omnitrack®

omnidirectional movement

Effortless precision

SINCE 1909

omnitrack®
omnidirectional movement

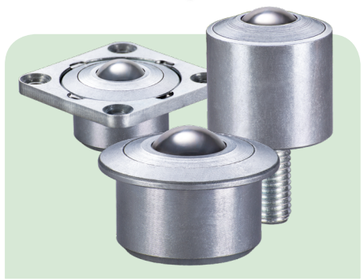
Effortless precision

Since 1909

- Call, email or chat online. Free technical advice now.
- No minimum order charges. Buy what you need now.
- Rapid production of a bespoke solution to meet your needs.
- Immediate despatch from stock & fast global delivery.
- Original Patented design, tested & manufactured in the UK since 1909.

HEAVY DUTY
Pages 4 - 7

- Low friction 0.005µ, highest loads
- Smooth & precise movement at any angle of orientation
- Material upgrade options for max life



MEDIUM DUTY
Pages 12 - 15

- Robust & precision machined
- MX, MV & MW 'Air-cargo' units
- Fixing clips & tolerance rings for rapid

LIGHT DUTY
Pages 16 - 17

- Pressed steel economy range
- Nylon, POM plastic & stainless range
- Cup & ball hemisphere design

omnicaster
PLASTIC CASTORS
Pages 18 - 19

- Suitable for delicate surfaces
- Fast directional change
- Self-cleaning in operation

omnifloat
GLASS HANDLING
Page 20

- Glass & sheet handling
- Hard-wearing/high-heat upgrade
- Stainless steel for wet areas

omniwheel
CONVEYOR ROLLERS
Pages 22 - 23

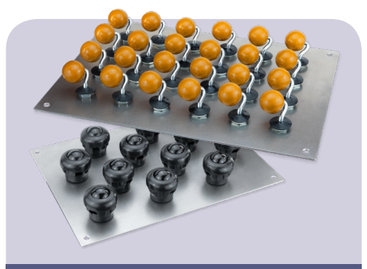
- Outdoor, dusty & washdown use
- Gravity, driven & bearing hubs
- Powered & driven conveying

SPRING LOADED
Pages 8 - 9

- Low friction, highest shock remittance
- Inverted orientation operation
- Pre-loaded spring deflection & die lifters

PNEUMATIC
Pages 10 - 11

- Pop-up ball units, stops, wheels & rails
- Modular live/dead control flexibility
- Installation tubing, regulators & ancillaries



BALL TABLES & PLATFORMS
Page 24 - 25

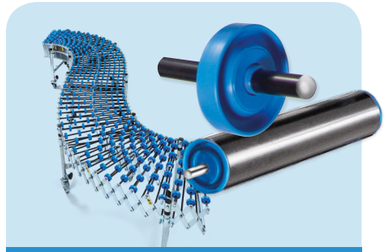
- Configure your ideal conveying plane
- Standard sizes dispatched from stock
- Custom built tables & platforms

BALL RAILS
Page 26

- Chrome steel, stainless or POM ball units
- Bolt together or interlink with spacer tubes
- Adjustable 'bolt down' fixing brackets

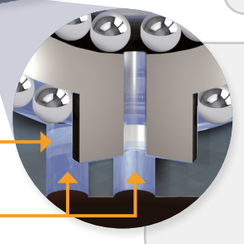
BALL SKATES
Page 27

- Move equipment, shelving & machinery
- Low profile & fits standard shelf legs
- Parking brake & optional load plate



FLEXIBLE CONVEYORS
Page 21

- Negotiate bends-mobile expandable concertina
- Skatewheel & gravity roller conveyor options
- Adjustable working height



Felt seal
9000 Series only

Lubricant
Mobil Vactra 1 Oil

A & **Standard**
Single Drain Channel

Z & SS
2 x Drain Channels

8000 KG
Maximum load rating unaffected at any orientation

Low friction
1 : 0,005

High Shock Resistance

Temperature
-50/260°C

Speed
2m/sec

Drain / Debris Channels
9000 Series only

User Serviceable
9000 Series only

Precision Machined Construction

STANDARD MATERIALS: AISI 52100 high chrome steel balls & internal load bearing components. "Anti-Oxide" electrophoretic coating (>350 hours ISO salt resistance) of precision machined steel housing.

Solve specific application requirements by upgrading standard materials.

Select option below by adding suffix:

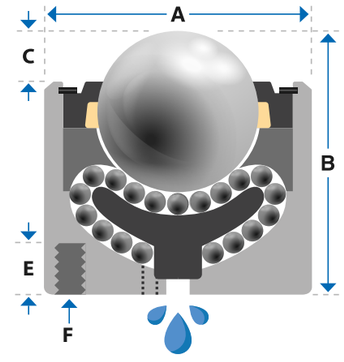
		Corrosion	Contamination	Temperature		Radiation
A	**STAINLESS STEEL BALLS UPGRADE** AISI 440C stainless steel balls, internal components as standard. "Anti-Oxide" housing. Load rating as standard & remains unaffected.	✓	✓	✓	✓	✓
Z	**ARDUOUS CONDITIONS UPGRADE** AISI440C stainless steel balls & load-bearing internal components. "Anti-Oxide" outer housing. Load rating as standard & remains unaffected.	✓✓	✓✓	✓✓	✓	✓
SS	**ALL STAINLESS STEEL UPGRADE** AISI440C stainless steel balls & load-bearing internal components. AISI 304 outer housing. Load rating as standard & remains unaffected.	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓

PB — PHENOLIC RESIN BALL OPTION
Minimise marking of delicate surfaces. Friction, wear & temperature properties change - consult us if in doubt. Reduced load ratings indicated.

BALL Ø (mm)	12.7	25.4	38.1+
PB LOAD (kg)	10	30	38

80 & 90 Series - *PLAIN FIT* A Z SS PB

Fixing Options
Page 15

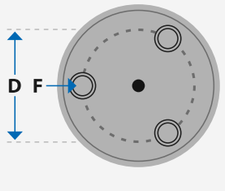


PART	LOAD (kg)	BALL Ø (mm)	A	B	C
8000	50	12.7	20	20	3.8 ●
8001	50	12.7	20.6	19.1 ✱	3.8 ●
8010	50	12.7	22.2	22.1	3.8 ●
8020	90	15.8	24	29	5
8030	110	19.1	30	34	6
8040	120	25.4	38	45	8
9020	225	25.4	44	41.3	5.6
9021	225	25.4	44.5	41.3	5.6
9022	225	25.4	44.5	41.3	7.1
9030	385	25.4	50	44.5	6.4
9031	385	25.4	50.8	44.5	6.4
9040	1100	38.1	60	61.5	12.7
9041	1100	38.1	60.3	61.5	12.7
9042	1100	38.1	60.3	60.3	12.7
9050	2200	50.8	100	95	14.3
9051	2200	50.8	101.6	98.4	14.3
9060	4550	76.2	160	145	21
9070	8000	101.6	228	190	38

✱ 9001 - spigot 3.2mm x 8mm Ø
● Further 1.5mm @ 16.2mm Ø

8020, 8030 & 8040 only

PART	D Ø	E X 3	F X PITCH
8020	16	6	M4 x 0.7
8030	20	6	M5 x 0.8
8040	26	8	M6 x 1.0



PART	LOAD (kg)	BALL Ø (mm)	A	B	C	D	E	F
8100	50	12.7	20	19.1	3.8 ✱	16.1	-	M8 x 1.25
8101	50	12.7	20.6	19.1	3.8 ✱	28.7	-	M8 x 1.25
8102	50	12.7	20.6	19.1	3.8 ✱	28.7	-	5/16" UNF
8112	50	12.7	22.2	22.2	3.8 ✱	25.4	-	5/16" UNF
8120	90	15.8	24AF⬡/27.7Ø	26	5	20	-	M12 x 1.75
8130	110	19.1	30AF⬡/34.9Ø	31	6	25	-	M16 x 2.0
8140	120	25.4	38AF⬡/43.9Ø	42	8	30	-	M20 x 2.5
9120	225	25.4	44	48.3	5.6	25	-	M12 x 1.75
9123	225	25.4	44	47.3	5.6	25	6	M12 x 1.75
9124	225	25.4	44.5	47.3	7.1	25.4	6	1/2" UNF
9130	385	25.4	50	51.3	6.4	25		M12 x 1.75
9133	385	25.4	50	50.5	6.4	25	6	M12 x 1.75
9134	385	25.4	50.8	50.5	6.4	25.4	6	1/2" UNF
9135	385	25.4	50.8	42	6.4	60	10	1" UNF
9140	1100	38.1	60	73.5	12.7	40		M20 x 2.5
9143	1100	38.1	60	71.5	12.7	40	10	M20 x 2.5
9144	1100	38.1	60.3	71.5	12.7	38.1	10	3/4" UNF
9145	1100	38.1	60.3	60	12.7	75	6	1" UNF
9150	2200	50.8	100	105	14.3	54		M24 x 3.0
9153	2200	50.8	100	109	14.3	50	10.6	M24 x 3.0
9154	2200	50.8	101.6	109	14.3	50.8	10.6	1" UNF
9160	4550	76.2	160	145	21	57.2		1" UNF
9163	4550	76.2	160	145	21	100	15	M30 x 3.5

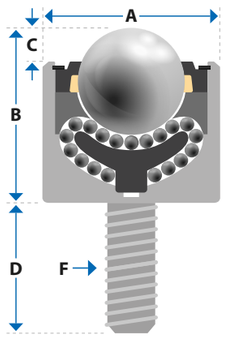
✱ Further 1.5mm @ 16.2mm Ø
81 & 91 Series units omit drain/debris channel - contact us if required

81 & 91 Series *THREADED STUD* A Z SS PB

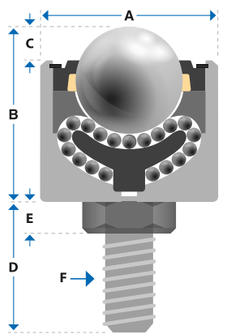
8120, 8130 & 8140
HEXAGON BODY

81 & 91 Series
ENDING 0, 1, 2 & 5

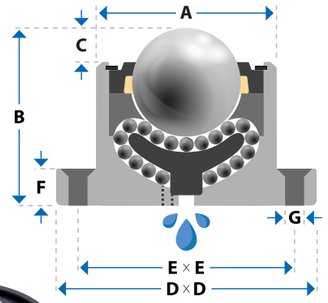
91 Series
ENDING 3 & 4



81 & 91 Series
ENDING 0, 1, 2 & 5 & HEXAGON BODY



91 Series
ENDING 3 & 4



82 & 92 Series - *FLANGE MOUNTED* (A) (Z) (SS) (PB)

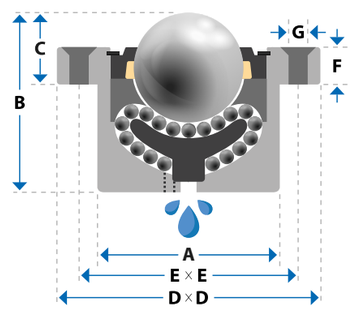
PART	LOAD (kg)	BALL Ø (mm)	A	B	C	D X D Ø	E X E	F	G Ø
8200	50	12.7	23.8	22.2	3.8 ✱	44.5 ●	34.9	3.2	2 x 3.6
8210	50	12.7	23.8	22.2	3.8 ✱	47.7 x 32 +	34.9	2	2 x 4 ▶
8220	90	15.8	24	39	5	40 ●	32	4	4 x 4.5 ▶
8230	110	19.1	30	34	6	50 ●	40	5	4 x 4.5 ▶
8240	120	25.4	38	45	8	60 ●	49	6	4 x 4.5 ▶
9220	225	25.4	44	41.3	5.6	57.2	44.5	4.8	4 x 6.1
9221	225	25.4	44.5	41.3	7.1	57.2	44.5	4.8	4 x 6.1
9230	385	25.4	50	44.5	6.4	76.2	57.9	6.4	4 x 8.1
9240	1100	38.1	60	61.5	12.7	76.2	57.9	12.7	4 x 8.1
9241	1100	38.1	60.3	60.3	12.7	76.2	57.9	12.7	4 x 8.1
9250	2200	50.8	100	98.4	14.3	127	101.6	9.5	4 x 11.1 ▶
9260	4550	76.2	160	145	21	175	145	15	4 x 13.1
9270	8000	101.6	228	190	38.1	235	190.5	25	4 x 16.1

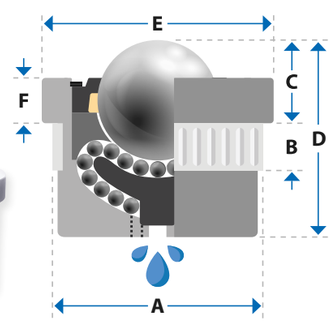
● Circular flange ✱ Further 1.5mm @ 16.2mm Ø
+ **8210** - Elliptical flange ▶ Not countersunk

83 & 93 Series - *FLANGE SOCKET MOUNTED* (A) (Z) (SS) (PB)

PART	LOAD (kg)	BALL Ø (mm)	A	B	C	D X D Ø	E X E	F	G Ø
8300	50	12.7	23.8	22.2	11.2	44.5 ●	34.9	3.2	2 x 3.6
8310	50	12.7	23.8	22.2	7.9	47.7 x 32 +	34.9	2	2 x 4 ▶
8320	90	15.8	24	29	11	40 ●	32	6	2 x 4.5 ✱
8330	110	19.1	30	34	13	50 ●	40	7	2 x 5.5 ✱
8340	120	25.4	38	45	16	60 ●	49	8	2 x 4.5 ✱
9320	225	25.4	44	41.3	10.3	57.2	44.5	4.8	4 x 6.1
9321	225	25.4	44.5	41.3	11.9	57.2	44.5	4.8	4 x 6.1
9330	385	25.4	50	44.5	12.7	76.2	57.9	6.4	4 x 8.1
9341	1100	38.1	60	60	25.4	76.2	57.9	12.7	4 x 8.1
9350	2200	50.8	100	95	33.3	127	101.6	19.1	4 x 11.1
9351	2200	50.8	101.6	98.4	36.5	127	101.6	22.2	4 x 11.1
9352	2200	50.8	109.5	98.4	33.3	127	101.6	19.1	4 x 10.3 ▶
9360	4550	76.2	160	145	36	175	145	15	4 x 13.1

● Circular flange ✱ Counterbore
+ **8310** - Elliptical flange ▶ Not countersunk





88 & 98 Series - *TOLERANCE RING*

PART	LOAD (kg)	BALL Ø (mm)	A	B	C	D	E	F
8810	50	12.7	22	12	6	21	24	2.4
9820	225	25.4	45 ✱	15	14	40	49	6.9
9830	385	25.4	50 ✱	16	15	44	55	8.6
9840	1100	38.1	65 ✱	20	25	60	70	12.3
9850	2200	50.8	100 ✱	24	30	95	110	15.7

✱ Bore Ø ISO H9 fit

Spares & Service Kits

Omnitrack Heavy Duty 9000 series ball transfers - In continuous production since 1954.

Rapidly restore performance within minutes by using Service Kits S1 & S2 offering 2 levels of components & full overhaul instructions.

Factory reconditioning service for spring loaded & custom units as these may require special tooling for safe disassembly.

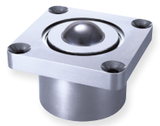
To order state original part number, any identification mark & Service Kit required eg S1-9241. If in doubt, contact us & we'll keep you rolling!

1 - Circlip (S2) | **2** - Top Cap | **3** - Felt Seal (S1) (S2) (Ball Ø > 12.7mm) | **4** - Main Ball (S1) (S2) | **5** - Recirculating Balls (S1) (S2) | **6** - Retainer (S2) | **7** - Table (S2)

DISMANTLE → ← ASSEMBLE

Anti-oxide Electrophoretic black finish

> 330 hours ISO salt resistance



Stainless Steel Units

- natural finish

Replacement felt seals

9000 Series only S1 & S2 Kits

Lubricant

Mobil Vactra 1 Oil - except SS units

Component materials & corrosion resistance

		1	1	1	2	3	3
SS	'All Stainless steel'						
Z	'Arduous Conditions'	4	4	1	5	3	3
A	'Stainless steel balls, other materials as standard'	4	4	6	5	3	6
	Standard Materials	4	4	6	5	6	6

1 AISI 304 stainless steel
2 AISI 302 stainless steel
3 AISI 440 stainless steel
4 AISI 1050 'Anti-oxide' finish
5 AISI 1070 carbon steel
6 AISI 52100 chrome steel

Max Capacity: 8000 KG
Maximum load rating unaffected at any orientation

Low friction 1 : 0,005

Speed 2m/sec

Temperature -50/+160°C

High Shock Resistance

Uneven Loads

Factory Refurbishment
9000 Series only

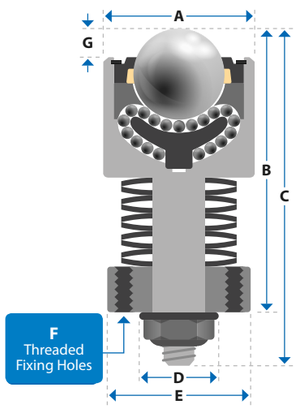
STANDARD MATERIALS: AISI 52100 high chrome steel balls & Anti-Oxide electrophoretic coated machined steel housing. Spring mechanism parts in carbon spring steel irrespective of material upgrade options below.

Solve specific application requirements by upgrading standard materials. **Select option below by adding suffix:**	Corrosion	Contamination	Temperature		Radiation
(A) **STAINLESS STEEL BALLS UPGRADE:** AISI 440C stainless steel balls, internal components as standard. "Anti-Oxide" housing. Load rating as standard & remains unaffected.	✓	✓	✓	✓	✓
(Z) **ARDUOUS CONDITIONS UPGRADE:** AISI440C stainless steel balls & load-bearing internal components. "Anti-Oxide" outer housing. Load ratings & spring values as standard & remain unaffected.	✓✓	✓✓	✓✓	✓	✓
(SS) **ALL STAINLESS STEEL UPGRADE:** AISI440C stainless steel balls & load-bearing internal components. AISI 304 outer housing. Load ratings & spring values as standard & remain unaffected.	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓✓

84 & 94 Series - *EXTERNAL SPRING LOADED* (A) (Z) (SS)

PART	BALL Ø (mm)	PRE-LOAD (kg)	MAX DE-FLECTION ADVISED	LOAD AT MAX DEFLECTION (kg)	A	B	C	D	E	FIXING HOLES (PCD)	G
8401	12.7	7	2	32	20.6	32.2	47.0	14.7	20	-	3.8 *
8402	12.7	14	2	35	20.6	31.8	47.0	14.7	20	-	3.8 *
8403	12.7	23	2	38	20.6	32.2	47.0	14.7	20	-	3.8 *
8404	12.7	23	2	38	20	32.2	47.0	14.7	20	-	3.8 *
8410	12.7	7	2	32	22.2	39	47.0	14.7	20	-	3.8 *
8411	12.7	14	2	35	22.2	38.6	47.0	14.7	20	-	3.8 *
8412	12.7	23	2	38	22.2	39	47.0	14.7	20	-	3.8 *
9420	25.4	7	5.4	136	44.5	61.9	77	19.2	31.8	3 x M5 (24.8)	5.6
9421	25.4	23	5	136	44.5	61.5	77	19.2	31.8	3 x M5 (24.8)	5.6
9422	25.4	45	4.4	136	44.5	60.9	77	19.2	31.8	3 x M5 (24.8)	5.6
9423	25.4	68	5.3	136	44.5	61.8	77	19.2	31.8	3 x M5 (24.8)	5.6
9424	25.4	89	2.7	204	44.5	61.5	77	19.2	31.8	3 x M5 (24.8)	5.6
9425	25.4	109	2.6	204	44	63	77	19.2	31.8	3 x M5 (24.8)	5.6
9430	25.4	91	7.7	331	50.8	80.8	95.3	19.2	38.1	3 x M6 (29)	6.4
9431	25.4	136	6.5	331	50.8	79.6	95.3	19.2	38.1	3 x M6 (29)	6.4
9432	25.4	181	5.8	331	50.8	80.5	95.3	19.2	38.1	3 x M6 (29)	6.4
9433	25.4	227	4.6	331	50.8	81	95.3	19.2	38.1	3 x M6 (29)	6.4
9440	38.1	227	10.5	960	60.3	115	162.1	35	59.4	3 x M6 (50.8)	12.7
9441	38.1	318	11.1	960	60.3	121	162.1	35	59.4	3 x M6 (50.8)	12.7
9442	38.1	454	11.1	960	60.3	129.2	162.1	35	59.4	3 x M6 (50.8)	12.7
9443	38.1	567	8.8	960	60.3	126.9	162.1	35	59.4	3 x M6 (50.8)	12.7
9444	38.1	680	9.2	960	60.3	146.3	189.7	35	59.4	3 x M6 (50.8)	12.7
9445	38.1	748	8.2	960	60.3	156.2	189.7	35	59.4	3 x M6 (50.8)	12.7
9450	50.8	764	2	1400	101.6	139.1	160.3	50.8	101.6	4 x M8 (76.2)	14.3
9451	50.8	764	5.3	1400	101.6	175.1	200.9	57	101.6	4 x M8 (76.2)	14.3
9452	50.8	1018	6	1400	101.6	177.4	200.9	57	101.6	4 x M8 (76.2)	14.3
9453	50.8	1273	5.9	1800	101.6	174.6	200.9	57	101.6	4 x M8 (76.2)	14.3
9454	50.8	1364	2.5	2000	101.6	137	158.4	50.8	101.6	4 x M8 (76.2)	14.3
9455	50.8	1527	5.7	2036	101.6	171.5	200.9	57	101.6	4 x M8 (76.2)	14.3

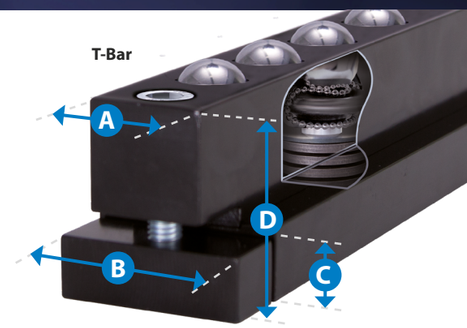
* Further 1.5mm @ 16.2mm Ø



T-Bars & B-Bars (A) (SS)

T & B bars incorporate Heavy Duty spring-loaded ball units for accurate positioning & effortless conveying of tools & dies on press & machine beds. Once positioned, clamp the tool & the springs allow the ball units to retract beneath the bed. Unclamp & the ball units will raise the tool above the bed ready to convey again. T-Bars feature an integral locking mechanism. B-Bars are locked using recessed M8 cap screw (requires drilling & tapping of the bed). Custom sizes available.

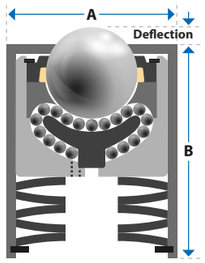
BAR	A	B	C	D	BAR LENGTH (mm)	SUPPORTS LOAD / BAR (kg)	DEFLECTION (mm)	LOAD AT MAX DEFLECTION (kg)	BALL / BAR
T-20	20	34	10	35	300	224	2.6	352	8
T-22	22	37	16	38	343	252	2.6	396	9
T-24	24	42	18	42	415	280	2.6	440	10
T-28	28	46	20	48	305	308	2.6	484	11
T-36	36	56	25	61	345	252	2.6	396	9
B-21	20.6	-	-	25.4	250	168	2.6	264	6
B-22	22.2	-	-	30.1	395	224	2.6	352	8
B-25	25.4	-	-	38.1	350	305	2.6	484	11



Spring Loaded Ball Transfers (A) (Z) (SS)

Omnitrack Heavy Duty spring loaded units are ideal where uneven track conditions or shock loading occurs. Internal springs offer full retraction of the ball within the housing. We can tailor spring pre-loads, deflections & characteristics to your requirements. Consider alternative material upgrade options to withstand severe operating environments.

Also consider: PNEUMATIC Page 10

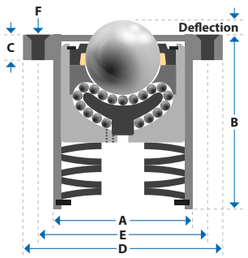


85 & 95 Series - *HOUSED SPRING LOADED* (A) (Z) (SS)

PART	SUPPORTS LOAD (kg)	DEFLECTION (mm)	LOAD AT MAX DEFLECTION (kg)	BALL Ø (mm)	A	B
8500	23	2.2	38	12.7	25.4 *	25.4
8501	12	3.3	46	12.7	25.4 *	25.4
9520	91	4.8	188	25.4	50.8	55.5
9530	227	2.4	367	25.4	63.5	60.3
9540	450	10	960	38.1	69.9	114.3
9550	1000	6.1	2000	50.8	120	138.9

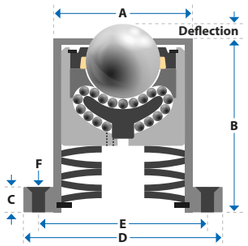
* 8mm wide (fine) knurl on outside Ø

Fixing Options Page 15



86 & 96 Series - *FLANGE SOCKET SPRING LOADED* (A) (Z) (SS)

PART	SUPPORTS LOAD (kg)	DEFLECTION (mm)	LOAD AT MAX DEFLECTION (kg)	BALL Ø (mm)	A	B	C	D	E (PCD)	F Counter-sunk
8601	12	3.3	46	12.7	25.4	25.4	5	50	36	2 x 5.1
9620	91	4.8	188	25.4	50.8	55.5	6	80	65	3 x 6.1
9630	227	2.4	367	25.4	63.5	60.3	6	100	80	3 x 8.1
9640	450	10	960	38.1	69.9	114.3	10	115	92	3 x 10.1
9650	1000	6.1	2000	50.8	120	138.9	12	165	140	3 x 10.1



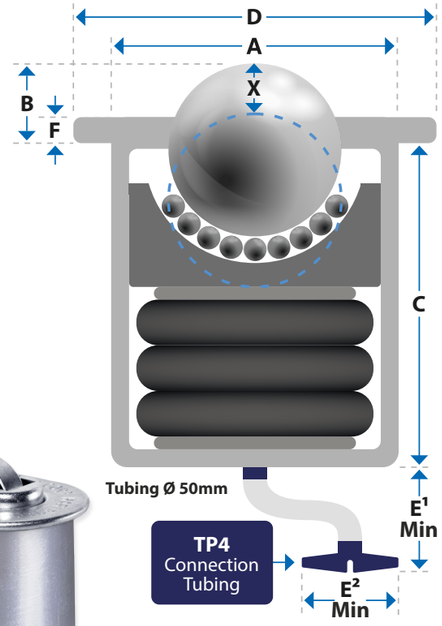
87 & 97 Series - *FLANGE MOUNTED SPRING LOADED* (A) (Z) (SS)

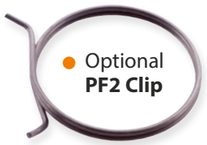
PART	SUPPORTS LOAD (kg)	DEFLECTION (mm)	LOAD AT MAX DEFLECTION (kg)	BALL Ø (mm)	A	B	C	D	E (PCD)	F Counter-sunk
8701	12	3.3	46	12.7	25.4	25.4	5	50	36	2 x 5.1
9720	91	4.8	188	25.4	50.8	55.5	6	80	65	3 x 6.1
9730	227	2.4	367	25.4	63.5	60.3	6	100	80	3 x 8.1
9740	450	10	960	38.1	69.9	114.3	10	115	92	3 x 10.1
9750	1000	6.1	2000	50.8	120	138.9	12	165	140	3 x 10.1

Pneumatic Ball Transfers, Stops & Linear Rollers

Pneumatic Ball Units allow air-driven positioning of omnidirectional ball transfers & may be individually arranged for a flexible, modular conveying plane.

PS25 Positioning Stops are pneumatically activated to stop & hold the position of the conveyed item.

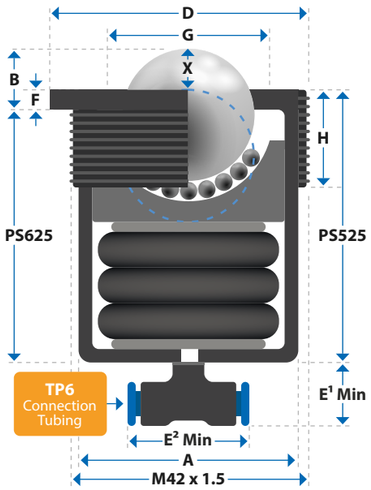




Units rated with a maximum air supply pressure of ≤3.4 bar support loads of up to 250 Kgs/rail whilst those rated at ≤6 bar air supply support up to 2500 Kgs/rail.

PART	LIFT (kg)	BAR	A	B	C	D	E¹ MIN	E² MIN	F	G	H	X
PB25	25	3.4	39.7	12	31.9	47	15	37	2.54			9.5
PS25	9	3.4	39.7	13.7	31.9	47	15	37	2.54			11.1
PW25	30	3.4	45.2 x 30.5 *	12	31.9	53.4 x 38.9 *	15	37	2.54			9.5
PB625	35	6	40	12.1	58	50	39	46	2.5	2x4.2Ø @34PCD	18	9.6
PB525	35	6	40	-	58	42	39	46	-	2x4.2Ø @34PCD	20	9.6

* Oval Stainless steel balls - add suffix 'A' Delrin (POM) ball option - add suffix 'D'

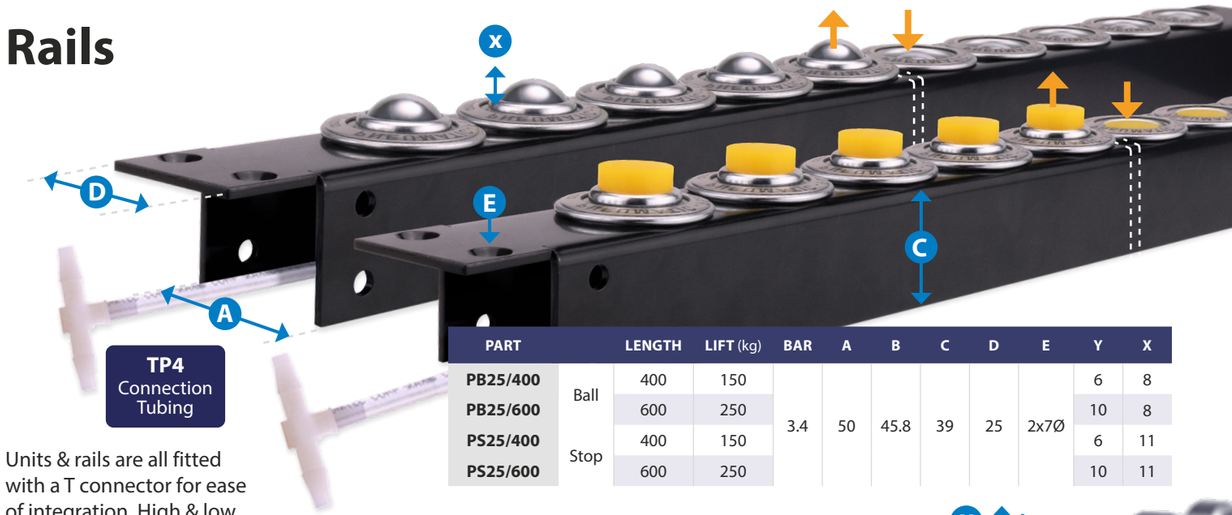


PB525

PB625

Optional PF4 - Fitting & adjustment collar

Rails



PART		LENGTH	LIFT (kg)	BAR	A	B	C	D	E	Y	X
PB25/400	Ball	400	150	3.4	50	45.8	39	25	2x7Ø	6	8
PB25/600		600	250							10	8
PS25/400	Stop	400	150							6	11
PS25/600		600	250							10	11

Units & rails are all fitted with a T connector for ease of integration. High & low pressure tubing, connectors & end-plugs. Configure together with switches & regulators to provide versatile control.

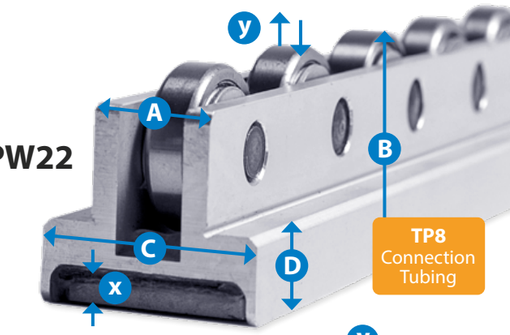
In low pressure systems, tubing length should be extended or altered using optional in-line connectors (TC4) as the tubing & fittings are not designed to be separated once assembled.

Appropriate blanking plugs are automatically supplied with each order.

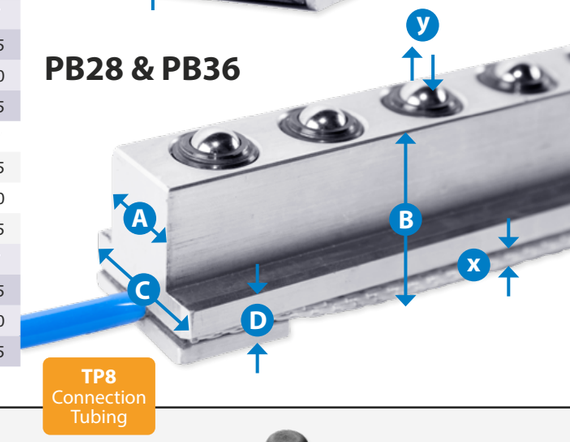
Alternative ball materials & sizes available.

PART	LENGTH	LIFT (kg)	BAR	A	B	C	D	X	Y
PB22 & PW22/300	300	390	6	21.5	38	37.5	15	3.5	7
PB22 & PW22/600	600	780							15
PB22 & PW22/800	800	1040							20
PB22 & PW22/1000	1000	1300							25
PB28 & PW28/300	300	510	6	27	47	45	16	4	7
PB28 & PW28/600	600	1020							15
PB28 & PW28/800	800	1360							20
PB28 & PW28/1000	1000	1700							25
PB36 & PW36/300	300	750	6	32	57	57	20	4.5	7
PB36 & PW36/600	600	1500							15
PB36 & PW36/800	800	200							20
PB36 & PW36/1000	1000	2500							25

PW22



PB28 & PB36



Integral Fluid Trap

AV6

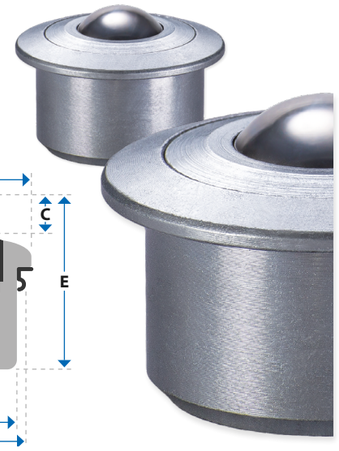
Connectors & Tubing

	PART	ITEM
4 bar Low Pressure	TP4	4 bar Tubing - 3m roll
	TB4	4 bar Blanking plug
	TC4	4 bar 3-way connector
6 bar High Pressure	TP6	6 bar Tubing - 3m roll
	TP8	6 bar Tubing - 3m roll
	TB6	6 bar Blanking plug
	TC6	6 bar 3-way connector

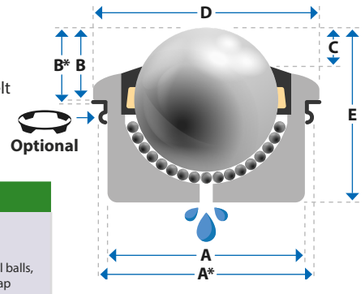
Switches

omnitrack
Medium Duty

Low friction 1 : 0,02 | Speed 1.5m/sec | Temperature -30/+100°C | Shock Resistance | Orientation Horizontal / Up



Medium Duty ball units are machined from solid steel & case hardened for wear resistance. Reinforced machined steel top cap protect against impact from misalignment of the conveyed item. Lubricated for life & zinc plated for resistance to corrosion. Standard materials; Body & cap AISI 1015, Balls AISI 52100. Stainless steel upgrade A & 'SS' feature AISI420 balls & body. Main ball sizes ≥19mm incorporate a felt seal to minimise contamination. 'M', 'MF', 'MG' & 'MS' Series feature a single drain hole.

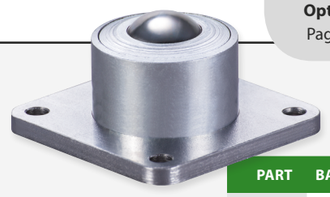


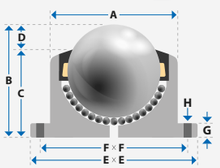
M Series - *PUSH FIT*

	MAXIMUM LOAD CAPACITY & NETT WEIGHT (kg)															
	Standard Chrome steel bearings, zinc plated body & cap		A Stainless steel balls, zinc plated body & cap		D Nylon load ball, zinc plated body & cap		SS Stainless steel balls, body & cap									
PART	LOAD	WEIGHT	LOAD	WEIGHT	LOAD	WEIGHT	LOAD	WEIGHT	BALL Ø	A	A*	B	B*	C	D	E
M12 ✱	25	0.038	20	0.038	5	0.031	20	0.038	12	22		8		3.2	27	16.7
M14	60	0.053	50	0.053	10	0.039	40	0.051	15	24	25.0-25.5	8.1	8.4	5	30	20
M15 ✱	60	0.059	50	0.059	10	0.044	40	0.058	15	24	25.0-25.5	9.5	9.8	4	31	21
M22	180	0.189	180	0.188	20	0.150	126	0.188	22	36	37.0-37.2	9.8	10.1	3.8	45	30.5
M25 ✱	200	0.193	140	0.192	25	0.137	140	0.192	25	38		13		6	46	30.5
M30	350	0.360	350	0.357	25	0.277	220	0.357	30	45	46.3-46.7	13.8	14.01	5.8	55	36.8
M45	600	1.010	600	1.000	25	0.710	350	1.020	45	62	63.0-63.5	19	19.3	9	75	53.5
M60	1500	3.710	1100	3.820	N/A	N/A	1050	3.830	60	100		30		15	117	77.5

✱ Denotes pressed top cap When using K clips dimensions A & B change to A* & B*

Fixing Options: Page 15.

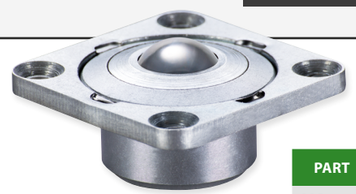


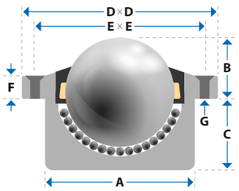


MF Series - *BOTTOM FLANGE*

	MAXIMUM LOAD CAPACITY & NETT WEIGHT (kg)															
	Standard										A				D	
PART	BALL Ø	A	B	C	D	E X E	F X F	G	H	LOAD	WEIGHT	LOAD	WEIGHT	LOAD	WEIGHT
MF12 ✱	12	23.9	20.7	17.2	3.5	44.5 ●	34.9	3.2	2 x 3.6	25	0.103	20	0.103	5	0.100
MF15	15	24	20	16	5	45	32	5.0	4 x 4.6	60	0.049	50	0.048	10	0.089
MF22	22	36	30.5	26	4.5	57.2	44.5	5.0	4 x 5.6	180	0.177	180	0.257	20	0.219
MF30	30	45	36.8	30.3	6.5	76.2	57.9	6.3	4 x 7.1	350	0.501	350	0.504	25	0.416
MF45	45	62	53.5	45	8.5	85	69	6.3	4 x 7.1	600	1.138	600	1.168	25	0.928

✱ Denotes pressed top cap ● MF12 has a 44.5mm circular flange with 2 fixing holes





MS Series - *TOP FLANGE*

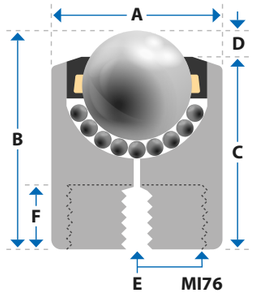
	MAXIMUM LOAD CAPACITY & NETT WEIGHT (kg)															
	Standard										A				D	
PART	BALL Ø	A	B	C	D X D	E X E	F	G		LOAD	WEIGHT	LOAD	WEIGHT	LOAD	WEIGHT
MS12 ✱	12	23.9	9.6	11.1	44.5 ●	34.9	3.2	2 x 3.6		25	0.103	20	0.100	5	0.100
MS15	15	24	11.3	9.7	45	32	5.0	4 x 4.6		60	0.059	50	0.059	10	0.044
MS22	22	36	11.8	18.7	57.2	44.5	5.0	4 x 5.6		180	0.189	180	0.188	20	0.150
MS30	30	45	16.8	20	76.2	57.9	6.3	4 x 7.1		350	0.360	350	0.357	25	0.277
MS45	45	62	22	31.5	85	69	9.5	4 x 7.1		600	1.010	600	1.000	25	0.710

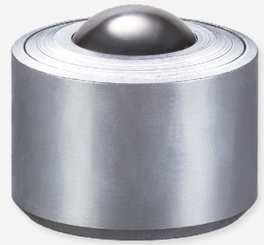
✱ Denotes pressed top cap ● MF12 has a 44.5mm circular flange with 2 fixing holes

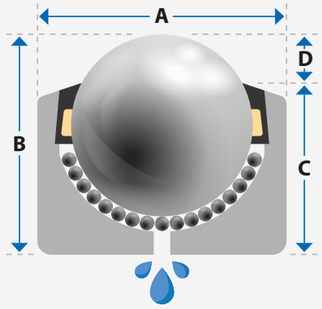
MI Series
INTERNAL THREAD FIXING

	MAXIMUM LOAD CAPACITY & NETT WEIGHT (kg)														
								Standard		A				D	
PART	BALL Ø	A	B	C	D	E	F	LOAD	WEIGHT	LOAD	WEIGHT	LOAD	WEIGHT	LOAD	WEIGHT
MI12 ✱	12	22	24	20.5	3.5	M8 x 1.25	5	25	0.050	20	0.050	5	0.043		
MI15	15	24	28	23	5	M8 x 1.25	8	60	0.074	50	0.074	10	0.061		
MI22	22	36	40.5	36	4.5	M8 x 1.25	10	180	0.254	180	0.256	20	0.210		
MI30	30	45	46.8	38.8	6.5	M8 x 1.25	10	350	0.460	350	0.450	25	0.360		
MI45	45	62	63.5	50.5	9	M8 x 1.25	10	600	1.180	600	1.170	25	0.950		
MI76 ●	76.2	127	101.4	78.1	23.3	3.5" x 8 TPI NPSM	37.3	1000	6.060	1000	6.050	25	4.565		

✱ Denotes pressed top cap ● **MI76 only** - User Serviceable







MG Series
PLAIN FITTING

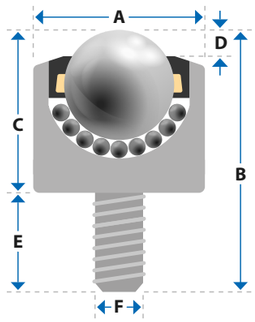
	MAXIMUM LOAD CAPACITY & NETT WEIGHT (kg)												
						Standard		A		D			
PART	BALL Ø	A	B	C	D	LOAD	WEIGHT	LOAD	WEIGHT	LOAD	WEIGHT		
MG8 ✱	8	18	12	10	2	13	0.017	10	0.018	5	0.016		
MG10	10	20	16.5	13.5	3	25	0.028	20	0.028	5	0.022		
MG12 ✱	12	22	17.5	14	3	25	0.035	20	0.034	5	0.027		
MG15	15	24	20	15	5	60	0.049	50	0.048	10	0.035		
MG22	22	36	30.5	26	4.5	180	0.177	180	0.178	20	0.140		
MG30	30	45	36.8	30.3	6.5	350	0.335	350	0.338	25	0.250		
MG45	45	62	53.5	45	9	600	0.940	600	0.97	25	0.730		
MG60	60	100	77.5	61	16.5	1500	3.650	1100	3.590	N/A	N/A		
MG76	76	130	103	80	23	2500	8.600	1700	8.600	N/A	N/A		
MG90	90	145	115	90	25	3500	11.310	2400	11.310	N/A	N/A		

✱ Denotes pressed top cap Dimension A changes when using fixing clips (Page 15)

MSP Series - *BOLT FITTING*

	MAXIMUM LOAD CAPACITY & NETT WEIGHT (kg)												
								Standard		A		D	
PART	BALL Ø	A	B	C	D	E	F	LOAD	WEIGHT	LOAD	WEIGHT	LOAD	WEIGHT
MSP8 ✱	8	18	27	12	2	15	M6 x 1.0	13	0.021	8	0.021	3	0.019
MSP10	12	20	29.8	17.8	3	12	M8 x 1.25	25	0.036	20	0.036	5	0.031
MSP11	12	20	48	20	3	28	M6 x 1.0	25	0.044	20	0.043	5	0.040
MSP12 ✱	12	22	42.5	22.5	3	20	M8 x 1.25	25	0.039	20	0.039	5	0.039
MSP14	15	24	32	20	5	12	M6 x 1.0	60	0.055	50	0.065	10	0.042
MSP15	15	25	46	26	5	20	M8 x 1.25	60	0.083	50	0.083	10	0.069
MSP19	19	30	46.5	26	4.8	20.5	M8 x 1.25	75	0.109	55	0.113	20	0.088
MSP22	22	36	62.9	37.5	4.5	25.4	M12 x 1.75	180	0.256	180	0.256	20	0.200
MSP30	30	45	69.2	43.8	6.5	25.4	M12 x 1.75	350	0.440	350	0.430	25	0.346
MSP45	45	62	107.3	66	8.5	41.3	M20 x 2.5	600	1.360	600	1.350	25	1.100

✱ Denotes pressed top cap



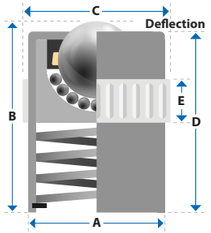
Low friction 1 : 0,02

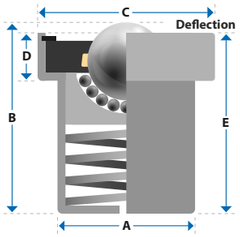
Speed 1.5m/sec

Temperature -30/+100°C

Shock Resistance

Orientation Horizontal / Up





MN / MM Series - *HOUSED SPRING LOADED*

PART	SUPPORTS LOAD (kg)	DEFLECTION (mm)	LOAD AT MAX DEFLECTION (kg)	BALL Ø	A	B	C	D	E
MN12	40	1.5	90	12.7	23.9	30	24.5	28.5	10.5
MN16	60	1.5	110	15.8	29.9	36	30.5	34.5	10.5
MN25	100	1.5	175	25.4	39.8	48	40.5	46.5	10.5
MN30	335	1.5	585	30	49.9	60	50.5	58.5	12.3
MM22	70	4.5	90	22	39	58	50	14	53.5
MM30	135	7	170	30	48.5	70	62	17.5	63
MM45	230	10.5	290	45	66.5	100.5	85	25.5	90

A **STAINLESS STEEL BALLS UPGRADE:** Improved corrosion resistance with no change in load or spring values. Add suffix A

Alternative spring-loaded & pneumatic solutions:
Pages 8 - 11.

MV, MX & MW - *AIR CARGO BALL UNITS*

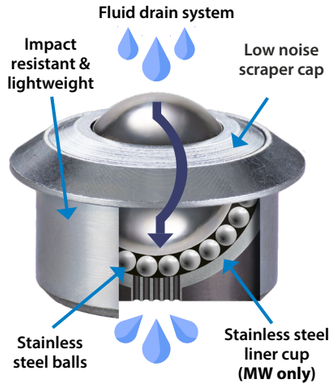
Compliant with ISO Air cargo industry standards these units utilise stainless steel (AISI 420) balls recirculating within a precision machined Steel (AISI 1015) housing. All models feature fluid drain & omit felt seal. Consult page 15 for C-type (stainless steel) & K-type (spring steel) optional fixing clips.

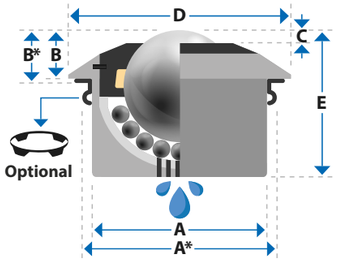
SERIES	HIGH TEMPERATURE	LOAD & SHOCK	LOW NOISE	CORROSION RESISTANCE	CONSTRUCTION FEATURES
MV	✓✓	✓✓✓	✓✓✓	✓✓	E Light weight construction
MX	✓✓✓	✓✓	✓✓	✓	SS Stainless Steel
MW	✓	✓	✓	✓✓✓	SL Stainless Liner Cup

MV Imperial Series: Moulded scraper cap reduces weight & noise levels during operation. Self-cleaning multiple drain slots. Compact inch series dimensions ideal for high-density ball cargo decks.

MX Cargo Series: Steel scraper cap protects against impact damage from misaligned loads. Multiple debris/drain channels rapidly eject contamination & fluid.

MW Washdown Series: Internal stainless steel liner cup provides a cost efficient alternative to all stainless steel construction. Effective corrosion resistance & fluid draining in washdown applications. Also available in all stainless steel.





PART	LOAD (kg)	BALL Ø	WITHOUT CLIP A	WITHOUT CLIP B	WITH K-TYPE CLIP CLIP #	WITH K-TYPE CLIP A*	WITH K-TYPE CLIP B*	C	D	E	DRAIN CHANNELS	WEIGHT (kg)
MV30	350	30	45	13.8	K30	46.0 - 46.5	14.1	5.5	50	34.8	4 slots	0.290
MX30	350	30	45	13.8	K30	46.0 - 46.5	14.1	5.5	55	36.8	7 holes	0.355
MW30	220	30	45	13.8	K30	46.0 - 46.5	14.1	5.5	55	36.8	5 holes	0.337
MX45	600	45	62	19	K45	63.0 - 63.5	19.3	9	75	53.5	7 holes	1.010
MW45	450	45	62	19	K45	63.0 - 63.5	19.3	9	75	53.5	1 hole	0.960

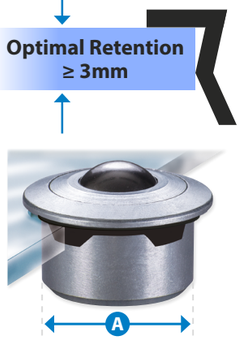
Fixing clips change A & B values to A* & B

K & C Type Clips

- Compensate for irregularities in bore & diameter.
- Ideal where only single-sided access of mounting surface is reachable.

MEDIUM DUTY	LIGHT DUTY	CLIP	A	BORE Ø MIN / MAX
M12		K12	22	23 - 23.5
M14 - M15 - MG15	L15 - LP15	K15	24	25.0 - 25.5
		C15	24	24.8 - 25.0
M22 - MG22	L22 - LP22	K22	36	37.0 - 37.5
		C22	36	37.0 - 37.2
M30 - MG30 - MV30 MX30 - MW30	L30 - LP30	K30	45	46.0 - 46.5
		C30	45	46.3 - 46.7
M45 - MG45 - MX45 - MW45	L45 - LP45	K45	62	63.0 - 63.5

Graffe realizzate in acciaio per molle - spessore 0,3 mm. L'utilizzo delle graffe prevede una sporgenza maggiorata di 0,3 mm.



1. Fit clip to mounting bore.
2. Push ball unit though clip.
3. Peripheral tags expand & grip the ball unit.

K-clip Spring Steel

C-clip Stainless Steel

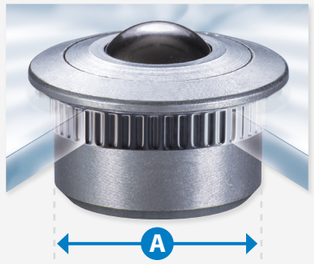
Other clips available.

Tolerance Rings

- Compensate for irregularities in bore & diameter.
- Ideal where only single-sided access of mounting surface is reachable.

HEAVY DUTY	MEDIUM DUTY	LIGHT DUTY	PART	A	BORE Ø MIN / MAX	B
	MG8		TR18	18	19.30 - 19.55	6.00
8000 | 8001 *	MG10		TR20	20	21.80 - 22.05	12.00
8010 *	M12 | MG12		TR20	22	23.80 - 24.05	12.00
8300 * | 8310 *	M14 | M15 | MG15	L15 | LP15	TR24	24	25.65 - 25.90	15.00
8500 * | 8501 * | 8601 *			TR25	25	27.20 - 27.45	8.00
	M22 | MG22	L22 | LP22	TR36	36	37.80 - 38.00	12.00
9020 * | 9021 * | 9022 * 9320 * | 9321 *	M30 | MG30 | MV30 MX30 | MW30	L30 | LP30	TR45	45	46.80 - 47.00	15.00
9030 | 9031 * | 9330 | 9520 *			TR50	50	51.90 - 52.10	15.00
9040 | 9041 * | 9042 * | 9341			TR60	60	62.10 - 62.30	20.00
9530 *	M45 | MG45 MX45 | MW45	L45 | LP45	TR60	62	64.30 - 64.50	20.00
9540 * | 9640 *			TR60	70	72.35 - 72.55	20.00
9050 | 9350 | 9051 *	M60 | MG60		TR100	100	103.75 - 104.05	20.00

Bore Ø specifications change when using Tolerance Rings. Contact us if in doubt
* Ø Min / Max tolerance varies



98 Series - Page 6.

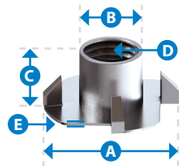
Nyloc Nut & Washer + 'T' Wood Insert Kits

Use with Heavy Duty 81 & 91 series, Medium Duty MSP series & Omnicaster Ball Casters.

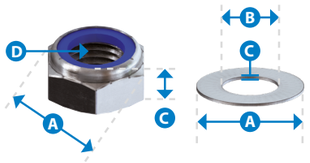
MODEL	8100 | 8101			OC35 | OC50 OC55 | OC55B			9120 | 9123 9130 | 9133		
	MSP10 | MSP12 MSP15 | MSP19						MSP22 | MSP30		
	OC30 | OC30F						OC100 | OC100B		
FIXING	T8	N8		T10	N10		T12	N12	
A	22.2	14.4	16	25	18.9	20	27	21.1	24
B	9.1	13	8	11.2	17	10	14	19	12
C	11	8	1.6	13.1	10	2	14	12	2.5
D	M8 x 1.25	M8 x 1.25		M10 x 1.5	M10 x 1.5		M12 x 1.75	M12 x 1.75	
E	1.3	-	-	1.4	-	-	1.8	-	-

Other thread types & sizes available on request

Wood Insert Fixing



Nut & Washer Fixing



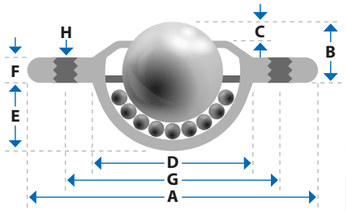
Low friction
1 : 0,03

Speed
1m/sec

Temperature
-20/+80°C

Orientation
Horizontal / Up

Economy
& Value



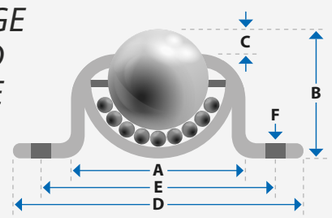
LD - *SATURN TYPE*

Pressed steel Saturn units are easily secured or riveted using integral fixing holes & are ideal for many light duty, low profile conveying applications. Models feature single drain hole & felt seal except LD16. LD32-SS & LD32/3-SS omit felt seal, other variants feature 7 rapid drain holes.

										MAXIMUM LOAD CAPACITY & NETT WEIGHT (kg)							
										Standard Carbon steel balls, zinc plated pressings		A Stainless steel balls, zinc plated pressings		D Nylon load ball, zinc plated pressings		SS Stainless steel balls & pressings	
PART	BALL Ø	A	B	C	D	E	F	G	H	LOAD	WEIGHT	LOAD	WEIGHT	LOAD	WEIGHT	LOAD	WEIGHT
LD16	15	41	10.8	5.0	24	8.5	3.2	30	2 x 3.4	15	0.045	10	0.044	10	0.030	NA	0.031
LD19	19	61	10	3.2	29.1	12	3.2	44.5	2 x 5.1	25	0.090	25	0.089	20	0.063	25	0.086
LD19/3	19	61	10	3.2	29.1	12	3.2	44.5	3 x 5.1	25	0.089	25	0.088	20	0.062	25	0.086
LD23	23	45	9.8	6.2	33	17.9	3.6	39	3 x 3.5	120	0.096	90	0.096	22	0.059	NA	N/A
LD25	25.4	73	14.2	6.3	37.2	15.8	3.5	55.6	2 x 5.1	55	0.170	55	0.166	25	0.110	55	0.172
LD25/3	25.4	73	14.2	6.3	37.2	15.8	3.5	55.6	3 x 5.1	55	0.168	55	0.167	25	0.110	55	0.171
LD26	25	56	14.6	7.8	36	15.4	3.3	45	2 x 4.0	60	0.125	40	0.126	22	0.070	NA	N/A
LD32	32	73.7	16.2	8	45.5	19.9	4.2	58.7	2 x 5.1	125	0.269	125	0.269	N/A	N/A	125	0.256
LD32/3	32	73.7	16.2	8	45.5	19.9	4.2	58.7	3 x 5.1	125	0.269	125	0.267	N/A	N/A	125	0.255

LD32-SS & LD32/3-SS units feature 7 fluid drain holes & omit felt seal

LF - *FLANGE MOUNTED 2 & 4 HOLE*



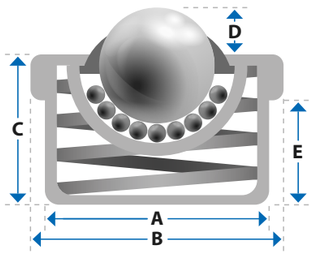
High profile, surface mounted units with fixing flange. Pressed steel construction with either 2 or 4 fixing points. LF26 units incorporate 2 slots rather than holes to accommodate varying fixing centres (55.9mm - 60.3mm). LF units feature debris drain hole. Models LF25 & LF38 omit felt seal.

								MAXIMUM LOAD CAPACITY & NETT WEIGHT (kg)							
								Standard Carbon steel balls, zinc plated pressings		A Stainless steel balls, zinc plated pressings		D Nylon load ball, zinc plated pressings		SS Stainless steel balls & pressings	
PART	BALL Ø	A	B	C	D	E	F	LOAD	WEIGHT	LOAD	WEIGHT	LOAD	WEIGHT	LOAD	WEIGHT
LF25	25.4	42	30.2	7.9	69.9 x 50.8	55.6	2 x 5.6 Ø	55	0.141	N/A	N/A	N/A	N/A	N/A	N/A
LF26	25.4	45	30.4	6.3	69 x 51	55.9 - 60.3	2 x 5.5 x 7.7 mm slot	55	0.155	55	0.154	25	0.097	55	0.151
LF38	38.1	66.9	46.2	9.8	76.2 x 76.2	62.7 x 62.7	4 x 7.1 Ø	115	0.520	N/A	N/A	N/A	N/A	N/A	N/A

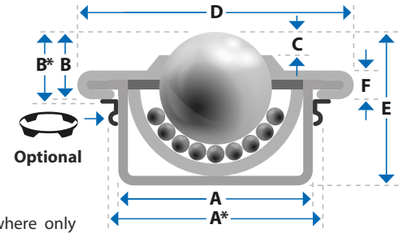
LM - *CASED SPRING LOADED*

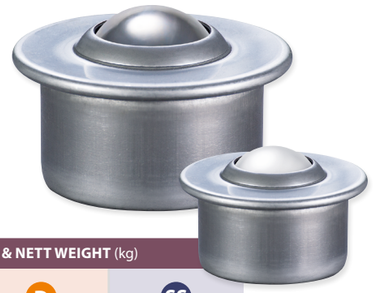
Load equalising spring loaded unit with integral moulded nylon seal. Internal coil spring deflects for biased loads or to compensate for surface irregularities. Carbon chrome balls & zinc plated pressings.

PART	SUPPORTS LOAD (kg)	DEFLECTION (mm)	LOAD AT MAX DEFLECTION	BALL Ø	A	B	C	D	E	NETT WEIGHT (kg)
LM25	20	4.5	55	25	43.5	49.1	35.7	10.1	15.7	0.174



L - *PUSH FIT & CLIP FIXING RANGE*



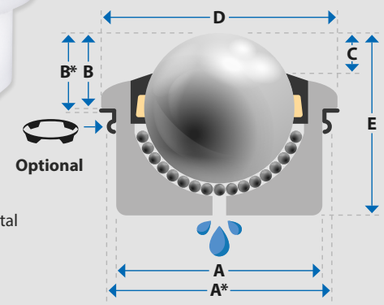


Push fit retention for rapid installation & replacement where only single-sided access of mounting surface is reachable. Compensate for irregularities in seating bore diameter using optional (spring steel) K-clips, or (stainless steel) C-clips. When using optional clips dimensions 'A' & 'B' become 'A*' & 'B*'. K-clip seating bore values are shown below. See page 15 for all fixing clips & tolerance ring details.

								MAXIMUM LOAD CAPACITY & NETT WEIGHT (kg)							
								Standard Carbon steel balls, zinc plated pressings		A Stainless steel balls, zinc plated pressings		D Nylon load ball, zinc plated pressings		SS Stainless steel balls & pressings	
PART	BALL Ø	A & A*	B & B*	C	D	E	F	LOAD	WEIGHT	LOAD	WEIGHT	LOAD	WEIGHT	LOAD	WEIGHT
L15	15	24	9.5	4.6	31	21	2.8	60	0.041	60	0.039	10	0.026	40	0.039
L15-K	15	25.0 - 25.5	9.8	4.6	31	21	2.8	60	0.041	60	0.039	10	0.026	40	0.039
L22	22	36	9.8	3.9	45	29.5	2.9	160	0.128	160	0.125	20	0.088	90	0.125
L22-K	22	37.0 - 37.5	10.1	3.9	45	29.5	2.9	160	0.128	160	0.125	20	0.088	90	0.125
L30	30	45	13.8	6.8	55	37	3.6	280	0.253	280	0.249	25	0.154	200	0.271
L30-K	30	46.0 - 46.5	14.1	6.8	55	37	3.6	280	0.253	280	0.249	25	0.154	200	0.271
L45	45	62	19	9.0	75	53.5	4.0	600	0.720	550	0.710	N/A	N/A	260	0.710
L45-K	45	63.0 - 63.5	19.3	9.0	75	53.5	4.0	600	0.720	550	0.710	N/A	N/A	260	0.710

All variants with 22mm & 30 mm main balls feature a felt seal
Values A & B change to A* & B* when using K-clips

LP - *ALL PLASTIC & CLIP FIXING RANGE*



Machined Acetal (POM) plastic housing fitted with either Acetal (POM) balls or AISI 316 stainless steel balls (add suffix A).

- Resists salt water & chemical attack.
- Non conductive & non magnetic.
- Suited to antimicrobial applications.

Optional fixing clips & rings - Page 15.
Spring steel K-clips & C-clips / tolerance rings in stainless steel.

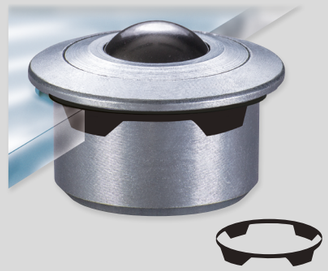
							MAXIMUM LOAD CAPACITY & NETT WEIGHT (kg)			
							Standard Acetal (POM) housing & bearings		A Acetal (POM) housing & AISI 316 Stainless steel bearings	
PART	BALL Ø	A & A*	B & B*	C	D	E	LOAD	WEIGHT	LOAD	WEIGHT
LP15	15	24	8.0	4.8	30	20	7	0.010	7	0.027
LP15-K	15	25.0 - 25.5	8.3	4.8	30	20	7	0.010	7	0.027
LP22	22	36	9.8	4.5	45	30.5	10	0.035	10	0.050
LP22-K	22	37.0 - 37.5	10.1	4.5	45	30.5	10	0.035	10	0.052
LP30	30	45	13.8	5.8	55	37	15	0.065	15	0.174
LP30-K	30	46.0 - 46.5	14.1	5.8	55	37	15	0.065	15	0.174
LP45	45	62	19	8.5	75	53.5	20	0.182	20	0.500
LP45-K	45	63.0 - 63.5	19.3	8.5	75	53.5	20	0.182	20	0.505

Values A & B become A* & B* when using K-clips
All LP series omit felt seal

Fixing Clips

K-clips spring steel
C-clips stainless steel

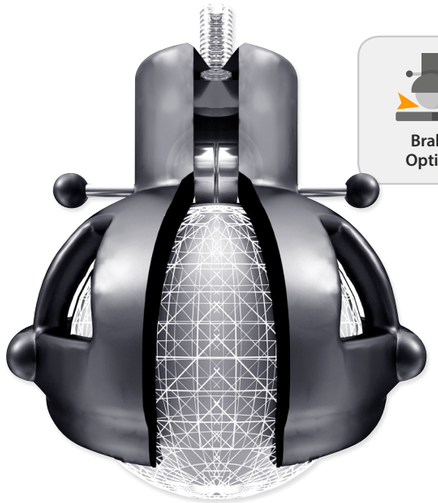
- Compensate for irregularities in bore & diameter.
- Ideal where only single-sided access of mounting surface is reachable.



Adding suffix K or C to ball unit part number will specify supply of the optional clip (eg L22K or L22C).

When using clips, fit the clip to the bore & then push the ball unit through the clip. Peripheral tags expand & securely retain the ball unit.

Dimensions A & B change to A* & B* when using clips. Tolerance ring & full clip options shown on page 15.



Brake Option | Rapid Drain | Delicate Contact | Speed 1m/sec | Temperature -20/+60°C

Optional Fixing Kits

Wood Insert Fixing | Nut & Washer Fixing

MODEL	OC30 | OC30F			OC35 | OC50 OC55 | OC55B			OC100 | OC100B		
FIXING	T8	N8		T10	N10		T12	N12	
A	22.2	14.4	16	25	18.9	20	27	21.1	24
B	9.1	13	8	11.2	17	10	14	19	12
C	11	8	1.6	13.1	10	2	14	12	2.5
D	M8 x 1.25	M8 x 1.25		M10 x 1.5	M10 x 1.5		M12 x 1.75	M12 x 1.75	
E	1.3	-	-	1.4	-	-	1.8	-	-

Metric dimensions subject to general tolerance of +/- 0.3mm

- Fast directional change - Easier steering than traditional casters.
- Glide smoothly over carpet, wood & marble floors.
- Multiple drain channels expel debris & fluids.
- Effortlessly convey delicate materials with minimal damage.

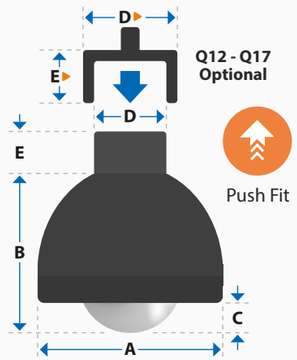
OC30 & OC30F

Fixing Options: N8 & N10 | T8 & T10

Push Fit

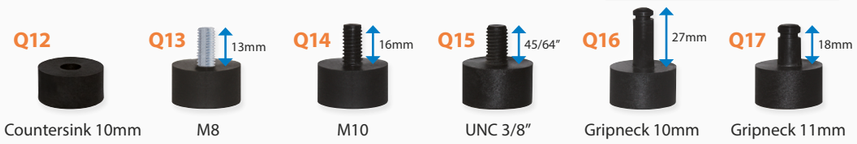
PART	OC30 & OC30F *
MAX LOAD (kg)	30
BALL Ø	35
A	63.8
B / B *	53.5 / 52 *
C / C *	9 / 7.5 *
D / D ▶	25 / 32 ▶
E / E ▶	13 / 18 ▶

▶ Values using Quick Fit adaptors
* Fixed / Non rolling caster



Q12 - Q17 Optional

Push Fit



Countersink 10mm | M8 | M10 | UNC 3/8" | Gripneck 10mm | Gripneck 11mm

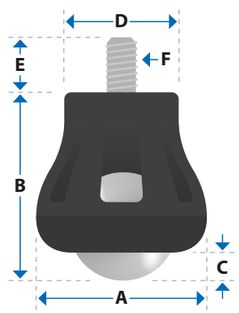
Quick Fit Adaptors

OC35

Fixing Options: N10 | T10

Debris Exit

PART	OC35
MAX LOAD (kg)	30
BALL Ø	35
A	60
B	60
C	9.6
D Ø	44
E	25
F	M10 x 1.5

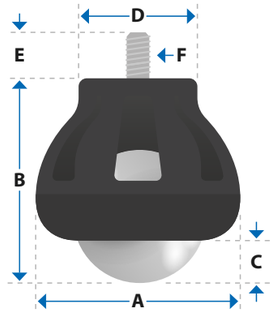


OC50

Fixing Options: N10 | T10

Debris Exit

PART	OC50
MAX LOAD	60 kg
BALL Ø	50
A	75
B	77
C	17.8
D	44
E	25
F	M10 x 1.5

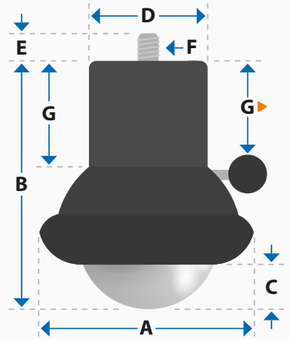


OC55 & OC55B

Fixing Options: N10 | T10

Brake Option

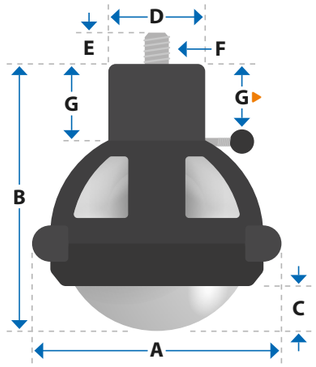
PART	OC55 & OC55B
MAX LOAD	60 kg
BALL Ø	50
A	76
B	84
C	14
D Ø	41.5
E	15
F	M10 x 1.5
G	34.5 (OC55)
G ▶	26.4 (OC55B)



OC100 & OC100B

PART	OC100 & OC100B
MAX LOAD	80 kg
BALL Ø	104
A	143
B	151.5
C	29
D Ø	58
E	25
F	M12 x 1.75
G	46 (OC100)
G ▶	34 (OC100B)

Metric dimensions subject to general tolerance of +/- 0.3mm



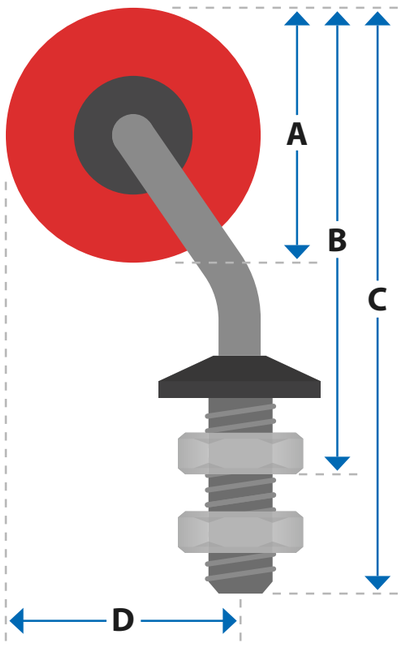
Debris Exit | Brake Option

Fixing Options: N12 | T12

Omnifloat

Contaminated environments | Temperature -20/+150°C | Replacement parts

PART	MAX LOAD (kg)	A BALL Ø	B MIN - MAX	C	D	THREAD
OF 35-55	18	35	54 - 76	92	27.5	M14 x 1.5
OF 35-75	18	35	54 - 71	87	37.5	M14 x 1.5
OF 50-100	22	50	69 - 91	107	50	M14 x 1.5



Omnifloat castors allow smooth conveying & directional change with minimal damage to delicate surfaces. Specified throughout the glass handling industry for conveying glass through wet, corrosive, dusty & high temperature processes.

Omnifloats are typically supplied with a 50% mix of 'left hand' & 'right hand' swivel trail. We recommend fitting the casters in a regular, alternate pattern to minimise bias & provide a neutral conveying plane.

Replacement balls available as spares. Alternative materials can be retro-fitted for extended durability & service.

TO ORDER:

1. Select model OF35-55 / OF35-75 / OF50-100.
2. Specify Ball material: R = Rubber, P = Polyurethane & HT = High Temperature (i.e. OF35-75HT).
3. Stainless Steel Arm required? Add suffix SS (otherwise zinc plated steel arm).

Replacement balls available as spares. Alternative materials can be retro-fitted for extended durability & service.

SUFFIX	SPECIFY MATERIAL	REPLACEMENT BALL # 35 mm	50 mm
R	**Rubber Ball** Better grip (Black). 70 Shore A -20°C to +80°C	S35R	S50R
P	**Polyurethane Ball** Wear resistant (Caramel). 92 Shore A -20°C to +80°C	S35P	S50P
HT	**High Temperature** Heat resistant (Red). 80 Shore A -20°C to +150°C	S35HT	S50HT
SS	**Corrosion / Chemical attack** Specify Stainless Steel Arm (AISI 304). Standard arm is zinc plated steel (AISI 1113).		

Remove

Snap Fitting

Flexible Conveyors

Omnitrack Flexible Conveyors - Versatile & mobile conveyor modules. Compact conveyors extend up to 3.6 times their retracted length & sturdy castors are then locked once positioned. All models are height adjustable & assembled with either Skatewheels for flat based items & tighter turns, or Conveyor Rollers for Increased support of irregular/ deformable items. Rollers & wheels are produced from low-inertia, high-impact PVC.

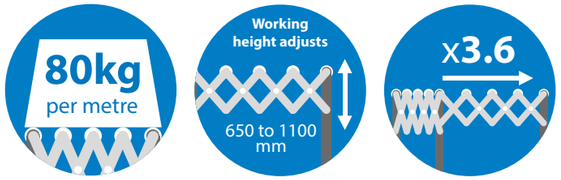
- 80 kg/metre load rating.
- Adjustable working height (650 - 1100mm).
- Maximum axle pitch 125mm (extended).
- 400 mm or 600 mm standard conveyor width.
- Other models & materials available.

FLEXIBLE CONVEYORS WITH SKATEWHEELS

– for flat-based items & for tighter turns.

400mm WIDTH	600mm WIDTH	EXTENDED LENGTH	RETRACTED LENGTH
S400/2000	S600/2000	2	0.63
S400/3500	S600/3500	3.5	1.02
S400/5000	S600/5000	5	1.41
S400/6500	S600/6500	6.5	1.8
S400/8000	S600/8000	8	2.19
S400/9500	S600/9500	9.5	2.58

Dimensions in metres



FLEXIBLE CONVEYORS WITH ROLLERS

– for increased support of irregular/deformable items.

400mm WIDTH	600mm WIDTH	EXTENDED LENGTH	RETRACTED LENGTH
S400/2000	S600/2000	2	0.63
S400/3500	S600/3500	3.5	1.02
S400/5000	S600/5000	5	1.41
S400/6500	S600/6500	6.5	1.8
S400/8000	S600/8000	8	2.19
S400/9500	S600/9500	9.5	2.58

Dimensions in metres

Optional CONNECTING HOOKS link multiple conveyors together (CH1).

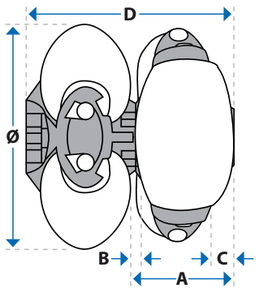
PART	OPTIONAL PARTS
CH1	Connecting Hooks (1 Pair)
ES400	End Stop (400 mm width)
ES600	End Stop (600 mm width)

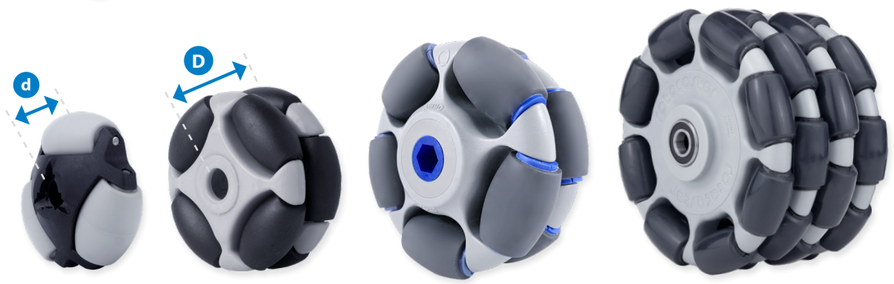
Optional END STOPS (ES400/ES600) or Ball Platforms & Tables (page 26).

- Delicate Handling
- Speed 1m/sec
- Temperature -20/+100°C
- Non-magnetic Construction
- Irregular & Deformable Objects
- Washdown Conditions / Dirt Debris

Omniwheels feature peripheral rollers which provide 360 degree movement & support of irregular shaped items. Ideal for assembly & inspection lines, machine feed & packing areas.

Driven & Automatic Sorting systems available - contact us.

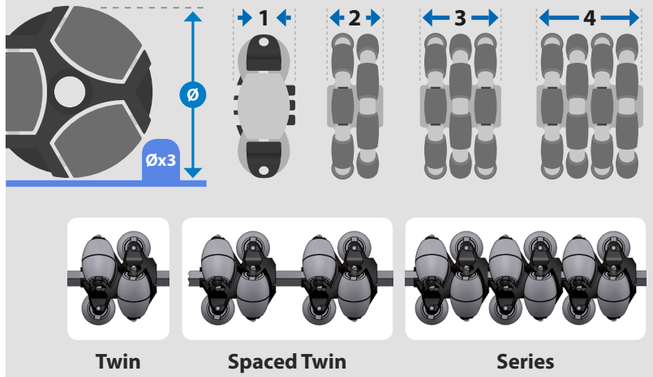




OW48-1-(x)-(y) OW80-1-(x)-(y) | OW35-2-(x)-(y) OW50-2-(x)-(y) | OW90-3-(x)-(y) | OW125-4-(x)-(y) OW180-4-(x)-(y)

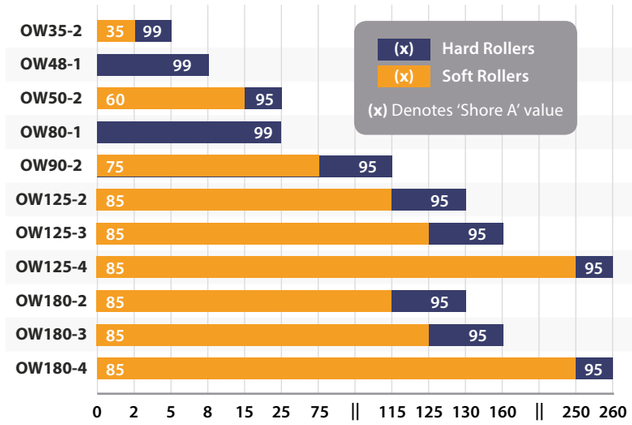
PART	A	B	C	D
OW48-1-(x)-(y)	40	3	3	40
OW80-1-(x)-(y)	34	4	4	65

DIAMETER & CONSTRUCTION		PART CONFIGURE VALUES: (X) & (Y)	(X) CONFIGURE HARDNESS SHORE A				(Y) CONFIGURE HUB CENTRE OPTIONS (MM)					
			HARD MATERIAL = HIGH LOAD		SOFT MATERIAL = LOW LOAD		(Y) = P PLAIN BUSH		(Y) = H HEX DRIVE		(Y) = B SEALED BEARING	
Ø	CONSTRUCTION		(X)	KG	(X)	KG	D	(Y) = P	D	(Y) = H	D	(Y) = B
35		OW35-2-(x)-(y)	99	5	35	2	18.5	P1 | P2 | P3 | P4	18.5	-	18. 5	-
48		OW48-1-(x)-(y)	99	8	-	-	21.5	P4	22	H1	-	-
50		OW50-2-(x)-(y)	95	25	60	15	27.5	P2 | P3 | P6 P8 | P9	27.5	H2 | H3 H5 | H6	27.5	B3
80		OW80-1-(x)-(y)	99	25	-	-	65	P7	65	H4	-	-
90		OW90-2-(x)-(y)	95	125	75	75	43	P2 | P3 | P5 | P6 P8 | P9	43	H2 | H3 | H5 H6 | H7	43	B3 | B4 | B5 B6 | B7 | B9
125		OW125-2-(x)-(y)	95	130	85	115	43		43		43	
125		OW125-3-(x)-(y)	95	160	85	125	62	P2 | P3 | P6 P8 | P9	62	H2 | H3 | H5 H6 | H7	62	B5 | B6 B7 | B9
125		OW125-4-(x)-(y)	95	260	85	250	86		86		86	
180		OW180-2-(x)-(y)	95	130	85	115	57		57		57	
180		OW180-3-(x)-(y)	95	160	85	125	85	P2 | P3 | P6 P8 | P9	85	H2 | H3 | H5 H6 | H7	85	B5 | B6 B7 | B9
180		OW180-4-(x)-(y)	95	260	85	250	114		114		114	



Diameter, Construction & Spacing

- Castor applications - ensure diameter is x3 minimum Ø of any step/obstacle in primary direction of travel.
- Synchronise rollers to achieve rapid directional change.
- Omniwheel OW48-1 & OW80-1 are singular but configure & synchronise by locking together in series.
- Other models pre-synchronised in x2, x3 & x4 construction for modular flexibility & support.



(x) Load & Roller materials

- Heavy loads require higher Shore A roller hardness; softer, cushioning materials compromise load capacity.
- OW48 & OW80 feature stainless steel axles, other models of non-magnetic, all-plastic construction except when specifying bearing centre hub option.

HARDNESS SHORE A	35	85	95	99
EXAMPLE ITEM	Pencil Eraser	Shoe Heel	Skateboard Wheel	Shopping Cart Wheel

PLAIN Ø	P1	P2	P3	P4	P5	P6	P7	P8	P9
Internal Ø mm /inch	3/16″	6	8	8.2	10	12	12.2	1/2″	7/16″

HEX DRIVE ⬡	H1	H2	H3	H4	H5	H6	H7
AF mm /inch	8.1	3/8″	7/16″	11.2	1/2″	14	19

SEALED BEARING #	B1	B2	B3	B4	B5	B6	B7	B8	B9
Internal Ø mm /inch	3/16″	6	8	3/8″	10	12	1/2″	5/8″	15

(y) Hub Centre & Inserts

- Plain bush – suffix P – for gravity conveyor applications.
- Hexagon drive - suffix H – for driven conveying.
- Sealed bearings – suffix B – for caster & trolley applications.

Accessories

- Castor brackets & fixing flanges.
- 'Live-storage' section channels & axles.
- Specify pre-cut or custom spacer tubes to reduce density for larger rigid items.

Driven systems
Contact us

Heavy Duty Tables & Platforms

We'll design & build your custom solution – just send us your application criteria:

UNIT SPACING
Shortest dimension
3.5

Table / Platform Dimensions
Sides & end stops?

Conveyed Item(s)
Maximum/minimum dimensions & weights.

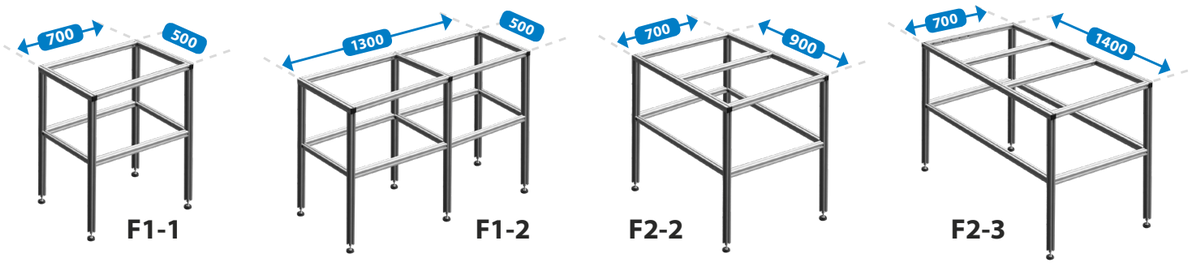
Conveyed Item(s)
Material & finish, deformability & flatness.

Special Operations
Shock loads, speed, assembly procedures.

Operating Environment
Outdoors, refrigerated conditions, hygienic & washdown areas.

Ball Tables & Conveying Platform - 300kg Capacity

Configure your ideal 'off the shelf' conveying solution for loads of up to 300 kg. Aluminium frames shipped with detachable legs for easy transit & storage. Full assembly instructions included. Frame layouts F1-1, F1-2, F2-2 & F2-3 can be joined to increase the conveying plane.



Ball transfers, Pneumatic & Omnicaster conveyor platforms arranged within standard 650 x 450 stainless-steel platforms. Omniwheels are assembled on 5 shafts & Pneumatic rails (x5) slot within standard aluminium frames (F1-1, F1-2 etc). Pneumatic 'live/dead' conveying planes require 3.4 bar compressed air supply (lubricated).

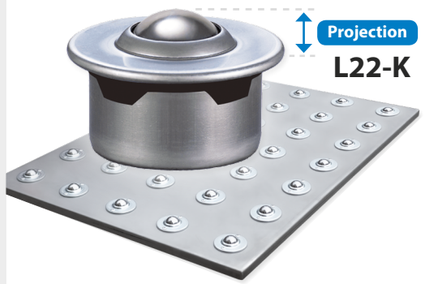
Standard pitch & sizes (shown below) available for immediate shipping from stock. Custom platforms with alternative units &/or pitch manufactured in-house for rapid despatch.

To order, quote frame type & conveying platform, for example 'OF35-75R'. If your application requires alternative pitch &/or conveying media, contact us.

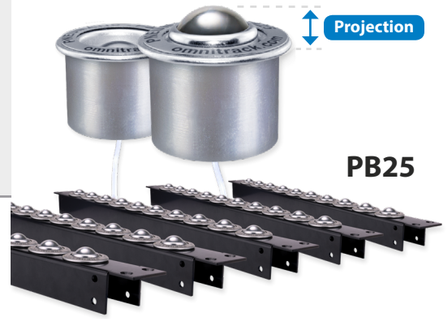
Legs assemble & disassemble for transport & storage.

	CONVEYING MEDIA	QTY.	LOAD / UNIT	PITCH	Σ SUPPORTED AREA	PROJECTION	FRAME
Ball Units	L22-K	35	120	90 x 90	350 x 560	10.1	F1-1
Pneumatic Ball	PB25	30	25	60 x 135	240 x 510	3.6-12.2	F1-2
Omniwheel	OW48-1	100	8	20 x 135	400 x 600	17.6	F1-2
Omnicaster	OC35	35	30	90 x 90	350 x 560	60	
Omnifloat	OF35-75R	35	18	90 x 90	350 x 560	54-76	F1-3

Standard (adjustable) legs 790 – 850 mm

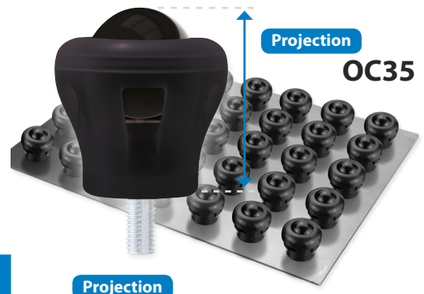


L22-K

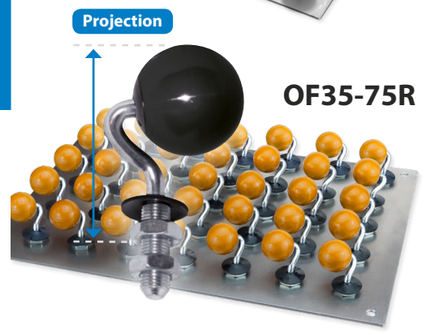


PB25

OW48-1



OC35



OF35-75R

Ball Transfer Units

Heavy & shock loads
Low friction
Instant direction change
High & low temperatures

Pneumatic

Active / static conveying plane
Low friction
Instant direction change
Uneven Loads

Omniwheel

Driven conveyor systems
Outdoor, wet & contaminated conditions
Irregular & deformable objects
Washdown areas

Omnicaster

Delicate Contact
Contaminated conditions
Brake Option
Rapid drain & debris channels

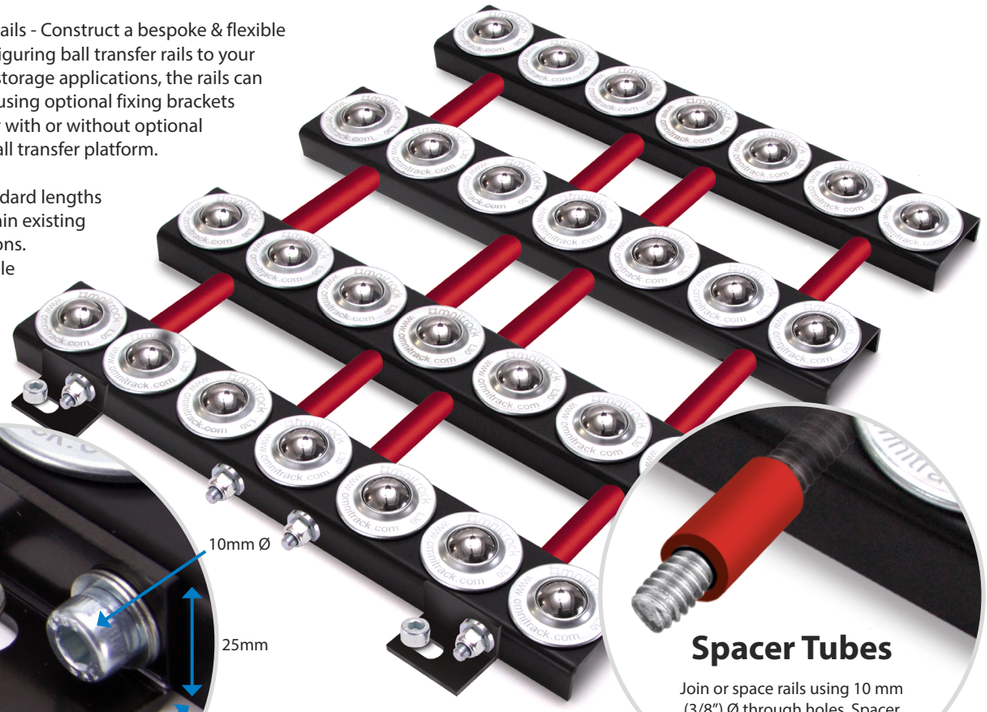
Omnifloat

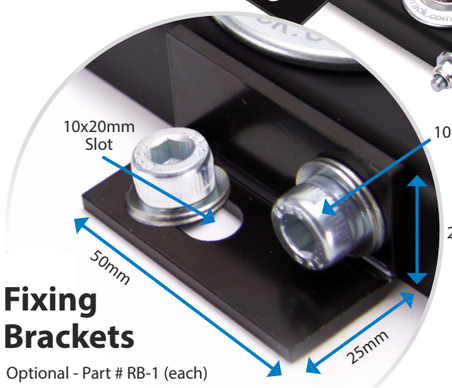
Glass & delicate sheet handing
Outdoor, wet & contaminated conditions
High temperature use
Service kits available

Ball Transfer Rails

Omnitrack Ball Transfer Rails - Construct a bespoke & flexible conveying plane by configuring ball transfer rails to your application. Ideal in live storage applications, the rails can be installed individually using optional fixing brackets or bolted together either with or without optional spacer tubes to form a ball transfer platform.

400 mm & 600 mm standard lengths for rapid integration within existing conveyor roller installations.
Ball transfer units available with alternative material upgrade options.





Fixing Brackets

Optional - Part # RB-1 (each)

Spacer Tubes

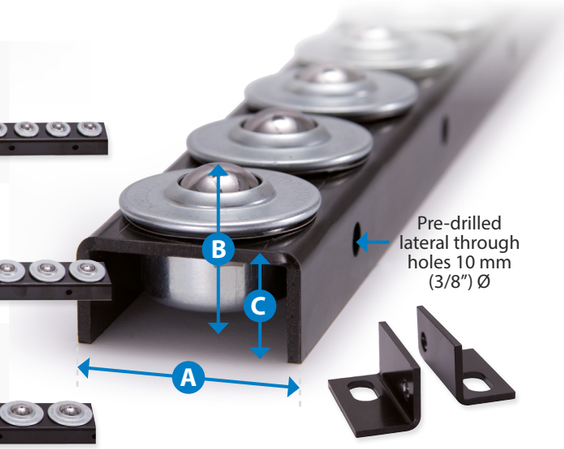
Join or space rails using 10 mm (3/8") Ø through holes. Spacer tubes cut to order.

BALL Ø	RAIL LENGTH # OF BALL UNITS @ SPACING				MAX LOAD (kg)												A RAIL WIDTH	B FITTED HEIGHT	C RAIL HEIGHT
	400 MM LENGTH		600 MM LENGTH		Standard – Carbon steel bearings, zinc pressings			A – Stainless steel balls, zinc plated pressings			D – Nylon load ball, zinc plated pressings			SS – Stainless steel bearings & pressings					
					Unit	400	600	Unit	400	600	Unit	400	600	Unit	400	600			
15	R15-400	10 @ 40	R15-600	15 @ 40	60	600	900	60	600	900	10	100	150	40	400	600	40	34.5	25
22	R22-400	8 @ 50	R22-600	12 @ 50	160	1280	1920	160	1280	1920	20	160	240	90	720	1080	50	34.8	25
30	R30-400	7 @ 58	R30-600	10 @ 60	280	1960	2800	280	1960	2800	25	175	250	200	1400	2000	60	38.8	25

R15
400
600

R22
400
600

R30
400
600



Pre-drilled lateral through holes 10 mm (3/8") Ø

Fixing Brackets RB-1 (each)

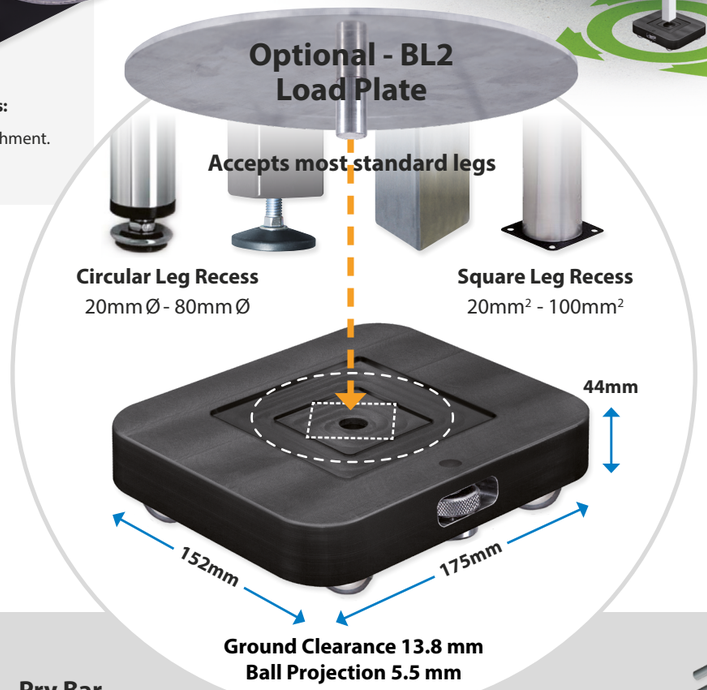
Ball Skates & Accessories

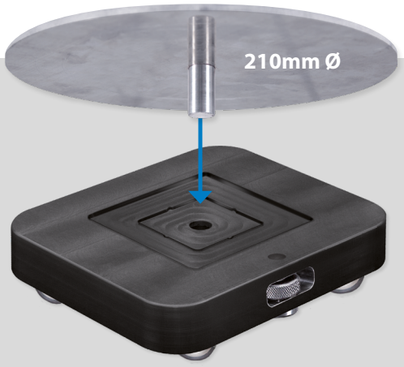
Ball Skate BB30/4

- 1000 kg load per skate
- Parking brake standard
- Lightweight & durable
- Stainless steel balls

12.7mm Ø through counterbore facilitates:

- Socket head capscrew for permanent attachment.
- BL2 Load Plate (optional).





Load Plate - *Part # BL2*

Ideal where flat or wide surfaces require increased support. Easy push fit & removal utilising central hole in skate.

Pry Bar
Part # BP2

Use to lift or lever items & fit/remove ball skates. Heavy duty 2 - Piece design for ease of transport.

Shelving Tie Brackets
Part # BS2

Ball skates are ideal to move laden connected shelving aisles. Use universal tie brackets to secure upper areas of connected gondola shelving.

Evaluate these aspects when choosing your solution:

Orientation

Which position does your application require the units to be mounted or function? Load ball up, down or other? Heavy duty range units operate at maximum load in all orientations.

Track & Contact

What is the condition, hardness & surface finish of the material the units will be conveying or bearing against? Uneven, deformable & delicate surfaces need special consideration.

Load & Shock

Dynamic & static load ratings are identical. Where loads are unevenly distributed or high impact/shock conditions exist, spring loaded units are ideal.

Speed

Maximum conveying speeds are limited; frequency & duration may also require consideration. Dynamic & static speed ratings are identical.

Friction & Precision

Lowest coefficient of friction & highest levels of precision movement are provided by the heavy duty ball units (pages 4 - 9). Some applications will allow a design concession to be made.

Stability

Consider the stability of the conveyed item. Ensure sufficient points of contact (pitch) to consistently support the mass. Provision for control & braking of the mass should not be overlooked.

Environment

Consider material upgrade options to better resist adverse environmental operating conditions. Dirty or dusty conditions? Wet & contaminated areas? Chemical attack / contamination? Magnetic permeability & radioactive fields?

Lubrication & Service

Omnitrack products are lubricated for life. To further extend service life, heavy duty ball transfers & Omnifloat ranges offer additional user-service kits. Consult page 7 for heavy duty ball units & page 20 for Omnifloat glass handling casters.

Temperature

Ambient temperature & maximum/minimum temperature ranges must be evaluated. Stainless steel components resist higher & lower temperatures better than standard materials (page 29).

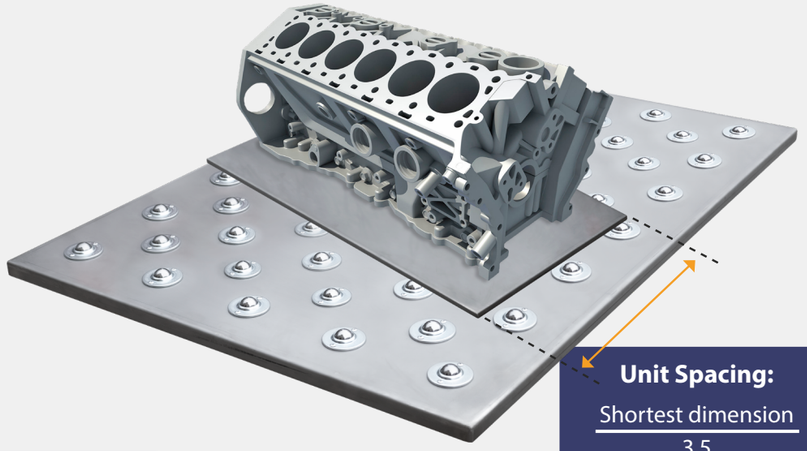
	MAX LOAD	FRICTION % OF LOAD	SPEED m/sec	SHOCK LOADS		ARDUOUS CONDITIONS		ORIENTATION	INSTANT CHANGE
Heavy Duty	8000	0.5	2	✓✓✓✓✓✓ 94-97 Series	✓✓✓✓✓ 90-93 & 98 Series	✓✓✓✓✓	Z & SS options		✓✓✓
Pneumatic	25 & 35	3	1.5						
Medium Duty	3500	2	1.5	✓✓✓✓✓ MM - MN Series	✓✓✓✓ MX Series	✓✓✓✓	MW, MV30 & SS option		✓✓✓
Light Duty	7-600	3	1	✓✓✓	✓ LM series	✓✓	SS options		✓✓✓
Omnicaster	30 & 60	3	1	✓		✓✓✓			✓✓
Omniwheel	8 & 25	5	1	✓		✓✓✓✓✓			✓
Omnifloat	18 & 22	6	1	✓✓		✓✓✓✓✓			✓
Flexible Conveyors	80/m	4	2	✓✓		✓✓✓✓✓			✓✓
Rails & Tables	300+	3	1	✓		✓✓			✓
Skates	1000	3	1.5	✓✓		✓✓✓			✓

Load & Stability

Ensure sufficient load capacity:

Load / 3

= 3 x 1000Kg

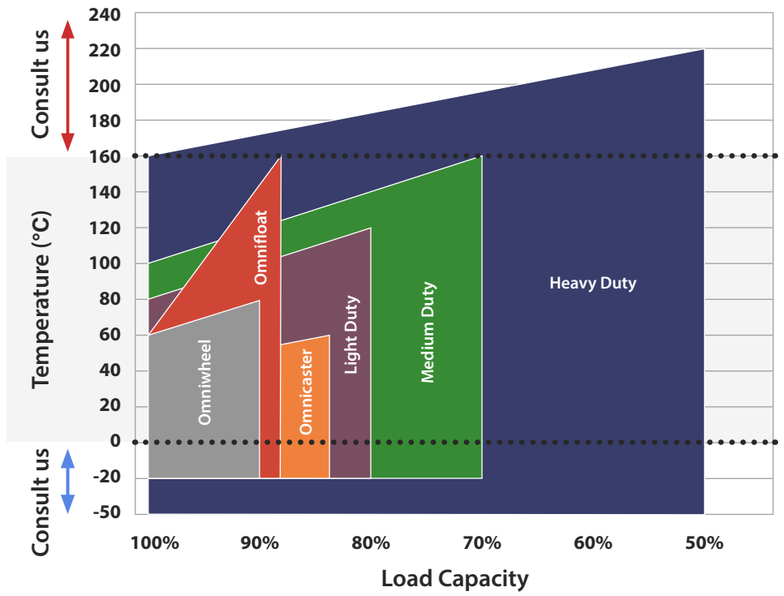


Unit Spacing: Shortest dimension / 3.5

Specify spring loaded units where shock loads & uneven track conditions exist.

Operating Temperature

Compensate for temperature & operating environment by reducing stated load capacity



Free technical advice
Bespoke design
In-house manufacturing
No minimum order
UK design & made
Immediate shipping

Making History Since 1909

2021
New 2021 Omniwheel Range

2020
New compact 8000 series

2017
Heavy duty 8000 kg Ball Unit. New technology & materials

2014
New Omnicaster Range Launched

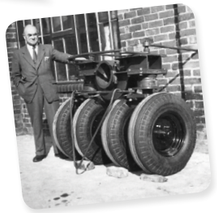
2011
Bloodhound' 1000mph Land Speed Record (Product Sponsor)

1970
Blue Steel nuclear warhead handling equipment – design & production

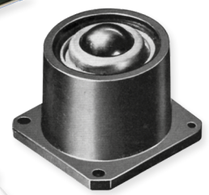
2009
CERN 'Hadron' collider particle research project supplier

1990
Euro Fighter production project supplier

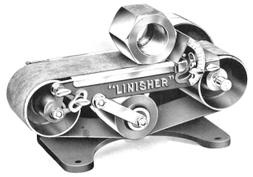
1930
Belt 'Linisher' designed & launched



1962
De Havilland Aircraft landing gear – design & manufacture contract



1958
1958 Patented Omnitrack Ball Transfer Units launched



1928
Gravity conveyor rollers, Skatewheels & live racking systems launched

1923
TST 'Townsend, Skinner & Tingle' car produced

1918
Autoglider' scooter range - Mass produced & exported

1909
Inception as manufacturer of Lathes, heavy duty Castors & Cabinet Drawer Slides

1896
Rodborough Court, our HQ in Stroud - UK was constructed

In-house World-Class Manufacturing

100% Product Quality Testing

2 Year Warranty

Register your free 2-year warranty online now - Scan the QR code below with your mobile phone. Our quality is your guarantee.

2 YEAR WARRANTY
omnitrack
2 YEAR WARRANTY

Global sales & design support team

omnitrack®

omnidirectional movement

Versione 40.0/UK - www.giovanatows.com

United Kingdom
01453 873345

Canada
1 647 258 4756

France
01 8721 0069

USA
1 914 600 5422

Deutschland
0800 18 33 297

México
01800 681 9310

Italia
0362 1321595

Brasil
11 4349 6211

España
91 198 4543

Australia
1800 824 493

Portugal
308 804 777

New Zealand
03 669 4787

România
0364 228 049

South Africa
010 595 1272

РОССИЯ
8800 100 9654

Türkiye
0216 900 2808

Netherland
020 703 8306

India
000 800 100 4384

Colombia
1 3819434

中国 China
北 10 800 713 1349
南 10 800 130 1308

DAILY WORLDWIDE SHIPPING

MADE IN BRITAIN

ACS REGISTRARS Quality Assurance ISO 9001 UKAS MANAGEMENT SYSTEMS 229

F4N Fit For Nuclear

omnitrack®

Rodborough Court - Stroud - GL5 3LR - England

info@omnitrack.com **+44 1453 873345** **www.omnitrack.com**