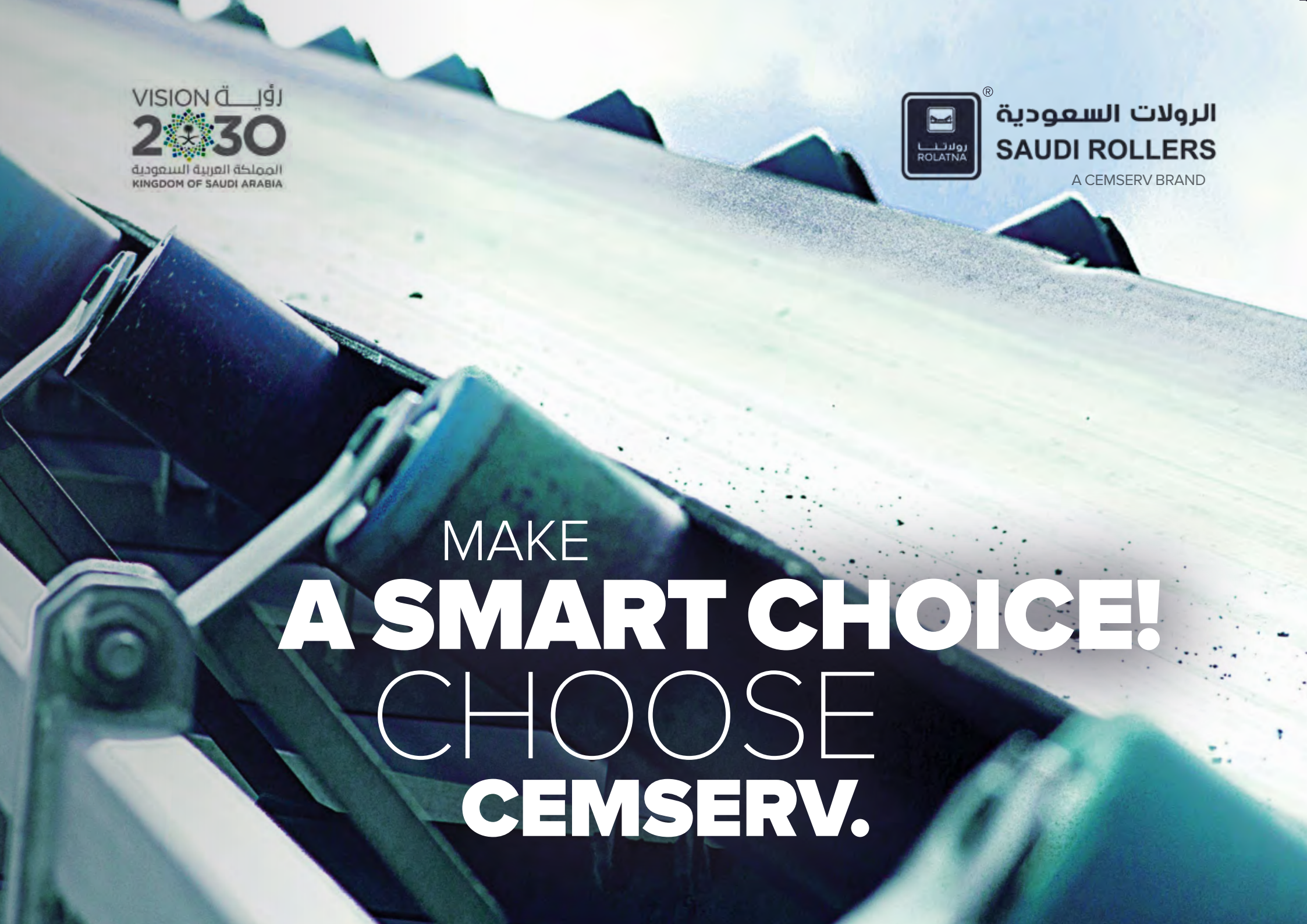

VISION رؤية
2030
المملكة العربية السعودية
KINGDOM OF SAUDI ARABIA
الرولات السعودية
SAUDI ROLLERS
ROLATNA
A CEMSERV BRAND
MAKE
A SMART CHOICE!
CHOOSE
CEMSERV.

ABOUT

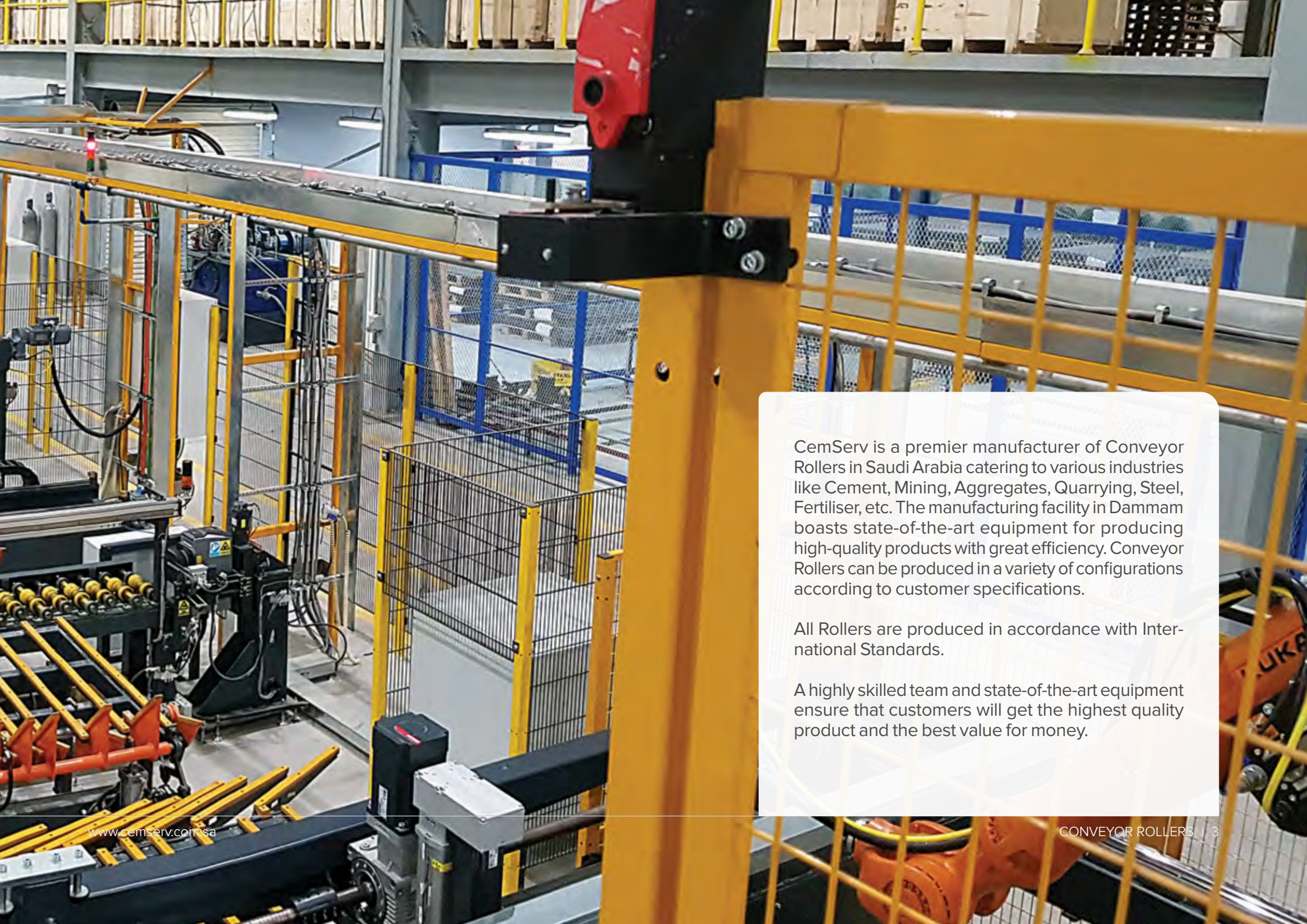
Saudi Rollers is a brand of Cement Service Industries Co. (CemServ) which comes under the umbrella of Al Qahtani Holding. CemServ was founded with the aim of providing high-quality industrial products and services to bulk material handling industries like Cement, Mining, Aggregates, Fertilisers, Steel, Quarries, etc.

Al Qahtani Holding was founded by the late Sheikh Abdulhadi Abdullah Al Qahtani in 1948, and it has risen to become one of the largest industrial conglomerates in the Kingdom of Saudi Arabia. Sheikh Abdulhadi was a man who proudly pursued his mission to make a strong contribution to Saudi Arabia's growing economy, and his legacy is a group which has grown beyond what he could have hoped for.

Since its inception, Al Qahtani holding has expanded and diversified into various sectors including beverages production and distribution, manufacturing, oil and gas, petrochemicals, mining, real estate, and the industrial sectors, to name just a few. Each sector of the group retains its own unique characteristics, but all hold true to Al Qahtani's original vision - to be at the forefront of Saudi Arabian business.

خدمات الأسمنت
CemServ

القحطاني القابضة
ALQAHTANI HOLDING



CemServ is a premier manufacturer of Conveyor Rollers in Saudi Arabia catering to various industries like Cement, Mining, Aggregates, Quarrying, Steel, Fertiliser, etc. The manufacturing facility in Dammam boasts state-of-the-art equipment for producing high-quality products with great efficiency. Conveyor Rollers can be produced in a variety of configurations according to customer specifications.

All Rollers are produced in accordance with International Standards.

A highly skilled team and state-of-the-art equipment ensure that customers will get the highest quality product and the best value for money.

MADE IN SAUDI ARABIA

MODERN STATE-OF-ART EQUIPMENTS

FLEXIBILITY OF SIZES

SUPERIOR DESIGN & QUALITY

PROMPT CUSTOMER SERVICE

WHAT IS A CONVEYOR ROLLER?

Roller is one of the most important components of a Belt Conveyor as it supports the conveyor belt and the load carried on the belt. It acts like a sliding surface over which the belt is continuously dragged by the drive pulley for several thousands of hours without wearing the belt. Conveyor Roller accounts for a total cost of 35% of a belt conveyor, however, suffers more than 70% of the resistance. So the quality of roller is particularly important.

APPLICATIONS

AGGREGATES

CEMENT

MINING

IRON & STEEL

MINERAL EXTRACTION

FERTILISER

CHEMICAL

ENERGY

CONCRETE

CONVEYOR ROLLER FUNDAMENTALS

• **Roller Tube Diameter (Ø-D)**
It is the outer diameter of the roller tube (see figure-1)

• **Roller Length (L)**
It is the length of the roller tube

• **Shaft Diameter (Ø-d)**
It is the diameter of the shaft. It is same as the bearing size.

• **Shaft Length (l)**
It is the end-to-end length of the shaft

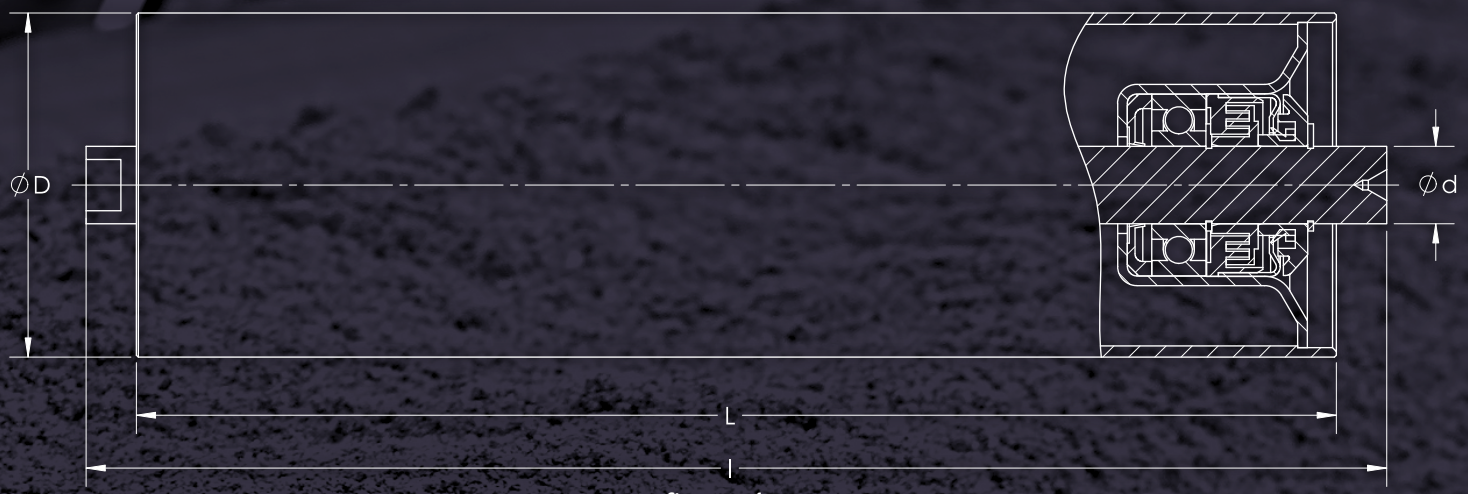
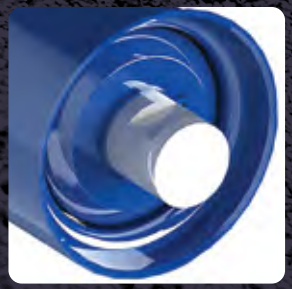


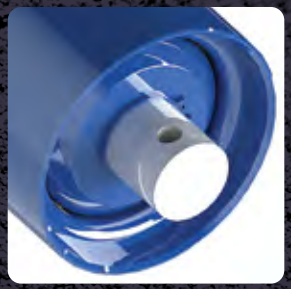
figure-1

• **Shaft End Type**
As shown in the figures, there can be different shaft ends like flat, round and threaded based on the fixing arrangement with the idler frame.



Internal Slotted

External Slotted



With Orthogonal Hole

Threaded

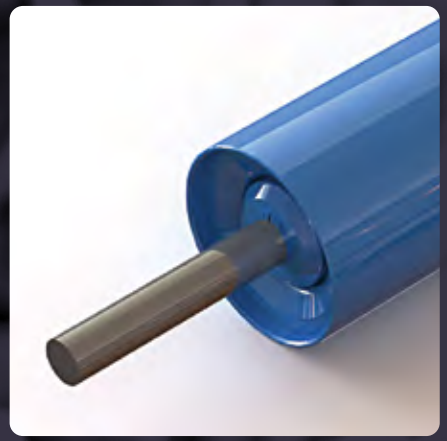
TYPES OF CONVEYOR ROLLERS

There are different types of rollers based on the location of roller on a conveyor and its application.

Carrying Roller
This type of roller is located on the carrying side of the belt conveyor and is responsible to convey the belt in a loaded condition. Our rollers are designed to provide a smooth running of belt with least rolling resistance for a long period of time.

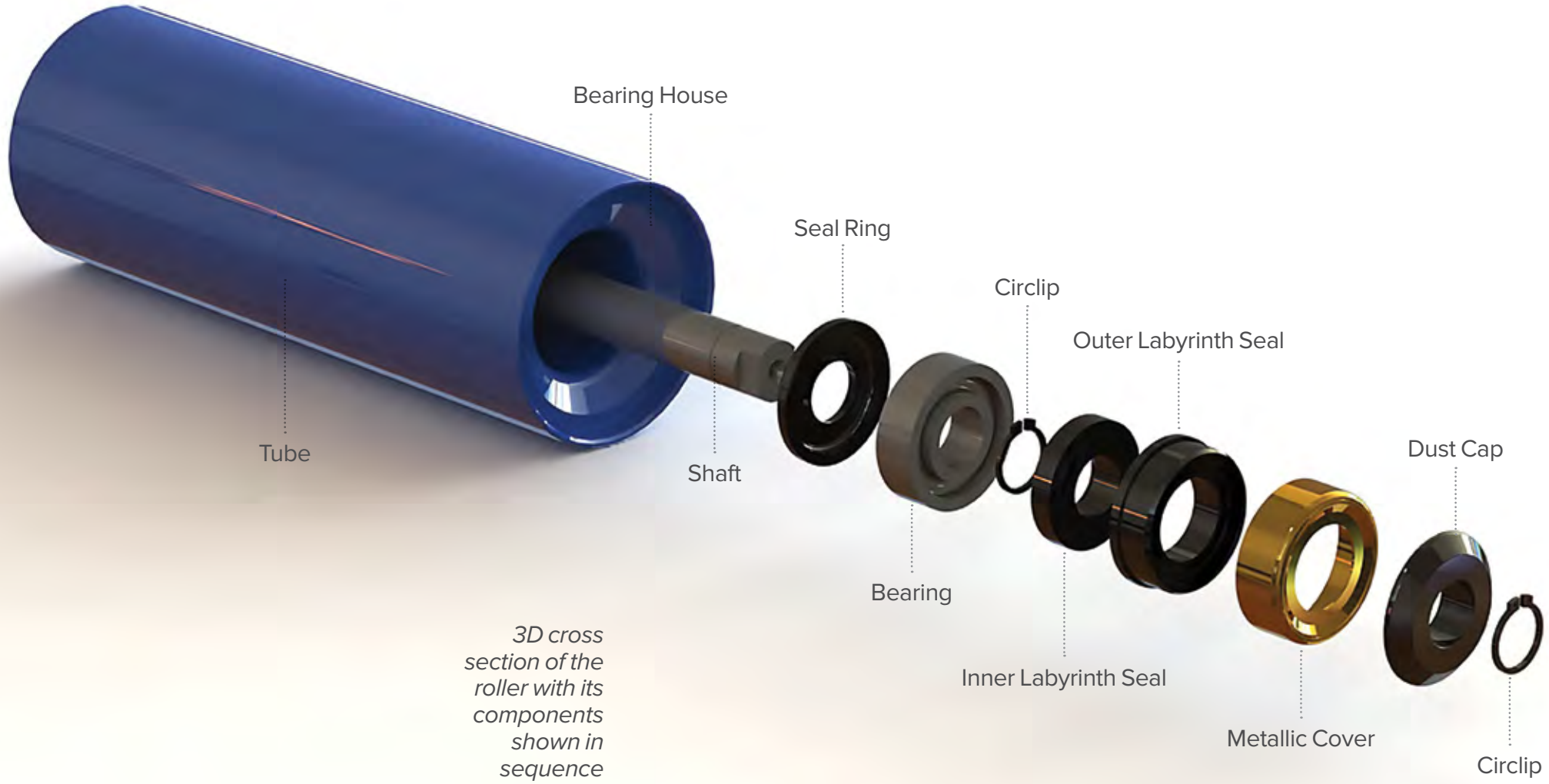
Return Roller
This type of roller is located on the return side of the belt conveyor and acts as a support for the belt. These rollers are generally plain tubes, however, for conveyors handling sticky material, they have spaced rubber rings mounted across the length.

Impact Roller
This type of roller is located on the areas where there is an uncontrolled feed to the conveyor such as below hoppers. It consists of rubber rings mounted on the steel tube to absorb the impact of material falling on the belt and thus, helps in avoiding damage to the belt and the roller tube. It also reduces the shock and vibration through the conveyor steel structure.



Guide Roller
This type of rollers are used to prevent the belt's lateral drift or movement. They are mounted vertically or at a suitable degree usually on self-aligning idler brackets.

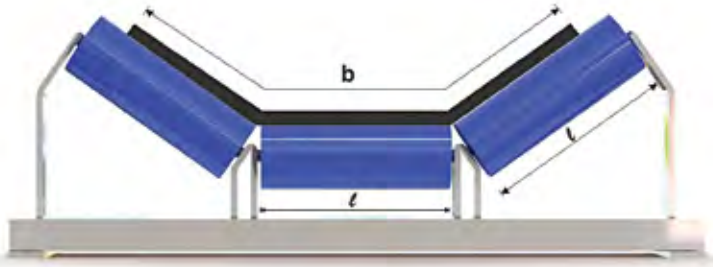
ROLLER CONSTRUCTION



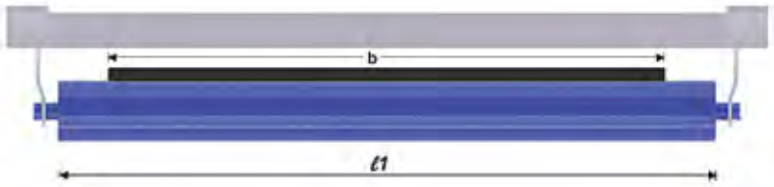
3D cross section of the roller with its components shown in sequence

ROLLER SPECIFICATIONS

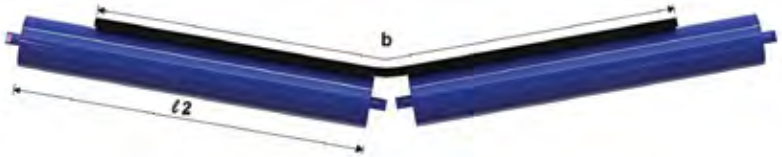
Lengths of Carrying and Return Rollers
See below table-1 for troughed belt conveyors using a centre roller and two side rollers on the carrying side and one or two rollers on the return side



Carrying idlers



One return idler



Two return idlers in V form

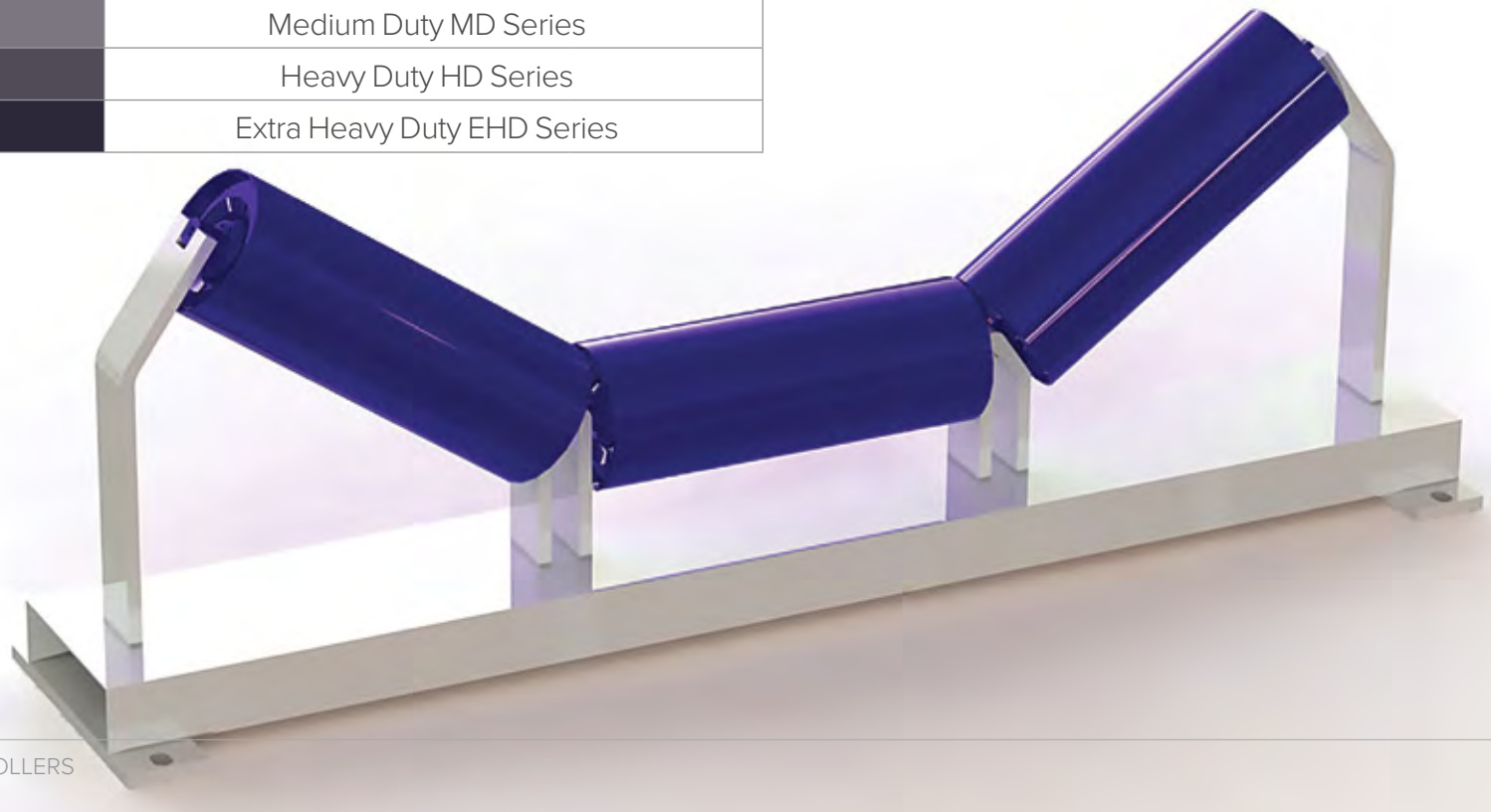
Belt Width 'b'	Carrying Rollers 'ℓ'	Return Rollers	
		One Roller 'ℓ1'	Two Rollers 'ℓ2'
MM	MM	MM	MM
400	160	500	-
500	200	600	-
650	250	750	-
800	315	950	465
1000	380	1150	600
1200	465	1400	700
1400	530	1600	800
1600	600	1800	900
1800	670	2000	1000
2000	750	2200	1100

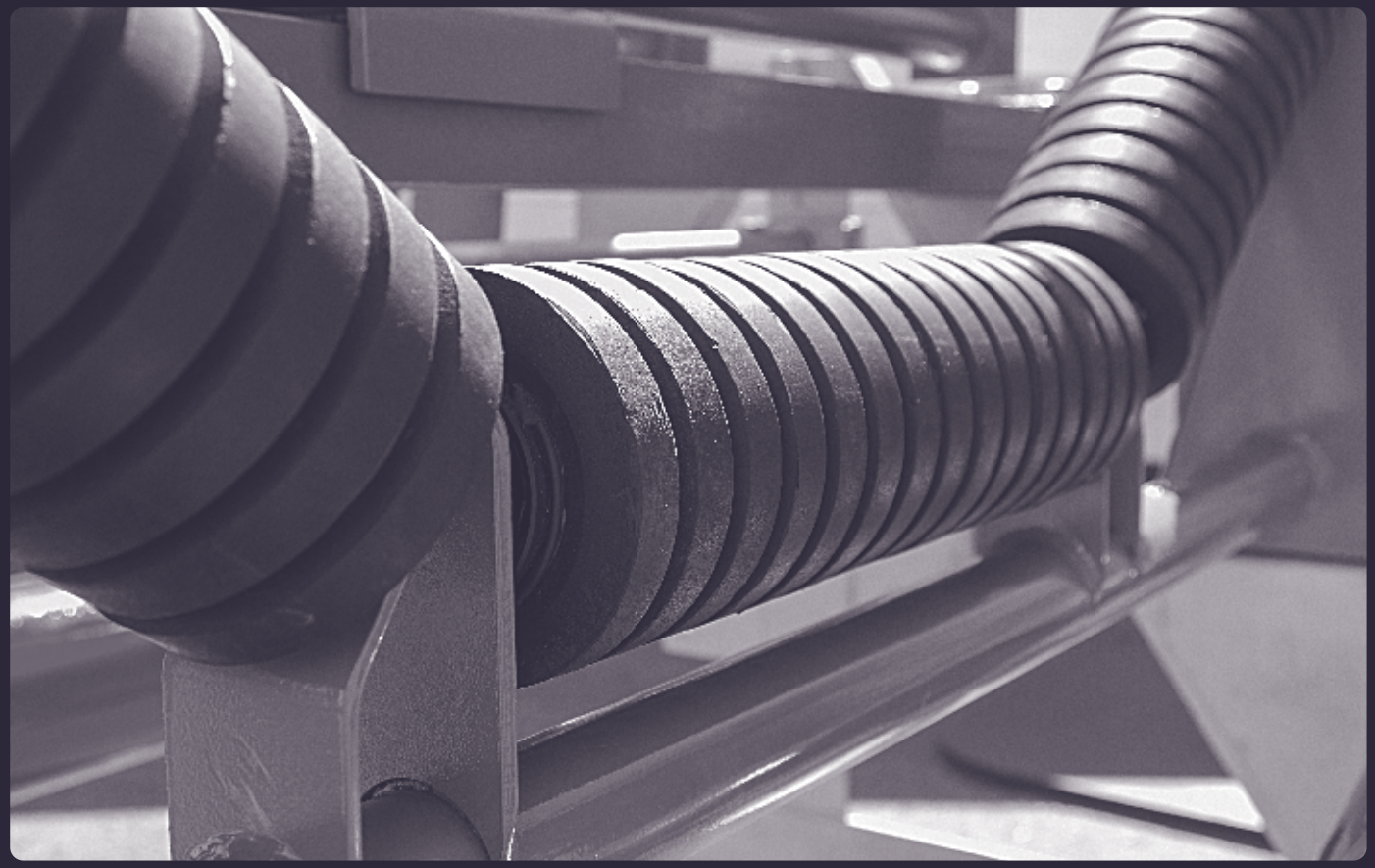
Table-1 (As per ISO 1537)

ROLLER SELECTION

Shaft Size (mm)	Bearing Type	Roller OD (mm)						
		63.5	89	108	127	133	159	219.1
Ø20	6204							
Ø25	6205/6305							
Ø30	6206/6306							
Ø40	6208/6308							

	Light Duty LD Series
	Medium Duty MD Series
	Heavy Duty HD Series
	Extra Heavy Duty EHD Series





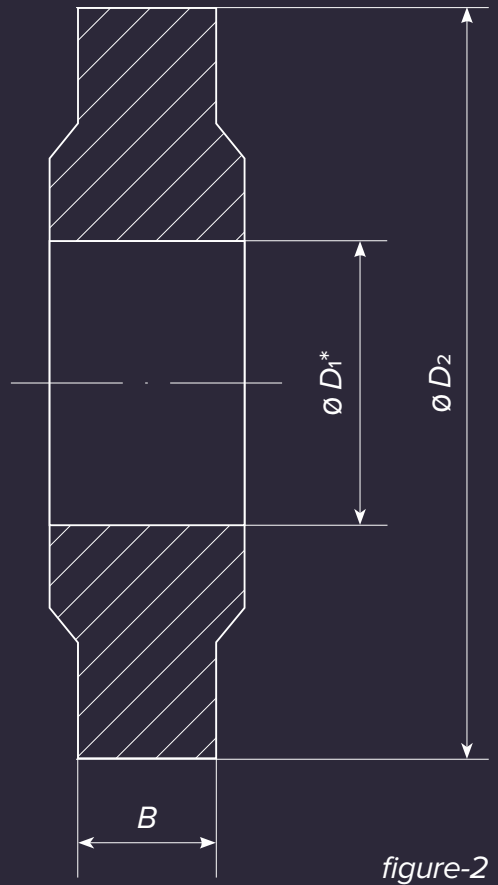


figure-2

IMPACT RUBBER RINGS FOR CARRYING ROLLERS

Please see below figure-2 and table-2 showing the dimensions of standard available rubber rings. We can also provide customised specifications based on customer requirement.

Roller Diameter, D1	63.5		89		108			133	
D2	108	133	133	159	159	194	219	194	219
B	30		35		40		45		

** Table-2 (As per ISO 1537) Diameter D1, shall be chosen so that the impact ring can be securely fixed on the idler.*

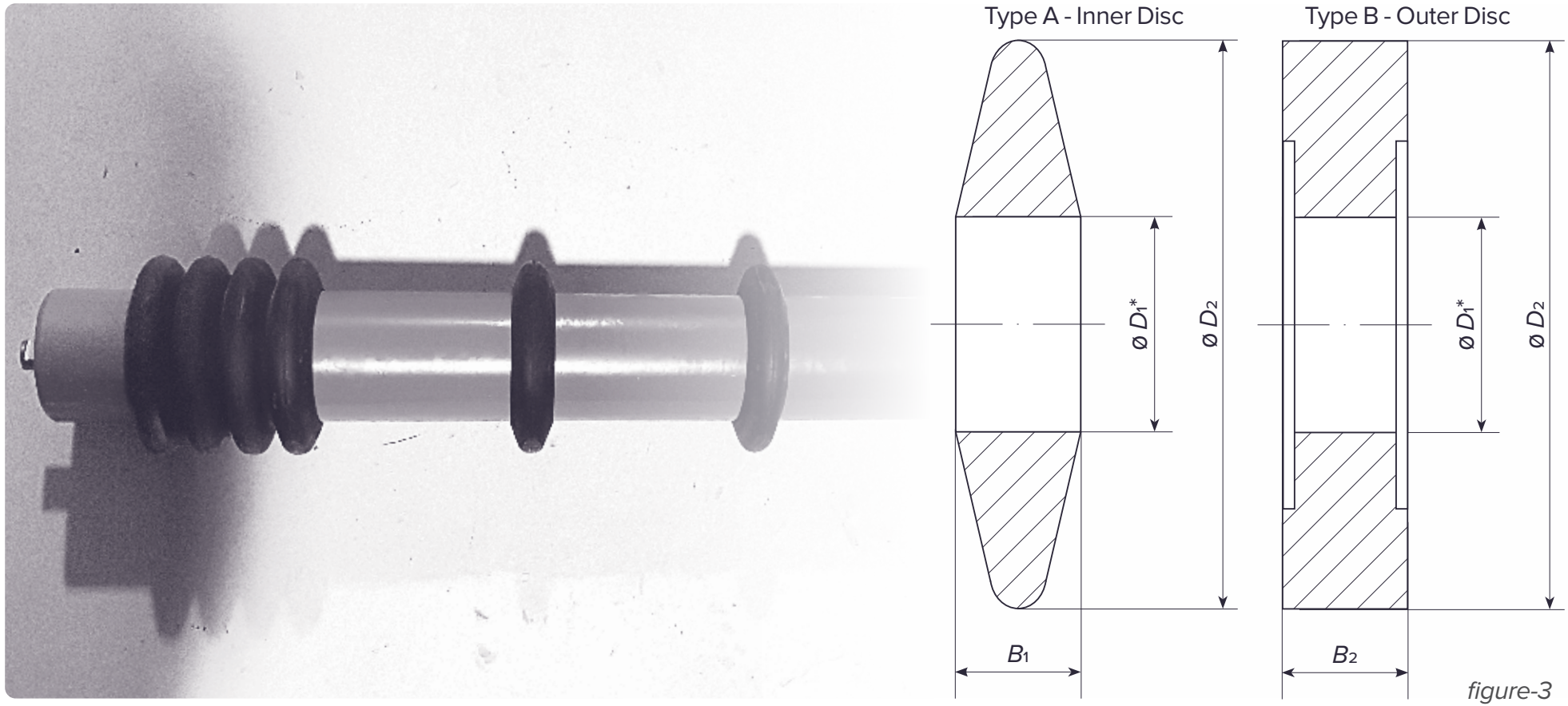


figure-3

RUBBER DISCS FOR RETURN ROLLERS

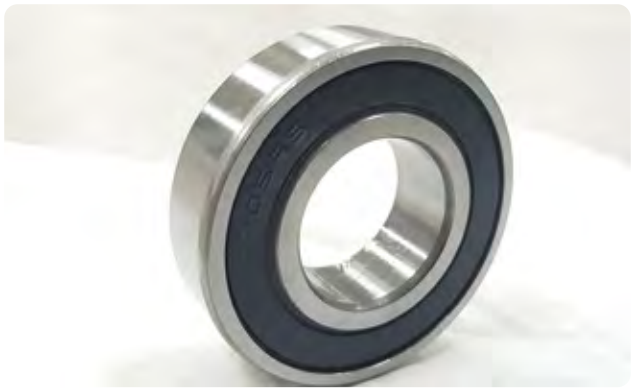
Please see below figure-3 and table-3 showing the dimensions of standard available rubber disks. We can also provide customised specifications based on customer requirement.

Roller Diameter, D1	63.5		89		108			133		159
D2	108	133	133	159	159	194	219	194	219	219
B1	25		30		35		40			45
B2	40				50					

** Table-3 (As per ISO 1537) Diameter D1, shall be chosen so that the disc can be securely fixed on the idler.*

MATERIALS

Apart from a sophisticated production line, it is also important that the raw materials used for production are of highest quality and are suitable considering the operating conditions of the end-product. Below we have summarised the material details of the different components of a roller.



Steel Tube
We use St37-2 material ERW tubes. We ensure that the tube concentricity and straightness are within the acceptable limits.

Shaft
St37-2 cold drawn round bars machined to close tolerances ensure that the bearings and seals assemble perfectly with the shaft. The shaft ends, circlip grooves, bearing and seal seating areas are precisely machined for perfect fitting.

Bearing
We employ deep groove ball bearings having less rolling resistance and high running life. Bearings are provided with integral double seals to provide additional protection from external contaminants. Also, the area between the bearing and Labyrinth seals can be filled with grease for additional protection and lubrication.

Bearing Housing
We use high grade steel punched to close tolerances to ensure the bearings and seals have a proper fit with housing and the complete assembly is concentric.

Inner Seal
Inner Seal is made from Nylon 6 in a special shape to prevent the contaminants to enter the bearing from internal area of the roller.

Labyrinth Seals
The sealing of the bearings has an essential effect on the service life of the rollers. We can provide double or triple lipped seals made of POM material. They provide a completely sufficient sealing effect combined with a low running resistance and favourable wear-related characteristics. These seals prevent the outside contaminants from damaging the bearing. The sealing system has two parts – internal seal and external seal.

Circlip
Our roller design consists of circlip mounted on two positions. This arrangement ensures that the placement of the bearing and seals assembly is not compromised even under high operating loads and for longer operating periods.

Metallic Cover
This is made from high grade steel and is mounted in between the labyrinth seals and dust cap. It prevents the dust particles from reaching the labyrinth seals both through the bearing housing surface and the shaft surface.

Dust & Rain Cap
The dust cap is made from Nylon 6 and is mounted at the end of the roller after the metallic cover. With integrated rubber ring, this cap provides an additional sealing.

We follow stringent vendor registration and raw material sample testing process to ensure that only high-quality materials are used in all our products. Also, third-party testing is used to make sure that materials conform to the required international standards.

QUALITY ASSURANCE

At Saudi Rollers, Quality is not just a routine but an obsession. Creating a high-quality product is the responsibility of each and every employee of CemServ, and it is something that we all take great pride in working towards every day.

A high-quality roller is one that is easy to install and gives a long operating life. Both can be achieved thanks to a relentless focus on strict quality control throughout all stages of the manufacturing process. Every roller is tested for run-out at the end of production to ensure that the values are within acceptable limits.

CemServ follows international standards ISO 1537, ISO 4123, DIN 15207-1, VDI 2341.

PACKAGING & WAREHOUSE

Product packaging is an integral part of the manufacturing process, so all items are packaged with consideration given to size, shape, quantity, and weight.

Standard packaging consists of every roller packed in a plastic sack and the complete set of rollers steel-strapped with a pallet. If required by the customer, rollers can be packed in wooden crates or boxes to protect it from weather and damage during transportation and storage.

For convenience of the customers, CemServ maintains stocks of running sizes in its warehouse, which means less down-time for the customers.

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