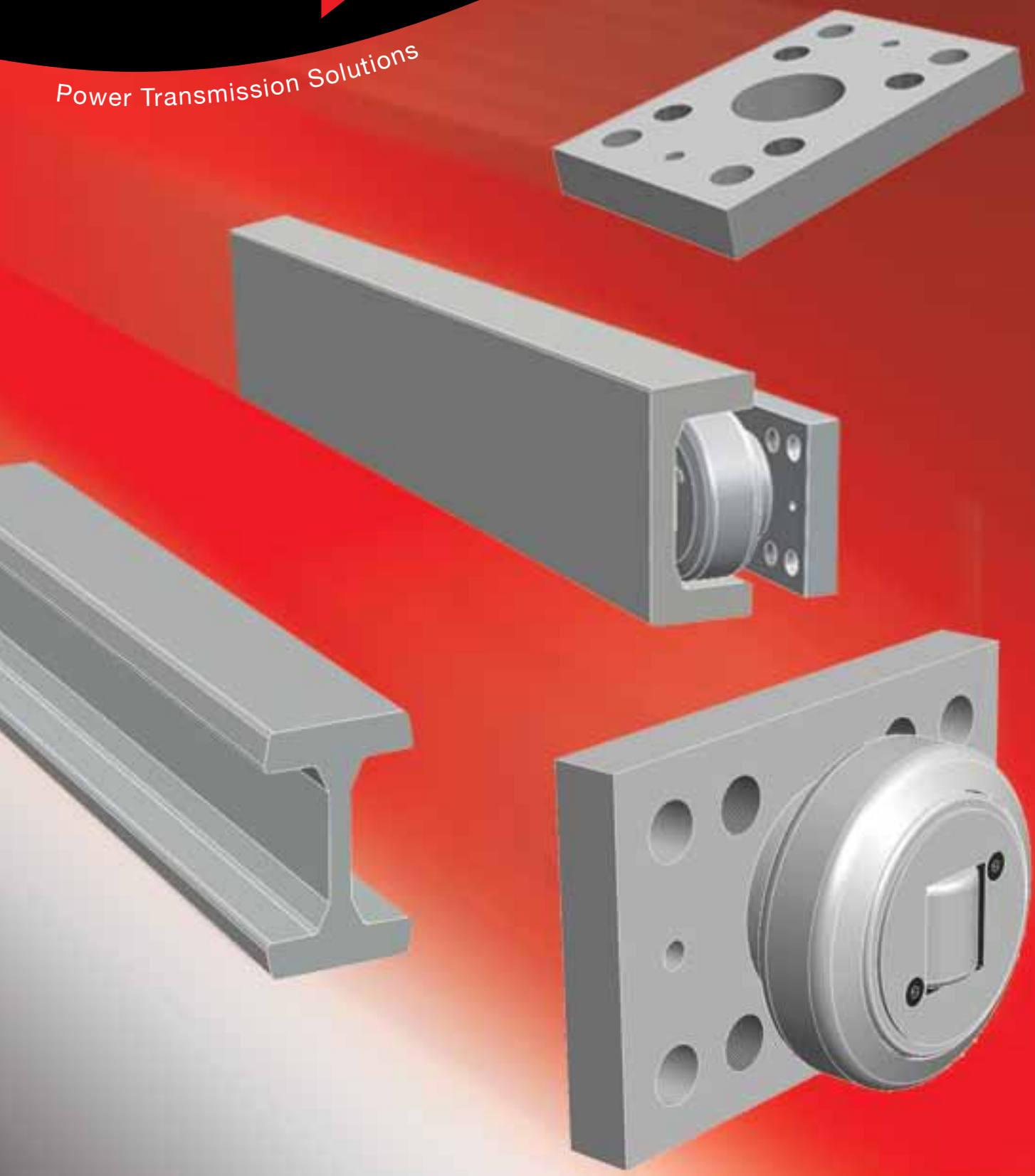
DriveLines

Power Transmission Solutions



CombinedBearings&AccessoriesRange

COMBINED BEARINGS & ACCESSORIES

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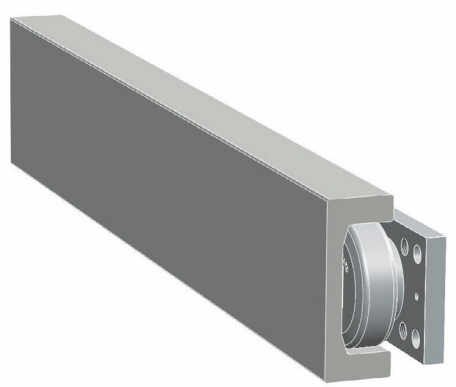


Drive Lines combined bearings and rails provide a cost effective solution to your mechanical handling and heavy load guidance needs. The system combines a radial bearing to take out high loads and a smaller axial roller to eliminate side movement.

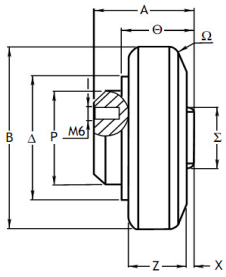
Ideally suited to Guiding Lift systems, platforms, and cantilever loads where it is advisable to eliminate high side forces on lifting actuators such as Screw Jacks.

Our Sizes are Industry Standard for ease of interchange and for simple integration into current systems.

INCREASED CORROSION RESISTANCE:

In difficult or corrosive applications Drive Lines can offer Armoloy® TDC coating for bearings and Hot Dip galvanising for rails. Armoloy® TDC will improve corrosion resistance of bearings in most chemical or water environments and be compatible or exceed that of 440C stainless steel. Armoloy® coating also has the added benefit of longer wear life than stainless steel due to its higher surface hardness (78HRc) and immediate cost savings realised for the use of non stainless parts.

Combined Bearings



Bearing Material:	High Carbon Steel EN31-SAE52100/DIN 100Cr6
Hardness:	58-62 HRc
Welding Bolt:	ST52.3
Lubrication:	Bearings are lubricated as standard. With re-lubrication holes on sizes CB-056-CB-063 only.
Seals:	Steel on Radial bearing, rubber on Axial bearing.

Operating Temp Range: -10°C to +80°C

Coefficient of friction(μ): New=0.05 Seized=0.3

Welding Advice: If you do not order the complete bearings + flange plate assembly then it is advised that you disassemble prior to welding the Radial and Axial bearings to avoid heat damage to seals / parts.

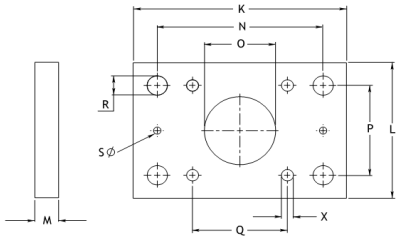
Bearings Part No.	B	Δ	P -0.05	A	Θ	Z	X	Σ	Ω	C kN	C_0 kN	C_A kN	C_{OA} kN	WEIGHT kg	System Max Load		Flange Plate Part No	Rail Part No
															Radial kN	Axial kN		
CB-053	52.5	40	30	33.0	27.0	17	5.0	15	2	24	32.0	7	7.0	0.46	5.2	1.7	CBP-S	CBR-S
CB-054	62.5	42	30	37.5	30.5	20	2.5	20	3	31	35.5	11	11	0.53	7.2	2.4	CBP-0	CBR-0
CB-055	70.1	48	35	44.0	36.0	23	2.5	22	4	45	51.0	13	14	0.80	8.6	2.8	CBP-1	CBR-1 CBIR-1
CB-056	77.7	54	40	48.0	36.5	23	3.0	26	4	48	56.8	18	18	1.00	8.9	3.0	CBP-2	CBR-2
CB-057	77.7	53	40	40.0	29.0	23	3.0	26	4	48	56.8	18	18	0.87	8.9	3.0	/	CBIR-2
CB-058	88.4	59	45	57.0	44.0	30	3.5	26	3	68	72.0	23	23	1.62	15.6	5.2	CBP-3	CBR-3 CBIR-3
CB-059	101.2	67	50	46.0	33.0	28	3.0	30	3	73	82.0	25	27	1.74	15.5	5.1	/	CBIR-U
CB-060	107.7	71	55	54.0	40.0	31	3.0	34	5	81	95.0	31	36	2.27	16.5	5.5	/	CBIR-4
CB-061	107.7	71	60	69.0	55.0	31	4.0	34	5	81	95.0	31	36	2.82	16.5	5.5	CBP-4	CBR-4
CB-062	123.0	80	60	72.3	56.0	37	5.0	40	5	110	132.0	43	50	3.89	23.5	7.8	CBP-5	CBR-5 CBIR-5
CB-063	149.0	103	60	78.5	58.5	43	5.5	50	3	151	192.0	68	71	6.52	41.1	13.7	CBP-6	CBR-6

Flange Plates

Material:
Low Carbon Steel

Finish:
Chemi Black

NOTES: CBP-3 IS A SQUARE PLATE WITHOUT OUTER THRU HOLES



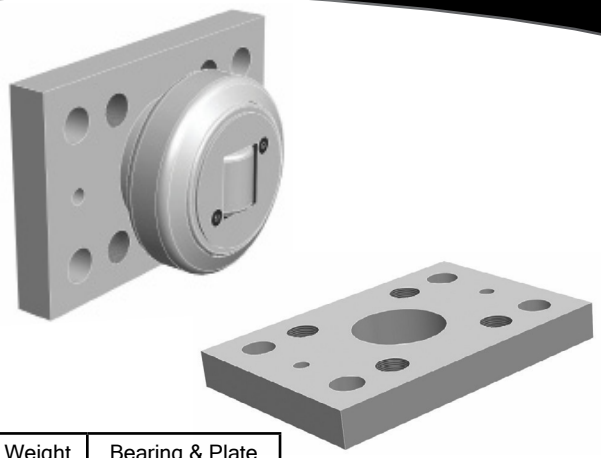
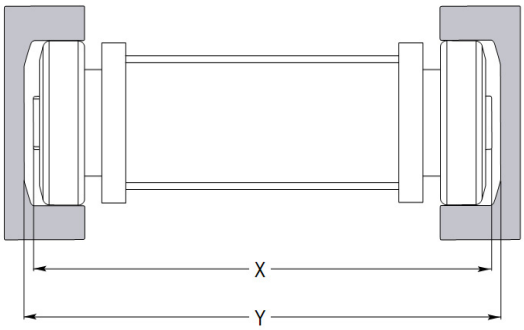


Plate Part No	K	L	M	N	O	P	Q	R	S	X Thru	Weight kg	Bearing & Plate PT.No
CBP-S	90.0	50.0	10.0	70.0	30.0	30.0	40.0	8.5	6.0	M8	0.3	CB-053-W
CBP-0	100.0	60.0	10.0	80.0	30.0	40.0	40.0	10.5	6.0	M10	0.4	CB-054-W
CBP-1	120.0	80.0	15.0	90.0	35.0	50.0	50.0	12.5	6.0	M12	1.0	CB-055-W
CBP-2	120.0	80.0	15.0	90.0	40.0	50.0	50.0	12.5	6.0	M12	0.9	CB-056-W
CBP-3	120.0	120.0	20.0	/	45.0	90.0	90.0	/	/	M16	1.9	CB-058-W
CBP-4	180.0	120.0	20.0	140.0	60.0	80.0	80.0	17.0	6.0	M16	2.7	CB-061-W
CBP-5	180.0	120.0	20.0	140.0	60.0	80.0	80.0	17.0	6.0	M16	4.0	CB-062-W
CBP-6	200.0	150.0	20.0	160.0	60.0	100.0	100.0	17.0.	6.0	M16	4.0	CB-063-W

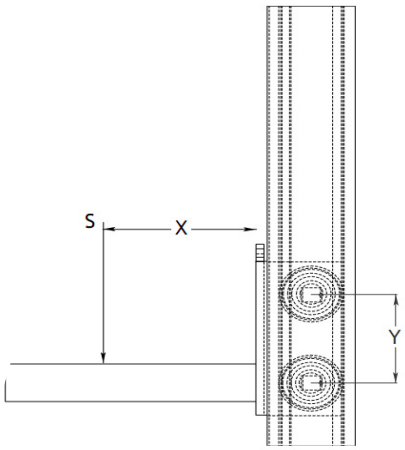
Design Clearances



Fabrication clearance is recommended at approx 2mm between X and Y dimensions.

Please refer to rail tolerances on page 3 if required.

Load Calculations



To calculate the load and therefore bearing size required:

System max load per radial bearing (kN) = $\frac{S \times X}{2 \times Y}$
(see Combined Bearing Table)

Where:

S: System Max load (N) = mg (Mass (kg) x Gravity (9.81)

X: Distance to centre of mass (m)

Y: Bearing Spacing (recommended 0.5m+) (m)

i.e. Calculated System Max load per radial bearing = 5kN per bearing
Therefore CB-054 is a suitable bearing (7.2 kN max capacity)

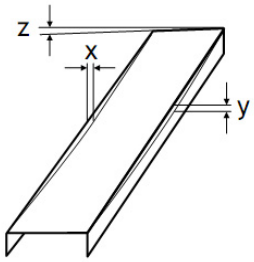
Note: A Factor of safety should be used when calculating suitable bearing sizes.

Please call for application advice or Horizontal load calculations

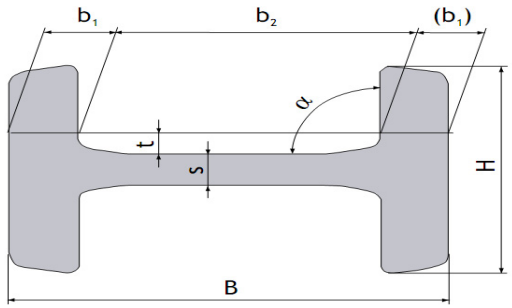
Rails

Rail Material: Hot Rolled Steel 18 MnNb6
Yield Point: >430 N/mm²
Tensile Strength: 550-700 N/mm²
Finish: Standard Rolled Steel. Cleaned and oiled on request.

Bow Tolerance on (X&Y): 1.0mm/m
Twist Tolerance (Z): 0.5°/m

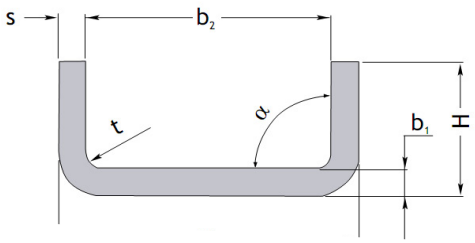


I Section

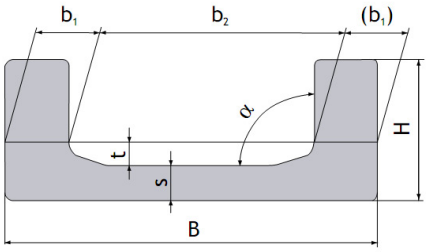


Rail Part No.	B	b1	Tol.±	b2	Tol.±	H	Tol.±	S	Tol.±	t	Angle α	Tol +	Weight kg/m	Wx cm3	Wy cm3	Bearing PT. NO.
CBIR-1	98.0	14.0	0.5	70	+1.0	65.0	1.00	9.0	0.5	7.0	91°	1°	19.4	70	18	CB-055
CBIR-2	113.9	18.0	0.5	77.9	+1.0	66.0	1.00	11.0	0.5	9.0	91°	1°	25.3	105	23	CB-057
CBIR-3	129.6	20.5	0.5	88.6	+1.0	81.0	1.25	12.0	0.5	9..0	91°	1°	34.1	160	40	CB-058
CBIR-U	140.2	18.9	0.8	102.3	-0.8	69.9	+1.6	12.7	0.5	8.0	91°	1°	31.2	157	31	CB-059
CBIR-4	152.4	22.0	0.5	108.4	0.5	83.0	1.00	14.0	0.5	9.0	91°	1°	40.5	219	45	CB-060
CBIR-5	175.0	25.6	0.5	123.8	0.5	90.0	1.30	15.0	0.5	12.5	91°	1°	41.4	322	65	CB-062

U Section



Size CBR-S



Sizes 0-6

Rail Part No	B	b1	Tol.±	b2	Tol.±	H	Tol.±	s	Tol.±	t	Angle α	Tol.±	Weight kg/m	Wx cm3	Wy cm3	Bearing Pt. No
CBR-S	65.0	6.0	/	53.0	0.4	30.0	/	6.0	/	R4	90°	/	5.3	11.9	2.5	CB-053
CBR-0	86.5	12.0	0.5	62.5	1.0	36.0	0.8	7.0	0.5	7.0	90°	1°	10.5	32	12	CB-054
CBR-1	103.2	16.2	0.5	70.8	0.5	40.0	0.8	7.7	0.5	8.5	90°	1°	14.8	53	11	CB-055
CBR-2	121.3	21.3	0.5	78.7	0.5	41.0	0.8	10.8	0.5	9.0	90°	1°	20.9	81	15	CB-056
CBR-3	135.4	23.0	0.5	89.4	0.5	53.0	0.8	12.7	0.5	9.0	90°	1°	28.6	128	27	CB-058
CBR-4	157.2	24.4	0.5	108.4	0.5	61.2	0.8	14.0	0.5	9.0	90°	1°	35.9	190	39	CB-061
CBR-5	175.0	25.5	0.5	123.8	0.5	66.2	0.8	16.2	0.5	9.0	90°	1°	42.9	250	48	CB-062
CBR-6	201.5	25.7	0.5	150.1	0.5	71.2	0.8	19.4	0.5	11.5	90°	1°	52.3	340	57	CB-063

Application Advice

Contact us if you would like to discuss an application with a sales engineer or would like a site visit.

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- Wömer GmbH
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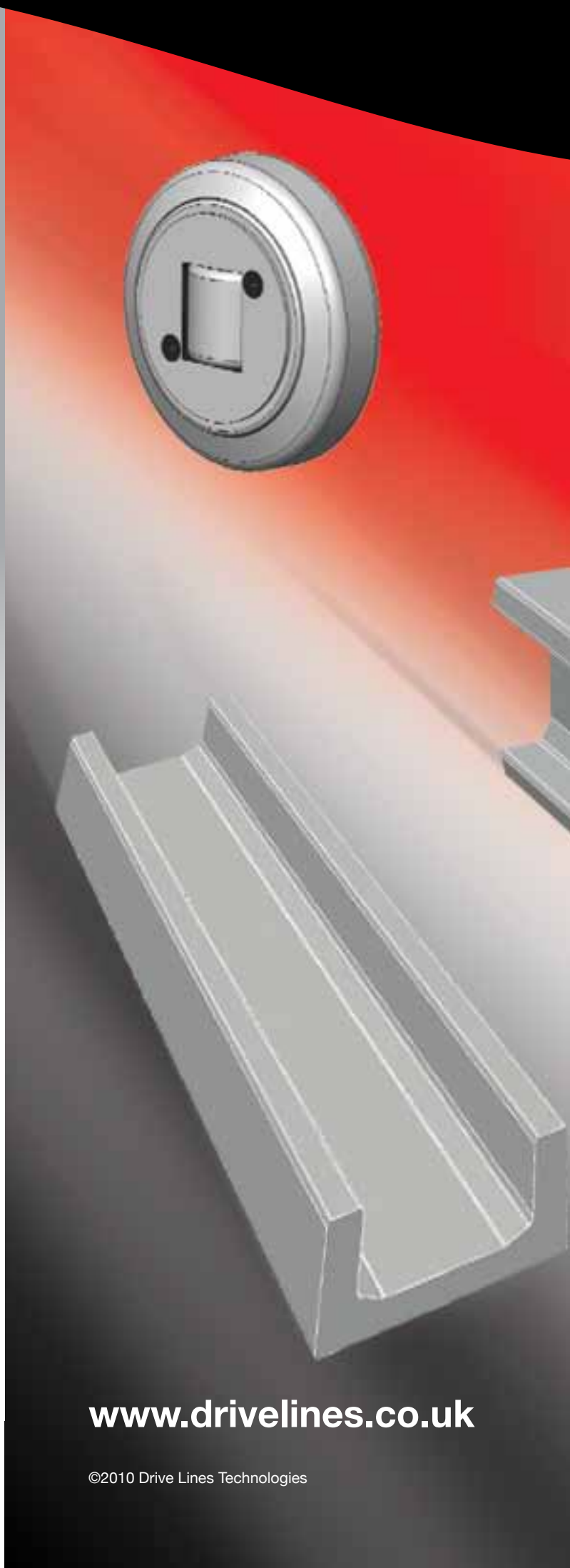

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