,5 (2,5“)	23.37	12.77	31.69	9.52	C
60622.W2043	Urethane	35	63,5 (2,5“)	49.28	12.77	31.69	19.05	C
60622.W2046	Urethane	60	63,5 (2,5“)	49.28	12.77	31.69	19.05	C
60622.W2048	Urethane	80	63,5 (2,5“)	49.28	12.77	31.69	19.05	C
60622.W2053	Urethane	35	101,6 (4,0“)	23.37	12.77	31.69	9.52	B
60622.W2056	Urethane	60	101,6 (4,0“)	23.37	12.77	31.69	9.52	B
60622.W2058	Urethane	80	101,6 (4,0“)	23.37	12.77	31.69	9.52	B
60622.W2063	Urethane	35	101,6 (4,0“)	49.28	12.77	31.69	19.05	C
60622.W2066	Urethane	60	101,6 (4,0“)	49.28	12.77	31.69	19.05	C
60622.W2068	Urethane	80	101,6 (4,0“)	49.28	12.77	31.69	19.05	C
60622.W2073	Urethane	35	127,0 (5,0“)	49.28	12.77	31.69	19.05	C
60622.W2076	Urethane	60	127,0 (5,0“)	49.28	12.77	31.69	19.05	C
60622.W2083	Urethane	35	152,4 (6,0“)	49.28	12.77	31.69	19.05	C
60622.W2086	Urethane	60	152,4 (6,0“)	49.28	12.77	31.69	19.05	C
60622.W2088	Urethane	80	152,4 (6,0“)	49.28	12.77	31.69	19.05	C
60622.W3002	Neoprene	20	38,1 (1,5“)	31.75	8.0	22.16	12.70	A
60622.W3003	Neoprene	35	38,1 (1,5“)	31.75	8.0	22.16	12.70	A
60622.W3006	Neoprene	60	38,1 (1,5“)	31.75	8.0	22.16	12.70	A
60622.W3008	Neoprene	80	38,1 (1,5“)	31.75	8.0	22.16	12.70	A
60622.W3012	Neoprene	20	50,8 (2,0“)	23.37	12.77	31.69	9.52	B
60622.W3013	Neoprene	35	50,8 (2,0“)	23.37	12.77	31.69	9.52	B
60622.W3016	Neoprene	60	50,8 (2,0“)	23.37	12.77	31.69	9.52	B
60622.W3018	Neoprene	80	50,8 (2,0“)	23.37	12.77	31.69	9.52	B
60622.W3022	Neoprene	20	50,8 (2,0“)	49.28	12.77	31.69	19.05	C
60622.W3023	Neoprene	35	50,8 (2,0“)	49.28	12.77	31.69	19.05	C
60622.W3026	Neoprene	60	50,8 (2,0“)	49.28	12.77	31.69	19.05	C
60622.W3028	Neoprene	80	50,8 (2,0“)	49.28	12.77	31.69	19.05	C
60622.W3032	Neoprene	20	63,5 (2,5“)	23.37	12.77	31.69	9.52	C
60622.W3033	Neoprene	35	63,5 (2,5“)	23.37	12.77	31.69	9.52	C
60622.W3036	Neoprene	60	63,5 (2,5“)	23.37	12.77	31.69	9.52	C
60622.W3038	Neoprene	80	63,5 (2,5“)	23.37	12.77	31.69	9.52	C
60622.W3042	Neoprene	20	63,5 (2,5“)	49.28	12.77	31.69	19.05	C
60622.W3043	Neoprene	35	63,5 (2,5“)	49.28	12.77	31.69	19.05	C
60622.W3046	Neoprene	60	63,5 (2,5“)	49.28	12.77	31.69	19.05	C
60622.W3048	Neoprene	80	63,5 (2,5“)	49.28	12.77	31.69	19.05	C
60622.W3052	Neoprene	20	101,6 (4,0“)	23.37	12.77	31.69	9.52	B
60622.W3053	Neoprene	35	101,6 (4,0“)	23.37	12.77	31.69	9.52	B
60622.W3056	Neoprene	60	101,6 (4,0“)	23.37	12.77	31.69	9.52	B
60622.W3058	Neoprene	80	101,6 (4,0“)	23.37	12.77	31.69	9.52	B
60622.W3062	Neoprene	20	101,6 (4,0“)	49.28	12.77	31.69	19.05	C
60622.W3063	Neoprene	35	101,6 (4,0“)	49.28	12.77	31.69	19.05	C
60622.W3066	Neoprene	60	101,6 (4,0“)	49.28	12.77	31.69	19.05	C
60622.W3068	Neoprene	80	101,6 (4,0“)	49.28	12.77	31.69	19.05	C

Solid Roller
stud mount



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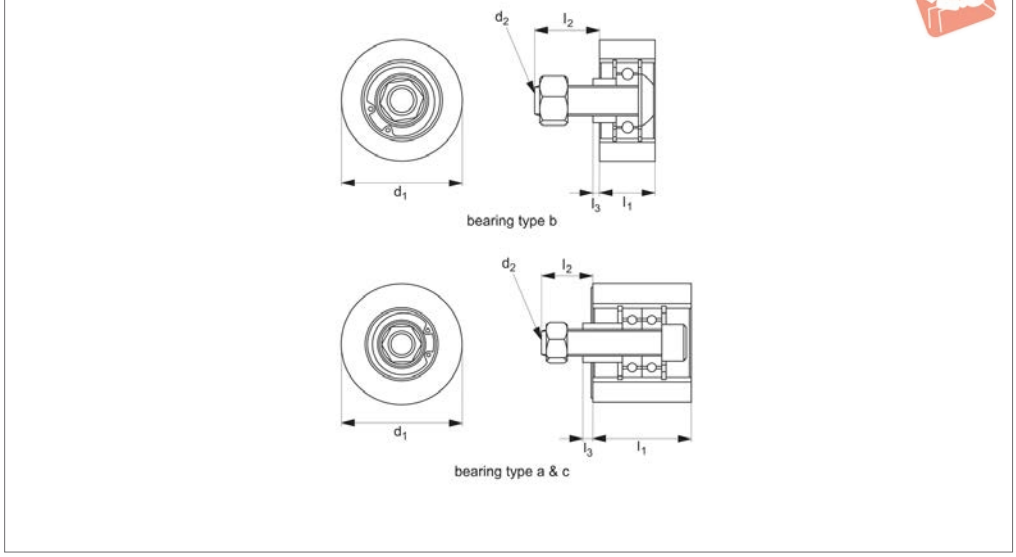


Material
Nitrile, urethane or neoprene bonded to a steel insert.
Hardness from 20-80 durometer (Shore A).

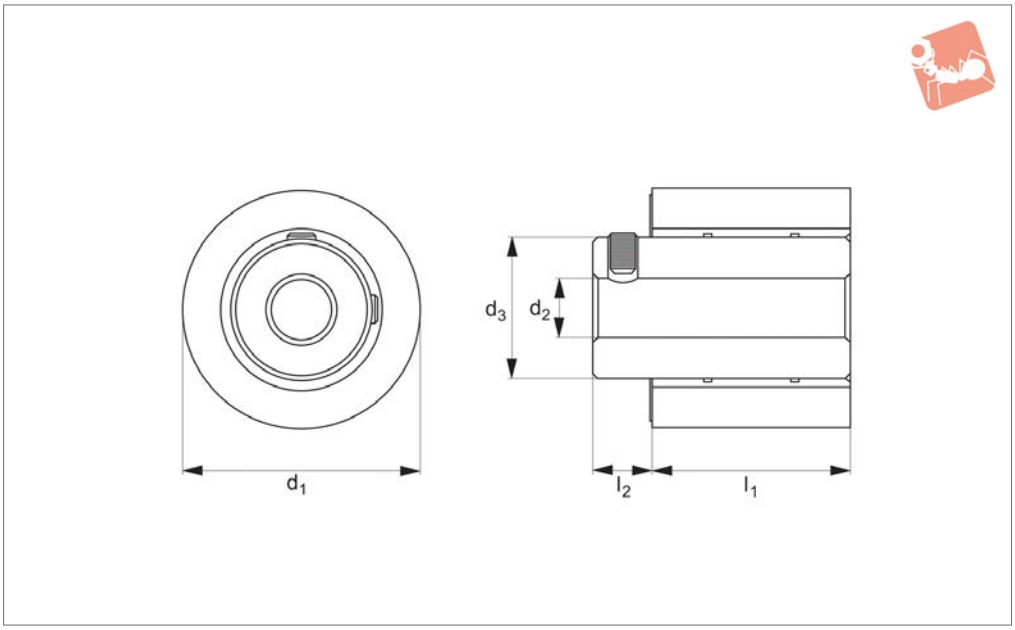
Technical Notes
Bearings included (held in place with snap rings). For more details on bearings please see technical pages. Assembled with socket head cap screw, spacer and lock nut.

Order No.	Material	Durometer	d_1	l_1	d_2	l_2	l_3	Bearing type
60624.W1002	Nitrile	20	38,1 (1,5“)	31.80	5/16-18“	16.00	3.05	A
60624.W1003	Nitrile	35	38,1 (1,5“)	31.80	5/16-18“	16.00	3.05	A
60624.W1006	Nitrile	60	38,1 (1,5“)	31.80	5/16-18“	16.00	3.05	A
60624.W1008	Nitrile	80	38,1 (1,5“)	31.80	5/16-18“	16.00	3.05	A
60624.W1012	Nitrile	20	50,8 (2,0“)	23.37	1/2-13“	27.94	3.05	B
60624.W1013	Nitrile	35	50,8 (2,0“)	23.37	1/2-13“	27.94	3.05	B
60624.W1016	Nitrile	60	50,8 (2,0“)	23.37	1/2-13“	27.94	3.05	B
60624.W1018	Nitrile	80	50,8 (2,0“)	23.37	1/2-13“	27.94	3.05	B
60624.W1022	Nitrile	20	50,8 (2,0“)	49.28	1/2-13“	35.81	6.35	C
60624.W1023	Nitrile	35	50,8 (2,0“)	49.28	1/2-13“	35.81	6.35	C
60624.W1026	Nitrile	60	50,8 (2,0“)	49.28	1/2-13“	35.81	6.35	C
60624.W1028	Nitrile	80	50,8 (2,0“)	49.28	1/2-13“	35.81	6.35	C
60624.W1032	Nitrile	20	63,5 (2,5“)	23.37	1/2-13“	27.94	3.05	B
60624.W1033	Nitrile	35	63,5 (2,5“)	23.37	1/2-13“	27.94	3.05	B
60624.W1036	Nitrile	60	63,5 (2,5“)	23.37	1/2-13“	27.94	3.05	B
60624.W1038	Nitrile	80	63,5 (2,5“)	23.37	1/2-13“	27.94	3.05	B
60624.W1042	Nitrile	20	63,5 (2,5“)	49.28	1/2-13“	35.81	6.35	C
60624.W1043	Nitrile	35	63,5 (2,5“)	49.28	1/2-13“	35.81	6.35	C
60624.W1046	Nitrile	60	63,5 (2,5“)	49.28	1/2-13“	35.81	6.35	C
60624.W1048	Nitrile	80	63,5 (2,5“)	49.28	1/2-13“	35.81	6.35	C
60624.W1052	Nitrile	20	101,6 (4,0“)	23.37	1/2-13“	27.94	3.05	B
60624.W1053	Nitrile	35	101,6 (4,0“)	23.37	1/2-13“	27.94	3.05	B
60624.W1056	Nitrile	60	101,6 (4,0“)	23.37	1/2-13“	27.94	3.05	B
60624.W1058	Nitrile	80	101,6 (4,0“)	23.37	1/2-13“	27.94	3.05	B
60624.W1062	Nitrile	20	101,6 (4,0“)	49.28	1/2-13“	35.56	6.35	C
60624.W1063	Nitrile	35	101,6 (4,0“)	49.28	1/2-13“	35.56	6.35	C
60624.W1066	Nitrile	60	101,6 (4,0“)	49.28	1/2-13“	35.56	6.35	C
60624.W1068	Nitrile	60	101,6 (4,0“)	49.28	1/2-13“	35.56	6.35	C
60624.W2003	Urethane	35	38,1 (1,5“)	31.80	5/16-18“	16.00	3.05	A
60624.W2006	Urethane	60	38,1 (1,5“)	31.80	5/16-18“	16.00	3.05	A
60624.W2008	Urethane	80	38,1 (1,5“)	31.80	5/16-18“	16.00	3.05	A
60624.W2013	Urethane	35	50,8 (2,0“)	23.37	1/2-13“	27.94	3.05	B
60624.W2016	Urethane	60	50,8 (2,0“)	23.37	1/2-13“	27.94	3.05	B
60624.W2018	Urethane	80	50,8 (2,0“)	23.37	1/2-13“	27.94	3.05	B
60624.W2023	Urethane	35	50,8 (2,0“)	49.28	1/2-13“	35.81	6.35	C

Order No.	Material	Durometer	d_1	l_1	d_2	l_2	l_3	Bearing type
60624.W2026	Urethane	60	50,8 (2,0“)	49.28	1/2-13“	35.81	6.35	C
60624.W2028	Urethane	80	50,8 (2,0“)	49.28	1/2-13“	35.81	6.35	C
60624.W2033	Urethane	35	63,5 (2,5“)	23.37	1/2-13“	27.94	3.05	B
60624.W2036	Urethane	60	63,5 (2,5“)	23.37	1/2-13“	27.94	3.05	B
60624.W2038	Urethane	80	63,5 (2,5“)	23.37	1/2-13“	27.94	3.05	B
60624.W2043	Urethane	35	63,5 (2,5“)	49.28	1/2-13“	35.81	6.35	C
60624.W2046	Urethane	60	63,5 (2,5“)	49.28	1/2-13“	35.81	6.35	C
60624.W2048	Urethane	80	63,5 (2,5“)	49.28	1/2-13“	35.81	6.35	C
60624.W2053	Urethane	35	101,6 (4,0“)	23.37	1/2-13“	27.94	3.05	B
60624.W2056	Urethane	60	101,6 (4,0“)	23.37	1/2-13“	27.94	3.05	B
60624.W2058	Urethane	80	101,6 (4,0“)	23.37	1/2-13“	27.94	3.05	B
60624.W2063	Urethane	35	101,6 (4,0“)	49.28	1/2-13“	35.56	6.35	C
60624.W2066	Urethane	60	101,6 (4,0“)	49.28	1/2-13“	35.56	6.35	C
60624.W2068	Urethane	60	101,6 (4,0“)	49.28	1/2-13“	35.56	6.35	C
60624.W2073	Urethane	35	127,0 (5,0“)	49.28	1/2-13“	35.56	6.35	C
60624.W2076	Urethane	60	127,0 (5,0“)	49.28	1/2-13“	35.56	6.35	C
60624.W2078	Urethane	80	127,0 (5,0“)	49.28	1/2-13“	35.56	6.35	C
60624.W2083	Urethane	35	152,4 (6,0“)	49.28	1/2-13“	35.56	6.35	C
60624.W2086	Urethane	60	152,4 (6,0“)	49.28	1/2-13“	35.56	6.35	C
60624.W2088	Urethane	80	152,4 (6,0“)	49.28	1/2-13“	35.56	6.35	C
60624.W3002	Neoprene	20	38,1 (1,5“)	31.80	5/16-18“	16.00	3.05	A
60624.W3003	Neoprene	35	38,1 (1,5“)	31.80	5/16-18“	16.00	3.05	A
60624.W3006	Neoprene	60	38,1 (1,5“)	31.80	5/16-18“	16.00	3.05	A
60624.W3008	Neoprene	80	38,1 (1,5“)	31.80	5/16-18“	16.00	3.05	A
60624.W3012	Neoprene	20	50,8 (2,0“)	23.37	1/2-13“	27.94	3.05	B
60624.W3013	Neoprene	35	50,8 (2,0“)	23.37	1/2-13“	27.94	3.05	B
60624.W3016	Neoprene	60	50,8 (2,0“)	23.37	1/2-13“	27.94	3.05	B
60624.W3018	Neoprene	80	50,8 (2,0“)	23.37	1/2-13“	27.94	3.05	B
60624.W3022	Neoprene	20	50,8 (2,0“)	49.28	1/2-13“	35.81	6.35	C
60624.W3023	Neoprene	35	50,8 (2,0“)	49.28	1/2-13“	35.81	6.35	C
60624.W3026	Neoprene	60	50,8 (2,0“)	49.28	1/2-13“	35.81	6.35	C
60624.W3028	Neoprene	80	50,8 (2,0“)	49.28	1/2-13“	35.81	6.35	C
60624.W3032	Neoprene	20	63,5 (2,5“)	23.37	1/2-13“	27.94	3.05	B
60624.W3033	Neoprene	35	63,5 (2,5“)	23.37	1/2-13“	27.94	3.05	B
60624.W3036	Neoprene	60	63,5 (2,5“)	23.37	1/2-13“	27.94	3.05	B
60624.W3038	Neoprene	80	63,5 (2,5“)	23.37	1/2-13“	27.94	3.05	B
60624.W3042	Neoprene	20	63,5 (2,5“)	49.28	1/2-13“	35.81	6.35	C
60624.W3043	Neoprene	35	63,5 (2,5“)	49.28	1/2-13“	35.81	6.35	C
60624.W3046	Neoprene	60	63,5 (2,5“)	49.28	1/2-13“	35.81	6.35	C
60624.W3048	Neoprene	80	63,5 (2,5“)	49.28	1/2-13“	35.81	6.35	C
60624.W3052	Neoprene	20	101,6 (4,0“)	23.37	1/2-13“	27.94	3.05	B
60624.W3053	Neoprene	35	101,6 (4,0“)	23.37	1/2-13“	27.94	3.05	B
60624.W3056	Neoprene	60	101,6 (4,0“)	23.37	1/2-13“	27.94	3.05	B
60624.W3058	Neoprene	80	101,6 (4,0“)	23.37	1/2-13“	27.94	3.05	B
60624.W3062	Neoprene	20	101,6 (4,0“)	49.28	1/2-13“	35.56	6.35	C
60624.W3063	Neoprene	35	101,6 (4,0“)	49.28	1/2-13“	35.56	6.35	C
60624.W3066	Neoprene	60	101,6 (4,0“)	49.28	1/2-13“	35.56	6.35	C
60624.W3068	Neoprene	60	101,6 (4,0“)	49.28	1/2-13“	35.56	6.35	C

Solid Roller
shaft drive

60626



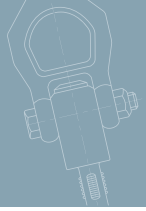
Material
Nitrile, urethane or neoprene bonded to a steel insert.

Hardness from 20-80 durometer (Shore A).

Technical Notes
Designed to be mounted onto a shaft. A hub extends past the roller and is supplied with two set screws at 90°.

Order No.	Material	Durometer	d_1	l_1	d_2	d_3	l_2
60626.W1002	Nitrile	20	38,10 (1,5“)	22.36	31.75	12,72/12,83	9.65
60626.W1003	Nitrile	35	38,10 (1,5“)	22.36	31.75	12,72/12,83	9.65
60626.W1006	Nitrile	60	38,10 (1,5“)	22.36	31.75	12,72/12,83	9.65
60626.W1008	Nitrile	80	38,10 (1,5“)	22.36	31.75	12,72/12,83	9.65
60626.W1012	Nitrile	20	50,80 (2,0“)	31.75	23.37	12,72/12,83	12.70
60626.W1013	Nitrile	35	50,80 (2,0“)	31.75	23.37	12,72/12,83	12.70
60626.W1016	Nitrile	60	50,80 (2,0“)	31.75	23.37	12,72/12,83	12.70
60626.W1018	Nitrile	80	50,80 (2,0“)	31.75	23.37	12,72/12,83	12.70
60626.W1022	Nitrile	20	50,80 (2,0“)	31.75	23.37	19,08/19,20	12.70
60626.W1023	Nitrile	35	50,80 (2,0“)	31.75	23.37	19,08/19,20	12.70
60626.W1026	Nitrile	60	50,80 (2,0“)	31.75	23.37	19,08/19,20	12.70
60626.W1028	Nitrile	80	50,80 (2,0“)	31.75	23.37	19,08/19,20	12.70
60626.W1032	Nitrile	20	50,80 (2,0“)	31.75	49.28	12,73/12,83	12.70
60626.W1033	Nitrile	35	50,80 (2,0“)	31.75	49.28	12,73/12,83	12.70
60626.W1036	Nitrile	60	50,80 (2,0“)	31.75	49.28	12,73/12,83	12.70
60626.W1038	Nitrile	80	50,80 (2,0“)	31.75	49.28	12,73/12,83	12.70
60626.W1042	Nitrile	20	50,80 (2,0“)	31.75	49.28	19,08/19,20	12.70
60626.W1043	Nitrile	35	50,80 (2,0“)	31.75	49.28	19,08/19,20	12.70
60626.W1046	Nitrile	60	50,80 (2,0“)	31.75	49.28	19,08/19,20	12.70
60626.W1048	Nitrile	80	50,80 (2,0“)	31.75	49.28	19,08/19,20	12.70
60626.W1052	Nitrile	20	63,50 (2,5“)	31.75	23.37	12,73/12,83	12.70
60626.W1053	Nitrile	35	63,50 (2,5“)	31.75	23.37	12,73/12,83	12.70
60626.W1056	Nitrile	60	63,50 (2,5“)	31.75	23.37	12,73/12,83	12.70
60626.W1058	Nitrile	80	63,50 (2,5“)	31.75	23.37	12,73/12,83	12.70
60626.W1062	Nitrile	20	63,50 (2,5“)	34.79	23.37	19,08/19,20	12.70
60626.W1063	Nitrile	35	63,50 (2,5“)	34.79	23.37	19,08/19,20	12.70
60626.W1066	Nitrile	60	63,50 (2,5“)	34.79	23.37	19,08/19,20	12.70
60626.W1068	Nitrile	80	63,50 (2,5“)	34.79	23.37	19,08/19,20	12.70
60626.W1072	Nitrile	20	63,50 (2,5“)	31.75	49.28	12,73/12,83	12.70
60626.W1073	Nitrile	35	63,50 (2,5“)	31.75	49.28	12,73/12,83	12.70
60626.W1076	Nitrile	60	63,50 (2,5“)	31.75	49.28	12,73/12,83	12.70
60626.W1078	Nitrile	80	63,50 (2,5“)	31.75	49.28	12,73/12,83	12.70
60626.W1082	Nitrile	20	63,50 (2,5“)	31.75	49.28	19,08/19,20	12.70
60626.W1083	Nitrile	35	63,50 (2,5“)	31.75	49.28	19,08/19,20	12.70
60626.W1086	Nitrile	60	63,50 (2,5“)	31.75	49.28	19,08/19,20	12.70

Order No.	Material	Durometer	d_1	l_1	d_2	d_3	l_2
60626.W1088	Nitrile	80	63,50 (2,5“)	31.75	49.28	19,08/19,20	12.70
60626.W1092	Nitrile	20	63,50 (2,5“)	34.79	49.28	25,42/25,55	12.70
60626.W1093	Nitrile	35	63,50 (2,5“)	34.79	49.28	25,42/25,55	12.70
60626.W1096	Nitrile	60	63,50 (2,5“)	34.79	49.28	25,42/25,55	12.70
60626.W1098	Nitrile	80	63,50 (2,5“)	34.79	49.28	25,42/25,55	12.70
60626.W1102	Nitrile	20	101,6 (4,0“)	31.75	23.37	12,73/12,83	12.70
60626.W1103	Nitrile	35	101,6 (4,0“)	31.75	23.37	12,73/12,83	12.70
60626.W1106	Nitrile	60	101,6 (4,0“)	31.75	23.37	12,73/12,83	12.70
60626.W1108	Nitrile	80	101,6 (4,0“)	31.75	23.37	12,73/12,83	12.70
60626.W1112	Nitrile	20	101,6 (4,0“)	31.75	23.37	19,08/19,20	12.70
60626.W1113	Nitrile	35	101,6 (4,0“)	31.75	23.37	19,08/19,20	12.70
60626.W1116	Nitrile	60	101,6 (4,0“)	31.75	23.37	19,08/19,20	12.70
60626.W1118	Nitrile	80	101,6 (4,0“)	31.75	23.37	19,08/19,20	12.70
60626.W1122	Nitrile	20	101,6 (4,0“)	31.75	49.28	12,73/12,83	12.70
60626.W1123	Nitrile	35	101,6 (4,0“)	31.75	49.28	12,73/12,83	12.70
60626.W1126	Nitrile	60	101,6 (4,0“)	31.75	49.28	12,73/12,83	12.70
60626.W1128	Nitrile	80	101,6 (4,0“)	31.75	49.28	12,73/12,83	12.70
60626.W1132	Nitrile	20	101,6 (4,0“)	31.75	49.28	19,08/19,20	12.70
60626.W1133	Nitrile	35	101,6 (4,0“)	31.75	49.28	19,08/19,20	12.70
60626.W1136	Nitrile	60	101,6 (4,0“)	31.75	49.28	19,08/19,20	12.70
60626.W1138	Nitrile	80	101,6 (4,0“)	31.75	49.28	19,08/19,20	12.70
60626.W1146	Nitrile	60	101,6 (4,0“)	34.80	49.28	31,78/31,90	12.70
60626.W2003	Urethane	35	38,10 (1,5“)	22.36	31.75	12,72/12,83	9.65
60626.W2006	Urethane	60	38,10 (1,5“)	22.36	31.75	12,72/12,83	9.65
60626.W2008	Urethane	80	38,10 (1,5“)	22.36	31.75	12,72/12,83	9.65
60626.W2013	Urethane	35	50,80 (2,0“)	31.75	23.37	12,72/12,83	12.70
60626.W2016	Urethane	60	50,80 (2,0“)	31.75	23.37	12,72/12,83	12.70
60626.W2018	Urethane	80	50,80 (2,0“)	31.75	23.37	12,72/12,83	12.70
60626.W2023	Urethane	35	50,80 (2,0“)	31.75	23.37	19,08/19,20	12.70
60626.W2026	Urethane	60	50,80 (2,0“)	31.75	23.37	19,08/19,20	12.70
60626.W2028	Urethane	80	50,80 (2,0“)	31.75	23.37	19,08/19,20	12.70
60626.W2033	Urethane	35	50,80 (2,0“)	31.75	49.28	12,73/12,83	12.70
60626.W2036	Urethane	60	50,80 (2,0“)	31.75	49.28	12,73/12,83	12.70
60626.W2038	Urethane	80	50,80 (2,0“)	31.75	49.28	12,73/12,83	12.70
60626.W2043	Urethane	35	50,80 (2,0“)	31.75	49.28	19,08/19,20	12.70
60626.W2046	Urethane	60	50,80 (2,0“)	31.75	49.28	19,08/19,20	12.70
60626.W2048	Urethane	80	50,80 (2,0“)	31.75	49.28	19,08/19,20	12.70
60626.W2053	Urethane	35	63,50 (2,5“)	31.75	23.37	12,73/12,83	12.70
60626.W2056	Urethane	60	63,50 (2,5“)	31.75	23.37	12,73/12,83	12.70
60626.W2058	Urethane	80	63,50 (2,5“)	31.75	23.37	12,73/12,83	12.70
60626.W2063	Urethane	35	63,50 (2,5“)	34.79	23.37	19,08/19,20	12.70
60626.W2066	Urethane	60	63,50 (2,5“)	34.79	23.37	19,08/19,20	12.70
60626.W2068	Urethane	80	63,50 (2,5“)	34.79	23.37	19,08/19,20	12.70
60626.W2073	Urethane	35	63,50 (2,5“)	31.75	49.28	12,73/12,83	12.70
60626.W2076	Urethane	60	63,50 (2,5“)	31.75	49.28	12,73/12,83	12.70
60626.W2078	Urethane	80	63,50 (2,5“)	31.75	49.28	12,73/12,83	12.70
60626.W2083	Urethane	35	63,50 (2,5“)	31.75	49.28	19,08/19,20	12.70
60626.W2086	Urethane	60	63,50 (2,5“)	31.75	49.28	19,08/19,20	12.70
60626.W2088	Urethane	80	63,50 (2,5“)	31.75	49.28	19,08/19,20	12.70
60626.W2093	Urethane	35	63,50 (2,5“)	34.79	49.28	25,42/25,55	12.70
60626.W2096	Urethane	60	63,50 (2,5“)	34.79	49.28	25,42/25,55	12.70
60626.W2098	Urethane	80	63,50 (2,5“)	34.79	49.28	25,42/25,55	12.70
60626.W2103	Urethane	35	101,6 (4,0“)	31.75	23.37	12,73/12,83	12.70
60626.W2106	Urethane	60	101,6 (4,0“)	31.75	23.37	12,73/12,83	12.70
60626.W2108	Urethane	80	101,6 (4,0“)	31.75	23.37	12,73/12,83	12.70
60626.W2116	Urethane	60	101,6 (4,0“)	31.75	23.37	19,08/19,20	12.70
60626.W2118	Urethane	80	101,6 (4,0“)	31.75	23.37	19,08/19,20	12.70
60626.W2123	Urethane	35	101,6 (4,0“)	31.75	49.28	12,73/12,83	12.70
60626.W2126	Urethane	60	101,6 (4,0“)	31.75	49.28	12,73/12,83	12.70
60626.W2128	Urethane	80	101,6 (4,0“)	31.75	49.28	12,73/12,83	12.70
60626.W2133	Urethane	35	101,6 (4,0“)	31.75	49.28	19,08/19,20	12.70
60626.W2136	Urethane	60	101,6 (4,0“)	31.75	49.28	19,08/19,20	12.70
60626.W2138	Urethane	80	101,6 (4,0“)	31.75	49.28	19,08/19,20	12.70
60626.W2146	Urethane	60	101,6 (4,0“)	34.80	49.28	31,78/31,90	12.70
60626.W2148	Urethane	80	101,6 (4,0“)	34.80	49.28	31,78/31,90	12.70
60626.W2153	Urethane	35	127,0 (5,0“)	31.75	49.28	12,72/12,83	12.70
60626.W2156	Urethane	60	127,0 (5,0“)	31.75	49.28	12,72/12,83	12.70
60626.W2158	Urethane	80	127,0 (5,0“)	31.75	49.28	12,72/12,83	12.70
60626.W2163	Urethane	35	127,0 (5,0“)	31.75	49.28	19,07/19,20	12.70



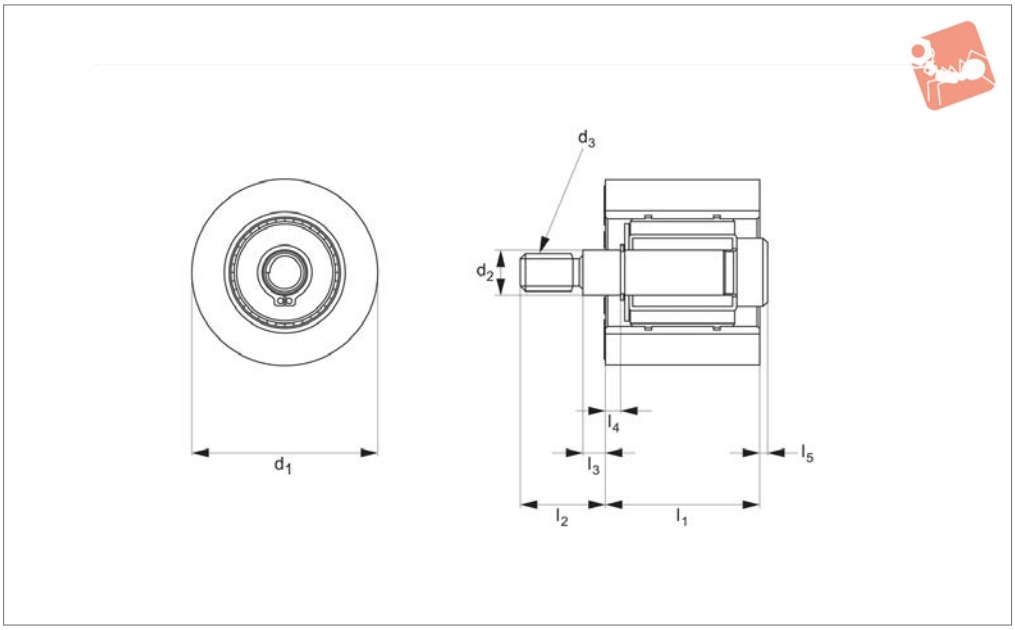
Solid Roller
shaft drive

Order No.	Material	Durometer	d_1	l_1	d_2	d_3	l_2
60626.W2166	Urethane	60	127,0 (5,0“)	31.75	49.28	19,07/19,20	12.70
60626.W2168	Urethane	80	127,0 (5,0“)	31.75	49.28	19,07/19,20	12.70
60626.W2173	Urethane	35	127,0 (5,0“)	41.40	49.28	31,78/31,90	12.70
60626.W2176	Urethane	60	127,0 (5,0“)	41.40	49.28	31,78/31,90	12.70
60626.W2178	Urethane	80	127,0 (5,0“)	41.40	49.28	31,78/31,90	12.70
60626.W2183	Urethane	35	152,4 (6,0“)	31.75	49.28	12,73/12,83	12.70
60626.W2186	Urethane	60	152,4 (6,0“)	31.75	49.28	12,73/12,83	12.70
60626.W2188	Urethane	80	152,4 (6,0“)	31.75	49.28	12,73/12,83	12.70
60626.W2193	Urethane	35	152,4 (6,0“)	31.75	49.28	19,08/19,20	12.70
60626.W2196	Urethane	60	152,4 (6,0“)	31.75	49.28	19,08/19,20	12.70
60626.W2198	Urethane	80	152,4 (6,0“)	31.75	49.28	19,08/19,20	12.70
60626.W2203	Urethane	35	152,4 (6,0“)	41.40	49.28	31,78/31,90	12.70
60626.W2206	Urethane	60	152,4 (6,0“)	41.40	49.28	31,78/31,90	12.70
60626.W2208	Urethane	80	152,4 (6,0“)	41.40	49.28	31,78/31,90	12.70
60626.W3002	Neoprene	20	38,10 (1,5“)	22.36	31.75	12,72/12,83	9.65
60626.W3003	Neoprene	35	38,10 (1,5“)	22.36	31.75	12,72/12,83	9.65
60626.W3006	Neoprene	60	38,10 (1,5“)	22.36	31.75	12,72/12,83	9.65
60626.W3008	Neoprene	80	38,10 (1,5“)	22.36	31.75	12,72/12,83	9.65
60626.W3012	Neoprene	20	50,80 (2,0“)	31.75	23.37	12,72/12,83	12.70
60626.W3013	Neoprene	35	50,80 (2,0“)	31.75	23.37	12,72/12,83	12.70
60626.W3016	Neoprene	60	50,80 (2,0“)	31.75	23.37	12,72/12,83	12.70
60626.W3018	Neoprene	80	50,80 (2,0“)	31.75	23.37	12,72/12,83	12.70
60626.W3022	Neoprene	20	50,80 (2,0“)	31.75	23.37	19,08/19,20	12.70
60626.W3023	Neoprene	35	50,80 (2,0“)	31.75	23.37	19,08/19,20	12.70
60626.W3026	Neoprene	60	50,80 (2,0“)	31.75	23.37	19,08/19,20	12.70
60626.W3028	Neoprene	80	50,80 (2,0“)	31.75	23.37	19,08/19,20	12.70
60626.W3032	Neoprene	20	50,80 (2,0“)	31.75	49.28	12,73/12,83	12.70
60626.W3033	Neoprene	35	50,80 (2,0“)	31.75	49.28	12,73/12,83	12.70
60626.W3036	Neoprene	60	50,80 (2,0“)	31.75	49.28	12,73/12,83	12.70
60626.W3038	Neoprene	80	50,80 (2,0“)	31.75	49.28	12,73/12,83	12.70
60626.W3042	Neoprene	20	50,80 (2,0“)	31.75	49.28	19,08/19,20	12.70
60626.W3043	Neoprene	35	50,80 (2,0“)	31.75	49.28	19,08/19,20	12.70
60626.W3046	Neoprene	60	50,80 (2,0“)	31.75	49.28	19,08/19,20	12.70
60626.W3048	Neoprene	80	50,80 (2,0“)	31.75	49.28	19,08/19,20	12.70
60626.W3052	Neoprene	20	63,50 (2,5“)	31.75	23.37	12,73/12,83	12.70
60626.W3053	Neoprene	35	63,50 (2,5“)	31.75	23.37	12,73/12,83	12.70
60626.W3056	Neoprene	60	63,50 (2,5“)	31.75	23.37	12,73/12,83	12.70
60626.W3058	Neoprene	80	63,50 (2,5“)	31.75	23.37	12,73/12,83	12.70
60626.W3062	Neoprene	20	63,50 (2,5“)	34.79	23.37	19,08/19,20	12.70
60626.W3063	Neoprene	35	63,50 (2,5“)	34.79	23.37	19,08/19,20	12.70
60626.W3066	Neoprene	60	63,50 (2,5“)	34.79	23.37	19,08/19,20	12.70
60626.W3068	Neoprene	80	63,50 (2,5“)	34.79	23.37	19,08/19,20	12.70
60626.W3072	Neoprene	20	63,50 (2,5“)	31.75	49.28	12,73/12,83	12.70
60626.W3073	Neoprene	35	63,50 (2,5“)	31.75	49.28	12,73/12,83	12.70
60626.W3076	Neoprene	60	63,50 (2,5“)	31.75	49.28	12,73/12,83	12.70
60626.W3078	Neoprene	80	63,50 (2,5“)	31.75	49.28	12,73/12,83	12.70
60626.W3082	Neoprene	20	63,50 (2,5“)	31.75	49.28	19,08/19,20	12.70
60626.W3083	Neoprene	35	63,50 (2,5“)	31.75	49.28	19,08/19,20	12.70
60626.W3086	Neoprene	60	63,50 (2,5“)	31.75	49.28	19,08/19,20	12.70
60626.W3088	Neoprene	80	63,50 (2,5“)	31.75	49.28	19,08/19,20	12.70
60626.W3092	Neoprene	20	63,50 (2,5“)	34.79	49.28	25,42/25,55	12.70
60626.W3093	Neoprene	35	63,50 (2,5“)	34.79	49.28	25,42/25,55	12.70
60626.W3096	Neoprene	60	63,50 (2,5“)	34.79	49.28	25,42/25,55	12.70
60626.W3098	Neoprene	80	63,50 (2,5“)	34.79	49.28	25,42/25,55	12.70
60626.W3102	Neoprene	20	101,6 (4,0“)	31.75	23.37	12,73/12,83	12.70
60626.W3103	Neoprene	35	101,6 (4,0“)	31.75	23.37	12,73/12,83	12.70
60626.W3106	Neoprene	60	101,6 (4,0“)	31.75	23.37	12,73/12,83	12.70
60626.W3108	Neoprene	80	101,6 (4,0“)	31.75	23.37	12,73/12,83	12.70
60626.W3112	Neoprene	20	101,6 (4,0“)	31.75	23.37	19,08/19,20	12.70
60626.W3113	Neoprene	35	101,6 (4,0“)	31.75	23.37	19,08/19,20	12.70
60626.W3116	Neoprene	60	101,6 (4,0“)	31.75	23.37	19,08/19,20	12.70
60626.W3118	Neoprene	80	101,6 (4,0“)	31.75	23.37	19,08/19,20	12.70
60626.W3122	Neoprene	20	101,6 (4,0“)	31.75	49.28	12,73/12,83	12.70
60626.W3123	Neoprene	35	101,6 (4,0“)	31.75	49.28	12,73/12,83	12.70
60626.W3126	Neoprene	60	101,6 (4,0“)	31.75	49.28	12,73/12,83	12.70
60626.W3128	Neoprene	80	101,6 (4,0“)	31.75	49.28	12,73/12,83	12.70
60626.W3132	Neoprene	20	101,6 (4,0“)	31.75	49.28	19,08/19,20	12.70
60626.W3133	Neoprene	35	101,6 (4,0“)	31.75	49.28	19,08/19,20	12.70
60626.W3136	Neoprene	60	101,6 (4,0“)	31.75	49.28	19,08/19,20	12.70

Order No.	Material	Durometer	d_1	l_1	d_2	d_3	l_2
60626.W3138	Neoprene	80	101,6 (4,0“)	31.75	49.28	19,08/19,20	12.70
60626.W3143	Neoprene	60	101,6 (4,0“)	34.80	49.28	31,78/31,90	12.70
60626.W3146	Neoprene	60	101,6 (4,0“)	34.80	49.28	31,78/31,90	12.70

Solid Roller
clutch bearing

60628

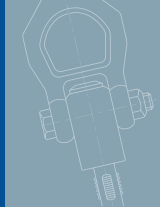


Material
Nitrile, urethane or neoprene bonded to a steel insert.
Hardness from 20-80 durometer (Shore A).

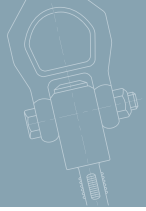
Technical Notes
A clutch bearing allows the roller to turn in only one direction. Available in left or right hand rotation (with the stud pointed upwards, a right hand rotation turns clockwise.)
Supplied with type I bearing, other d_1=38,1 roller which is supplied with type h bearing.

Tips
Type R = Right handed clutch bearing.
Type L = Left handed clutch bearing.
See technical introduction pages for further information.

Order No.	Type	Material	Durometer	d_1	l_1	d_2 -0|+0.05	d_3	l_2	l_3	l_4	l_5
60628.W1002	Right	Nitrile	20	38.10	31.75	9.42	5/16-18“	17.53	4.83	3.05	1.52
60628.W1003	Right	Nitrile	35	38.10	31.75	9.42	5/16-18“	17.53	4.83	3.05	1.52
60628.W1006	Right	Nitrile	60	38.10	31.75	9.42	5/16-18“	17.53	4.83	3.05	1.52
60628.W1008	Right	Nitrile	80	38.10	31.75	9.42	5/16-18“	17.53	4.83	3.05	1.52
60628.W1012	Left	Nitrile	20	38.10	31.75	9.42	5/16-18“	17.53	4.83	3.05	1.52
60628.W1013	Left	Nitrile	35	38.10	31.75	9.42	5/16-18“	17.53	4.83	3.05	1.52
60628.W1016	Left	Nitrile	60	38.10	31.75	9.42	5/16-18“	17.53	4.83	3.05	1.52
60628.W1018	Left	Nitrile	80	38.10	31.75	9.42	5/16-18“	17.53	4.83	3.05	1.52
60628.W1022	Right	Nitrile	20	50.80	23.37	15.77	1/2-13“	45.47	26.42	3.05	10.41
60628.W1023	Right	Nitrile	35	50.80	23.37	15.77	1/2-13“	45.47	26.42	3.05	10.41
60628.W1026	Right	Nitrile	60	50.80	23.37	15.77	1/2-13“	45.47	26.42	3.05	10.41
60628.W1028	Right	Nitrile	80	50.80	23.37	15.77	1/2-13“	45.47	26.42	3.05	10.41
60628.W1032	Left	Nitrile	20	50.80	23.37	15.77	1/2-13“	45.47	26.42	3.05	10.41
60628.W1033	Left	Nitrile	35	50.80	23.37	15.77	1/2-13“	45.47	26.42	3.05	10.41
60628.W1036	Left	Nitrile	60	50.80	23.37	15.77	1/2-13“	45.47	26.42	3.05	10.41
60628.W1038	Left	Nitrile	80	50.80	23.37	15.77	1/2-13“	45.47	26.42	3.05	10.41
60628.W1042	Right	Nitrile	20	50.80	49.28	15.77	1/2-13“	31.75	12.70	3.05	-
60628.W1043	Right	Nitrile	35	50.80	49.28	15.77	1/2-13“	31.75	12.70	3.05	-
60628.W1046	Right	Nitrile	60	50.80	49.28	15.77	1/2-13“	31.75	12.70	3.05	-
60628.W1048	Right	Nitrile	80	50.80	49.28	15.77	1/2-13“	31.75	12.70	3.05	-
60628.W1052	Left	Nitrile	20	50.80	49.28	15.77	1/2-13“	31.75	12.70	3.05	-
60628.W1053	Left	Nitrile	35	50.80	49.28	15.77	1/2-13“	31.75	12.70	3.05	-
60628.W1056	Left	Nitrile	60	50.80	49.28	15.77	1/2-13“	31.75	12.70	3.05	-
60628.W1058	Left	Nitrile	80	50.80	49.28	15.77	1/2-13“	31.75	12.70	3.05	-
60628.W1062	Right	Nitrile	20	63.50	23.27	15.77	1/2-13“	31.75	26.42	3.05	10.41
60628.W1063	Right	Nitrile	35	63.50	23.27	15.77	1/2-13“	31.75	26.42	3.05	10.41
60628.W1066	Right	Nitrile	60	63.50	23.27	15.77	1/2-13“	31.75	26.42	3.05	10.41
60628.W1068	Right	Nitrile	80	63.50	23.27	15.77	1/2-13“	31.75	26.42	3.05	10.41
60628.W1072	Left	Nitrile	20	63.50	23.27	15.77	1/2-13“	31.75	26.42	3.05	10.41
60628.W1073	Left	Nitrile	35	63.50	23.27	15.77	1/2-13“	31.75	26.42	3.05	10.41
60628.W1076	Left	Nitrile	60	63.50	23.27	15.77	1/2-13“	31.75	26.42	3.05	10.41

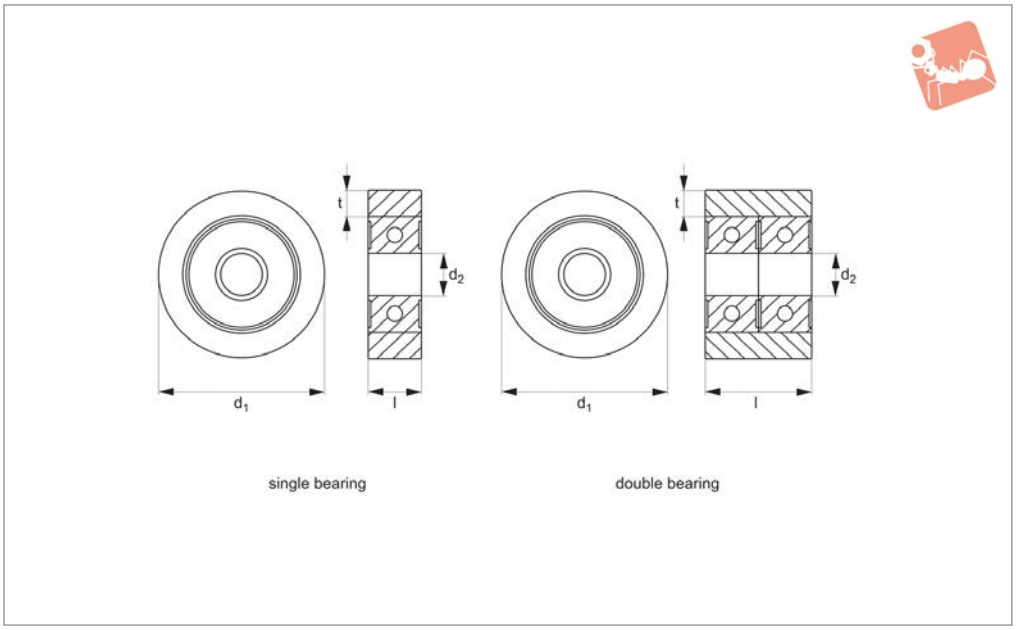


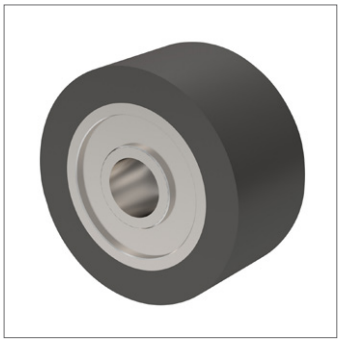
Order No.	Type	Material	Durometer	d_1	l_1	d_2 -0|+0.05	d_3	l_2	l_3	l_4	l_5
60628.W1078	Left	Nitrile	80	63.50	23.27	15.77	1/2-13“	31.75	26.42	3.05	10.41
60628.W1082	Right	Nitrile	20	63.50	49.28	15.77	1/2-13“	31.75	12.70	3.05	-
60628.W1083	Right	Nitrile	35	63.50	49.28	15.77	1/2-13“	31.75	12.70	3.05	-
60628.W1086	Right	Nitrile	60	63.50	49.28	15.77	1/2-13“	31.75	12.70	3.05	-
60628.W1088	Right	Nitrile	80	63.50	49.28	15.77	1/2-13“	31.75	12.70	3.05	-
60628.W1092	Left	Nitrile	20	63.50	49.28	15.77	1/2-13“	31.75	12.70	3.05	-
60628.W1093	Left	Nitrile	35	63.50	49.28	15.77	1/2-13“	31.75	12.70	3.05	-
60628.W1096	Left	Nitrile	60	63.50	49.28	15.77	1/2-13“	31.75	12.70	3.05	-
60628.W1098	Left	Nitrile	80	63.50	49.28	15.77	1/2-13“	31.75	12.70	3.05	-
60628.W1102	Right	Nitrile	20	101.6	23.27	15.77	1/2-13“	31.75	26.42	3.05	10.41
60628.W1103	Right	Nitrile	35	101.6	23.27	15.77	1/2-13“	31.75	26.42	3.05	10.41
60628.W1106	Right	Nitrile	60	101.6	23.27	15.77	1/2-13“	31.75	26.42	3.05	10.41
60628.W1108	Right	Nitrile	80	101.6	23.27	15.77	1/2-13“	31.75	26.42	3.05	10.41
60628.W1112	Left	Nitrile	20	101.6	23.27	15.77	1/2-13“	31.75	26.42	3.05	10.41
60628.W1113	Left	Nitrile	35	101.6	23.27	15.77	1/2-13“	31.75	26.42	3.05	10.41
60628.W1116	Left	Nitrile	60	101.6	23.27	15.77	1/2-13“	31.75	26.42	3.05	10.41
60628.W1118	Left	Nitrile	80	101.6	23.27	15.77	1/2-13“	31.75	26.42	3.05	10.41
60628.W1122	Right	Nitrile	20	101.6	49.28	15.77	1/2-13“	31.75	12.70	3.05	-
60628.W1123	Right	Nitrile	35	101.6	49.28	15.77	1/2-13“	31.75	12.70	3.05	-
60628.W1126	Right	Nitrile	60	101.6	49.28	15.77	1/2-13“	31.75	12.70	3.05	-
60628.W1128	Right	Nitrile	80	101.6	49.28	15.77	1/2-13“	31.75	12.70	3.05	-
60628.W1132	Left	Nitrile	20	101.6	49.28	15.77	1/2-13“	31.75	12.70	3.05	-
60628.W1133	Left	Nitrile	35	101.6	49.28	15.77	1/2-13“	31.75	12.70	3.05	-
60628.W1136	Left	Nitrile	60	101.6	49.28	15.77	1/2-13“	31.75	12.70	3.05	-
60628.W1138	Left	Nitrile	80	101.6	49.28	15.77	1/2-13“	31.75	12.70	3.05	-
60628.W2003	Right	Urethane	35	38.10	31.75	9.42	5/16-18“	17.53	4.83	3.05	1.52
60628.W2006	Right	Urethane	60	38.10	31.75	9.42	5/16-18“	17.53	4.83	3.05	1.52
60628.W2008	Right	Urethane	80	38.10	31.75	9.42	5/16-18“	17.53	4.83	3.05	1.52
60628.W2013	Left	Urethane	35	38.10	31.75	9.42	5/16-18“	17.53	4.83	3.05	1.52
60628.W2016	Left	Urethane	60	38.10	31.75	9.42	5/16-18“	17.53	4.83	3.05	1.52
60628.W2018	Left	Urethane	80	38.10	31.75	9.42	5/16-18“	17.53	4.83	3.05	1.52
60628.W2023	Right	Urethane	35	50.80	23.37	15.77	1/2-13“	45.47	26.42	3.05	10.41
60628.W2026	Right	Urethane	60	50.80	23.37	15.77	1/2-13“	45.47	26.42	3.05	10.41
60628.W2028	Right	Urethane	80	50.80	23.37	15.77	1/2-13“	45.47	26.42	3.05	10.41
60628.W2033	Left	Urethane	35	50.80	23.37	15.77	1/2-13“	45.47	26.42	3.05	10.41
60628.W2036	Left	Urethane	60	50.80	23.37	15.77	1/2-13“	45.47	26.42	3.05	10.41
60628.W2038	Left	Urethane	80	50.80	23.37	15.77	1/2-13“	45.47	26.42	3.05	10.41
60628.W2043	Right	Urethane	35	50.80	49.28	15.77	1/2-13“	31.75	12.70	3.05	-
60628.W2046	Right	Urethane	60	50.80	49.28	15.77	1/2-13“	31.75	12.70	3.05	-
60628.W2048	Right	Urethane	80	50.80	49.28	15.77	1/2-13“	31.75	12.70	3.05	-
60628.W2053	Left	Urethane	35	50.80	49.28	15.77	1/2-13“	31.75	12.70	3.05	-
60628.W2056	Left	Urethane	60	50.80	49.28	15.77	1/2-13“	31.75	12.70	3.05	-
60628.W2058	Left	Urethane	80	50.80	49.28	15.77	1/2-13“	31.75	12.70	3.05	-
60628.W2063	Right	Urethane	35	63.50	23.27	15.77	1/2-13“	31.75	26.42	3.05	10.41
60628.W2066	Right	Urethane	60	63.50	23.27	15.77	1/2-13“	31.75	26.42	3.05	10.41
60628.W2068	Right	Urethane	80	63.50	23.27	15.77	1/2-13“	31.75	26.42	3.05	10.41
60628.W2073	Left	Urethane	35	63.50	23.27	15.77	1/2-13“	31.75	26.42	3.05	10.41
60628.W2076	Left	Urethane	60	63.50	23.27	15.77	1/2-13“	31.75	26.42	3.05	10.41
60628.W2078	Left	Urethane	80	63.50	23.27	15.77	1/2-13“	31.75	26.42	3.05	10.41
60628.W2083	Right	Urethane	35	63.50	49.28	15.77	1/2-13“	31.75	12.70	3.05	-
60628.W2086	Right	Urethane	60	63.50	49.28	15.77	1/2-13“	31.75	12.70	3.05	-
60628.W2088	Right	Urethane	80	63.50	49.28	15.77	1/2-13“	31.75	12.70	3.05	-
60628.W2093	Left	Urethane	35	63.50	49.28	15.77	1/2-13“	31.75	12.70	3.05	-
60628.W2096	Left	Urethane	60	63.50	49.28	15.77	1/2-13“	31.75	12.70	3.05	-
60628.W2098	Left	Urethane	80	63.50	49.28	15.77	1/2-13“	31.75	12.70	3.05	-
60628.W2103	Right	Urethane	35	101.6	23.27	15.77	1/2-13“	31.75	26.42	3.05	10.41
60628.W2106	Right	Neoprene	60	101.6	23.27	15.77	1/2-13“	31.75	26.42	3.05	10.41
60628.W2108	Right	Urethane	60	101.6	23.27	15.77	1/2-13“	31.75	26.42	3.05	10.41
60628.W2113	Left	Urethane	80	101.6	23.27	15.77	1/2-13“	31.75	26.42	3.05	10.41
60628.W2116	Left	Urethane	35	101.6	23.27	15.77	1/2-13“	31.75	26.42	3.05	10.41
60628.W2118	Left	Urethane	60	101.6	23.27	15.77	1/2-13“	31.75	26.42	3.05	10.41
60628.W2123	Right	Urethane	80	101.6	49.28	15.77	1/2-13“	31.75	12.70	3.05	-
60628.W2126	Right	Urethane	35	101.6	49.28	15.77	1/2-13“	31.75	12.70	3.05	-
60628.W2128	Right	Urethane	60	101.6	49.28	15.77	1/2-13“	31.75	12.70	3.05	-
60628.W2133	Left	Urethane	80	101.6	49.28	15.77	1/2-13“	31.75	12.70	3.05	-
60628.W2136	Left	Urethane	35	101.6	49.28	15.77	1/2-13“	31.75	12.70	3.05	-
60628.W2138	Left	Urethane	80	101.6	49.28	15.77	1/2-13“	31.75	12.70	3.05	-
60628.W3002	Right	Neoprene	20	38.10	31.75	9.42	5/16-18“	17.53	4.83	3.05	1.52



Solid Roller
clutch bearing

Order No.	Type	Material	Durometer	d_1	l_1	d_2 -0|+0.05	d_3	l_2	l_3	l_4	l_5
60628.W3003	Right	Neoprene	35	38.10	31.75	9.42	5/16-18“	17.53	4.83	3.05	1.52
60628.W3006	Right	Neoprene	60	38.10	31.75	9.42	5/16-18“	17.53	4.83	3.05	1.52
60628.W3008	Right	Neoprene	80	38.10	31.75	9.42	5/16-18“	17.53	4.83	3.05	1.52
60628.W3012	Left	Neoprene	20	38.10	31.75	9.42	5/16-18“	17.53	4.83	3.05	1.52
60628.W3013	Left	Neoprene	35	38.10	31.75	9.42	5/16-18“	17.53	4.83	3.05	1.52
60628.W3016	Left	Neoprene	60	38.10	31.75	9.42	5/16-18“	17.53	4.83	3.05	1.52
60628.W3018	Left	Neoprene	80	38.10	31.75	9.42	5/16-18“	17.53	4.83	3.05	1.52
60628.W3022	Right	Neoprene	20	50.80	23.37	15.77	1/2-13“	45.47	26.42	3.05	10.41
60628.W3023	Right	Neoprene	35	50.80	23.37	15.77	1/2-13“	45.47	26.42	3.05	10.41
60628.W3026	Right	Neoprene	60	50.80	23.37	15.77	1/2-13“	45.47	26.42	3.05	10.41
60628.W3028	Right	Neoprene	80	50.80	23.37	15.77	1/2-13“	45.47	26.42	3.05	10.41
60628.W3032	Left	Neoprene	20	50.80	23.37	15.77	1/2-13“	45.47	26.42	3.05	10.41
60628.W3033	Left	Neoprene	35	50.80	23.37	15.77	1/2-13“	45.47	26.42	3.05	10.41
60628.W3036	Left	Neoprene	60	50.80	23.37	15.77	1/2-13“	45.47	26.42	3.05	10.41
60628.W3038	Left	Neoprene	80	50.80	23.37	15.77	1/2-13“	45.47	26.42	3.05	10.41
60628.W3042	Right	Neoprene	20	50.80	49.28	15.77	1/2-13“	31.75	12.70	3.05	-
60628.W3043	Right	Neoprene	35	50.80	49.28	15.77	1/2-13“	31.75	12.70	3.05	-
60628.W3046	Right	Neoprene	60	50.80	49.28	15.77	1/2-13“	31.75	12.70	3.05	-
60628.W3048	Right	Neoprene	80	50.80	49.28	15.77	1/2-13“	31.75	12.70	3.05	-
60628.W3052	Left	Neoprene	20	50.80	49.28	15.77	1/2-13“	31.75	12.70	3.05	-
60628.W3053	Left	Neoprene	35	50.80	49.28	15.77	1/2-13“	31.75	12.70	3.05	-
60628.W3056	Left	Neoprene	60	50.80	49.28	15.77	1/2-13“	31.75	12.70	3.05	-
60628.W3058	Left	Neoprene	80	50.80	49.28	15.77	1/2-13“	31.75	12.70	3.05	-
60628.W3062	Right	Neoprene	20	63.50	23.27	15.77	1/2-13“	31.75	26.42	3.05	10.41
60628.W3063	Right	Neoprene	35	63.50	23.27	15.77	1/2-13“	31.75	26.42	3.05	10.41
60628.W3066	Right	Neoprene	60	63.50	23.27	15.77	1/2-13“	31.75	26.42	3.05	10.41
60628.W3068	Right	Neoprene	80	63.50	23.27	15.77	1/2-13“	31.75	26.42	3.05	10.41
60628.W3072	Left	Neoprene	20	63.50	23.27	15.77	1/2-13“	31.75	26.42	3.05	10.41
60628.W3073	Left	Neoprene	35	63.50	23.27	15.77	1/2-13“	31.75	26.42	3.05	10.41
60628.W3076	Left	Neoprene	60	63.50	23.27	15.77	1/2-13“	31.75	26.42	3.05	10.41
60628.W3078	Left	Neoprene	80	63.50	23.27	15.77	1/2-13“	31.75	26.42	3.05	10.41
60628.W3082	Right	Neoprene	20	63.50	49.28	15.77	1/2-13“	31.75	12.70	3.05	-
60628.W3083	Right	Neoprene	35	63.50	49.28	15.77	1/2-13“	31.75	12.70	3.05	-
60628.W3086	Right	Neoprene	60	63.50	49.28	15.77	1/2-13“	31.75	12.70	3.05	-
60628.W3088	Right	Neoprene	80	63.50	49.28	15.77	1/2-13“	31.75	12.70	3.05	-
60628.W3092	Left	Neoprene	20	63.50	49.28	15.77	1/2-13“	31.75	12.70	3.05	-
60628.W3093	Left	Neoprene	35	63.50	49.28	15.77	1/2-13“	31.75	12.70	3.05	-
60628.W3096	Left	Neoprene	60	63.50	49.28	15.77	1/2-13“	31.75	12.70	3.05	-
60628.W3098	Left	Neoprene	80	63.50	49.28	15.77	1/2-13“	31.75	12.70	3.05	-
60628.W3102	Right	Neoprene	20	101.6	23.27	15.77	1/2-13“	31.75	26.42	3.05	10.41
60628.W3103	Right	Neoprene	35	101.6	23.27	15.77	1/2-13“	31.75	26.42	3.05	10.41
60628.W3108	Right	Neoprene	80	101.6	23.27	15.77	1/2-13“	31.75	26.42	3.05	10.41
60628.W3112	Left	Neoprene	20	101.6	23.27	15.77	1/2-13“	31.75	26.42	3.05	10.41
60628.W3113	Left	Neoprene	35	101.6	23.27	15.77	1/2-13“	31.75	26.42	3.05	10.41
60628.W3116	Left	Neoprene	60	101.6	23.27	15.77	1/2-13“	31.75	26.42	3.05	10.41
60628.W3118	Left	Neoprene	80	101.6	23.27	15.77	1/2-13“	31.75	26.42	3.05	10.41
60628.W3122	Right	Neoprene	20	101.6	49.28	15.77	1/2-13“	31.75	12.70	3.05	-
60628.W3123	Right	Neoprene	35	101.6	49.28	15.77	1/2-13“	31.75	12.70	3.05	-
60628.W3126	Right	Neoprene	60	101.6	49.28	15.77	1/2-13“	31.75	12.70	3.05	-
60628.W3128	Right	Neoprene	80	101.6	49.28	15.77	1/2-13“	31.75	12.70	3.05	-
60628.W3132	Left	Neoprene	20	101.6	49.28	15.77	1/2-13“	31.75	12.70	3.05	-
60628.W3133	Left	Neoprene	35	101.6	49.28	15.77	1/2-13“	31.75	12.70	3.05	-
60628.W3136	Left	Neoprene	60	101.6	49.28	15.77	1/2-13“	31.75	12.70	3.05	-
60628.W3138	Left	Neoprene	80	101.6	49.28	15.77	1/2-13“	31.75	12.70	3.05	-





60610

Material
Urethane cast directly to a precision sealed ball bearing. Hardness from 35-95 durometer (Shore A).

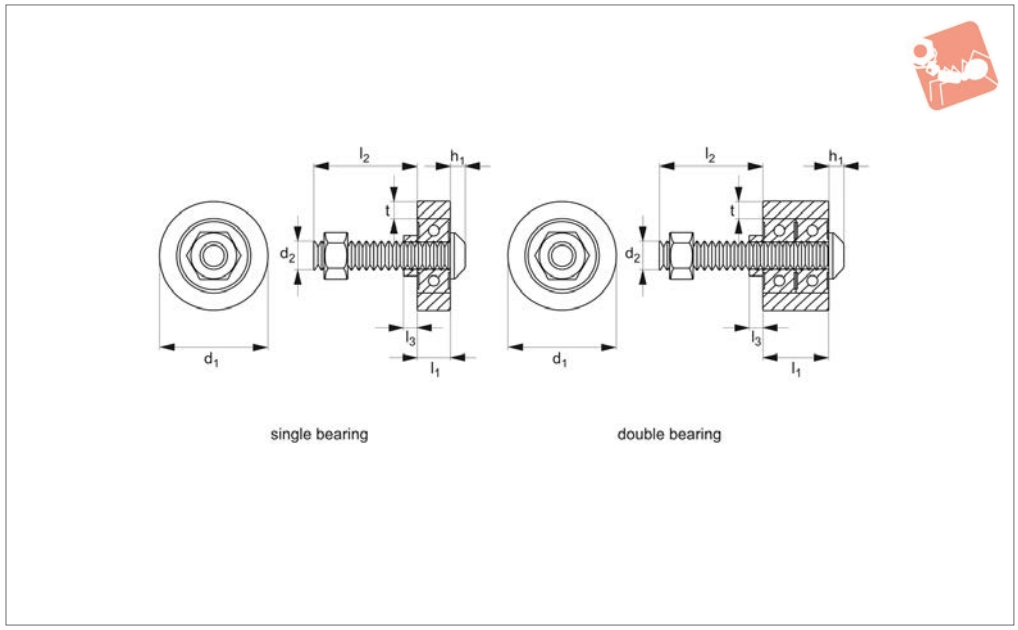
Technical Notes
These bearings provide a smooth, quiet and non-marring operation. Urethane provides excellent durability and resistance to abrasion.

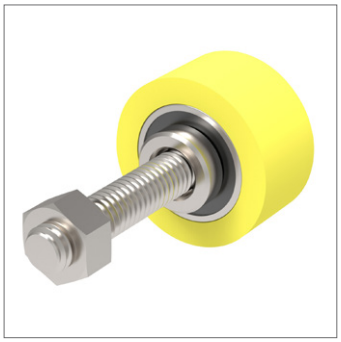
Order No.	Bearing type	Durometer	d_1	d_2	l	t
60610.W0003	Single	35	20	5	5	3
60610.W0006	Single	60	20	5	5	3
60610.W0009	Single	95	20	5	5	3
60610.W0013	Single	35	25	6	6	3
60610.W0016	Single	60	25	6	6	3
60610.W0019	Single	95	25	6	6	3
60610.W0023	Single	35	30	8	7	4
60610.W0026	Single	60	30	8	7	4
60610.W0029	Single	95	30	8	7	4
60610.W0033	Single	35	35	9	7	6
60610.W0036	Single	60	35	9	7	6
60610.W0039	Single	95	35	9	7	6
60610.W0043	Single	35	35	10	8	5
60610.W0046	Single	60	35	10	8	5
60610.W0049	Single	95	35	10	8	5
60610.W0053	Single	35	40	10	8	7
60610.W0056	Single	60	40	10	8	7
60610.W0059	Single	95	40	10	8	7
60610.W0063	Single	35	40	12	8	6
60610.W0066	Single	60	40	12	8	6
60610.W0069	Single	95	40	12	8	6
60610.W0073	Single	35	50	12	8	11
60610.W0076	Single	60	50	12	8	11
60610.W0079	Single	95	50	12	8	11
60610.W0089	Single	95	45	15	9	7
60610.W0099	Single	95	50	17	10	8
60610.W0109	Single	95	60	20	12	9
60610.W1003	Double	35	20	5	10	3
60610.W1006	Double	60	20	5	10	3
60610.W1009	Double	95	20	5	10	3
60610.W1013	Double	35	25	6	12	3
60610.W1016	Double	60	25	6	12	3
60610.W1019	Double	95	25	6	12	3
60610.W1023	Double	35	30	8	14	4
60610.W1026	Double	60	30	8	14	4

Urethane Covered Bearings

bearing only

Order No.	Bearing type	Durometer	d_1	d_2	l	t
60610.W1029	Double	95	30	8	14	4
60610.W1033	Double	35	35	9	14	6
60610.W1036	Double	60	35	9	14	6
60610.W1039	Double	95	35	9	14	6
60610.W1043	Double	35	35	10	16	5
60610.W1046	Double	60	35	10	16	5
60610.W1049	Double	95	35	10	16	5
60610.W1053	Double	35	40	10	16	7
60610.W1056	Double	60	40	10	16	7
60610.W1059	Double	95	40	10	16	7
60610.W1063	Double	35	40	12	16	6
60610.W1066	Double	60	40	12	16	6
60610.W1069	Double	95	40	12	16	6
60610.W1073	Double	35	50	12	16	11
60610.W1076	Double	60	50	12	16	11
60610.W1079	Double	95	50	12	16	11
60610.W1089	Double	95	45	15	18	7
60610.W1099	Double	95	50	17	20	8
60610.W1109	Double	95	60	20	24	9
60610.W1119	Double	95	70	25	24	12
60610.W0119	Single	95	70	25	12	12





60614

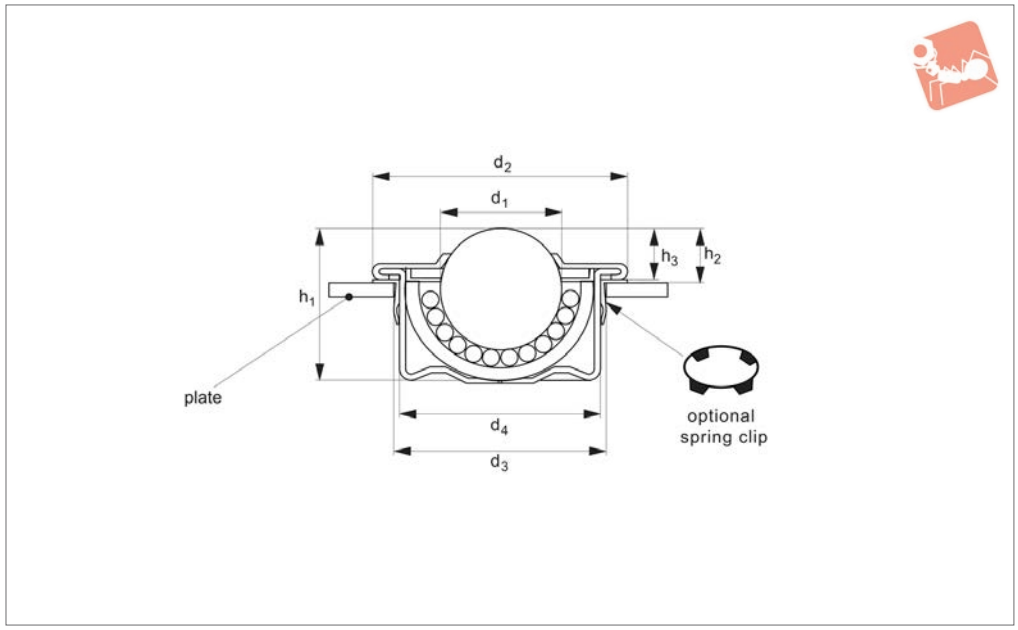
Material
Urethane cast directly to a precision sealed ball bearing. Hardness from 35-95 durometer (Shore A).

Technical Notes
These bearings provide a smooth, quiet and non-marring operation. Urethane provides excellent durability and resistance to abrasion. Assembled with button head cap screw, spacer and lock nut.

Order No.	Bearing type	Durometer	d_1	l_1	d_2	l_2	d_3	t	h
60614.W1003	Double	35	20	10	M5x0.8	25	3	3	2.75
60614.W1006	Double	60	20	10	M5x0.8	25	3	3	2.75
60614.W1009	Double	95	20	10	M5x0.8	25	3	3	2.75
60614.W1013	Double	35	25	12	M6x1.0	28	3	3	3.3
60614.W1016	Double	60	25	12	M6x1.0	28	3	3	3.3
60614.W1019	Double	95	25	12	M6x1.0	28	3	3	3.3
60614.W1023	Double	35	30	14	M8x1.25	26	3	4	4.4
60614.W1026	Double	60	30	14	M8x1.25	26	3	4	4.4
60614.W1029	Double	95	30	14	M8x1.25	26	3	4	4.4
60614.W1033	Double	35	35	16	M10x1.5	29	3	4.5	5.5
60614.W1036	Double	60	35	16	M10x1.5	29	3	4.5	5.5
60614.W1039	Double	95	35	16	M10x1.5	29	3	4.5	5.5
60614.W1043	Double	35	40	16	M10x1.5	29	3	7	5.5
60614.W1046	Double	60	40	16	M10x1.5	29	3	7	5.5
60614.W1049	Double	95	40	16	M10x1.5	29	3	7	5.5
60614.W1053	Double	35	40	16	M12x1.75	29	3	6	6.6
60614.W1056	Double	60	40	16	M12x1.75	29	3	6	6.6
60614.W1059	Double	95	40	16	M12x1.75	29	3	6	6.6
60614.W1063	Double	35	50	16	M12x1.75	29	3	11	6.6
60614.W1066	Double	60	50	16	M12x1.75	29	3	11	6.6
60614.W1069	Double	95	50	16	M12x1.75	29	3	11	6.6
60614.W0003	Single	35	20	5	M5x0.8	30	3	3	2.75
60614.W0006	Single	60	20	5	M5x0.8	30	3	3	2.75
60614.W0009	Single	95	20	5	M5x0.8	30	3	3	2.75
60614.W0013	Single	35	25	6	M6x1.0	34	3	3	3.3
60614.W0016	Single	60	25	6	M6x1.0	34	3	3	3.3
60614.W0019	Single	95	25	6	M6x1.0	34	3	3	3.3
60614.W0023	Single	35	30	7	M8x1.25	33	3	4	4.4
60614.W0026	Single	60	30	7	M8x1.25	33	3	4	4.4
60614.W0029	Single	95	30	7	M8x1.25	33	3	4	4.4
60614.W0033	Single	35	35	8	M10x1.5	37	3	4.5	5.5
60614.W0036	Single	60	35	8	M10x1.5	37	3	4.5	5.5
60614.W0039	Single	95	35	8	M10x1.5	37	3	4.5	5.5
60614.W0043	Single	35	40	8	M10x1.5	37	3	7	5.5
60614.W0046	Single	60	40	8	M10x1.5	37	3	7	5.5

Urethane Covered Bearings
stud mounted

Order No.	Bearing type	Durometer	d_1	l_1	d_2	l_2	d_3	t	h
60614.W0049	Single	95	40	8	M10x1.5	37	3	7	5.5
60614.W0053	Single	35	40	8	M12x1.75	37	3	6	6.6
60614.W0056	Single	60	40	8	M12x1.75	37	3	6	6.6
60614.W0059	Single	95	40	8	M12x1.75	37	3	6	6.6
60614.W0063	Single	35	50	8	M12x1.75	37	3	11	6.6
60614.W0066	Single	60	50	8	M12x1.75	37	3	11	6.6
60614.W0069	Single	95	50	8	M12x1.75	37	3	11	6.6



67202

Material
Steel (zinc plated), stainless steel (AISI 416 for housing and AISI 420 for balls) and acetal (POM).

Technical Notes
Cost-effective and light-weight units formed from sheet steel material.
No reduction in load carrying capacity even when installed upside down.
Sizes 22 and 30 have a felt seal for the ball.
Low friction 1:0,03, speeds up to 1m/s.
Temperature range -20°C to +70°C.

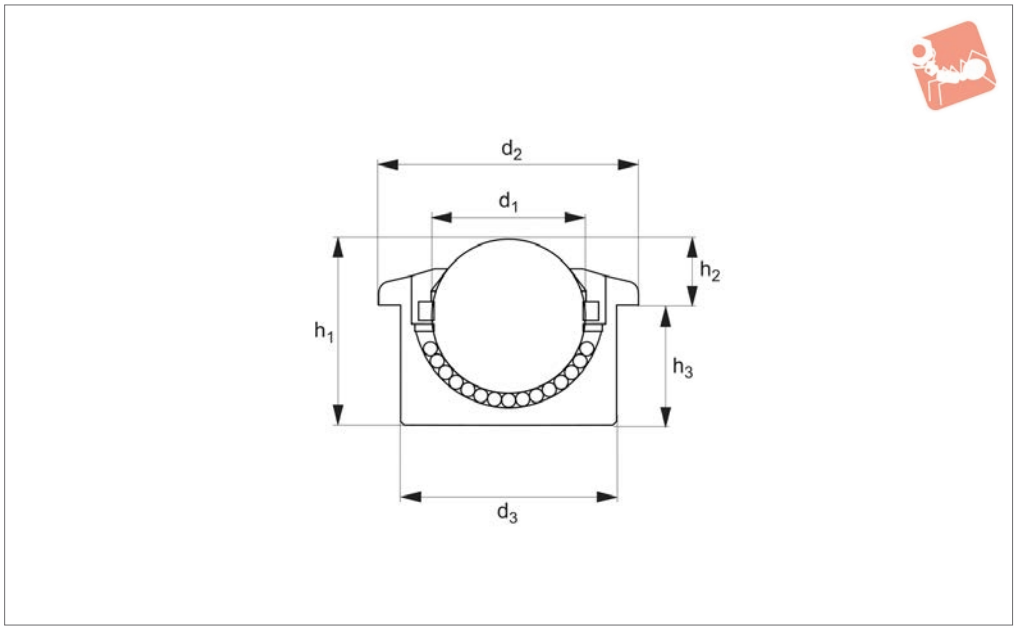
Tips
To compensate for irregular bore diameters we recommend using the spring clip (stainless) part no. P2730.
Clip requires a minimum plate thickness of 3mm to grip securely.
These rollers can only be used in the horizontal or „ball up“ direction.

Order No.	d_1	d_2	h_1	h_2	d_3 min.	d_3 max.	d_4	h_3	Housing	Ball	Load kg max.
67202.W0151	15	31	21	10.1	25	25.5	24	9.8	Steel	Steel	60
67202.W0154	15	31	21	10.1	25	25.5	24	9.8	Steel	Stainless	60
67202.W0155	15	31	21	10.1	25	25.5	24	9.8	Steel	Acetal	10
67202.W0152	15	31	21	10.1	25	25.5	24	9.8	Stainless	Stainless	40
67202.W0221	22	45	29.5	10.4	37.0	37.5	36	10.1	Steel	Steel	160
67202.W0224	22	45	29.5	10.4	37.0	37.5	36	10.1	Steel	Stainless	160
67202.W0225	22	45	29.5	10.4	37.0	37.5	36	10.1	Steel	Acetal	20
67202.W0222	22	45	29.5	10.4	37.0	37.5	36	10.1	Stainless	Stainless	90
67202.W0301	30	55	37	14.4	46	46.5	45	14.1	Steel	Steel	280
67202.W0304	30	55	37	14.4	46	46.5	45	14.1	Steel	Stainless	280
67202.W0305	30	55	37	14.4	46	46.5	45	14.1	Steel	Acetal	25
67202.W0302	30	55	37	14.4	46	46.5	45	14.1	Stainless	Stainless	200

Acetal Body Ball Transfer Units

light duty, acetal body

67204

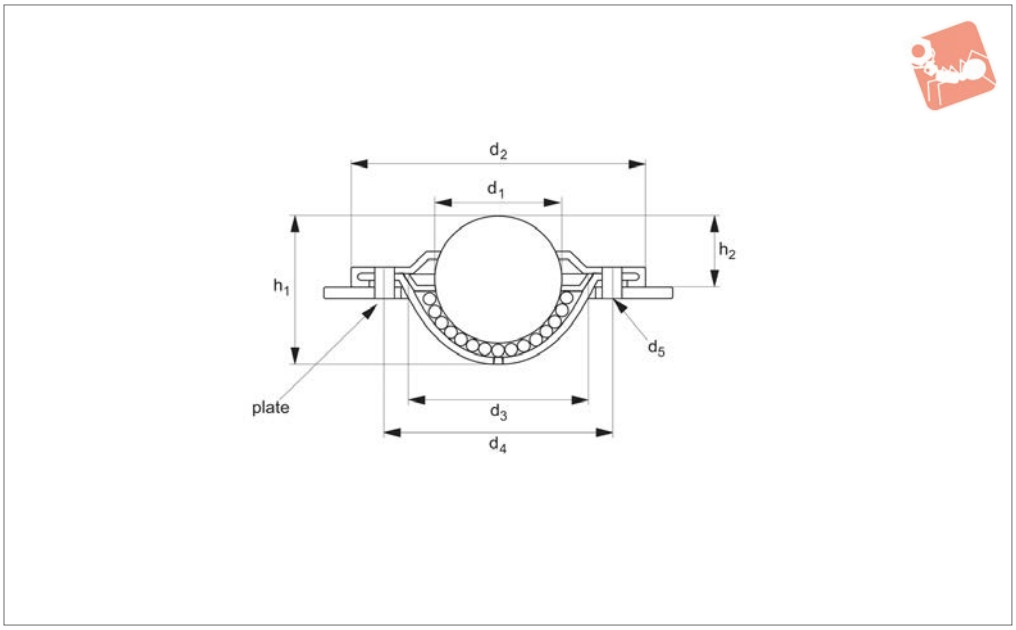


Material
Acetal (POM) housing with acetal or stainless (AISI 316) balls.

Technical Notes
Push-fit units, these actetal units resist salt water and chemicals.
They are non-conductive and non-magnetic, low friction 1:0,03.
Temperature range -20°C to +70°C, speeds up to 1m/s.

Tips
These rollers can only be used in the horizontal or „ball up" direction.

Order No.	d_1	d_2	h_1	h_2	d_3	h_3	Housing	Ball
67204.W0156	15	31	21	9.5	24	11.5	Acetal	Stainless
67204.W0157	15	31	21	9.5	24	11.5	Acetal	Acetal
67204.W0226	22	45	30.5	9.8	36	20.7	Acetal	Stainless
67204.W0227	22	45	30.5	9.8	36	20.7	Acetal	Acetal
67204.W0306	30	55	37	13.8	45	23.2	Acetal	Stainless
67204.W0307	30	55	37	13.8	45	23.2	Acetal	Acetal
67204.W0456	45	75	53.5	19	62	34.5	Acetal	Stainless
67204.W0457	45	75	53.5	19	62	34.5	Acetal	Acetal



67208

Material
Steel (AISI 1040 housing and AISI 52100 for balls),
stainless steel (AISI 416 for housing and AISI 420 for balls) and acetal (POM).

Technical Notes
Cost-effective and light-weight units formed from sheet steel material.
No reduction in load carrying capacity even when installed upside down.
Low friction 1:0,03, temperature range -20°C to +70°C, speeds up to 1m/s.

Tips
Theses rollers can only be used in the horizontal or „ball up" direction.
67208.320-SS and 67208.330-SS have 7 large fluid drain holes & no felt seal.

Order No.	d_1	d_2	h_1	h_2	d_3	d_4	d_5	Housing	Ball	Load kg max.
67208.W0161	15	41.0	19.3	10.8	24.0	30.0	2 x 3,4	Steel	Steel	15
67208.W0164	15	41.0	19.3	10.8	24.0	30.0	2 x 3,4	Steel	Stainless	10
67208.W0165	15	41.0	19.3	10.8	24.0	30.0	2 x 3,4	Steel	Acetal	10
67208.W0221	23	45.0	27.7	9.8	33.0	39.0	3 x 3,5	Steel	Steel	120
67208.W0225	23	45.0	27.7	9.8	33.0	39.0	3 x 3,5	Steel	Acetal	90
67208.W0322	32	73.7	36.1	16.2	45.5	58.7	2 x 5,5	Stainless	Stainless	125
67208.W0255	25	56.0	30.0	14.6	36.0	45.0	2 x 4,0	Steel	Acetal	22
67208.W0332	32	74.0	36.1	16.2	46.0	58.7	3 x 5,5	Stainless	Stainless	125
67208.W0224	23	45.0	27.7	9.8	33.0	39.0	3 x 3,5	Steel	Stainless	22
67208.W0252	25	56.0	30.0	14.6	36.0	45.0	2 x 4,0	Steel	Steel	60
67208.W0254	25	56.0	30.0	14.6	36.0	45.0	2 x 4,0	Steel	Stainless	40
67208.W0251	25	47.1	29.6	14.3	38.1	-	-	Stainless	Stainless	55

Product selection

Available materials

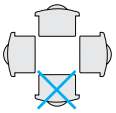
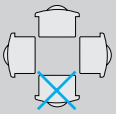
Housing	Ball	Load Factor	
Steel	Steel	1,0	Housing: AISI 1040 steel, machined, toughened & zinc plated. Ball: AISI 52100 chrome steel
Steel	Stainless	0,7	Housing: AISI 1040 steel, machined, toughened & zinc plated. Ball: AISI 420 stainless steel
Stainless	Stainless	0,7	Housing: AISI 416 stainless steel. Ball: AISI 420 stainless steel
Steel	Acetal		Housing: AISI 1040 steel, machined, toughened & zinc plated. Ball: POM acetal
Aluminium	Stainless		Housing: aluminium. Ball: AISI 420 stainless steel
Acetal	Acetal		Housing: POM acetal. Ball: POM acetal
Acetal	Stainless		Housing: POM acetal. Ball: AISI 420 stainless steel

Fixing clip selection

Part No.	Ball Size	Minimum Bore ø	Maximum Bore ø
67202.W9015	15	24,8	25,0
67202.W9022	22	37,0	37,2
67202.W9030	30	46,3	46,7

Clip requires a minimum plate thickness of 3mm to grip securely

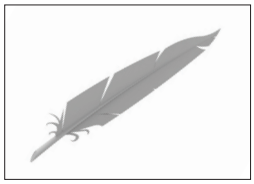
How to select the correct unit

Ball Type	Max Load (Kg)	Friction (% of load)	Speed (m/s)	Shock Loads	Arduous Conditions	Orientation	Instant Change
Medium Duty	20-3500	2%	1,5	✓✓✓	✓✓		✓✓✓
Light Duty	7-250	3%	1,0	✓	✓✓		✓✓✓

Variables to consider

Shock Loads: Specify High Capacity series & spring loaded units

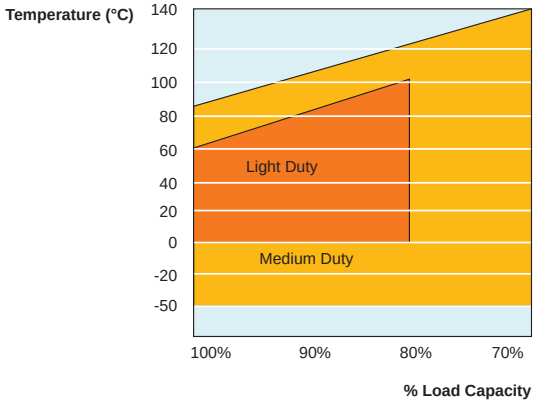
Track Hardness/ Conveyed Item Material: Standard material ball units have Rockwell 'C' hardness of 60 minimum

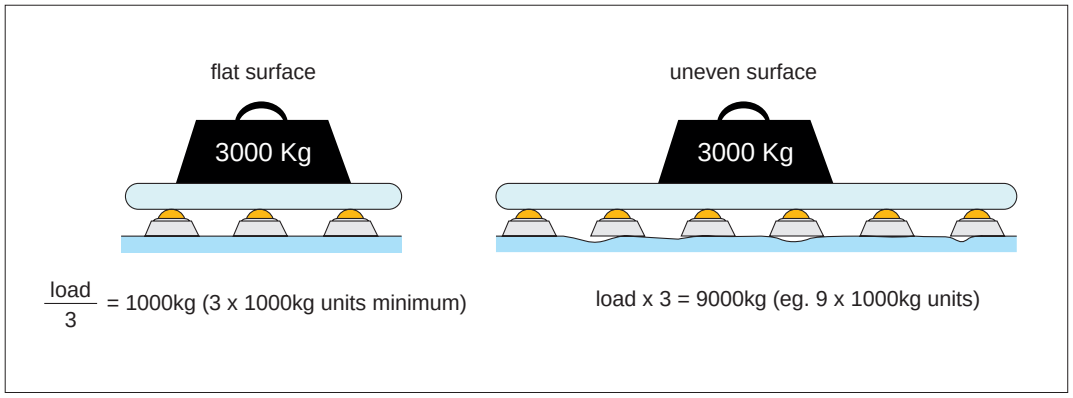


Delicate Surfaces: Ball Units - Acetal (POM) & Phenolic Resin

Operating Environment: Wet, dirty, outdoor, radioactive

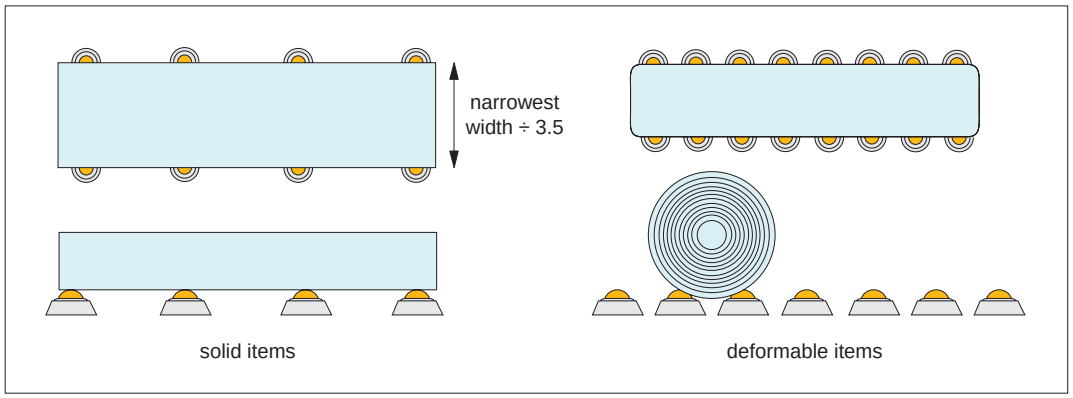
Operation temperature





Load and stability

To determine the load of a ball transfer unit, the weight of the article to be conveyed should be divided by 3. If the height tolerance of the load balls is good and the surface of the workpiece to be conveyed is suitable, the calculation can be based on the number of ball transfer units under the load.



Pitching and spacing

How the ball transfer units should be arranged depends on the bottom surface of the load to be transported. For loads with a uniform, even bottom surface, e.g. packing cases, the distance between the ball transfer units is calculated by dividing the smallest dimension by 3,5.

Conveying speed and load capacity

The maximum conveying speed allowed amounts to 2m/s. The load capacities specified apply to any mounting position and are based on 10^6 rotations of the load ball. With the units being used over a longer time at speeds exceeding 1m/s, an increase in temperature as well as a reduction in travel life must be expected depending on the load.

Calculation of travel life

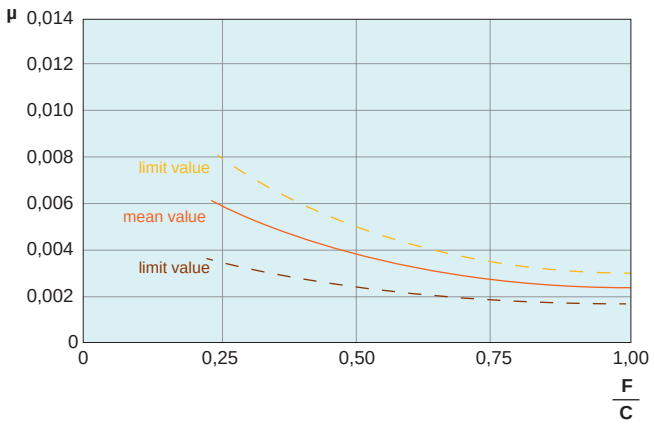
$$L = \frac{C^3}{F} \; 10^6 \text{ rotations}$$

L = travel life
C = load capacity (N)
F = load (N)

Friction

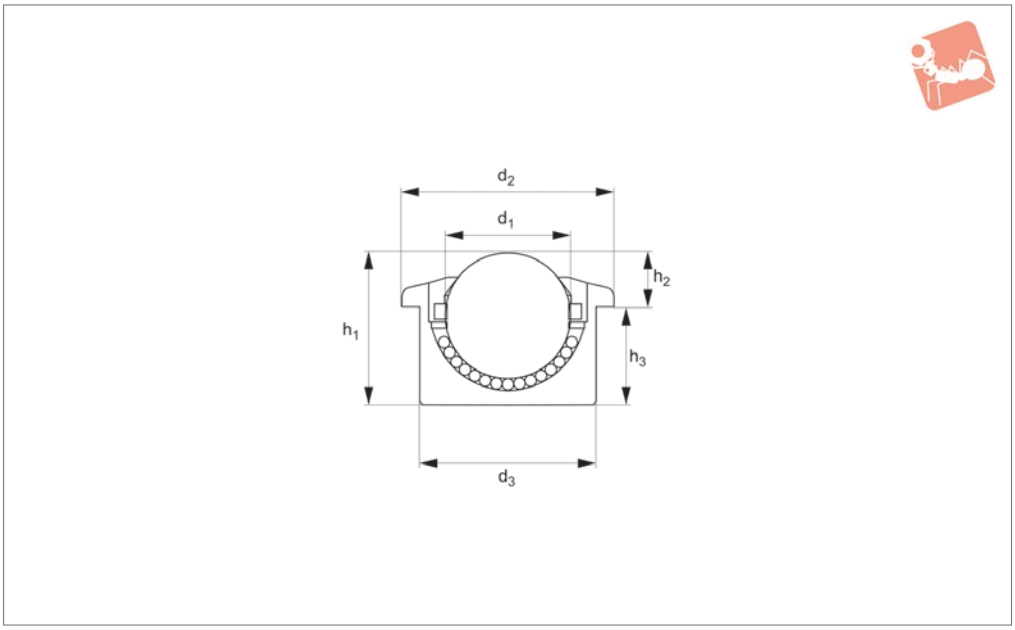
The diagram shows the friction values as a function of load and speed for ball transfer units. These approximate values apply to all mounting positions with operation on a hardened steel plate.

v = 1m/s



Push-Fit Ball Transfer Units
medium duty

67220



Material
Steel (AISI 1040 housing and AISI 52100 for balls),
stainless steel (AISI 416 for housing and AISI 420 for balls) and acetal (POM).

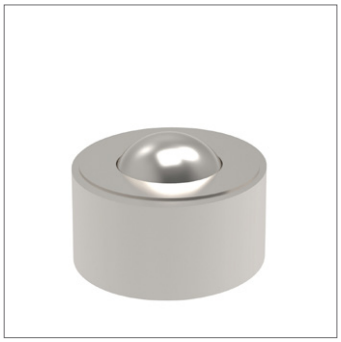
Technical Notes
These ball transfer units are made of a solid steel block with a precision machined hemispherical carrying bowl.
Top cover plates are shaped to ensure the perfect conveyance of items which have possible burred or bent edges. This design also prevents possible damage to the carrying ball.
Provided with a hole in the base of the bearing cup to dispose of particles of dirt and swarf (this may also be used for re-lubrication purposes).

Tips
These rollers can only be used in the horizontal or ball up direction.

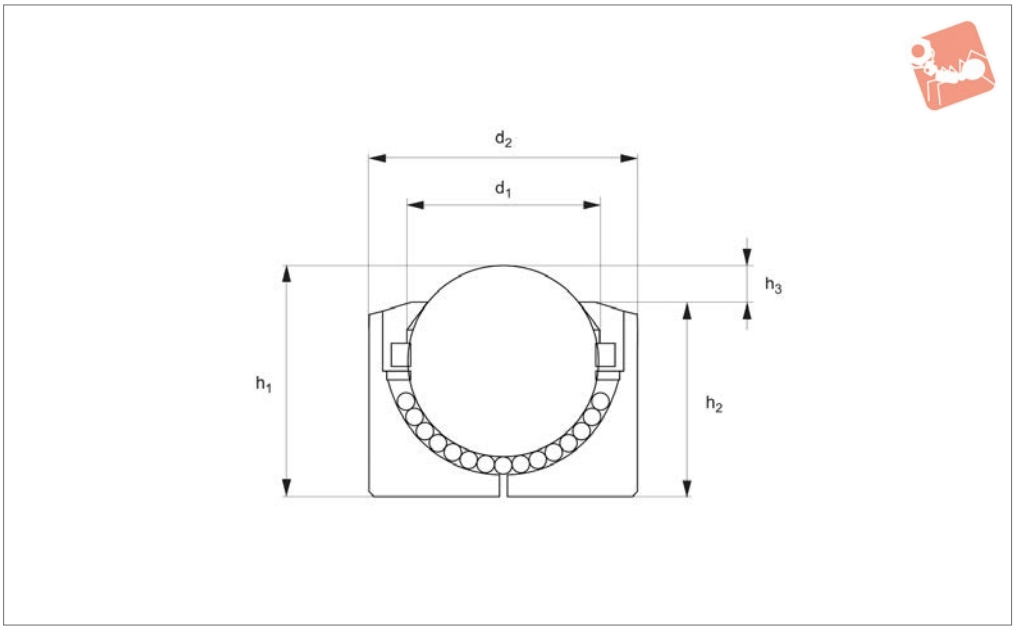
Order No.	d_1	d_2	h_1	h_2	d_3	h_3	Housing	Ball	Load kg max.
67220.W0454	45	75	53.5	19.0	62	34.5	Steel	Stainless	600
67220.W0304	30	55	36.8	13.8	45	23.0	Steel	Stainless	350
67220.W0254	25	46	30.5	13.0	38	17.5	Steel	Stainless	140
67220.W0224	22	45	30.5	9.8	36	20.7	Steel	Stainless	180
67220.W0154	15	30	20	8.1	24	11.9	Steel	Stainless	50
67220.W0124	12	27	16.7	8.0	22	8.7	Steel	Stainless	20
67220.W0121	12	27	16.7	8.0	22	8.7	Steel	Steel	25
67220.W0125	12	27	16.7	8.0	22	8.7	Steel	Acetal	5
67220.W0122	12	27	16.7	8.0	22	8.7	Stainless	Stainless	20
67220.W0151	15	30	20	8.1	24	11.9	Steel	Steel	60
67220.W0155	15	30	20	8.1	24	11.9	Steel	Acetal	10
67220.W0152	15	30	20	8.1	24	11.9	Stainless	Stainless	40
67220.W0161	15	31	21	9.5	24	11.5	Steel	Steel	60
67220.W0165	15	31	21	9.5	24	11.5	Steel	Acetal	10
67220.W0164	15	31	21	9.5	24	11.5	Steel	Acetal	50
67220.W0162	15	31	21	9.5	24	11.5	Stainless	Stainless	40
67220.W0221	22	45	30.5	9.8	36	20.7	Steel	Steel	180
67220.W0225	22	45	30.5	9.8	36	20.7	Steel	Acetal	20
67220.W0222	22	45	30.5	9.8	36	20.7	Stainless	Stainless	126
67220.W0251	25	46	30.5	13.0	38	17.5	Steel	Steel	200
67220.W0255	25	46	30.5	13.0	38	17.5	Steel	Acetal	25
67220.W0252	25	46	30.5	13.0	38	17.5	Stainless	Stainless	140
67220.W0301	30	55	36.8	13.8	45	23.0	Steel	Steel	350
67220.W0305	30	55	36.8	13.8	45	23.0	Steel	Acetal	25
67220.W0302	30	55	36.8	13.8	45	23.0	Stainless	Stainless	220
67220.W0451	45	75	53.5	19.0	62	34.5	Steel	Steel	600
67220.W0455	45	75	53.5	19.0	62	34.5	Steel	Acetal	25
67220.W0452	45	75	53.5	19.0	62	34.5	Stainless	Stainless	350

Order No.	d_1	d_2	h_1	h_2	d_3	h_3	Housing	Ball	Load kg max.
67220.W0601	60	117	77.5	30.0	100	47.5	Steel	Steel	1500
67220.W0605	60	117	77.5	30.0	100	47.5	Steel	Acetal	35
67220.W0602	60	117	77.5	30.0	100	47.5	Stainless	Stainless	1050

Plain-Fit Ball Transfer Units
medium duty



67222



Material
Steel (AISI 1040 housing and AISI 52100 for balls),
stainless steel (AISI 416 for housing and AISI 420 for balls) and acetal (POM).

Technical Notes
These ball transfer units are made of a solid steel block
with a precision machined hemispherical carrying bowl.

Top cover plates are shaped to ensure the perfect conveyance of items which have possible burred or bent edges. This design also prevents possible damage to the carrying ball.
Provided with a hole in the base of the bearing cup to dispose of particles of dirt and swarf
(this may also be used for re-lubrication purposes).

Manufactured without a flange on the housing,
therefore the whole load is being supported only by the bottom face of the unit.

Tips
These rollers can only be used in the horizontal or „ball up“ direction.

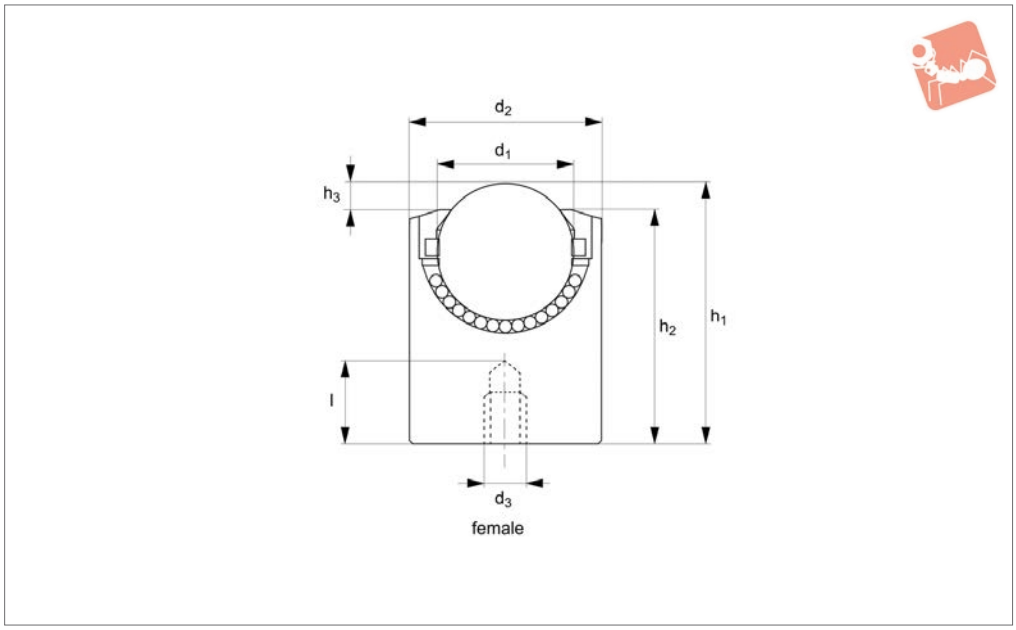
Order No.	d_1	d_2	h_1	h_2	h_3	Housing	Ball	Load kg max.
67222.W0081	8	18	12.0	10.0	2.0	Steel	Steel	13
67222.W0084	8	18	12.0	10.0	2.0	Steel	Stainless	10
67222.W0082	8	18	12.0	10.0	2.0	Stainless	Stainless	8.4
67222.W0124	12	20	16.5	13.5	3.0	Steel	Stainless	20
67222.W0154	15	24	20.0	15.0	5.0	Steel	Stainless	50
67222.W0224	22	36	30.5	27.9	4.5	Steel	Stainless	180
67222.W0304	30	45	36.8	30.3	6.5	Steel	Stainless	350
67222.W0454	45	62	53.5	45.0	8.5	Steel	Stainless	600
67222.W0604	60	100	77.5	61	16.5	Steel	Stainless	1100
67222.W0121	12	20	16.5	13.5	3.0	Steel	Steel	25
67222.W0125	12	20	16.5	13.5	3.0	Steel	Acetal	5
67222.W0122	12	20	16.5	13.5	3.0	Stainless	Stainless	14
67222.W0151	15	24	20.0	15.0	5.0	Steel	Steel	60
67222.W0155	15	24	20.0	15.0	5.0	Steel	Acetal	10
67222.W0152	15	24	20.0	15.0	5.0	Stainless	Stainless	40
67222.W0221	22	36	30.5	27.9	4.5	Steel	Steel	180
67222.W0225	22	36	30.5	27.9	4.5	Steel	Acetal	20
67222.W0222	22	36	30.5	27.9	2.6	Stainless	Stainless	125
67222.W0301	30	45	36.8	30.3	6.5	Steel	Steel	350
67222.W0305	30	45	36.8	30.3	6.5	Steel	Acetal	25
67222.W0302	30	45	36.8	30.3	6.5	Stainless	Stainless	245
67222.W0451	45	62	53.5	45.0	8.5	Steel	Steel	600
67222.W0455	45	62	53.5	45.0	8.5	Steel	Acetal	25
67222.W0452	45	62	53.5	45.0	8.5	Stainless	Stainless	420
67222.W0601	60	100	77.5	61	16.5	Steel	Steel	1500

Order No.	d_1	d_2	h_1	h_2	h_3	Housing	Ball	Load kg max.
67222.W0605	60	100	77.5	61	16.5	Steel	Acetal	35
67222.W0602	60	100	77.5	61	16.5	Stainless	Stainless	1000

Threaded Ball Transfer Units

medium duty, female

67224



Material

Steel (AISI 1040 housing and AISI 52100 for balls),
stainless steel (AISI 416 for housing and AISI 420 for balls) and acetal (POM).

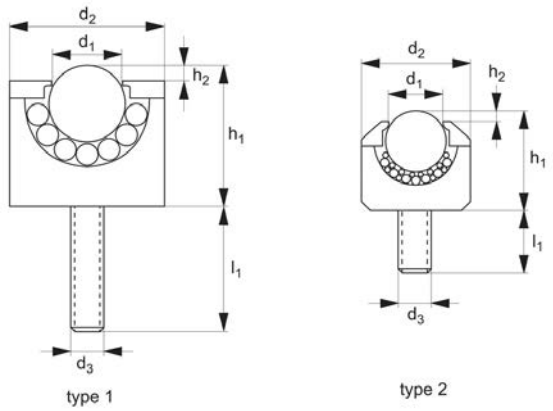
Technical Notes

These ball transfer units are made of a solid steel block
with a precision machined hemispherical carrying bowl.
Top cover plates are shaped to ensure the perfect conveyance of items which have possible burred or bent edges. This design also prevents possible damage to the carrying ball.
Provided with a hole in the base of the bearing cup to dispose of particles of dirt and swarf (this may also be used for re-lubrication purposes).
Manufactured without a flange on the housing,
therefore the whole load is being supported only by the bottom face of the unit.

Tips

For male version see .

Order No.	Type	d_1	d_2	h_1	h_2	d_3	h_3	l_1	Housing	Ball	Load kg max.
67224.W1121	Female	12	22	24.0	20.5	M8	3.5	5	Steel	Steel	25
67224.W1125	Female	12	22	24.0	20.5	M8	3.5	5	Steel	Acetal	5
67224.W1122	Female	12	22	24.0	20.5	M8	3.5	5	Stainless	Stainless	17
67224.W1124	Female	12	22	24.0	20.5	M8	3.5	5	Steel	Stainless	20
67224.W1224	Female	22	36	40.5	34	M8	4.5	10	Steel	Stainless	180
67224.W1454	Female	45	62	63.5	50.5	M8	13.0	10	Steel	Stainless	600
67224.W1304	Female	30	45	46.8	38.8	M8	8.0	10	Steel	Stainless	350
67224.W1154	Female	15	24	28.0	23	M8	5.0	8	Steel	Stainless	50
67224.W1151	Female	15	24	28.0	23	M8	5.0	8	Steel	Steel	60
67224.W1155	Female	15	24	28.0	23	M8	5.0	8	Steel	Acetal	10
67224.W1152	Female	15	24	28.0	23	M8	5.0	8	Stainless	Stainless	40
67224.W1221	Female	22	36	40.5	34	M8	4.5	10	Steel	Steel	180
67224.W1225	Female	22	36	40.5	34	M8	4.5	10	Steel	Acetal	20
67224.W1222	Female	22	36	40.5	34	M8	4.5	10	Stainless	Stainless	126
67224.W1301	Female	30	45	46.8	38.8	M8	8.0	10	Steel	Steel	350
67224.W1305	Female	30	45	46.8	38.8	M8	8.0	10	Steel	Acetal	25
67224.W1302	Female	30	45	46.8	38.8	M8	8.0	10	Stainless	Stainless	245
67224.W1451	Female	45	62	63.5	50.5	M8	13.0	10	Steel	Steel	600
67224.W1455	Female	45	62	63.5	50.5	M8	13.0	10	Steel	Acetal	25
67224.W1452	Female	45	62	63.5	50.5	M8	13.0	10	Stainless	Stainless	420



67200

Material
Carbon steel, aluminium or stainless steel housing. Carbon steel or stainless steel balls.

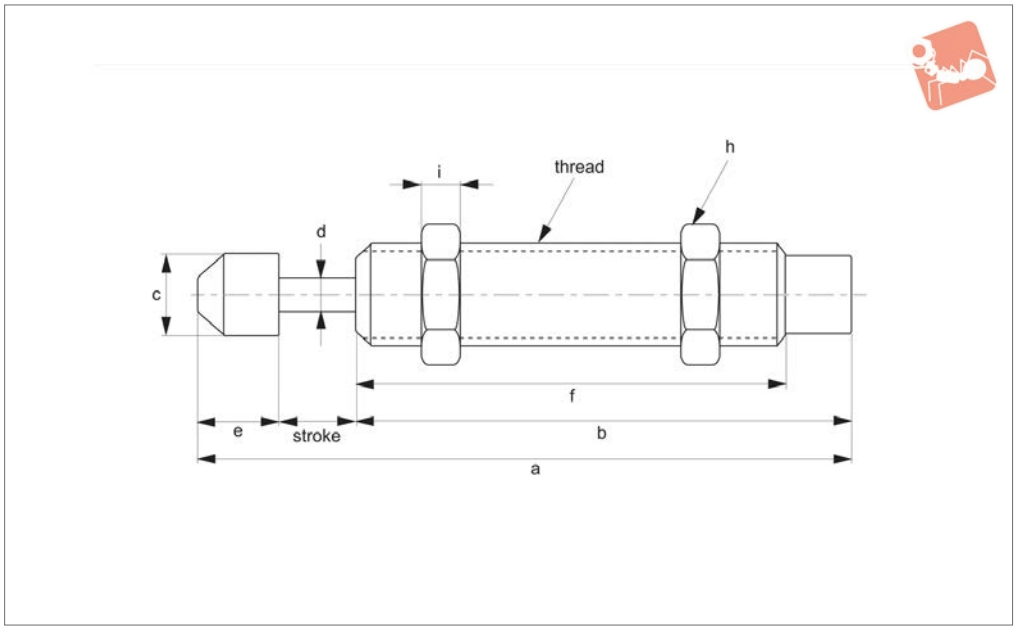
Technical Notes
All steel parts are supplied with a small amount of oil, to protect from oxidation.

Tips
Normally used in measuring equipment, small linear motion systems (e.g photocopier slides) and miniature mechanisms.

Order No.	Type	d_1	d_2	h_1	h_2	d_3	h_3	Housing	Ball	Load kg max.
67200.W0051	type 1	4.8	13	9	1	M6	15	Steel	Steel	10
67200.W0151	type 1	15.8	28	20.5	4	M6	12	Steel	Steel	70
67200.W0152	type 1	15.8	24	20.5	4	M6	12	Stainless	Stainless	70
67200.W0162	type 1	15.8	24	20.5	4	M6	12	Stainless	Stainless	70
67200.W0052	type 1	4.8	13	9	1	M6	15	Stainless	Stainless	10
67200.W0053	type 2	4.8	8	6	1	M2	2.5	Aluminium	Stainless	5
67200.W0072	type 1	6.4	17	11	2	M6	15	Stainless	Stainless	20
67200.W0065	type 2	6.4	13	10.5	2	M3	6	Aluminium	Stainless	10
67200.W0082	type 1	8	18	12	2	M6	15	Stainless	Stainless	30
67200.W0093	type 2	7.9	15	12.5	2	M4	8	Aluminium	Stainless	15
67200.W0101	type 1	9.6	23	20	2	M8	20	Steel	Steel	40
67200.W0102	type 1	9.6	23	20	2	M8	20	Stainless	Stainless	40
67200.W0131	type 1	12.7	28	25	3.5	M8	23	Steel	Steel	50
67200.W0132	type 1	12.7	28	25	3.5	M8	23	Stainless	Stainless	50

Minature Shock Absorbers, Self
M8 - M12, non-adjustable

68001



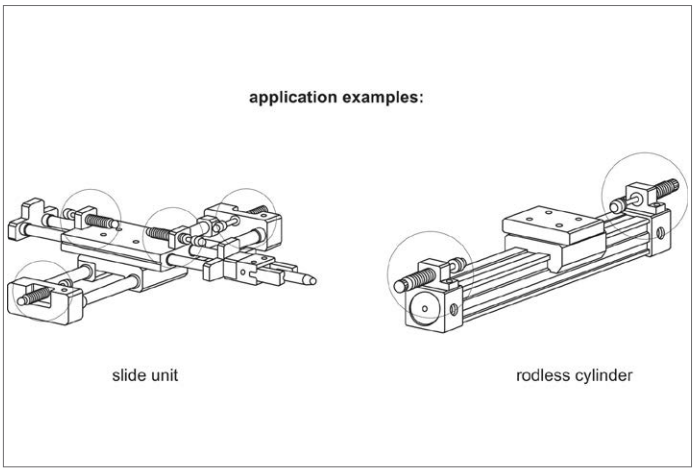
Material
Outer Tube: STKM11A, hardened and blackened.
Piston Rod: AISI 1045 hardened to HV940°, chrome plated.
Return Spring: DIN GWP.
Muffler Cap: urethane rubber.
Seal: nitrile rubber.

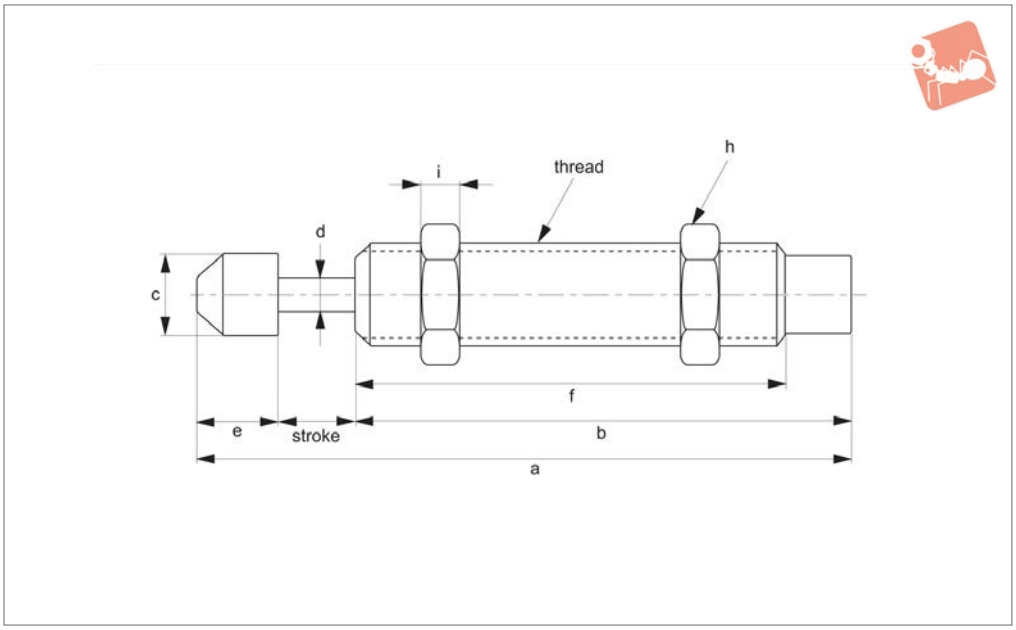
Technical Notes
Supplied with rubber muffler cap as standard, this is removable - see introductorary technical notes for guidance.

Tips
Select High Impact Speed model for hard impact at start of stroke. For hard set down at end of stroke choose a Medium or Low Impact Speed model.

Important Notes
For correct product selection refer to Product Selection Formulae and Calculation pages, and associated Capacity & Selection Charts.

Order No.	Stroke mm	Nm per cycle (Et) Nm max.	Per hour (ETc) Nm max.	Effective mass (Me) kg max.	Impact speed (v)	Impact speed (v) m/s max.	Operating temperature °C	Thread	a	b	c	d	e	f	h	i	Weight g
68001.W0109	10	4	10800	3.0	Low	0.5	-10 to +80	M10 x0,75	66.8	49.5	8.0	3.0	8.0	44.5	12.7	3	20.0





68002

Material
Outer Tube: STKM11A, hardened and blackened.
Piston Rod: AISI 1045 hardened to HV940°, chrome plated.
Return Spring: DIN GWP.
Muffler Cap: urethane rubber. Seal: nitrile rubber.

Technical Notes
Supplied with rubber muffler cap as standard, this is removable - see introductorary technical notes for guidance.

Tips
Select High Impact Speed model for hard impact at start of stroke. For hard set down at end of stroke choose a Medium or Low Impact Speed model.

Important Notes
For correct product selection refer to Product Selection Formulae and Calculation pages, and associated Capacity & Selection Charts.

Order No.	Stroke mm	Nm per cycle (Et) Nm max.	Per hour (ETc) Nm max.	Effective mass (Me) kg max.	Impact speed (v)	Impact speed (v) m/s max.	Operating temperature °C	Weight g
68002.W0140	8	12	22000	6	High	3.0	-10 to +80	65
68002.W0141	12	15	30000	8	High	3.0	-10 to +80	80
68002.W0142	12	15	30000	50	Med	1.5	-10 to +80	80
68002.W0143	12	15	30000	100	Low	0.8	-10 to +80	80
68002.W0144	16	20	35000	10	Low	3.0	-10 to +80	85
68002.W0145	16	20	35000	70	Low	1.5	-10 to +80	85
68002.W0146	16	20	35000	150	Low	0.8	-10 to +80	85
68002.W0147	16	20	35000	10	High	3.0	-10 to +80	80
68002.W0148	16	20	35000	70	Med	1.5	-10 to +80	80
68002.W0149	16	20	35000	150	Low	0.8	-10 to +80	80
68002.W0198	20	20	35000	10	High	3.0	-10 to +80	95
68002.W0199	20	20	35000	70	Med	1.5	-10 to +80	95
68002.WX200	10	16	42000	30	Low	3.5	-10 to +80	165
68002.W0200	20	20	35000	150	Low	0.8	-10 to +80	95
68002.W0201	20	40	40000	30	High	3.5	-10 to +80	215
68002.W0202	20	40	40000	200	Med	2.0	-10 to +80	215
68002.W0203	20	40	40000	700	Low	1.0	-10 to +80	215
68002.W0204	30	50	48000	30	High	3.5	-10 to +80	220
68002.W0205	30	50	48000	200	Med	2.0	-10 to +80	220
68002.W0206	30	50	48000	700	Low	1.0	-10 to +80	220
68002.W0207	50	60	6000	60	High	3.5	-10 to +80	300
68002.W0208	50	60	60000	400	Med	2.0	-10 to +80	300
68002.W0209	50	60	60000	1200	Low	1.0	-10 to +80	300

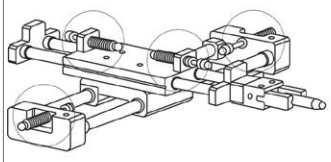
Order No.	Thread	a	b	c	d	e	f	h	i
68002.W0140	M14x1,5	73.5	55.0	12.0	4.0	11.2	50.5	19	5
68002.W0141	M14x1,5	98.5	76	12	4	10.5	67	19	5

Shock Absorbers, Self Compensating

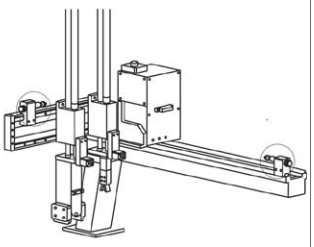
M14 - M20, non adjustable

Order No.	Thread	a	b	c	d	e	f	h	i
68002.W0142	M14x1,5	98.5	76	12	4	10.5	67	19	5
68002.W0143	M14x1,5	98.5	76	12	4	10.5	67	19	5
68002.W0144	M14x1,5	122.2	95.0	12.0	4.0	11.2	86.0	19.0	5.0
68002.W0145	M14x1,5	122.2	95.0	12.0	4.0	11.2	86.0	19.0	5.0
68002.W0146	M14x1,5	122.2	95.0	12.0	4.0	11.2	86.0	19.0	5.0
68002.W0147	M14x1,5	102.5	76	12	4	10.5	67	19	5
68002.W0148	M14x1,5	102.5	76	12	4	10.5	67	19	5
68002.W0149	M14x1,5	102.5	76	12	4	10.5	67	19	5
68002.W0198	M14x1,5	125.5	95	12	4	10.5	86	19	5
68002.W0199	M14x1,5	125.5	95	12	4	10.5	86	19	5
68002.WX200	M16x1,5	68.0	58.0	10.0	5.0	8.0	40.0	19.0	6.0
68002.W0200	M14x1,5	125.5	95	12	4	10.5	86	19	5
68002.W0201	M20x1,5	145.8	110	18	6	15.8	101	26	7
68002.W0202	M20x1,5	145.8	110	18	6	15.8	101	26	7
68002.W0203	M20x1,5	145.8	110	18	6	15.8	101	26	7
68002.W0204	M20x1,5	158.8	113	18	6	15.8	104	26	7
68002.W0205	M20x1,5	158.8	113	18	6	15.8	104	26	7
68002.W0206	M20x1,5	158.8	113	18	6	15.8	104	26	7
68002.W0207	M20x1,5	232.8	167	18	6	15.8	158	26	7
68002.W0208	M20x1,5	232.8	167	18	6	15.8	158	26	7
68002.W0209	M20x1,5	232.8	167	18	6	15.8	158	26	7

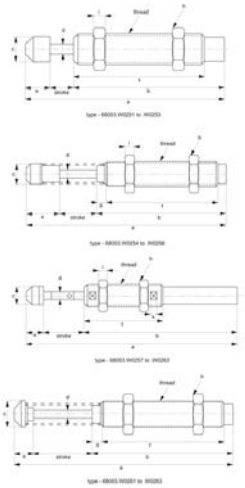
application examples:



robot for plastic injection molding machine



slide unit



68003

Material

Outer Tube: STKM11A, hardened and blackened.
Piston Rod: AISI 1045 hardened to HV940°, chrome plated.
Return Spring: DIN GWP.
Muffler Cap: urethane rubber. **Seal:** nitrile rubber.

Technical Notes

Supplied with rubber muffler cap as standard, this is removable - see introductorary technical notes for guidance.

Tips

Select High Impact Speed model for hard impact at start of stroke. For hard set down at end of stroke choose a Medium or Low Impact Speed model.

Important Notes

For correct product selection refer to Product Selection Formulae and Calculation pages, and associated Capacity & Selection Charts.

Order No.	Stroke mm	Nm per cycle (Et) Nm max.	Per hour (ETc) Nm max.	Effective mass (Me) kg max.	Impact speed (v)	Impact speed (v) m/s max.	Operating temperature °C	Weight g
68003.W0251	25	80	54000	200	High	4.0	-10 to +80	330
68003.W0252	25	80	54000	800	Med	2.5	-10 to +80	330
68003.W0253	25	80	54000	1500	Low	1.0	-10 to +80	330
68003.W0254	40	120	75000	300	High	4.0	-10 to +80	430
68003.W0255	40	120	75000	1200	Med	2.5	-10 to +80	430
68003.W0256	40	120	75000	2000	Low	1.0	-10 to +80	430
68003.W0257	50	98	90000	15	High	4.0	-10 to +80	435
68003.W0258	50	98	90000	40	Med	2.5	-10 to +80	435
68003.W0259	50	98	90000	160	Low	1.0	-10 to +80	435
68003.W0261	80	150	120000	20	High	4.0	-10 to +80	535
68003.W0262	80	150	120000	50	Med	2.5	-10 to +80	535
68003.W0263	80	150	120000	200	Low	1.0	-10 to +80	535
68003.W0361	60	250	120000	400	High	4.0	-10 to +80	1.030
68003.W0362	60	250	120000	1500	Med	2.5	-10 to +80	1.030
68003.W0363	60	250	120000	2400	Low	1.0	-10 to +80	1.030

Order No.	Thread	a	b	c	d	e	f	h	g	i	j	k
68003.W0251	M25x1,5	155.0	111.0	22.0	8	19.5	101.0	32	-	9	-	-
68003.W0252	M25x1,5	155.0	111.0	22.0	8	19.5	101.0	32	-	9	-	-
68003.W0253	M25x1,5	155.0	111.0	22.0	8	19.5	101.0	32	-	9	-	-
68003.W0254	M25x1,5	214.0	127.0	22.0	8	36.0	117.0	32	10	9	-	-
68003.W0255	M25x1,5	214.0	127.0	22.0	8	36.0	117.0	32	10	9	-	-
68003.W0256	M25x1,5	214.0	127.0	22.0	8	36.0	117.0	32	10	9	-	-
68003.W0257	M25x1,5	239.5	170.5	22.0	8	19.5	100.0	32	-	9	-	-
68003.W0258	M25x1,5	239.5	170.5	22.0	8	19.5	100.0	32	-	9	-	-
68003.W0259	M25x1,5	239.5	170.5	22.0	8	19.5	100.0	32	-	9	-	-
68003.W0261	M25x1,5	336.0	237.0	22.0	8	19.5	100.0	32	-	9	23	11

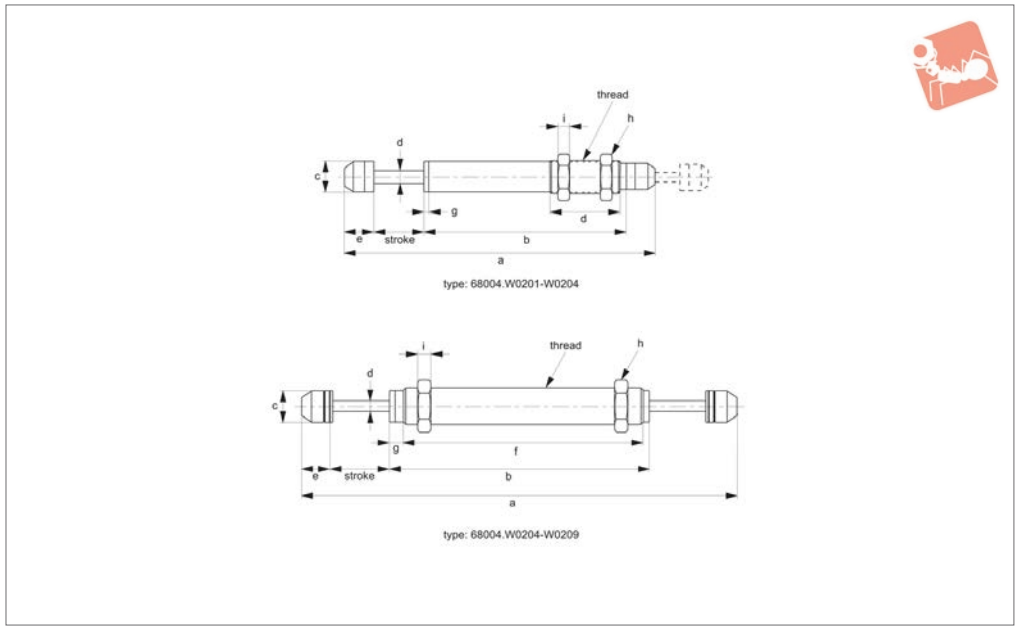
Shock Absorbers, Self Compensating

M25 - M36, non-adjustable

Order No.	Thread	a	b	c	d	e	f	h	g	i	j	k
68003.W0262	M25x1,5	336.0	237.0	22.0	8	19.5	100.0	32	-	9	23	11
68003.W0263	M25x1,5	336.0	237.0	22.0	8	19.5	100.0	32	-	9	23	11
68003.W0361	M36x1,5	248.0	162.0	35.5	10	26.0	134.0	46	17	15	23	11
68003.W0362	M36x1,5	248.0	162.0	35.5	10	26.0	134.0	46	17	15	23	11
68003.W0363	M36x1,5	248.0	162.0	35.5	10	26.0	134.0	46	17	15	23	11

Double Cushion Shock Absorbers

M20, self-compensating, non-adjustable



68004

Material

Outer Tube: STKM11A, hardened and blackened.
Piston Rod: AISI 1045 hardened to HV940°, chrome plated.
Return Spring: DIN GWP.
Muffler Cap: urethane rubber. **Seal:** nitrile rubber.

Technical Notes

Supplied with rubber muffler cap as standard, this is removable - see introductorary technical notes for guidance.

Tips

Select High Impact Speed model for hard impact at start of stroke. For hard set down at end of stroke choose a Medium or Low Impact Speed model.

Important Notes

For correct product selection refer to Product Selection Formulae and Calculation pages, and associated Capacity & Selection Charts.

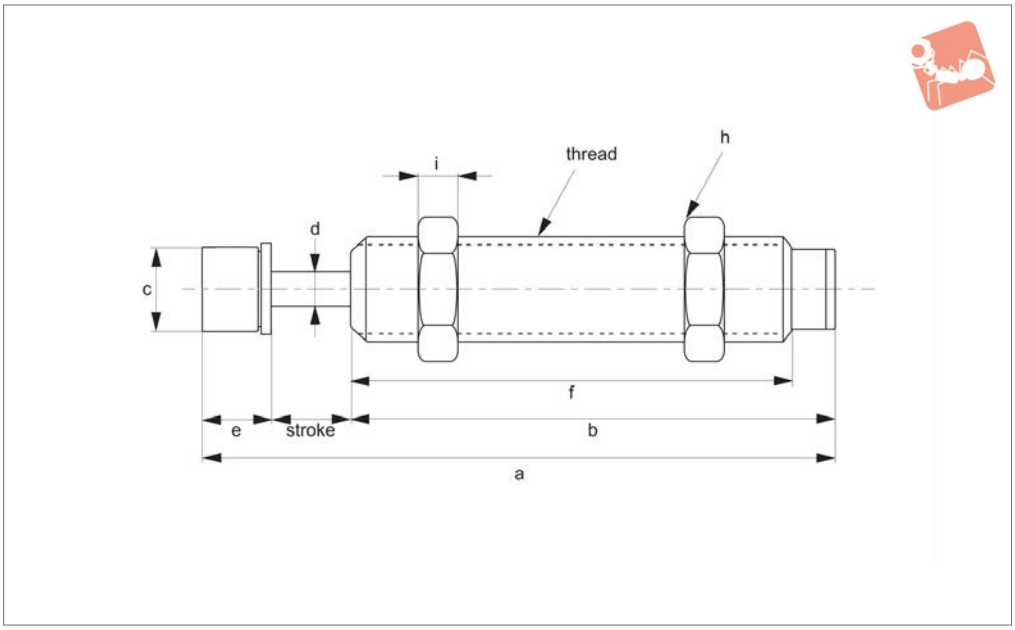
Order No.	Stroke mm	Nm per cycle (Et) Nm max.	Per hour (ETc) Nm max.	Effective mass (Me) kg max.	Impact speed (v)	Impact speed (v) m/s max.	Operating temperature °C	Weight g
68004.W0201	30	45	55000	40	High	3.5	-10 to +80	320
68004.W0202	30	45	55000	300	Med	2.0	-10 to +80	320
68004.W0203	30	45	55000	900	Low	1.0	-10 to +80	320
68004.W0204	35	52	63000	40	High	3.5	-10 to +80	350
68004.W0205	35	52	63000	200	Med	2.0	-10 to +80	350
68004.W0206	35	52	63000	650	Low	1.0	-10 to +80	350
68004.W0207	50	60	68000	60	High	3.5	-10 to +80	470
68004.W0208	50	60	68000	210	Med	2.0	-10 to +80	470
68004.W0209	50	60	68000	480	Low	1.0	-10 to +80	470
68004.W0210	50	70	72000	530	Low	3.5	-10 to +80	480

Order No.	Thread	a	b	c	d	e	f	h	g	i
68004.W0201	M20x1,5	183.6	123	18	6	15.8	44	26	3	7
68004.W0202	M20x1,5	183.6	123	18	6	15.8	44	26	3	7
68004.W0203	M20x1,5	183.6	123	18	6	15.8	44	26	3	7
68004.W0204	M20x1,5	224.6	123	18	5	15.8	42	26	5	7
68004.W0205	M20x1,5	224.6	123	18	5	15.8	42	26	5	7
68004.W0206	M20x1,5	224.6	123	18	5	15.8	42	26	5	7
68004.W0207	M20x1,5	276.6	145	18	6	15.8	134	26	8	7
68004.W0208	M20x1,5	276.6	145	18	6	15.8	134	26	8	7
68004.W0209	M20x1,5	276.6	145	18	6	15.8	134	26	8	7
68004.W0210	M20x1,5	313.8	172.8	17.8	6	20.5	11	26	16	7

Shock Absorber Self Compensating

M30, non-adustable

68005



Material

Outer Tube: STKM11A, hardened and blackened.
Piston Rod: AISI 1045 hardened to HV940°, chrome plated.
Return Spring: DIN GWP.
Muffler Cap: urethane rubber. **Seal:** nitrile rubber.

Technical Notes

Supplied with rubber muffler cap as standard, this is removable - see introductorary technical notes for guidance.

Tips

Select High Impact Speed model for hard impact at start of stroke. For hard set down at end of stroke choose a Medium or Low Impact Speed model.

Important Notes

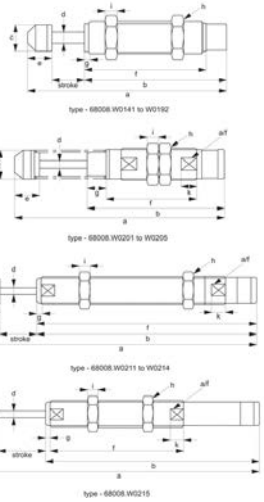
For correct product selection refer to Product Selection Formulae and Calculation pages, and associated Capacity & Selection Charts.

Order No.	Stroke mm	Nm per cycle (Et) Nm max.	Per hour (ETc) Nm max.	Effective mass (Me) kg max.	Impact speed (v)	Impact speed (v) m/s max.	Weight g
68005.W0301	25	180	60000	300	High	3.0	950
68005.W0302	25	180	60000	700	Med	2.0	950
68005.W0303	25	180	60000	1300	Low	1.0	950

Order No.	Operating temperature °C	Thread	a	b	c	d	e	f	h	i
68005.W0301	-10~+80	M30x1,5	151	106.5	27	10	19.5	94.5	36	14
68005.W0302	-10~+80	M30x1,5	151	106.5	27	10	19.5	94.5	36	14
68005.W0303	-10~+80	M30x1,5	151	106.5	27	10	19.5	94.5	36	14

Shock Absorbers, Self Compensating

M14 - M20, non-adjustable



68008

Material

Outer Tube: STKM11A, hardened and blackened.
Piston Rod: AISI 1045 hardened to HV940°, chrome plated.
Return Spring: DIN GWP.
Muffler Cap: urethane rubber. **Seal:** nitrile rubber.

Technical Notes

Supplied with rubber muffler cap as standard, this is removable - see introductorary technical notes for guidance.

Tips

Select High Impact Speed model for hard impact at start of stroke. For hard set down at end of stroke choose a Medium or Low Impact Speed model.

Important Notes

For correct product selection refer to Product Selection Formulae and Calculation pages, and associated Capacity & Selection Charts.

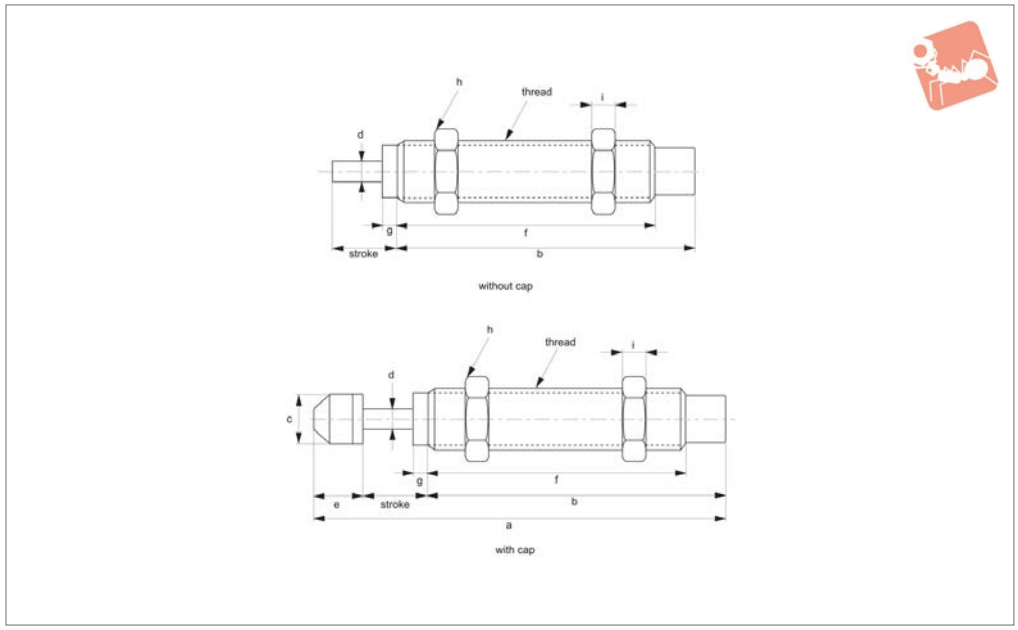
Order No.	Stroke mm	Nm per cycle (Et) Nm max.	Per hour (ETc) Nm max.	Effective mass (Me) kg max.	Impact speed (v)	Impact speed (v) m/s max.	Operating temperature °C	Weight g
68008.W0141	15	9.8	35280	30	Low	1.0	-10 to +80	80
68008.W0142	15	9.8	35280	15	Med	1.5	-10 to +80	80
68008.W0191	20	36.0	22000	27	Low	2.0	-10 to +80	170
68008.W0192	25	40.0	24200	35	Low	2.0	-10 to +80	180
68008.W0201	30	44.0	26460	60	V Low	1.2	-10 to +80	185
68008.W0202	30	44.0	26460	30	Low	1.7	-10 to +80	185
68008.W0203	30	44.0	26460	15	Med	2.4	-10 to +80	185
68008.W0204	30	44.0	26460	5	High	4.2	-10 to +80	205
68008.W0205	30	44.0	26460	3	V High	6.0	-10 to +80	205
68008.W0211	50	59.0	35280	30	V Low	2.0	-10 to +80	250
68008.W0213	50	59.0	35280	8	Low	3.8	-10 to +80	250
68008.W0212	50	59.0	35280	15	Med	2.8	-10 to +80	250
68008.W0214	50	59.0	35280	5	High	5.0	-10 to +80	250
68008.W0215	50	59.0	35280	3	V High	6.8	-10 to +80	235

Order No.	Thread	a	b	c	d	e	f	h	g	i	A/F	k
68008.W0141	M14x1,0	95.2	69.2	12	4	11.0	53.0	19	2.0	5	-	-
68008.W0142	M14x1,0	95.2	69.2	12	4	11.0	53.0	19	2.0	5	-	-
68008.W0191	M20x1,5	129.3	95.0	18	5	15.8	74.5	26	3.8	7	-	-
68008.W0192	M20x1,5	140.4	100.0	18	5	15.8	81.0	26	2.7	7	-	-
68008.W0201	M20x1,5	134.0	85.6	18	5	18.0	48.0	26	21.0	7	18.2	10
68008.W0202	M20x1,5	134.0	85.6	18	5	18.0	48.0	26	21.0	7	18.2	10
68008.W0203	M20x1,5	134.0	85.6	18	5	18.0	48.0	26	21.0	7	18.2	10
68008.W0204	M20x1,5	146.0	97.3	18	5	18.0	48.0	26	32.7	7	18.2	10
68008.W0205	M20x1,5	146.0	97.3	18	5	18.0	48.0	26	32.7	7	18.2	10
68008.W0211	M20x1,5	221.0	156.0	18	5	15.8	136.5	26	4.0	7	18.2	10
68008.W0213	M20x1,5	221.0	156.0	18	5	15.8	136.5	26	4.0	7	18.2	10

Shock Absorbers, Self Compensating

M14 - M20, non-adjustable

Order No.	Thread	a	b	c	d	e	f	h	g	i	A/F	k
68008.W0212	M20x1,5	221.0	156.0	18	5	15.8	136.5	26	4.0	7	18.2	10
68008.W0214	M20x1,5	221.0	156.0	18	5	15.8	136.5	26	4.0	7	18.2	10
68008.W0215	M20x1,5	221.0	156.0	18	5	15.8	60.0	26	4.0	7	18.2	10



68012

Material

Outer Tube: STKM11A, hardened and blackened.
Piston Rod: AISI 1045 hardened to HV940°, chrome plated.
Return Spring: DIN GWP.
Muffler Cap: urethane rubber. Seal: nitrile rubber.

Technical Notes

Supplied with rubber muffler cap as standard, this is removable - see introductory technical notes for guidance.

Important Notes

For correct product selection refer to Product Selection Formulae and Calculation pages, and associated Capacity & Selection Charts.

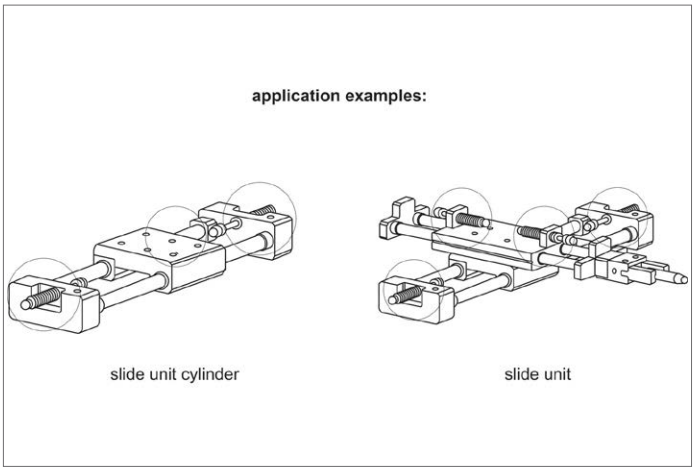
Order No.	With / without cap	Stroke mm	Nm per cycle (Et) Nm max.	Per hour (ETc) Nm max.	Effective mass (Me) kg max.	Impact speed (v) m/s max.	Operating temperature °C	Weight g
68012.W0080	Without	4	0.5	720	3.0	0,3 - 1,0	-10 to +80	4.0
68012.W0081	Without	6	3	7000	6	0,3 - 2,5	-10 to +80	15
68012.W0082	With	6	3	7000	6	0,3 - 2,5	-10 to +80	17
68012.W0101	Without	7	6	12400	12	0,3 - 2,5	-10 to +80	25
68012.W0102	With	7	6	12400	12	0,3 - 3,5	-10 to +80	28
68012.W0121	Without	10	12	22500	22	0,3 - 4,0	-10 to +80	29
68012.W0122	With	10	12	22500	22	0,3 - 4,0	-10 to +80	32
68012.W0141	Without	12	20	33000	40	0,3 - 5,0	-10 to +80	65
68012.W0142	With	12	20	33000	40	0,3 - 5,0	-10 to +80	70
68012.W0143	With	12	14	24000	25.0	0,3 - 5,0	-10 to +80	70
68012.W0201	Without	15	59	38000	120	0,3 - 5,0	-10 to +80	150
68012.W0202	With	15	59	38000	120	0,3 - 5,0	-10 to +80	160
68012.W0251	Without	25	80	60000	180	0,3 - 5,0	-10 to +80	280
68012.W0252	With	25	80	60000	180	0,3 - 5,0	-10 to +80	295
68012.W0271	Without	25	147	72000	270	0,3 - 5,0	-10 to +80	360
68012.W0272	With	25	147	72000	270	0,3 - 5,0	-10 to +80	375

Order No.	Thread	a	b	c	d	e	f	h	g	i	A/F
68012.W0080	M 6x0,75	36.5	28.5	4.5	1.8	4.0	22.5	8.0	1	3.0	-
68012.W0081	M 8x1,0	-	40.6	-	2.9	-	33.6	11.0	2	3	-
68012.W0082	M 8x1,0	55.2	40.6	6.6	2.9	8.6	33.6	11.0	2	3	-
68012.W0101	M10x1,0	-	47.0	-	3.0	-	39.0	12.7	3	3	-
68012.W0102	M10x1,0	62.6	47.0	8.6	3.0	8.6	39.0	12.7	3	3	-
68012.W0121	M12x1,0	-	52.5	-	3.0	-	44.0	14.0	3	4	-
68012.W0122	M12x1,0	71.1	52.5	10.3	3.0	8.6	44.0	14.0	3	4	-
68012.W0141	M14x1,5	-	67.0	-	4.0	-	58.0	19.0	4	5	12.1
68012.W0142	M14x1,5	90.0	67.0	12.0	4.0	11.0	58.0	19.0	4	5	12.1
68012.W0143	M14x1,5	78.8	55.0	12.0	4.0	11.2	46.5	19.0	3.5	5.0	12.1

Shock Absorbers, Self Compensating

M8 - M27, non-adjustable

Order No.	Thread	a	b	c	d	e	f	h	g	i	A/F
68012.W0201	M20x1,5	-	73.0	-	6.0	-	62.0	26.0	4	7	18.0
68012.W0202	M20x1,5	103.0	73.0	18.0	6.0	15.0	62.0	26.0	4	7	18.0
68012.W0251	M25x1,5	-	92.0	-	8.0	-	82.0	32.0	-	9	23.0
68012.W0252	M25x1,5	136.0	92.0	22.0	8.0	19.0	82.0	32.0	-	9	23.0
68012.W0271	M27x1,5	-	99.0	-	8.0	-	86.0	36.0	5	6	25.0
68012.W0272	M27x1,5	143.0	99.0	22.0	8.0	19.0	86.0	36.0	5	6	25.0



Shock Absorbers benefits and features

Why do we need shock absorbers?

Shock Absorbers are widely used in industry where the speed, direction or movement of objects must be changed or stopped. Without suitable methods of control the kinetic energy inherent in many moving objects, which occur in manufacturing, can result in increased machine wear and even machine damage.

Ideally any method of "shock absorption" should provide two key features:

1) Bring the moving object to rest quickly, smoothly and without rebounding forces
2) In-built reliability and safety

Shock Absorbers are able to quickly convert the kinetic energy of a moving object into heat and to dissipate this into the air, and provide a constant linear deceleration of an object throughout its entire impact stroke, to quickly, smoothly and quietly bring a moving object to rest with the lowest reaction force and in the shortest time. All of these features mean increased manufacturing productivity, extended machine life, and improved efficiency.

The cost of outdated buffering methods

Traditional buffering methods:

- Springs
- Dash Pots
- Air Buffers
- Rubber bumpers

Costs associated with outdated cushioning methods:

- Loss of production
- Increased machine wear and tear
- Increased maintenance cost
- Increased vibration and noise pollution
- Varying and inconsistent dampening forces, with non-linear or high peak forces at some point in their stroke.

Traditional buffering methods can only dissipate a small percentage of the kinetic energy of a moving object, the remainder is stored (rather than dissipated) as elastic energy which results in high resistance and rebounding forces toward the end of the impact stroke.

Benefits of using Wixroyd Shock Absorbers

Wixroyd Shock Absorbers are designed to stop a moving object smoothly and quietly from the beginning to the end of its impact stroke. Their design enables a constant resistance force or linear deceleration throughout the impact stroke, quickly converting the kinetic energy of the moving object into heat which is quickly dissipated into the air. A linear deceleration curve, as achieved by our shock absorbers, brings an object to rest in the shortest time while reducing damaging impact forces.

Energy Capacity: Shock absorbers can absorb more energy, without increasing deceleration or reaction forces.

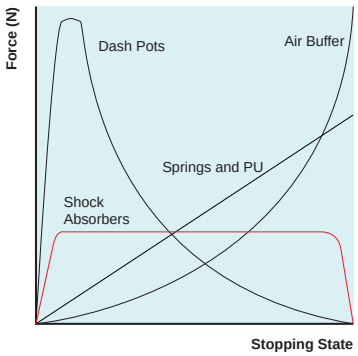
Stopping Force: Shock absorbers provide smooth decelaration of parts, which means less machine wear and hence reduced maintenance.

Stopping time: Shock absorbers bring moving loads to rest more quickly, increasing productivity.

Advantages of using Wixroyd Shock Absorbers

- Consistent and reliable dampening force or linear deceleration, throughout entire impact stroke
- Smoother motion and deceleration of moving parts
- Increased productivity
- Extended machine life and improved efficiency
- Simplified application design and build costs
- Reduced maintenance costs
- Improved health and safety, through reduced vibration and noise pollution

Comparison of shock absorbers vs. other methods



Dashpots: produce large peak forces at beginning of impact stroke, abruptly slowing load - however braking force quickly declines.

Springs & Rubber Buffers: energy is stored rather than dissipated, resulting in rebounding of the load.

Air Buffers: initial braking force is low, but due to the compressibility of air it increases sharply toward later stages of stroke, resulting in inconsistent braking force.

Shock Absorbers: designed to stop a moving object smoothly and quietly from beginning to end of its impact stroke. Their design enables constant resistance force or linear deceleration throughout impact stroke, they quickly convert kinetic energy of a moving object into heat which is quickly dissipated into the air.

Wixroyd Shock Absorbers are available in two primary types

Self-compensating

Self compensating shock absorber 68001

Our Self-Compensating Shock Absorbers are effective for a stated range of Effective Mass (Me), and are self-compensating within this range - see selection charts. As long as the applications effective mass remains within the given range then no additional adjustment is required for changes in weight, speed or propelling force.

See models: 68001, 68002, 68003, 68004, 68008, 68012

Self compensating shock absorber 68002

Each Self-Compensating Shock Absorber is available in three standard max. Impact speed (v-m/s) variations:

1 - high impact speed
2 - medium impact speed
3 - low impact speed

For specific max. impact speed values please refer to the selections charts and the specific product tables.

For hard impact at the start of a stroke it is advisable to choose a high impact speed model, for hard set down at the end of a stroke it is advisable to choose a medium or low impact speed model, or to move up to the next higher bore size

Adjustable

Adjustable shock absorber 68020

Set collar to 0 at initial installation

After a few cycles adjust collar setting to suit application

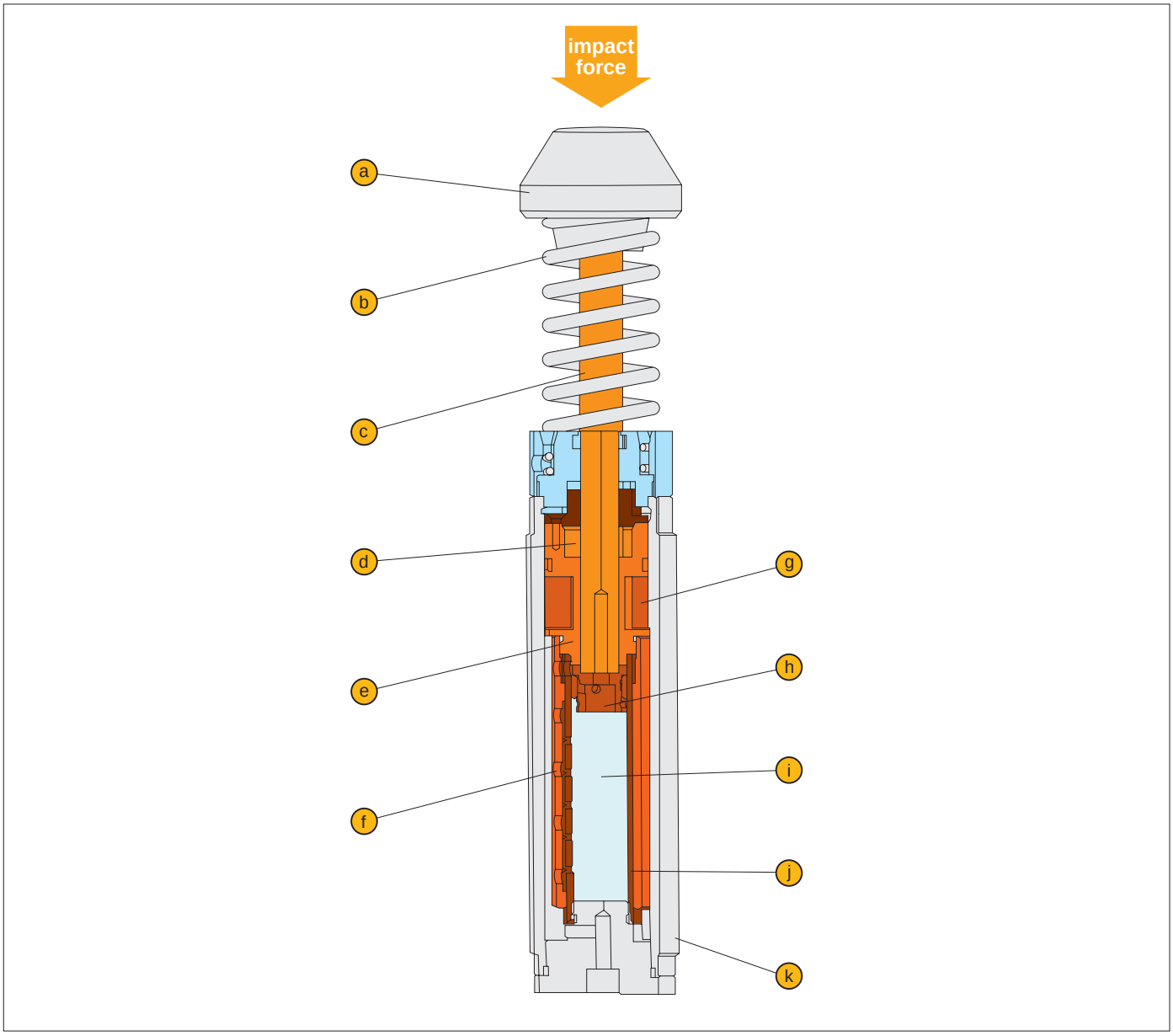
Adjustable Shock Absorbers have an adjustment collar at their base (with a scale of 0-9), which enables adjustment of the Shock Absorber's optimum deceleration to suit the application.

After initial installation, the Shock Absorber should be cycled a number of times to settle, and then the adjustable collar turned to the desired position for the application.

Inside a Wixroyd Shock Absorber

The design of Wixroyd Shock Absorbers is beautifully simple and beautifully effective. Made from high quality materials and components, they provide the highest performance and reliability.

Shock absorber design



- a Impact Cap
- b Return Spring; DIN GWP (external and internal models avai.)
- c Piston Rod; AISI 1045, hardened to HV940°, chrome plated
- d Seal
- e Bearing
- f Orifices
- g Accumulator; neoprene rubber
- h Check Valve
- i Fluid
- j Inner Tube
- k Outer Tube; STKM11A, hardened and blackened

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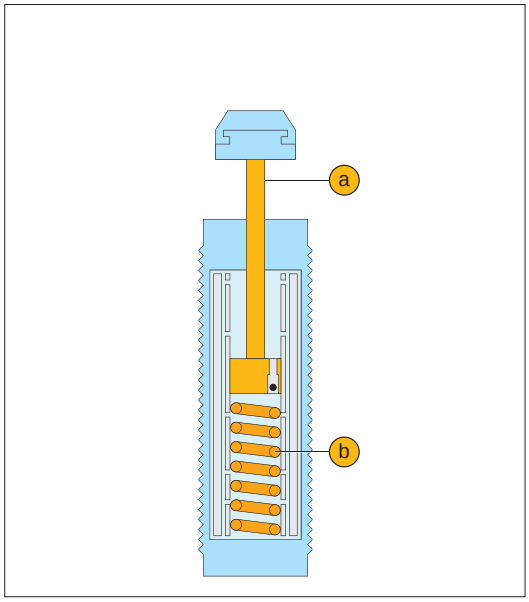
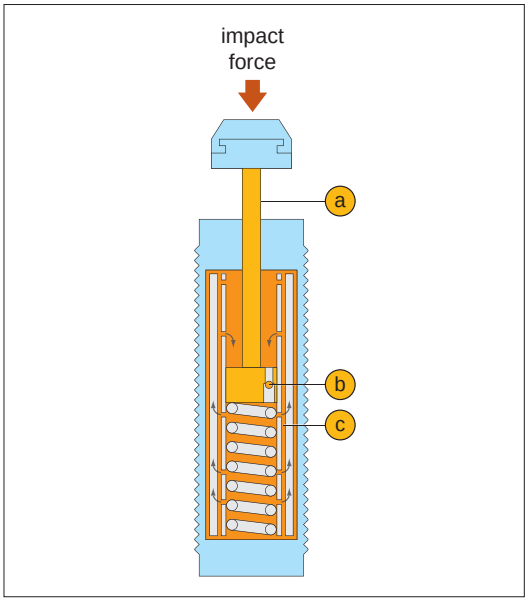
Wixroyd Shock Absorbers

operating principles and operating sequence of shock absorbers



At rest

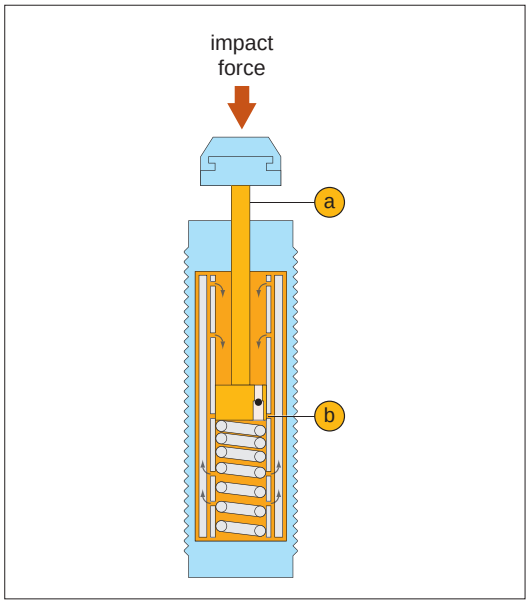
1) Shock Absorber at rest, piston rod (1), fully extended through force exerted on it by return spring (2).



Initial impact

2) Moving load impacts piston (1), which moves into shock absorber body increasing pressure in chamber.

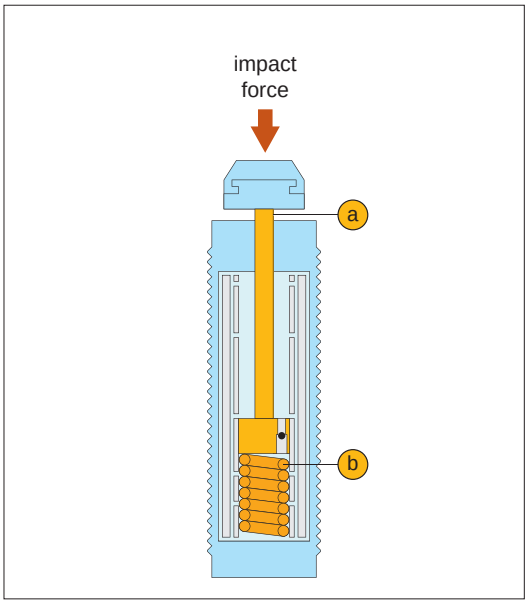
3) Piston rod check valve closes (2). Hydraulic oil behind the piston head is initially able to escape/vent into the accumulator (3).



Continued impact and linear decelaration

4) As load on piston rod (1) increases, the rod continues to move back into the inner tube, as it does so the number of available metering orifices (2) through which the hydraulic oil is able to escape reduces - hence the velocity of the moving load continues to decelerate.

5)The number and position of the orifices are such that the pressure in the inner tube remains constant throughout the entire impact stroke - providing constant linear decelaration. (Number of metering orifices decreases proportionally through length of piston rod.)



Load bought to rest

6) The moving load is brought to a smooth and quiet stop.

7) When the load is removed the return spring (2) pushes the piston (1), back to its original resting position, ready for the next cycle.

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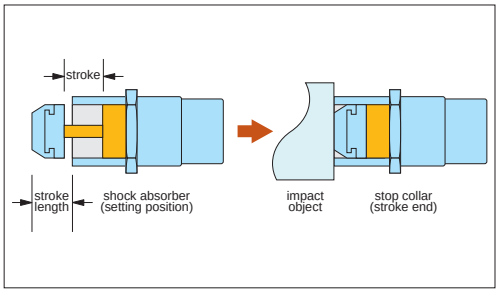
Optional extras

We advise the use of external mechanical stops with all of our Shock Absorbers, typically within 1 to 0.5 mm from the end of the stroke. Alternatively, we have a range of stop collars available which can be mounted directly to the shock absorber body (see our part 68030). Stop Collars are available for our M8 to M36 threaded models, they can be used both to adjust stroke and also to fix the end position of the load.

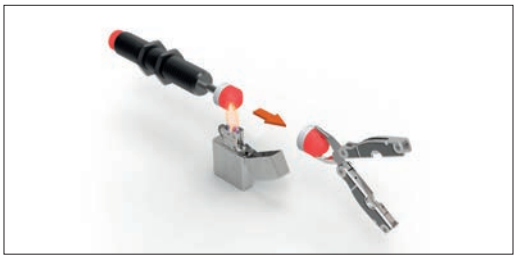


Stop collars

Basic mounting of shock absorbers is through the use of its threaded body, and lock nuts supplied. Alternatively Shock Absorbers can be flange mounted, please see our available flange mounting adaptors part 68032 for our M36 and M42 threaded models.

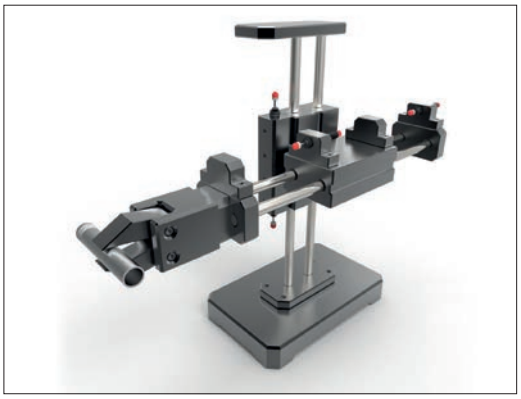
Flange mounting adaptors

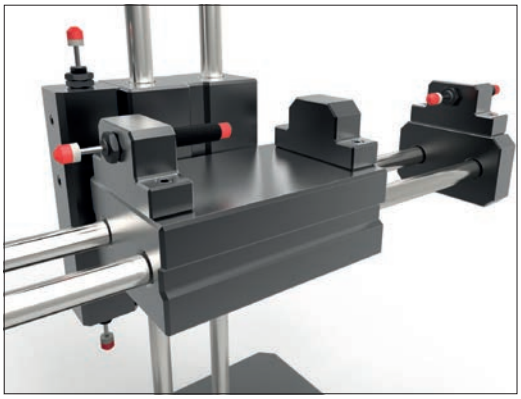
Shock Absorbers are supplied with muffler caps as standard. Muffler caps can be removed from the Shock Absorber Piston by heating them with a lighter and pulling away using a pair of plyers.



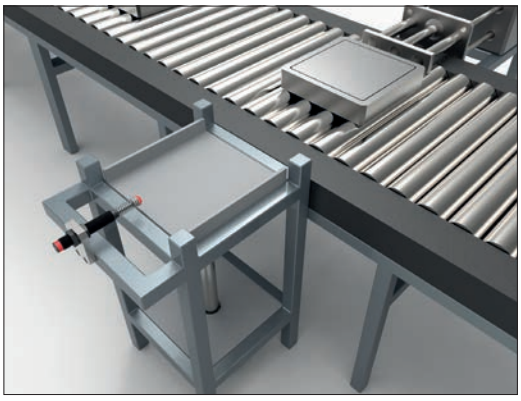
Muffler caps

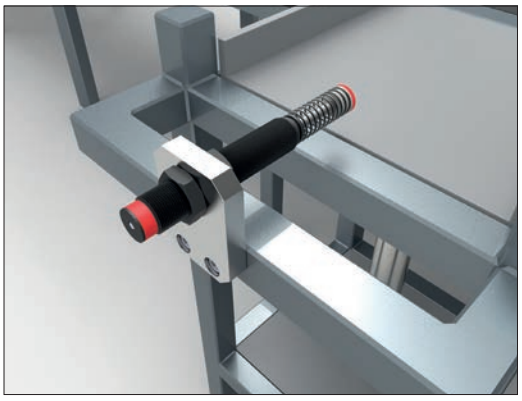
Application examples





Pick and place robots





Pick and place machines

Wixroyd Shock Absorbers

How to select your Wixroyd Shock Absorber

Firstly consider the following:

1) Direction of movement - horizontal, free fall or rotary
2) Total weight of impacting object
3) Propelling force - if present
4) Impact velocity of load
5) Number of cycles/impact per hour
6) Number of shock absorbers in application (only if parallel)

Secondly, ascertain the following from your application

1) Mass to be decelerated (weight) ..... m (kg)
2) Impact velocity at shock absorber .. v (m/s)
3) Propelling or driving force..... F (N)
4) Number of impact cycles per hour... C (/hr)
5) Desired shock absorber stroke ..... S (m)

Thirdly, derive value for the following within your application

ET (Nm)	Maximum energy absorbed per cycle
ETC (Nm/hr)	Maximum energy absorbed per hour
Me (Kg)	Effective mass

Formulae on the following pages will allow you to derive these values for the most appropriate set-up of your application.

Finally, refer to our selection charts

Using the values derived from you calculations, refer to our selection charts and identify the most suitable Wixroyd Shock Absorber for your application.

Mounting and installation information

1. Please install a 1 to 0.5 mm mechanical stop or stop collar before the end of the impact stroke and do not drive shock absorbers into their final position under full load. See the range of Stop Collars part 68030, which can be easily mounted on to shock absorbers to protect shock absorber pistons from bottoming out and can also be used to adjust the final stroke.
2. Reusing is prohibited after dismantling. Do not paint the piston rod or threaded body. This both inhibits movement of the piston and can interfere with effective heat dissipation.
3. Install shock absorbers as close to the moving object's centre as possible.
4. If installing shock absorbers in sheet metal, please ensure sheet metal is robust enough.
5. When installing two or more shock absorbers in parallel, please ensure that they have the same stroke.

Product selection calculation

Some useful calculation formulae

1) Kinetic energy: ..... $E_K = mv^2/2$
2) Drive energy: ..... $E_D = F \cdot S$
3) Free fall velocity: ..... $v = \sqrt{2g} \cdot h$
4) Pneumatic or hydraulic cylinder driving forces:..... $F = 0.00785\ Pd^2$
5) Maximum shock force (approximate): ..... $F_m = 1.2\ E_T/S$
6) Propelling force generated by electric motors:..... $F = 3000\ kW/v$
7) Total energy absorbed per hour: .... $E_{TC} = E_T \cdot C$

Key to formulae symbols used

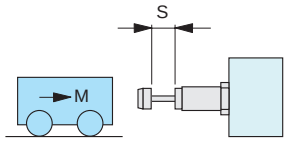
μ	-	coefficient of friction	E_{TC}	(Nm)	total energy per hour	M_e	(kg)	effective mass
α	(rad)	angle of incline	F	(N)	propelling force	P	(Bar)	operation pressure
θ	(rad)	side load of angle	F_m	(N)	maximum shock force	R	(m)	radius
ω	(rad/s)	angular velocity	g	(m/s^2)	acceleration due to gravity (9.81m/s2)	R_S	(m)	shock absorber mounting distance from rotation center
A	(m)	width						
B	(m)	thickness	h	(m)	height	S	(m)	stroke
C	(/hr)	impact cycles per hour	I	(Nm/s2)	moment of inertia	T	(Nm)	driving torque
d	(mm)	cylinder bore diameter	HM	-	arresting torque factor for motors (normally 2.5)	t	(s)	decelartion time
E_D	(Nm)	drive energy per cycle				v	(m/s)	velocity of impact mass
E_K	(Nm)	kinetic energy per cycle	kW	(kW)	electric motor power	v_s	(m/s)	impact velocity at shock absorber
E_T	(Nm)	total energy per cycle	m	(kg)	mass to be deccelerated			

$$E_k = \frac{mv^2}{2} = \frac{300 \cdot 1{,}0^2}{2} = 150\text{Nm}$$

$$E_T = E_k = 150\text{Nm}$$

$$E_{TC} = E_T \cdot C = 150 \cdot 300 = 45000\text{Nm/hr}$$

$$M_e = \frac{2E_T}{v^2} = \frac{2 \cdot 150}{1{,}0^2} = 300\text{kg}$$



1) Horizontal moving mass - without propelling force

m = 300kg
v = 1,0m/s
S = 0,04m
C = 300/hr

Selection from capacity chart: 68024.W0362 is suitable

$$E_k = \frac{mv^2}{2} = \frac{300 \cdot 1{,}0^2}{2} = 216\text{Nm}$$

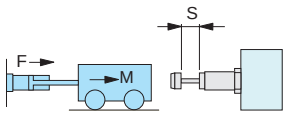
$$E_D = F \cdot S = 0{,}00785Pd^2 \cdot S$$

$$= 0{,}00785 \cdot 40 \cdot 100^2 \cdot 0{,}05 = 157\text{Nm}$$

$$E_T = E_K + E_D = 216 + 157 = 373\text{Nm}$$

$$E_{TC} = E_T \cdot C = 373 \cdot 300 = 111900\text{Nm/hr}$$

$$M_e = \frac{2E_T}{v^2} = \frac{2 \cdot 373}{1{,}2^2} = 518\text{kg}$$



2) Horizontal moving mass - with propelling force

m = 300kg
v = 1,2m/s
S = 0,05m
P = 40N/cm²
d = 100mm
C = 300/hr

Selection from capacity chart: 68024.W0422 is suitable

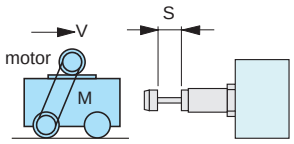
$$E_k = \frac{mv^2}{2} = \frac{400 \cdot 1{,}0^2}{2} = 200\text{Nm}$$

$$E_D = F \cdot S = \frac{kW \cdot HM}{v} \cdot S = \frac{1500 \cdot 2{,}5}{1{,}0} \cdot 0{,}075 = 281\text{Nm}$$

$$E_T = E_K + E_D = 200 + 281 = 481\text{Nm}$$

$$E_{TC} = E_T \cdot C = 481 \cdot 60 = 25860\text{Nm/hr}$$

$$M_e = \frac{2E_T}{v^2} = \frac{2 \cdot 481}{1{,}0^2} = 962\text{kg}$$



3) Horizontal moving mass - motor driven

m = 400kg
v = 1,0m/s
kW = 1,5kW
HM = 2,5
S = 0,075m
C = 60/hr

Selection from capacity chart: 68024.W0423 is suitable

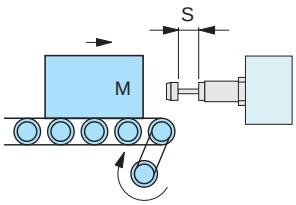
$$E_k = \frac{mv^2}{2} = \frac{150 \cdot 0{,}5^2}{2} = 18{,}75\text{Nm}$$

$$E_D = F \cdot S = mg\mu \cdot S = 150 \cdot 9{,}81 \cdot 0{,}25 \cdot 0{,}02 = 7{,}35\text{Nm}$$

$$E_T = E_K + E_D = 18{,}73 + 7{,}35 = 26{,}1\text{Nm}$$

$$E_{TC} = E_T \cdot C = 26{,}1 \cdot 120 = 3132\text{Nm/hr}$$

$$M_e = \frac{2E_T}{v^2} = \frac{2 \cdot 26{,}1}{0{,}5^2} = 208{,}8\text{kg}$$



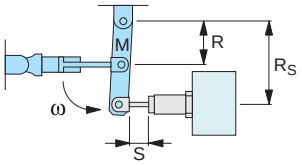
4) Horizontal moving mass - driven rollers

m = 150kg
v = 0,5m/s
μ = 0,25
S = 0,02m
C = 120/hr

Selection from capacity chart: 68002.W0203 is suitable

5) Swinging arm - with propelling force (universal weight distribution)

P	=	5bar
m	=	600kg
ω	=	3rad/s
R	=	0,6m
R_S	=	0,9m
d	=	80mm
C	=	150/hr
I	=	216Nm/s²

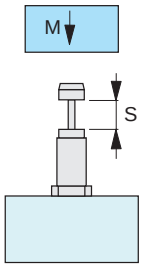


E_k	$\frac{I \cdot \omega^2}{2}$	=	$\frac{216 \cdot 3^2}{2}$	= 972Nm
F	$\frac{0{,}0785 \cdot D^2 \cdot P \cdot R}{R_S}$	=	$\frac{0{,}0785 \cdot 80^2 \cdot 5 \cdot 0{,}6}{0{,}9}$	= 1674.7Nm
E_D	F • S	=	1674,7 • 0,05	= 83,7Nm
E_T	$E_K + E_D$	=	972 + 83,7	= 1055,7Nm
E_{TC}	$E_T \cdot C$	=	1055,7 • 150	= 158355Nm/hr
v	$R_S \cdot \omega$	=	0,6 • 3	= 1.8m/s
M_e	$\frac{2E_T}{v^2}$	=	$\frac{2 \cdot 1055{,}7}{1{,}8^2}$	= 651,2kg

Selection from capacity chart: 68002.W0203 is suitable

6) Vertical moving mass - free falling

m	=	40kg
h	=	0,4m
S	=	0,06m
C	=	200/hr

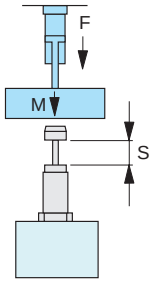


v	$\sqrt{2g \cdot h}$	=		$\sqrt{2 \cdot 9.81 \cdot 0{,}4}$	= 2.8m/s
E_k	$\frac{mv^2}{2}$	=		$\frac{40 \cdot 2{,}8^2}{2}$	= 157Nm
E_D	F • S	=	mg • h	40 • 9.81 • 0,06	= 23,5Nm
E_T	$E_K + E_D$	=		157 + 23,5	= 180,5Nm
E_{TC}	$E_T \cdot C$	=		180,5 • 200	= 36100Nm/hr
M_e	$\frac{2E_T}{v^2}$	=		$\frac{2 \cdot 180{,}5}{2{,}8^2}$	= 46kg

Selection from capacity chart: 68003.W0361 is suitable

7) Vertical moving mass - with propelling force

m	=	40kg
h	=	0,3m
S	=	0,025m
P	=	5bar
d	=	50mm
C	=	200/hr
v	=	1,0m/s

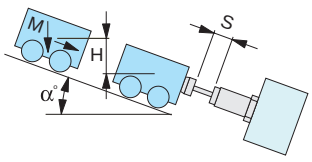


E_k	$\frac{mv^2}{2}$	=	$\frac{40 \cdot 1{,}0^2}{2}$	= 20Nm
E_D	F • S	=	$(mg + 0{,}0785Pd^2) \cdot S$	
		=	$(40 \cdot 9{,}81 + 0{,}0785 \cdot 5 \cdot 50^2) \cdot 0{,}025$	= 33,5Nm
E_T	$E_K + E_D$	=	20 + 33,5	= 55,5Nm
E_{TC}	$E_T \cdot C$	=	55,5 • 200	= 11100Nm/hr
M_e	$\frac{2E_T}{v^2}$	=	$\frac{2 \cdot 55{,}5}{1{,}0^2}$	= 111kg

Selection from capacity chart: 68024.W0252 is suitable

8) Free moving mass - on inclined plane

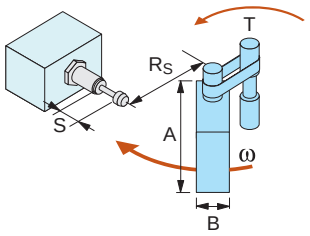
m	=	150kg
h	=	0,3m
α	=	30°
S	=	0,075m
C	=	200/hr



v =	$\sqrt{2g \cdot h}$	=		$\sqrt{2 \cdot 9.81 \cdot 0{,}3}$	= 2.43m/s
E_k =	$\frac{mv^2}{2}$	=		$\frac{150 \cdot 2{,}43^2}{2}$	= 443Nm
E_D =	F • S	=	m • g • S • sinα =	150 • 9,81 • 0,075 • sin30°	= 55,2Nm
E_T =	$E_K + E_D$	=		433 + 55,2	= 498,2Nm
E_{TC} =	$E_T \cdot C$	=		498,2 • 200	= 99640Nm/hr
M_e =	$\frac{2E_T}{v^2}$	=		$\frac{2 \cdot 498{,}2}{2{,}43^2}$	= 168,7kg

Selection from capacity chart: 68024.W0423 is suitable

I	$= \frac{m(4A^2 + B^2)}{12}$	$= \frac{20(4 \cdot 1{,}0^2 + 0{,}05^2)}{12}$		$= 6{,}67\text{kg} \cdot \text{m}^2$
E_k	$= \frac{I\omega^2}{2}$	$= \frac{6{,}67 \cdot 2{,}0^2}{2}$		$= 13{,}34\text{Nm}$
θ	$= \frac{S}{R_S}$	$= \frac{0{,}04}{0{,}8}$		$= 0{,}05\text{rad}$
E_D	$= T \cdot \theta$	$= 20 \cdot 0{,}5$		$= 1{,}0\text{Nm}$
E_T	$= E_K + E_D$	$= 13{,}34 + 1{,}0$		$= 14{,}34\text{Nm}$
E_{TC}	$= E_T \cdot C$	$= 14{,}34 \cdot 100$		$= 1434\text{Nm/hr}$
v	$= \omega \cdot R_S$	$= 2{,}0 \cdot 0{,}8$		$= 1.6\text{m/s}$
M_e	$= \frac{2E_T}{v^2}$	$= \frac{2 \cdot 14{,}34}{1{,}6^2}$		$= 11{,}2\text{kg}$

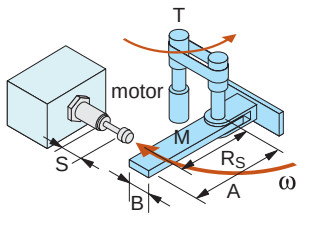


9) Horizontal rotating door

m	=	20kg
ω	=	2,0rad/s
T	=	20Nm
R_S	=	0,8m
A	=	1,0m
B	=	0,05m
S	=	0,016m
C	=	100/hr

Selection from capacity chart: 68002.W0203 is suitable

I	$= \frac{m(4A^2 + B^2)}{12}$	$= \frac{40(4 \cdot 0{,}5^2 + 0{,}05^2)}{12}$		$= 3{,}36\text{kg} \cdot \text{m}^2$
E_k	$= \frac{I\omega^2}{2}$	$= \frac{3{,}36 \cdot 2{,}0^2}{2}$		$= 6{,}8\text{Nm}$
θ	$= \frac{S}{R_S}$	$= \frac{0{,}05}{0{,}4}$		$= 0{,}125\text{rad}$
E_D	$= T \cdot \theta$	$= 10 \cdot 0{,}125$		$= 1{,}25\text{Nm}$
E_T	$= E_K + E_D$	$= 6{,}8 + 1{,}25$		$= 8{,}05\text{Nm}$
E_{TC}	$= E_T \cdot C$	$= 8{,}05 \cdot 50$		$= 402{,}5\text{Nm/hr}$
v	$= \omega \cdot R_S$	$= 2{,}0 \cdot 0{,}4$		$= 0{,}8\text{m/s}$
M_e	$= \frac{2E_T}{v^2}$	$= \frac{2 \cdot 8{,}05}{0{,}8^2}$		$= 25{,}15\text{kg}$

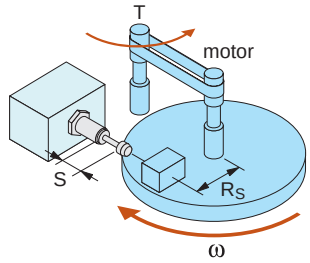


10) Horizontal rotating mass - with torque

m	=	40kg
A	=	0,5m
B	=	0,05m
ω	=	2,0rad/s
T	=	10Nm
R_S	=	0,4m
S	=	0,05m
C	=	50/hr

Selection from capacity chart: 68003.W0361 is suitable

I	$= \frac{mR^2}{2}$	$= \frac{200 \cdot 0{,}5^2}{2}$		$= 25\text{kg} \cdot \text{m}^2$
E_k	$= \frac{I\omega^2}{2}$	$= \frac{25 \cdot 1{,}0^2}{2}$		$= 12{,}5\text{Nm}$
θ	$= \frac{S}{R_S}$	$= \frac{0{,}04}{0{,}4}$		$= 0{,}1\text{rad}$
E_D	$= T \cdot \theta$	$= 100 \cdot 0{,}1$		$= 10\text{Nm}$
E_T	$= E_K + E_D$	$= 12{,}5 + 10$		$= 22{,}5\text{Nm}$
E_{TC}	$= E_T \cdot C$	$= 22{,}5 \cdot 50$		$= 1125\text{Nm/hr}$
v	$= \omega \cdot R_S$	$= 1{,}0 \cdot 0{,}4$		$= 0{,}4\text{m/s}$
M_e	$= \frac{2E_T}{v^2}$	$= \frac{2 \cdot 22{,}5}{0{,}4^2}$		$= 281\text{kg}$



11) Rotary index table - with propelling force

m	=	200kg
ω	=	1,0rad/s
T	=	100Nm
R	=	0,5m
R_S	=	0,4m
S	=	0,04m
C	=	100/hr

Selection from capacity chart: 68024.W0255 is suitable

Wixroyd Shock Absorbers

capacity and selection charts

68001 - shock absorbers - self compensating

Order Number	Stroke (mm)	Thread (mm)	Max. Energy per cycle Nm (ET)	Max. Energy per hour Nm/hr (ETC)	Max. Effective Mass Kg (Me)	Max. Impact Speed m/s (v)	Operating temp. (°C)	Avai. w/o cap	Avai. with cap	Flange Avai.	Stop Collar Avai.	Weight (g)
68001.W0081	6	M 8 x 1,0	2	8,800	0,5	2,0	-10~+80	•	•	-	•	11
68001.W0082	6	M 8 x 1,0	2	8,800	2,0	1,0	-10~+80	•	•	-	•	11
68001.W0083	6	M 8 x 1,0	2	8,800	6,0	0,5	-10~+80	•	•	-	•	11
68001.W0101	5	M10 x 1,0	3	10,800	1,0	3,0	-10~+80	•	•	-	•	14
68001.W0102	5	M10 x 1,0	3	10,800	3,0	1,5	-10~+80	•	•	-	•	14
68001.W0103	5	M10 x 1,0	3	10,800	7,0	0,8	-10~+80	•	•	-	•	14
68001.W0104	8	M10 x 1,0	4	15,200	2,0	3,0	-10~+80	•	•	-	•	20
68001.W0105	8	M10 x 1,0	4	15,200	4,0	1,5	-10~+80	•	•	-	•	20
68001.W0106	8	M10 x 1,0	4	15,200	9,0	0,8	-10~+80	•	•	-	•	20
68001.W0107	10	M10 x 0,75	4	10,800	1,0	3,0	-10~+80	•	•	-	•	20
68001.W0108	10	M10 x 0,75	4	10,800	2,0	1,0	-10~+80	•	•	-	•	20
68001.W0109	10	M10 x 0,75	4	10,800	3,0	0,5	-10~+80	•	•	-	•	20
68001.W0121	10	M12 x 1,0	5	17,640	5,0	3,0	-10~+80	•	•	-	•	32
68001.W0122	10	M12 x 1,0	5	17,640	10,0	1,5	-10~+80	•	•	-	•	32
68001.W0123	10	M12 x 1,0	5	17,640	30,0	0,8	-10~+80	•	•	-	•	32

68002, 68004 - shock absorbers - self compensating

Order Number	Stroke (mm)	Thread (mm)	Max. Energy per cycle Nm (ET)	Max. Energy per hour Nm/hr (ETC)	Max Effective Mass Kg (Me)	Max. Impact Speed m/s (v)	Operating temp. (°C)	Avai. w/o cap	Avai. with cap	Flange Avai.	Stop Collar Avai.	Weight (g)
68002.W0141	12	M14 x 1,5	15	30,000	8	3,0	-10~+80	•	•	-	•	80
68002.W0142	12	M14 x 1,5	15	30,000	50	1,5	-10~+80	•	•	-	•	80
68002.W0143	12	M14 x 1,5	15	30,000	100	0,8	-10~+80	•	•	-	•	80
68002.W0147	16	M14 x 1,5	20	35,000	10	3,0	-10~+80	•	•	-	•	80
68002.W0148	16	M14 x 1,5	20	35,000	70	1,0	-10~+80	•	•	-	•	80
68002.W0149	16	M14 x 1,5	20	35,000	150	0,5	-10~+80	•	•	-	•	80
68002.W0198	20	M14 x 1,5	20	35,000	10	3,0	-10~+80	•	•	-	•	80
68002.W0199	20	M14 x 1,5	20	35,000	70	1,0	-10~+80	•	•	-	•	80
68002.W0200	20	M14 x 1,5	20	35,000	150	0,5	-10~+80	•	•	-	•	80
68002.W0201	20	M20 x 1,5	40	40,000	30	3,5	-10~+80	•	•	-	•	215
68002.W0202	20	M20 x 1,5	40	40,000	200	2,0	-10~+80	•	•	-	•	215
68002.W0203	20	M20 x 1,5	40	40,000	700	1,0	-10~+80	•	•	-	•	215
68002.W0204	30	M20 x 1,5	50	48,000	30	3,5	-10~+80	•	•	-	•	220
68002.W0205	30	M20 x 1,5	50	48,000	200	2,0	-10~+80	•	•	-	•	220
68002.W0206	30	M20 x 1,5	50	48,000	700	1,0	-10~+80	•	•	-	•	220
68002.W0207	50	M20 x 1,5	60	60,000	60	3,5	-10~+80	-	•	-	•	300
68002.W0208	50	M20 x 1,5	60	60,000	400	2,0	-10~+80	-	•	-	•	300
68002.W0209	50	M20 x 1,5	60	60,000	1,200	1,0	-10~+80	-	•	-	•	300
68004.W0201	30	M20 x 1,5	45	55,000	40	3,5	-10~+80	-	•	-	•	220
68004.W0202	30	M20 x 1,5	45	55,000	300	2,0	-10~+80	-	•	-	•	220
68004.W0203	30	M20 x 1,5	45	55,000	900	1,0	-10~+80	-	•	-	•	220
68004.W0204	35	M20 x 1,5	52	63,000	40	3,5	-10~+80	-	•	-	•	210
68004.W0205	35	M20 x 1,5	52	63,000	200	2,0	-10~+80	-	•	-	•	210
68004.W0206	35	M20 x 1,5	52	63,000	650	1,0	-10~+80	-	•	-	•	210
68004.W0207	50	M20 x 1,5	60	68,000	60	3,5	-10~+80	-	•	-	•	470
68004.W0208	50	M20 x 1,5	60	68,000	210	2,0	-10~+80	-	•	-	•	470
68004.W0209	50	M20 x 1,5	60	68,000	480	1,0	-10~+80	-	•	-	•	470

ov-W68001-A-T-W68032-A-T-j-Inh- Updated -31-10-2022

68003 - shock absorbers - self compensating

Order Number	Stroke (mm)	Thread (mm)	Max. Energy per cycle Nm (ET)	Max. Energy per hour Nm/hr (ETC)	Max Effective Mass Kg (Me)	Max. Impact Speed m/s (v)	Operating temp. (°C)	Avai. w/o cap	Avai. with cap	Flange Avai.	Stop Collar Avai.	Weight (g)
68003.W0251	25	M25 x 1,5	80	54,000	200	4,0	-10~+80	•	•	-	•	330
68003.W0252	25	M25 x 1,5	80	54,000	800	2,5	-10~+80	•	•	-	•	330
68003.W0253	25	M25 x 1,5	80	54,000	1,500	1,0	-10~+80	•	•	-	•	330
68003.W0254	40	M25 x 1,5	120	75,000	300	4,0	-10~+80	-	•	-	•	430
68003.W0255	40	M25 x 1,5	120	75,000	1,200	2,5	-10~+80	-	•	-	•	430
68003.W0256	40	M25 x 1,5	120	75,000	2,000	1,0	-10~+80	-	•	-	•	430
68003.W0257	50	M25 x 1,5	98	90,000	15	4,0	-10~+80	•	•	-	•	435
68003.W0258	50	M25 x 1,5	98	90,000	40	2,5	-10~+80	•	•	-	•	435
68003.W0259	50	M25 x 1,5	98	90,000	160	1,0	-10~+80	•	•	-	•	435
68003.W0261	80	M25 x 1,5	150	120,000	20	4,0	-10~+80	•	•	-	•	535
68003.W0262	80	M25 x 1,5	150	120,000	50	2,5	-10~+80	•	•	-	•	535
68003.W0263	80	M25 x 1,5	150	120,000	200	1,0	-10~+80	•	•	-	•	535
68003.W0361	60	M36 x 1,5	250	120,000	400	4,0	-10~+80	-	•	•	•	1030
68003.W0362	60	M36 x 1,5	250	120,000	1,500	2,5	-10~+80	-	•	•	•	1030
68003.W0363	60	M36 x 1,5	250	120,000	2,400	1,0	-10~+80	-	•	•	•	1030

68005 - shock absorbers - self compensating

Order Number	Stroke (mm)	Thread (mm)	Max. Energy per cycle Nm (ET)	Max. Energy per hour Nm/hr (ETC)	Max Effective Mass Kg (Me)	Max. Impact Speed m/s (v)	Operating temp. (°C)	Avai. w/o cap	Avai. with cap	Flange Avai.	Stop Collar Avai.	Weight (g)
68005.W0301	25	M30 x 1,5	180	60,000	300	3,0	-10~+80	-	•	-	•	950
68005.W0302	25	M30 x 1,5	180	60,000	700	2,0	-10~+80	-	•	-	•	950
68005.W0303	25	M30 x 1,5	180	60,000	1,300	1,0	-10~+80	-	•	-	•	950

68008 - shock absorbers - self compensating

Order Number	Stroke (mm)	Thread (mm)	Max. Energy per cycle Nm (ET)	Max. Energy per hour Nm/hr (ETC)	Max Effective Mass Kg (Me)	Max. Impact Speed m/s (v)	Operating temp. (°C)	Avai. w/o cap	Avai. with cap	Flange Avai.	Stop Collar Avai.	Weight (g)
68008.W0141	15	M14 x 1,0	9,8	35,280	30	1,0	-10~+80	-	•	-	•	80
68008.W0142	15	M14 x 1,0	9,8	35,280	15	1,5	-10~+80	-	•	-	•	80
68008.W0191	20	M20 x 1,5	36	22,000	27	2	-10~+80	•	•	-	•	170
68008.W0192	25	M20 x 1,5	40	24,200	35	2	-10~+80	•	•	-	•	180
68008.W0201	30	M20 x 1,5	44	26,460	60	1,2	-10~+80	-	•	-	•	185
68008.W0202	30	M20 x 1,5	44	26,460	30	1,7	-10~+80	-	•	-	•	185
68008.W0203	30	M20 x 1,5	44	26,460	15	2,4	-10~+80	-	•	-	•	185
68008.W0204	30	M20 x 1,5	44	26,460	5	4,2	-10~+80	-	•	-	•	205
68008.W0205	30	M20 x 1,5	44	26,460	3	6,0	-10~+80	-	•	-	•	205
68008.W0211	50	M20 x 1,5	59	35,280	30	2,0	-10~+80	-	•	-	•	250
68008.W0212	50	M20 x 1,5	59	35,280	15	2,8	-10~+80	-	•	-	•	250
68008.W0213	50	M20 x 1,5	59	35,280	8	3,8	-10~+80	-	•	-	•	250
68008.W0214	50	M20 x 1,5	59	35,280	5	5,0	-10~+80	-	•	-	•	250
68008.W0215	50	M20 x 1,5	59	35,280	3	6,8	-10~+80	-	•	-	•	235

68012 - shock absorbers - self compensating

Order Number	Stroke (mm)	Thread (mm)	Max. Energy per cycle Nm (ET)	Max. Energy per hour Nm/ hr (ETC)	Max Effective Mass Kg (Me)	Max. Impact Speed m/s (v)	Operating temp. (°C)	Avai. w/o cap	Avai. with cap	Flange Avai.	Stop Collar Avai.	Weight (g)
68012.W0081/82	6	M14 x 1,0	3	7,000	6	2,5	-10~+80	•	•	-	•	17
68012.W0101/102	7	M14 x 1,0	6	12,400	12	3,5	-10~+80	•	•	-	•	28
68012.W0121/122	10	M20 x 1,5	12	22,500	22	4,0	-10~+80	•	•	-	•	32
68012.W0141/142	12	M20 x 1,5	20	33,000	40	5,0	-10~+80	•	•	-	•	70
68012.W0201/202	15	M20 x 1,5	59	38,000	120	5,0	-10~+80	•	•	-	•	160
68012.W0251/252	25	M20 x 1,5	80	60,000	180	5,0	-10~+80	•	•	-	•	295
68012.W0271/272	25	M20 x 1,5	147	72,000	270	5,0	-10~+80	•	•	-	•	375

68020, 68024 - shock absorbers - adjustable

Order Number	Stroke (mm)	Thread (mm)	Max. Energy per cycle Nm (ET)	Max. Energy per hour Nm/hr (ETC)	Max Effective Mass Kg (Me)	Max. Impact Speed m/s (v)	Operating temp. (°C)	Avai. w/o cap	Avai. with cap	Flange Avai.	Stop Collar Avai.	Weight (g)
68020.W0141	10	M14 x 1,5	20	25,000	80	3,0	-10~+80	•	•	-	•	90
68020.W0142	10	M14 x 1,5	20	25,000	80	3,0	-10~+80	•	•	-	•	90
68020.W0199	16	M20 x 1,5	25	28,500	200	3,5	-10~+80	•	•	-	•	222
68020.W0200	16	M20 x 1,5	25	28,500	200	3,5	-10~+80	•	•	-	•	230
68020.W0203	25	M20 x 1,5	39	30,000	200	3,5	-10~+80	•	•	-	•	230
68020.W0204	25	M20 x 1,5	39	30,000	312	3,5	-10~+80	•	•	-	•	240
68024.W0251	25	M25 x 1,5	85	54,000	400	3,5	-10~+80	•	•	-	•	335
68024.W0252	25	M25 x 1,5	85	54,000	400	3,5	-10~+80	•	•	-	•	350
68024.W0253	30	M25 x 1,5	95	60,000	480	3,5	-10~+80	•	•	-	•	340
68024.W0254	30	M25 x 1,5	95	60,000	480	3,5	-10~+80	•	•	-	•	365
68024.W0255	40	M25 x 1,5	100	80,000	700	3,5	-10~+80	-	•	-	•	455
68024.W0256	50	M25 x 1,5	98	90,000	720	4,0	-10~+80	•	•	-	•	455
68024.W0257	80	M25 x 1,5	150	120,000	800	4,0	-10~+80	•	•	-	•	585
68024.W0361	25	M36 x 1,5	150	81,000	1400	3,0	-10~+80	-	•	•	•	955
68024.W0362	50	M36 x 1,5	300	100,000	1400	3,0	-10~+80	-	•	•	•	1100
68024.W0421	25	M42 x 1,5	260	125,000	3000	3,5	-10~+80	-	•	•	-	1280
68024.W0422	50	M42 x 1,5	500	150,000	4000	4,5	-10~+80	-	•	•	-	1490
68024.W0423	75	M42 x 1,5	750	180,000	6000	4,5	-10~+80	-	•	•	-	1710

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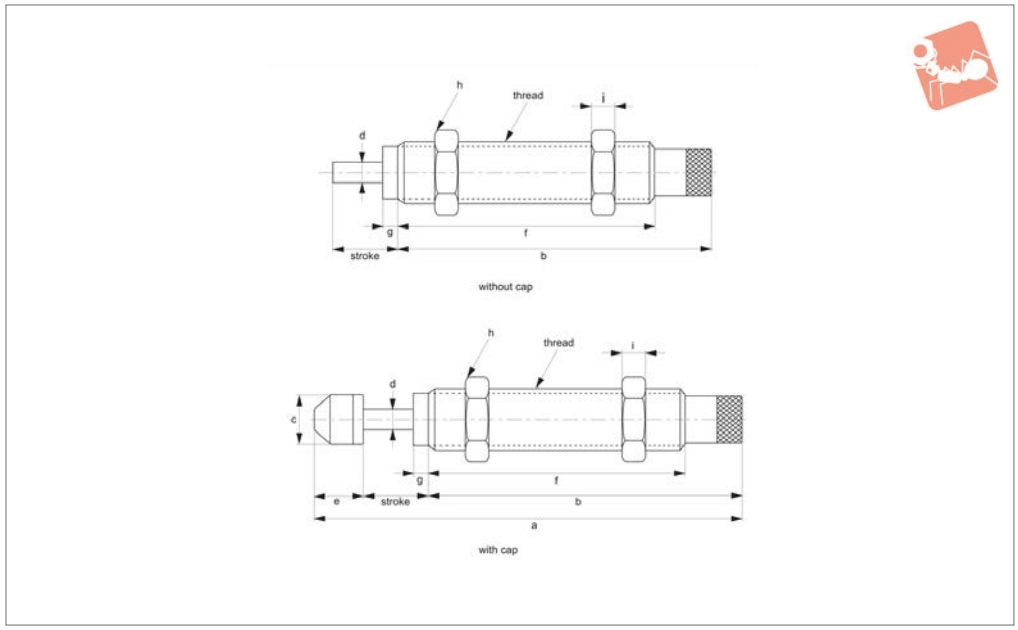


68020

Material
Outer Tube: STKM11A, hardened and blackened.
Piston Rod: AISI 1045 hardened to HV940°, chrome plated.
Return Spring: DIN GWP.
Muffler Cap: urethane rubber.
Seal: nitrile rubber.

Technical Notes
Adjustable shock absorbers have an adjustment collar at their base to enable setting of optimum deceleration of unit to suit application.
Supplied with rubber muffler cap as standard, this is removable - see introductory technical notes for guidance.

Important Notes
For correct product selection refer to Product Selection Formulae and Calculation pages, and associated Capacity & Selection Charts.

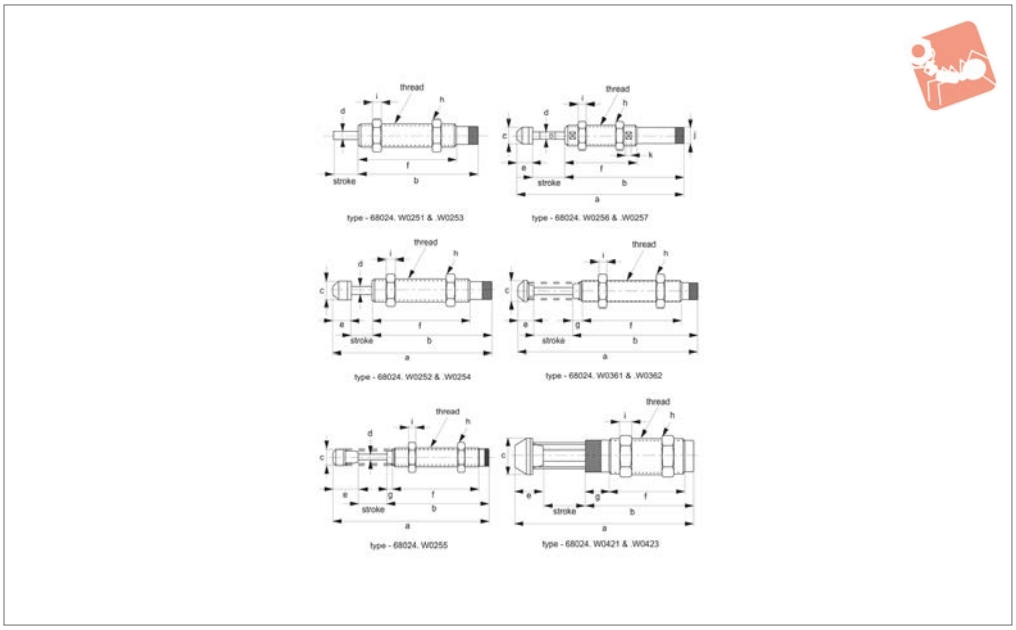
Order No.	With / without cap	Stroke mm	Per hour (ETc) Nm max.	Nm per cycle (Et) Nm max.	Effective mass (Me) kg max.	Speed (v) m/s max.	Operating temperature °C	Weight g
68020.W0139	Without	10	22000	12	35	3.0	-10 to +80	66
68020.W0140	With	10	22000	12	35	3.0	-10 to +80	66
68020.W0141	Without	10	25000	20	80	3.0	-10 to +80	90
68020.W0142	With	10	25000	20	80	3.0	-10 to +80	90
68020.W0143	Without	15	26000	24	100	3.0	-10 to +80	120
68020.W0144	With	15	26000	24	100	3.0	-10 to +80	120
68020.W0145	Without	25	27500	28	140	3.0	-10 to +80	194
68020.W0146	With	25	27500	28	140	3.0	-10 to +80	194
68020.W0147	Without	12	27500	22	130	3.0	-10 to +80	200
68020.W0148	With	12	27500	22	130	3.0	-10 to +80	200
68020.W0199	Without	16	28500	28	200	3.5	-10 to +80	222
68020.W0200	With	16	28500	28	200	3.5	-10 to +80	230
68020.W0201	Without	16	27500	28	200	3.0	-10 to +80	230
68020.W0202	With	16	27500	28	200	3.0	-10 to +80	230
68020.W0203	Without	25	30000	39	312	3.5	-10 to +80	232
68020.W0204	With	25	30000	39	312	3.5	-10 to +80	240
68020.W0205	Without	20	29000	34	298	3.5	-10 to +80	235
68020.W0206	With	20	29000	34	298	3.5	-10 to +80	235
68020.W0207	Without	50	52000	69	420	3.5	-10 to +80	330
68020.W0208	With	50	52000	69	420	3.5	-10 to +80	330

Order No.	Thread	a	b	c	d	e	f	h	i
68020.W0139	M14x1,5	90.3	71.7	10.3	4	8.6	57.3	14	4
68020.W0140	M14x1,5	90.3	71.7	10.3	4	8.6	57.3	14	4
68020.W0141	M14x1,5	109.5	88.5	12	4	11.2	72.5	19	5
68020.W0142	M14x1,5	109.5	88.5	12	4	11.0	72.5	19	5
68020.W0143	M14x1,5	128.2	102	12	4	11.2	86.0	19	5
68020.W0144	M14x1,5	128.2	102	12	4	11.2	86.0	19	5

Shock Absorber, Adjustable

M14 - M20

Order No.	Thread	a	b	c	d	e	f	h	i
68020.W0145	M14x1,5	153.2	117	12	4	11.2	101.0	19	5
68020.W0146	M14x1,5	153.2	117	12	4	11.2	101.0	19	5
68020.W0147	M16x1,5	99.0	76.5	14	4	11.2	54.9	19	6
68020.W0148	M16x1,5	99.0	76.5	14	4	11.2	54.9	19	6
68020.W0199	M20x1,5	-	117.0	-	6	-	101.0	26	7
68020.W0200	M20x1,5	158.0	117.0	18	6	15.8	101.0	26	7
68020.W0201	M20x2,0	148.3	117.0	17.8	6	15.3	101.0	26	7
68020.W0202	M20x2,0	148.3	117.0	17.8	6	15.3	101.0	26	7
68020.W0203	M20x1,5	157.3	117.0	17.8	6	15.3	101.0	26	7
68020.W0204	M20x1,5	157.3	117.0	17.8	6	15.3	101.0	26	7
68020.W0205	M20x1,5	152.3	117.0	17.8	6	15.3	101.0	26	7
68020.W0206	M20x1,5	152.3	117.0	17.8	6	15.3	101.0	26	7
68020.W0207	M20x1,5	239.3	174	17.8	6	15.3	158.0	26	7
68020.W0208	M20x1,5	239.3	174	17.8	6	15.3	158.0	26	7



68024

Material
Outer Tube: STKM11A, hardened and blackened.
Piston Rod: AISI 1045 hardened to HV940°, chrome plated.
Return Spring: DIN GWP.
Muffler Cap: urethane rubber.
Seal: nitrile rubber.

Technical Notes
Adjustable shock absorbers have an adjustment collar at their base to enable setting of optimum deceleration of unit to suit application.
After initial installation, cycle unit a number of times to settle, then turn adjustment collar to desired position for application.
Supplied with rubber muffler cap as standard, this is removable - see introductory technical notes for guidance.

Important Notes
For correct product selection refer to Product Selection Formulae and Calculation pages, and associated Capacity & Selection Charts.

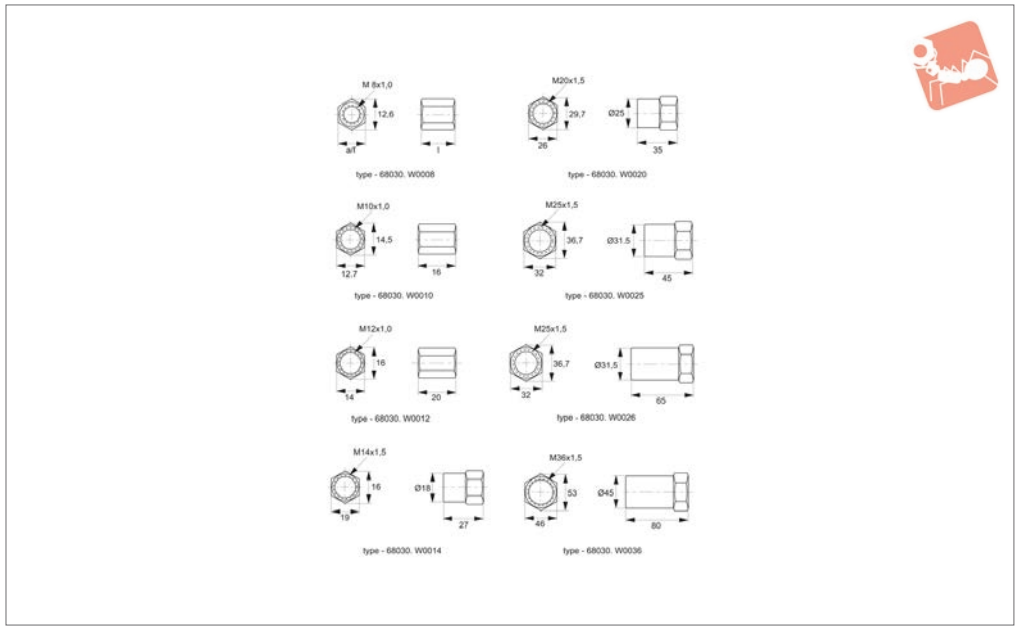
Order No.	With / without cap	Stroke mm	Per hour (ETc) Nm max.	Nm per cycle (Et) Nm max.	Effective mass (Me) kg max.	Impact speed (v) m/s max.	Operating temperature °C	Weight g
68024.W0251	Without	25	54000	85	400	3.5	-10 to +80	335
68024.W0252	With	25	54000	85	400	3.5	-10 to +80	350
68024.W0253	Without	30	60000	95	480	3.5	-10 to +80	340
68024.W0254	With	30	60000	95	480	3.5	-10 to +80	365
68024.W0255	With	40	80000	100	700	3.5	-10 to +80	455
68024.W0256	With	50	90000	120	720	4.0	-10 to +80	455
68024.W0257	With	80	120000	150	800	4.0	-10 to +80	585
68024.W0361	With	25	81000	150	1400	3.0	-10 to +80	955
68024.W0362	With	50	81000	300	1400	3.0	-10 to +80	1100
68024.W0260	Without	25	75700	195	1400	3.3	-10 to +80	482
68024.W0261	Without	25	75700	195	1400	3.3	-10 to +80	482
68024.W0262	With	52	98962	385	2400	3.3	-10 to +80	708
68024.W0263	Without	52	98962	385	2400	3.3	-10 to +80	708
68024.W0421	With	25	125000	260	3000	3.5	-10 to +80	1280
68024.W0422	With	50	150000	500	4000	4.5	-10 to +80	1490
68024.W0423	With	75	180000	750	6000	4.5	-10 to +80	1710

Order No.	Thread	a	b	c	d	e	f	h	g	i	j	k
68024.W0251	M25x1,5	-	118.5	-	8	-	101.0	32	-	9	-	-
68024.W0252	M25x1,5	163.0	118.5	22.0	8	19.0	101.0	32	-	9	-	-
68024.W0253	M25x1,5	-	118.5	-	8	-	101.0	32	-	9	-	-
68024.W0254	M25x1,5	167.5	118.5	22.0	8	19.0	101.0	32	-	9	-	-
68024.W0255	M25x1,5	221.5	144.5	22.0	8	37.0	117.0	32	10.0	9	-	-
68024.W0256	M25x1,5	247.0	178.0	22.0	8	19.0	100.0	32	-	9	23	11

Shock Absorber, Adjustable

M25 - M42

Order No.	Thread	a	b	c	d	e	f	h	g	i	j	k
68024.W0257	M25x1,5	343.5	244.5	22.0	8	19.0	100.0	32	-	9	23	11
68024.W0361	M36x1,5	183.8	123.0	35.5	10	25.8	103.0	46	10.0	15	-	-
68024.W0362	M36x1,5	246.8	154.0	35.5	10	25.8	134.0	46	17.0	15	-	-
68024.W0260	M33x1,5	150.3	110.5	28.5	10	13.8	77.9	45	19.1	11	29.7	16
68024.W0261	M33x1,5	150.3	110.5	28.5	10	13.8	77.9	45	19.1	11	29.7	16
68024.W0262	M33x1,5	217.3	151.5	28.5	10	13.8	118.7	45	19.1	11	29.7	16
68024.W0263	M33x1,5	217.3	151.5	28.5	10	13.8	118.7	45	19.1	11	29.7	16
68024.W0421	M42x1,5	186.4	127.5	44.5	12	33.9	88.0	50	28.5	15	-	-
68024.W0422	M42x1,5	240.9	157.0	44.5	12	33.9	117.5	50	28.5	15	-	-
68024.W0423	M42x1,5	301.4	187.5	44.5	12	33.9	148.0	50	28.5	15	-	-



68030

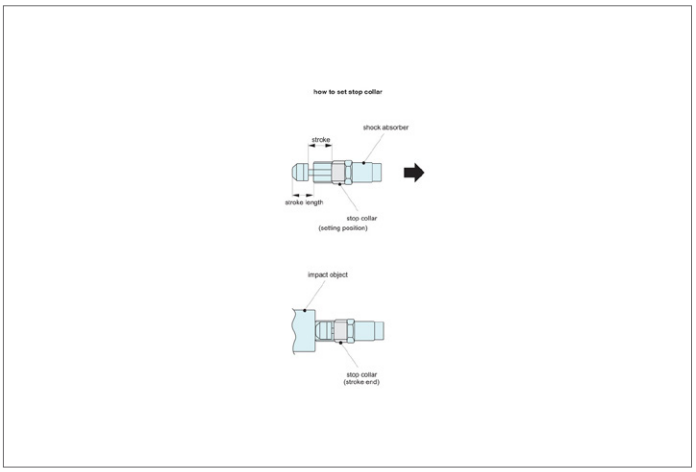
Material
Steel, hardened and blackened.

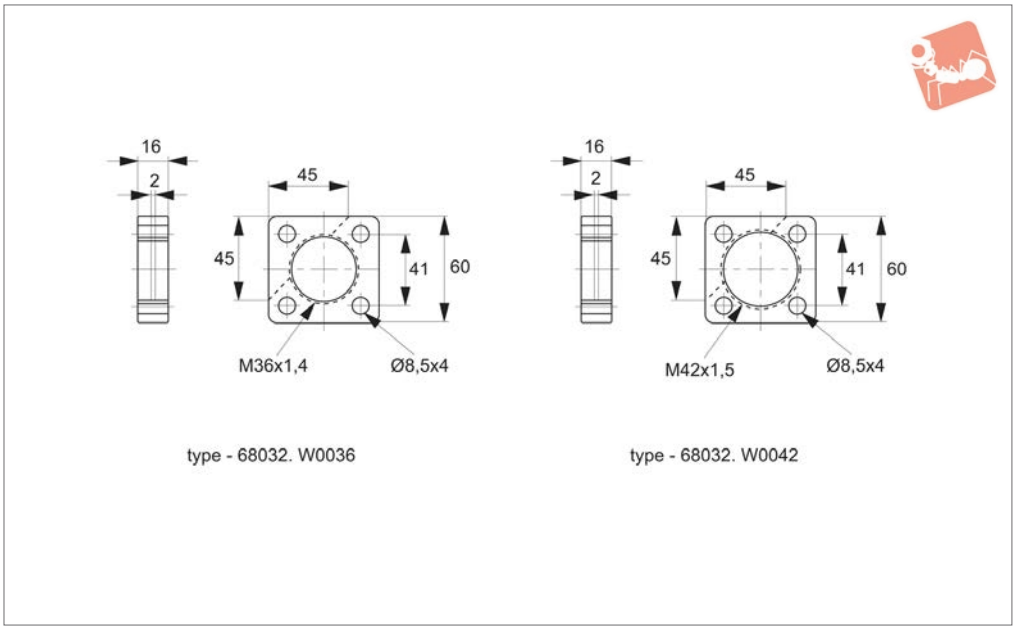
Technical Notes
For use with Wixroyd range of shock absorbers, stop collars can be used to adjust both the stroke and fixing position of the shock absorber.
Stop collar plus half nut supplied.

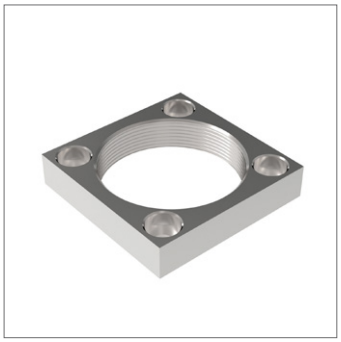
Order No.	Thread	l	To suit shock absorber size	A/F	Dia. Ø
68030.W0008	M 8x1,0	14	**68001**.W0081, .W0082, .W0083 **68012**.W0081, .W0082	11.0	-
68030.W0010	M10x1,0	16	**68001**.W0101, .W0102, .W0103, .W0104, .W0105, .W0106 **68012**.W0101, .W0102	12.7	-
68030.W0012	M12x1,0	20	**68001**.W0121, .W0122, .W0123 **68012**.W0121, .W0122	14.0	-
68030.W0014	M14x1,5	27	**68002**.W0141, .W0142, .W0143, .W0144, .W0145, .W0146 **68008**.W0141, .W0142 **68012**.W0141, .W0142 **68020**.W0141, .W0142	19.0	18.0
68030.W0020	M20x1,5	35	**68002**.W0201, .W0202, .W0203, .W0204, .W0205, .W0206, .W0207, .W0208, .W0209 **68004**.W0201, .W0202, .W0203, .W0204, .W0205, .W0206 **68008**.W0201, .W0202, .W0203, .W0204,	26.0	25.0
68030.W0025	M25x1,5	45	**68003**.W0251, .W0252, .W0253, .W0257, .W0258, .W0259, .W0260, .W0261, .W0262, .W0263 **68012**.W0251, .W0252 **68024**.W0252, .W0254, .W0255, .W0257	32.0	31.5
68030.W0026	M25x1,5	65	**68003**.W0254, .W0255, .W0256 **68024**.W0255	32.0	31.5
68030.W0036	M36x1,5	80	**68003**.W0361, .W0362, .W0363 **68024**.W0361, .W0362	46.0	45.0

Stop Collars for Shock Absorbers

M8 to M36







68032

Material
Steel, hardened and blackened.

Technical Notes
Provide easy mounting of Wixroyd Shock Absorbers in our application.

Order No.	Thread	To suit shock absorber size
68032.W0036	M36 x 1,5	**68003**.W0361, .W0362, .W0363 **68024**.W0361, .W0632
68032.W0042	M42 x 1,5	**68024**.W0421, .W0422, .W0423