

Polyurethane tyred wheels and guide rollers



Formed in 1972, BIL Group started from humble beginnings. Originally known as Baz-Roll International, the company began life as a castor and wheel distributor, quickly expanding and relocating from its original premises in the South East of the UK across to the South West and our current location in Calne, Wiltshire.

The company itself is comprised of three divisions:

BIL CASTORS AND WHEELS

The UK's leading manufacturer of such products, with thousands of combinations and options available. With over £2.3m stock holding we have a solution for nearly any requirement. If it's not a stock item then we have the capabilities to produce project work and make your solution bespoke.

BIL MATERIALS HANDLING

Featuring our renowned premium AluTruk® modular sack truck range and our Skoots® Moving System along with a whole range of trolleys, dollies, moving skates and more. As with our castor division, extensive stocks are held for fast, reliable delivery!

BIL EQUIPMENT







The third piece of the jigsaw. Our BIL Equipment division has full welding and fabrication capabilities, which in turn produces some of our many product lines. Adding to our innovative and flexible approach we are able to machine produce additional parts such as axles, spacer plates, assemblies and much, much more. The possibilities are endless.



The acquisition of **H Varley Limited** in 2024 added to our portfolio of products. Additionally, the distribution agreement with **Vulkoprin** of Belgium brings the opportunity to offer our customers a range of wheels, rollers and components manufactured in high performance polyurethane products, notably **Vulkollan®**, the benchmark polyurethane elastomer combining excellent mechanical properties for highest possible dynamic load capacity and abrasion resistance.

Vulkollan® is only available from distributors appointed by Covestro (formerly Bayer Material Science) and is ideally suitable for the most demanding of applications. Also available are guide rollers tyred in **Printhopan®**, another specialist polyurethane and **Printhane-X** used in the manufacture and reconditioning of roller coaster wheels.

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-  Diameter range of wheels listed in table
-  Load range of wheels listed in table
-  Shore hardness of wheels listed in table
-  CAD file available
-  Manual handling speed relevant to stated load capacity
-  Operating temperature range relevant to stated load capacity

Vulkollan® is the benchmark polyurethane elastomer in the market, combining excellent mechanical properties for highest dynamic load bearing capacity and abrasion resistance.



In a multi-stage process developed by Covestro, solid Vulkollan® is produced through chemical reactions between polyester polyols of the high quality Vulkollan® range, Desmodur®15 and glycols. Desmodur®15 is the trade name for 1.5 naphthylene di-isocyanate (NDI) from Covestro. The ultra high performance elastomer covers a hardness range from approximately 65 Shore A up to 60 Shore D. Vulkollan® and can only be manufactured by licensed processors such as Vulkoprin. They produce wheels to deal with the highest dynamic loads as well as technical and semi-finished parts.

FEATURES

- Tyre hardness: 90 Shore A.
- Temperature range: Load capacities applicable to operating temperature range of -20°C to +80°C.
- Noise reducing.
- Non-marking.
- High mechanical resistance and extremely wear resistant.
- High load capacity, resistant to axial forces.
- Resistant to oils, greases & various chemicals.

FINISH







- Self-coloured Vulkollan® tyre.
- Colturiet anti-corrosive painted centre.

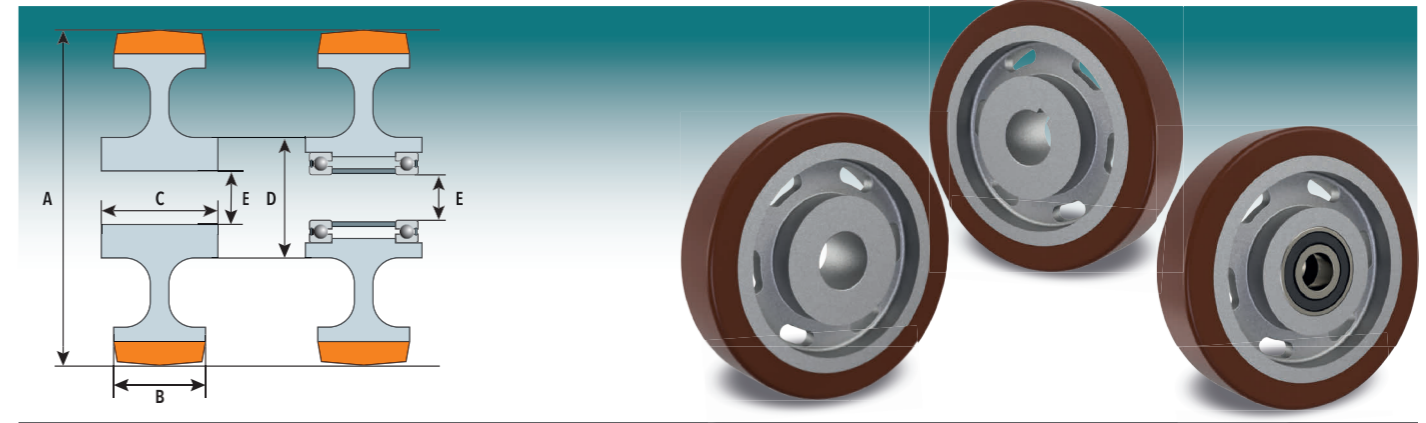
INDUSTRIES & APPLICATIONS

- Water treatment.
- Waste & recycling.
- Aerospace.
- Automotive.
- Maritime.
- Oil and Gas.

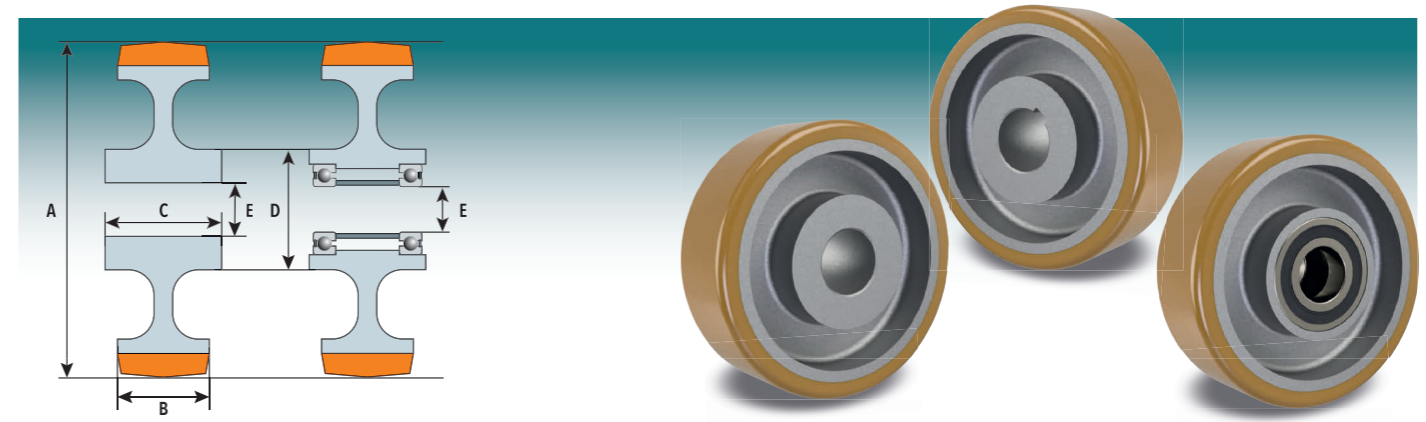
VULW series Vulkollan® wheels can be adapted to bespoke specifications. We have the facility to machine wheels to custom diameters and widths on both tread and hub. We can also machine a tread pattern into the polyurethane tyre if required.

- Vulkollan® tyred wheels
- Cast iron centre
- Colturiet paint finish

-  150
-  470 - 670
-  90 Shore A
-  CAD
-  4kph
-  -20°C +80°C



A	B	C	D	load capacity	E	plain bore	keyway	ball journal
wheel diameter	tread width	hub width	hub diameter		bore			
150	35	40	65	470	20			VULW150-35-40-BJM20
					25			VULW150-35-40-BJM25
					30	VULW150-35-40-PBM30	VULW150-35-40-KM30	
					35	VULW150-35-40-PBM35	VULW150-35-40-KM35	



A	B	C	D	load capacity	E	plain bore	keyway	ball journal
wheel diameter	tread width	hub width	hub diameter		bore			
150	50	55	70	670	25			VULW150-50-55-BJM25
					30			VULW150-50-55-BJM30
					35	VULW150-50-55-PBM35	VULW150-50-55-KM35	
					40	VULW150-50-55-PBM40	VULW150-50-55-KM40	

Alternative bore and bearing sizes are available to order. Please ask for details.



- Vulkollan® tyred wheels
- Cast iron centre
- Colturiet paint finish

200 - 250

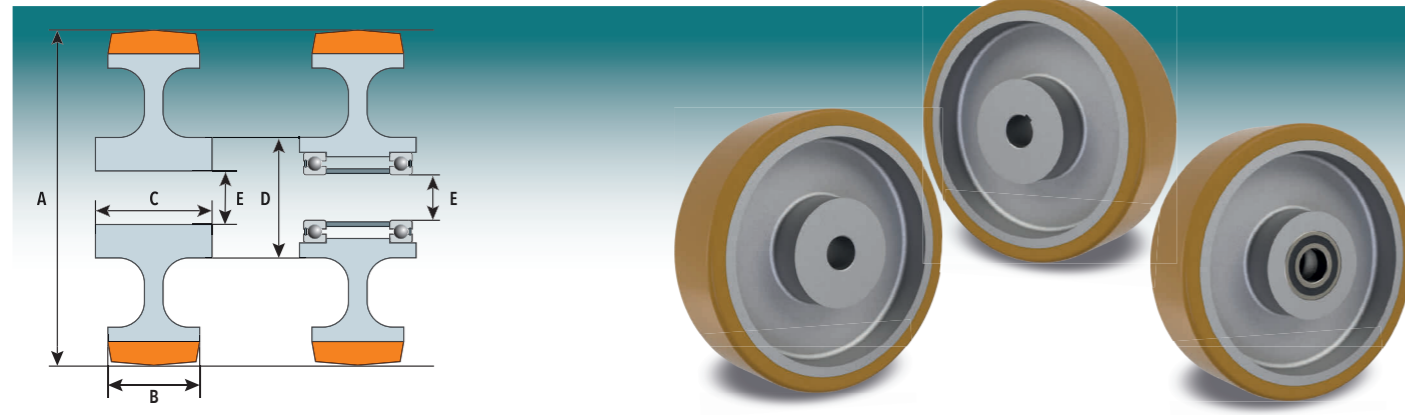
CAD

725 - 1585

4kph

90 Shore A

-20°C +80°C



A	B	C	D	load capacity	E	plain bore	keyway	ball journal
wheel diameter	tread width	hub width	hub diameter		bore			
200	40	50	78	725	25	VULW200-40-50-PBM25	VULW200-40-50-KM25	VULW200-40-50-BJM25
					30	VULW200-40-50-PBM30	VULW200-40-50-KM30	VULW200-40-50-BJM30
					35	VULW200-40-50-PBM35	VULW200-40-50-KM35	VULW200-40-50-BJM35
					40	VULW200-40-50-PBM40	VULW200-40-50-KM40	
200	60	70	85	1080	25			VULW200-60-70-BJM25
					30	VULW200-60-70-PBM30	VULW200-60-70-KM30	VULW200-60-70-BJM30
					35	VULW200-60-70-PBM35	VULW200-60-70-KM35	VULW200-60-70-BJM35
					40	VULW200-60-70-PBM40	VULW200-60-70-KM40	
200	80	80	94	1300	30	VULW200-80-80-PBM30	VULW200-80-80-KM30	VULW200-80-80-BJM30
					35	VULW200-80-80-PBM35	VULW200-80-80-KM35	VULW200-80-80-BJM35
					40	VULW200-80-80-PBM40	VULW200-80-80-KM40	VULW200-80-80-BJM40
250	45	55	83	1010	30			VULW250-45-55-BJM30
					35			VULW250-45-55-BJM35
					50	VULW250-45-55-PBM50	VULW250-45-55-KM50	
250	70	80	95	1585	30	VULW250-70-80-PBM30	VULW250-70-80-KM30	VULW250-70-80-BJM30
					35	VULW250-70-80-PBM35	VULW250-70-80-KM35	VULW250-70-80-BJM35
					40	VULW250-70-80-PBM40	VULW250-70-80-KM40	VULW250-70-80-BJM40

Alternative bore and bearing sizes are available to order. Please ask for details.

- Vulkollan® tyred wheels
- Cast iron centre
- Colturiet paint finish

300 - 400

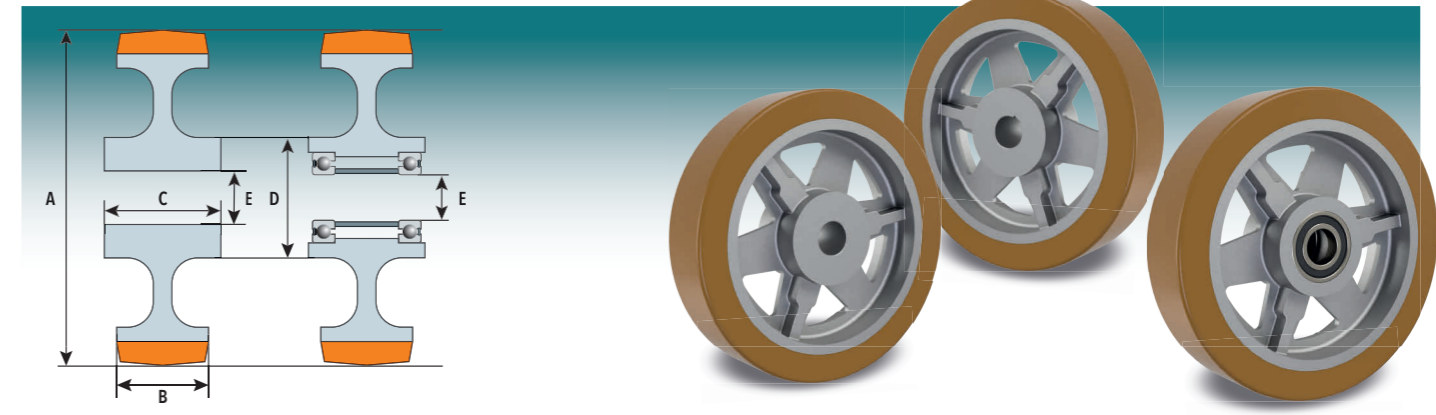
CAD

1240 - 4000

4kph

90 Shore A

-20°C +80°C



A	B	C	D	load capacity	E	plain bore	keyway	ball journal
wheel diameter	tread width	hub width	hub diameter		bore			
300	50	60	90	1240	30			VULW300-50-60-BJM30
					35			VULW300-50-60-BJM35
					40			VULW300-50-60-BJM40
					50	VULW300-50-60-PBM50	VULW300-50-60-KM50	
300	75	80	96	1870	30	VULW300-75-80-PBM30	VULW300-75-80-KM30	VULW300-75-80-BJM30
					35	VULW300-75-80-PBM35	VULW300-75-80-KM35	VULW300-75-80-BJM35
					40	VULW300-75-80-PBM40	VULW300-75-80-KM40	VULW300-75-80-BJM40
					50	VULW300-75-80-PBM50	VULW300-75-80-KM50	
					60	VULW300-75-80-PBM60	VULW300-75-80-KM60	
300	100	100	102	2500	40			VULW300-100-100-BJM40
					50			VULW300-100-100-BJM50
					60	VULW300-100-100-PBM60	VULW300-100-100-KM60	
350	80	80	110	2170	40	VULW350-80-80-PBM40	VULW350-80-80-KM40	VULW350-80-80-BJM40
					50	VULW350-80-80-PBM50	VULW350-80-80-KM50	VULW350-80-80-BJM50
					60	VULW350-80-80-PBM60	VULW350-80-80-KM60	
350	100	100	116	2700	35	VULW350-100-100-PBM35	VULW350-100-100-KM35	VULW350-100-100-BJM35
					40	VULW350-100-100-PBM40	VULW350-100-100-KM40	VULW350-100-100-BJM40
					50	VULW350-100-100-PBM50	VULW350-100-100-KM50	VULW350-100-100-BJM50
					60	VULW350-100-100-PBM60	VULW350-100-100-KM60	
					38.1	VULW380-75-90-PBM38.1	VULW380-75-90-KM38.1	
400	80	80	105	2570	50	VULW400-80-80-PBM50	VULW400-80-80-KM50	VULW400-80-80-BJM50
					60	VULW400-80-80-PBM60	VULW400-80-80-KM60	
400	100	100	120	3200	50	VULW400-100-100-PBM50	VULW400-100-100-KM50	VULW400-100-100-BJM50
					60	VULW400-100-100-PBM60	VULW400-100-100-KM60	
400	125	125	115	4000	50	VULW400-125-125-PBM50	VULW400-125-125-KM50	VULW400-125-125-BJM50
					60	VULW400-125-125-PBM60	VULW400-125-125-KM60	

Alternative bore and bearing sizes are available to order. Please ask for details.

Printhopan is a high grade thermoplastic polyurethane (TPU) developed by Vulkoprin for guide roller applications.



Printhopan is a high grade thermoplastic polyurethane (TPU) for the covering of small guide rollers. The tyre is mechanically locked to the ball bearing centre by means of some lateral overlap and thermal shrinkage to the outer ring of the bearing. These guide rollers offer a near silent function and are a great alternative to a hard thermoplastic guide bearings such as polyamide. Printhopan guide rollers are resilient and also offer good load capacities. Applications include conveyor and transport systems, elevator construction, sorting systems, materials handling etc.

FEATURES

- Tyre hardness: 59° Shore D .
- Temperature range: -40°C to +80°C (up to 120°C in short duration).
- Noise reducing.
- Non-marking.
- High mechanical resistance and extremely wear resistant.
- High load capacity, resistant to axial forces.
- Resistant to oils, greases & various chemicals.

FINISH

- Self-coloured Printhopan tyre.

INDUSTRIES & APPLICATIONS

- Conveyor and transport systems.
- Elevator construction.
- Sorting systems.
- Materials handling.

For the most demanding applications, heavy duty rollers with a steel centre and cast Vulkollan® tyre are also available. Please ask for details.

- Printhopan® tyred guide rollers
- Ball journal centre

25 - 80

CAD

20 - 215

20kph

59 Shore D

-40°C +60°C

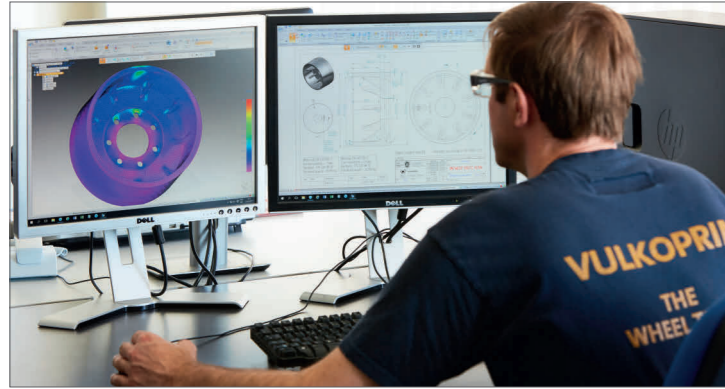


A roller diameter	B tread width	C bore diameter	D bearing width	E inner race diameter	bearing reference	load capacity	ball journal
25	10	6	6	11.10	626 ZZ	20	WUDP-025-010-006-Z
28	11	8	8	12.15	608 ZZ	25	WUDP-028-011-008-Z
30	11	8	8	12.15	608 ZZ	30	WUDP-030-011-008-Z
	11	9	7	14.45	609 ZZ	25	WUDP-030-011-009-Z
32	16	8	8	12.15	608 ZZ	45	WUDP-032-016-008-Z
	40	14	10	9	17.00	6200 ZZ	70
14		12	8	17.00	6001 ZZ	70	WUDP-040-014-012-Z
20		10	9	17.00	6200ZZ	90	WUDP-040-020-010-Z
50	15	10	9	17.00	6200 ZZ	100	WUDP-050-015-010-Z
	15	12	10	18.45	6201 2RS	100	WUDP-050-015-012-S
	15	12	10	18.45	6201 ZZ	100	WUDP-050-015-012-Z
	18	17	10	23.00	6003 ZZ	110	WUDP-050-018-017-Z
55	25	12	10	18.45	6201 ZZ	125	WUDP-050-025-012-Z
	60	20	12	10	18.45	6201 ZZ	115
20		17	12	24.50	6203 ZZ	150	WUDP-060-020-017-Z
20		20	20	27.20	6004 2RS	150	WUDP-060-020-020-S
70	25	15	15	21.70	6202 2RS	150	WUDP-060-025-015-S
	25	20	20	28.80	6204 ZZ	200	WUDP-070-025-020-Z
80	25	25	25	34.40	6205 ZZ	215	WUDP-080-025-025-Z

Alternative sizes are available to order. Please ask for details.



Printhane is the generic name for all Vulkoprin PU elastomers developed specifically for extreme fields of application.



Printhane X has been developed specifically for applications with high running speeds which means it is well suited for all amusement park and roller coaster applications. Printhane X exhibits low hysteresis losses and, therefore, little heat build up.

Return and re-bonding service.

To extend the working life of your worn wheels, we are able to repair and renovate the existing hub by removing worn material, cleaning and inspecting for damage and re-bonding with a new polyurethane tyre.

FEATURES

- Standard tyre hardness: 95 Shore A.
- Custom specification appropriate to specific application.

FINISH

- Customised to requirement.

INDUSTRIES & APPLICATIONS

- Roller coasters and family rides.



Custom wheels are at the core of the Vulkoprin range and can be manufactured in diameters ranging from just a few millimetres up to 600mm and above, giving load capacities of many tonnes.

Appropriate materials are selected to exactly suit the application whether that be wet conditions, extremes of temperature, high speed etc.

Additionally, the Vulkoprin range of speciality polyurethanes are ideally suited to the production of all manner of parts and components. Applications include motor manufacture, agricultural machinery, maritime, mining etc.

We would be pleased to advise on the design and material specification for your application.





Clockwise, from top left

Agriculture
Conveying and sorting

Manufacturing
Glass handling and transfer

Civil engineering
Pipe and cable laying

Civil engineering
Tunnelling

Maritime
Pipe & cable laying

Waste
Trommel & drum rotation

Leisure
Roller coaster & family rides

Manufacturing
Trommel & drum rotation

Aviation
Access gantries

Automotive
Production line

Clockwise, from top left

Manufacturing & distribution
AGVs, driven wheels

Distribution
Automated warehouse

Aviation
Baggage handling

Water treatment
Settlement tank bridge

Construction
Escalators & lifts

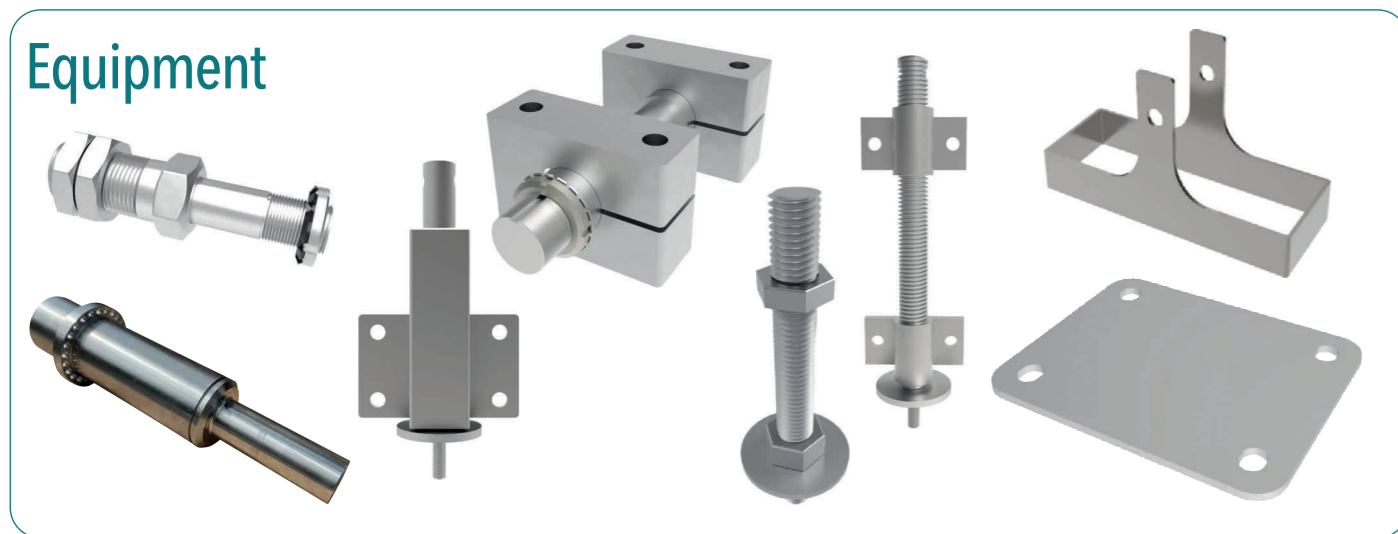
Aviation
Cargo handling

Maritime
Cable laying

Waste
Sorting & conveying

Water treatment
Settlement tank bridge





BILGroup

- Castors
- Wheels
- V Groove & Flanged Wheels
- Axles & Shafts
- Complete Wheel Systems
- Sack Trucks
- Trolleys
- Materials Handling Equipment
- Lifting Equipment
- Precision CNC Machining
- Welding & Fabrication
- Ball Transfer Units
- Workshop Cranes
- Pallet Trucks
- Mobile Safety Steps
- and more...



BILGroup brands

AluTruk[®]

SKOOTS



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Catalogue **VLK.1**



VULKOPRIN
QUALITY IN MOTION

Polyurethane tyred wheels and guide rollers