PERFECT ENGINEERING COMPONENTS (P) LTD.

- CONVEYOR SOLUTIONS
- ROLLERS
- PULLEYS

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ABOUT OUR COMPANY

SINCE ITS FOUNDATION IN 2005 HAS GROWN TO BECOME ONE OF THE INDIA'S LEADING MANUFACTURERS OF CONVEYOR ROLLERS/IDLERS, PULLEYS, FABRICATED PULLEYS AND OTHER COMPONENTS FOR THE BULK HANDLING INDUSTRY.

Today, Perfect Engineering Components (P) Ltd. specialize in the supply of long-lasting premium belt conveyor components. Products are developed and produced to meet the most demanding everyday challenges of all major bulk handling applications: coal and lignite mining, cement, steel, quarries, tunneling, power plant installations, ports, salt and fertilizers, sugar plants, recycling and demolition, crushing and screening.

The close partnership with our customers, OEMs, engineering companies and end users has made us one of the most trusted brands in the industry. With a long-term perspective, our combination of traditional values and openness to innovation continues to be one of our key success factors. This is also seen in our consistent environmental and social responsibility throughout the value chain. We are committed to the continuous improvement of our range, often considered among the best in the market. Our research departments are equipped with state-of-the-art test facilities, where our products are thoroughly examined under extreme conditions.

Perfect Engineering products improve the performance, safety and reliability of systems, equipment and machines within the bulk handling industry. Whatever your materials handling problem might be, talk to us. We have the expertise, the experience – and the products you need.

VISION & MISSION

STATEMENT IN THIS

WHY USE OUR PRODUCT ?

Perfect Engineering Components (P) Ltd. has been a long-term trusted partner for clients in the north india region and beyond since 1996 working closely with our clients allows us to act in their best interest over the long term.

MANUFACTURING CAPACITY

We are manufacturing 32000 Rollers per month and 800 Pulleys per month.
Also, We are supplying 50 Complete Conveyors per month (With belt, Gearbox).

OUR PRODUCT

- BELT CONVEYOR
- IDLER ROLLERS
- PULLEYS
- BRACKETS

OUR HAPPY CUSTOMERS

- METSO
- TIL
- PROPEL
- BEUMERS

OUR CLIENTS BENEFIT FROM

- Considerable range of combined technical knowledge and experience
- A proven client service model: locally owned and operated
- Timely response to any issues
- Cost efficient services
- Longer Life

CLIENT AND FUTURE FOCUSED

We have the technical team with enhancing client management and to provide a better level of service to our clients brings a management experience to the company. We are committed to ensuring that our often very busy technical team is resourced appropriately for the ultimate benefit of our clients.

OWNERSHIP & MANAGEMENT

Perfect Engineering Components is a private company. Founded in the 2005 by Ishwar Saini, the company is registered as Perfect engineering components private limited

CONCLUSION :

Perfect Engineering's focus is to provide a long term partnerships with our clients. These long term relationships allow us to understand our clients' unique needs and requirements and provide a high level of Quality And Service.
We believe we can provide cost effective Quality & Support allowing you to get the best from your investment. If you are interested in knowing more as to how Perfect Engineering can help you in Operating conveyor systems efficiently, we would be delighted to discuss this with you.

CONTENT

ROLLERS

F-ROLLERS (FLAT)

- 63 mm----------
- 76 mm ----------
- 89 mm ----------
- 102 mm ----------
- 108 mm ----------
- 127 mm ----------
- 133 mm ----------
- 152 mm ----------
- 159 mm ----------
- 194 mm ----------

R - ROLLERS (RUBBER-LAGGED)

- 76/108 mm ---------
- 89/133 mm ----------

I - ROLLERS (IMPACT)

- 63/108 mm ---------
- 89/133 mm ---------
- 89/159 mm ---------
- 108/194 mm --------
- 133/245 mm --------

T - ROLLERS (TRAINING)

- 89/108 mm ----------
- 108/ 133 mm --------
- 63 /108 mm ----------

D - ROLLERS (RETURN DISC, SELF-CLEANING)

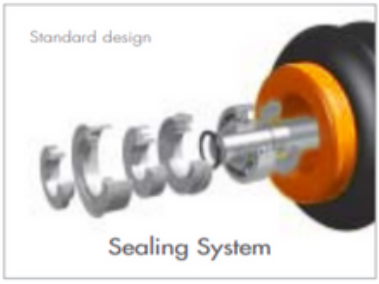
- 63/108 mm ---------
- 63/133 mm ---------
- 89/133 mm ---------
- 89/159 mm ---------
- 108/159 mm --------
- 108/194 mm --------
- 133/194 mm --------
- 133/245 mm --------

S - ROLLERS (RETURN SPIRAL, SELF-CLEANING)

- 108 mm ----------
- 133 mm ----------

PERFECT ROLLER DESIGN

- Manufactured from seamless or lengthwise welded accurate steel tubes of ISO 4200 grade steel
- Wall thickness corresponds to the loading and operating conditions the roller is subjected to and is optimized by FEM calculations and verified by long-term testing



SHAFT

- Drawn from ISO 1035 - 1, ISO 1035-4, EN 10278 grade round bars
- The ends of shafts are CNC machined
- The shaft is ground to a fit tolerance of ISO h6

BEARING HOUSING

- Deep drawn from quality sheet steel
- Sheet thickness corresponds to the loading and operating conditions the roller is subjected to and is optimised by FEM calculations and verified by long-term testing
- Bearing fit tolerance to ISO M7

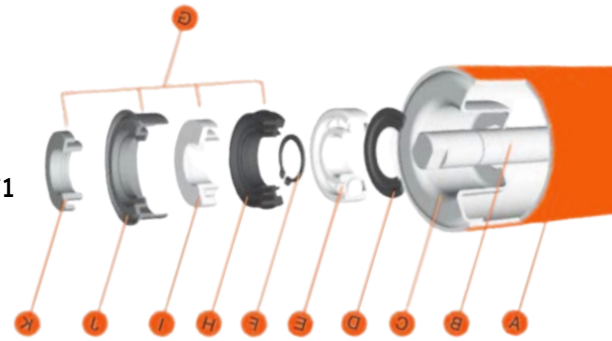
SEALING - THE BACK SEAL

- Manufactured from special polyamide-based material
- Its shape prevents contaminants entering the bearing from the internal area of the roller

BEARING

- Single-row ball bearings are used, with dimensions in compliance with ISO 15
- C3 radial bearing clearance provides for optimum roller operation
- Bearings are filled with lithium based water repellent grease

CIRCLIP



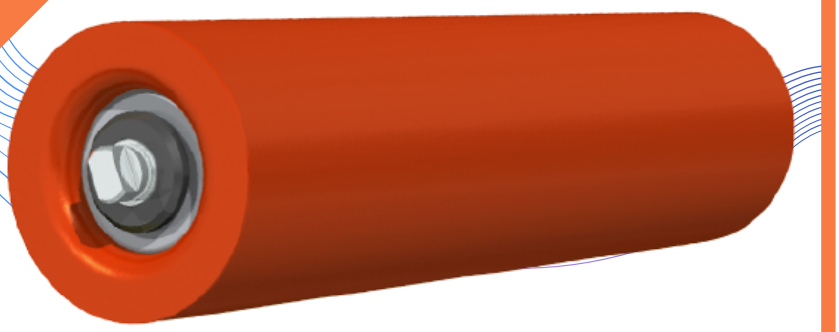
- Manufactured from hardened spring steel in compliance with DIN 471
- Prevents axial movement of the shaft

LABYRINTH SEALING SYSTEM

- The system comprises of several sealing elements which prevent contaminants from entering the bearing
- Individual elements of the system are circular in shape with interlaid lips which form a labyrinth
- The shape of the lips is designed to prevent the intrusion of contaminants into the bearing chamber without increasing rotational frictional resistance

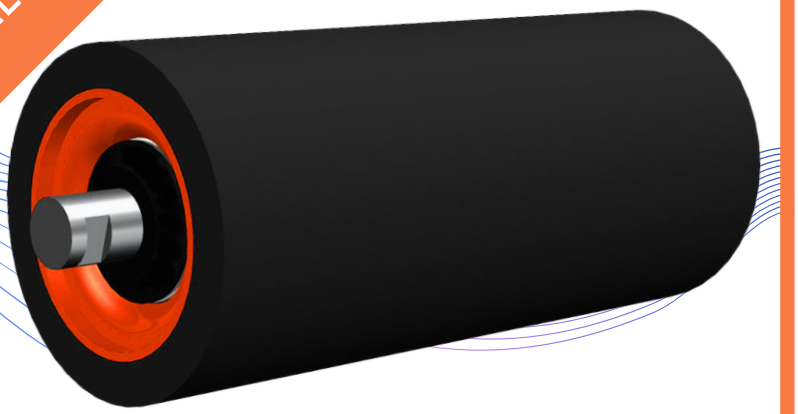
TYPES OF ROLLERS

FLAT ROLLERS - F



Used for carrying and return idlers, recommended up to belt widths of 2000mm

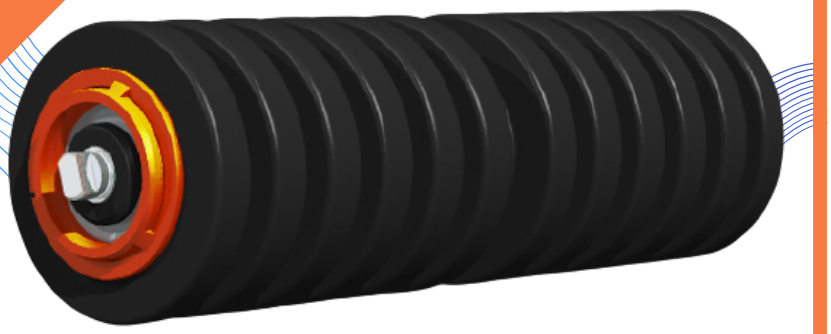
RUBBER-LAGGED ROLLERS - R



Used to reduce the dynamic effects of impact in the filling area or hopper

ROLLERS

IMPACT ROLLERS - I



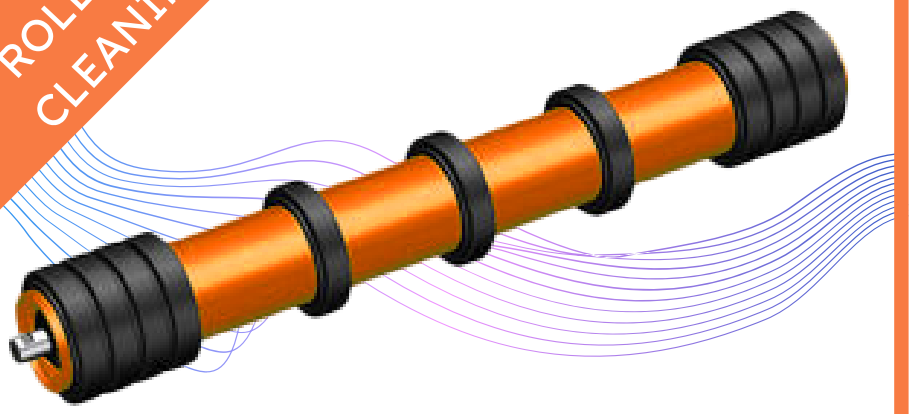
Used to reduce the dynamic effects of impact in the filling area or hopper

TRAINING ROLLERS - T

Used for conveyor belt alignment when passing through the training idler

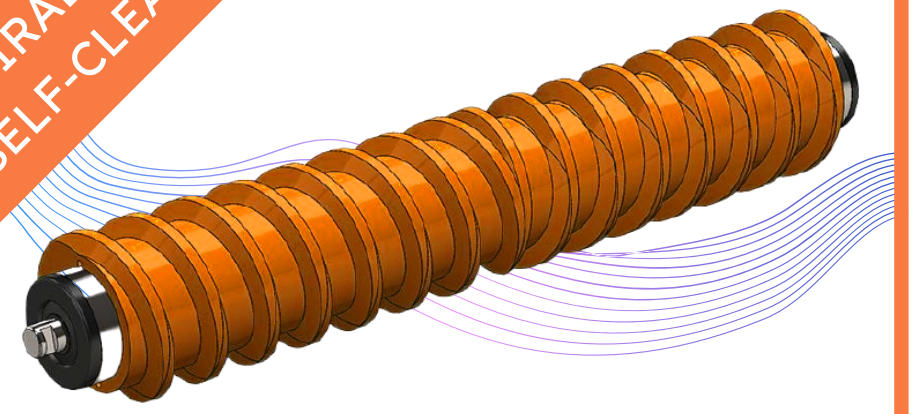
ROLLERS

RETURN DISC ROLLERS (SELF-CLEANING) - D



Used for cleaning belts from residual contamination

RETURN SPIRAL ROLLERS (SELF-CLEANING) - S



Used for cleaning heavily contaminated belts

SELECTING ROLLERS ACCORDING TO BELT WIDTH AND SPEED

BELT WIDTH B	ROLLER DIAMETER (MM)				BEARING	ROLLER LENGTH FOR STATION TYPE (MM)			MAX. BELT SPEED M/S
400	63,76,89	108/63	108/76	108/63	6204, 420204	500	250	160	3.5
500	63,76,89	108/63	108/76	108/63	6204, 420204	600	315	200	3.5
650	63,76,89	108/63	108/76	108/63	6204, 420204	750	380	250	3.5
800	89,108	108/63	108/76	108/63	6204, 420204	950	465	315	3.5
1000	10,81,33	133/89	133/89	133/89	6204, 420204	1150	600	380	3.5
1200	133	133/89	133/89	133/89	6204, 420204	1400	670	465	3.5
- -	133	159/89	- -	159/89	6305	1400	670	465	5.5
- -	133	159/89	- -	159/89	6306	1400	670	465	7.5
1400	133	133/89	- -	133/89	6204, 420204	1600	750	530	3.5
- -	133	159/89	- -	159/89	6305	1600	750	530	5.5
- -	133	159/89	- -	159/89	6306	1600	750	530	7.5
1600	159	194/108	- -	- -	6308	- -	900	600	7.5
1800	159	194/108	- -	- -	6308	- -	1000	670	7.5
2000	194	245/133	- -	- -	6310	- -	1150	750	7.5

OPERATION CONDITIONS

TRANSPORTED MATERIAL

Non-sorted bulk materials with max. loose mass 2,1 t/m3. The percentage of lumps cannot exceed 5% of all transported material.

APPROXIMATE LUMP SIZES:

BELT WIDTH [MM]	400	500	650	800	1000	1200	1400	1600	1800	2000
MAX. LUMP SIZE [MM]	100	150	250	300	400	500	600	675	750	800

Conveying Speed

- Max. 3,5 m/s for belt width 400-1400 mm and rollers with bearing 6204, 420204, 420204
- Max. 5,5 m/s for belt width 1200-1400 mm and rollers with bearing 6305, 420205
- Max. 7,5 m/s for belt width 1200-2000 mm and rollers with bearings 6306, 6308, 6310 and 6312
- On determining the max. speed for a specific application the roller diameter needs to be taken into consideration as this determines the number of revolutions at the given speed (max 700 rpm)

WORKING CONDITIONS

Chemical and mechanical contamination, IE41, working temperature from -32°C to + 45 °C (for temperatures lower than -20°C special lubrication should be applied – contact PERFECT Components sales department)

STORAGE

Rollers must be stored on a palette on stabilized solid ground under a roof. Storage temperatures range from -25°C to + 45 °C. Storage for longer than 6 months is not recommended.

INSTALLATION AND MAINTENANCE

Mounting of rollers in garlands and idlers and the installation of garlands and idlers on the conveyor frame can only be carried out by skilled workers and designated organizations. Installed rollers should be rotated by hand to check that they have been installed correctly. During operation it is necessary to check that rollers are working correctly. Rollers that are not working properly (e.g. incorrect rotation, whistling, overheating, increased axial and radial clearance, shell or rubber wear, deformed) must be replaced.
Upon request PERFECT can provide an installation and maintenance manual describing all procedures necessary for proper installation and maintenance.

SERVICE LIFE

The average service life of roller (bearing durability) is 30.000 working hours within 5 years of the production date. This service life is also valid if all operational conditions are met and the rollers are installed within 6 months of the production date. The service life does not apply to discs, buffer-rings and rubber lagging or to the conveying of extremely abrasive bulk materials, e.g. fly-ash, slag.

GENERAL CONDITIONS OF SALE

Orders should include: name, code, surface finish, quantity, other special requirements, e.g. balance, surface finish, package etc.

PACKAGING

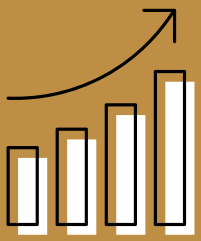
Rollers are supplied on wooden palettes 800x1200mm Different types of packaging must be agreed in advance with the producer and must be specified in the order. Each palette is marked with a label, stating the name and dimensions of rollers, order number, code, quantity.

ACCEPTANCE AND QUALITY INSPECTION

Unless agreed in advance, acceptance is not performed. If acceptance and quality inspection are required please state this in your order.

PRICING

Price quotations are valid for 3 months from issue unless stated otherwise.

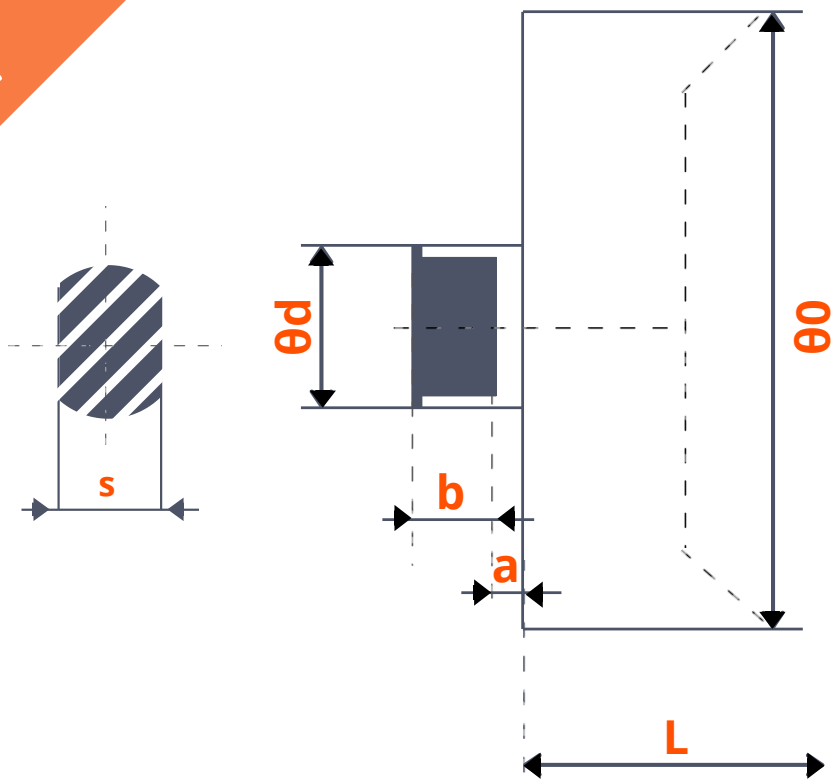


GUARANTEE

If all the requirements of these specifications are met the producer provides a 24 months guarantee from the date of installation, however no longer than 30 months from the delivery date.

STANDARD DIMENSIONS OF SHAFT ENDS

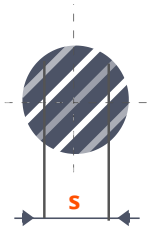
A - DOUBLE FLAT

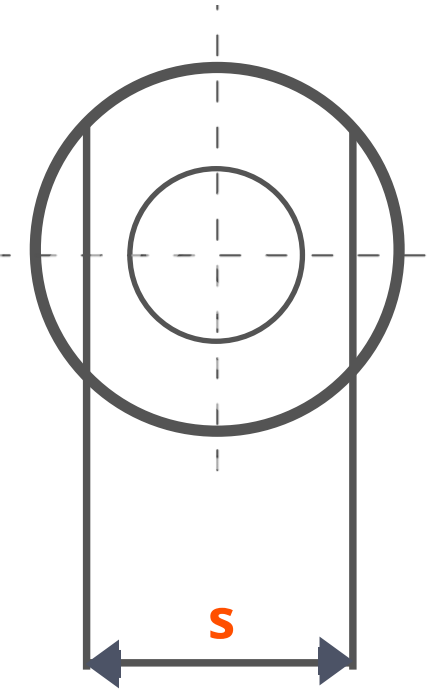


B E A R I N G

	6204, 420204	6205, 420205	6206, 420206	6308	6310
d	20	25	30	40	45
s	14	18	22	32	32
a	9	12	12	12	15
b	4	4	4	4	4

B E A R I N G

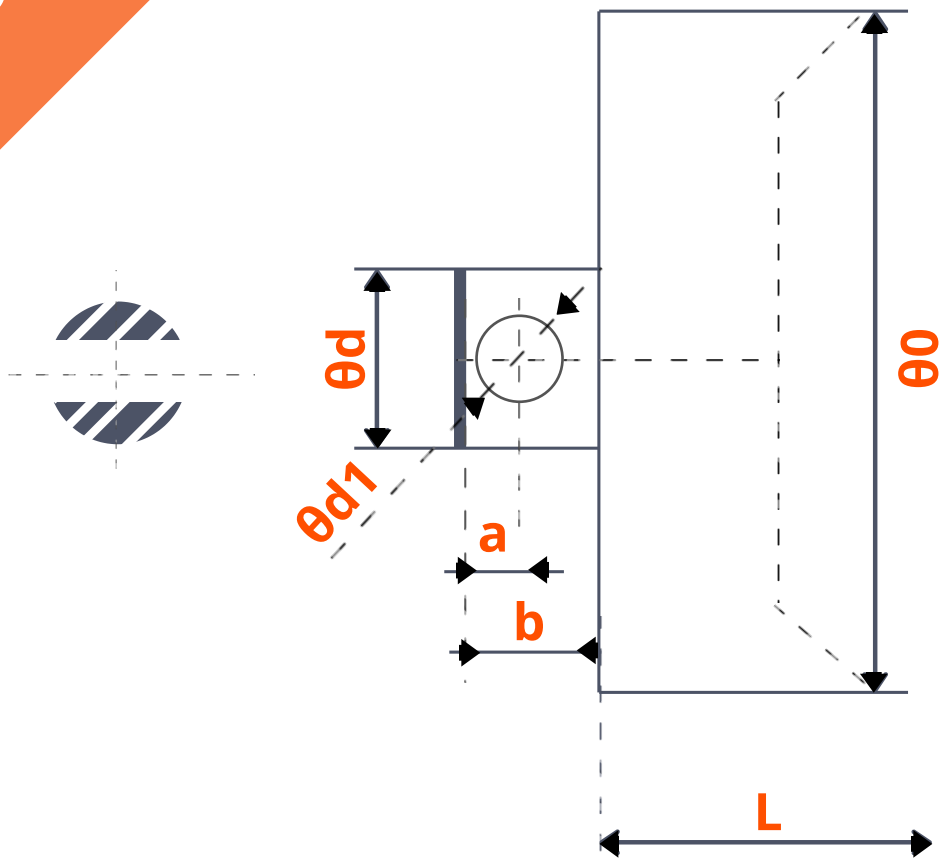
B - INTERNAL DOUBLE FLAT	6204, 420204	6205, 420205, 6305	6206, 6306	6308	 6310
Æd	20	25	30	40	45
s	14	18	22	32	32
a	9	12	12	12	15
b	4	4	4	4	4
t	4	4	4	5	6



B E A R I N G

C- BUSH	6204, 420204	6205, 420205, 6305	6206, 6306
Æd	20	25	30
s	14	18	22
a	9	12	12
b	4	4	4

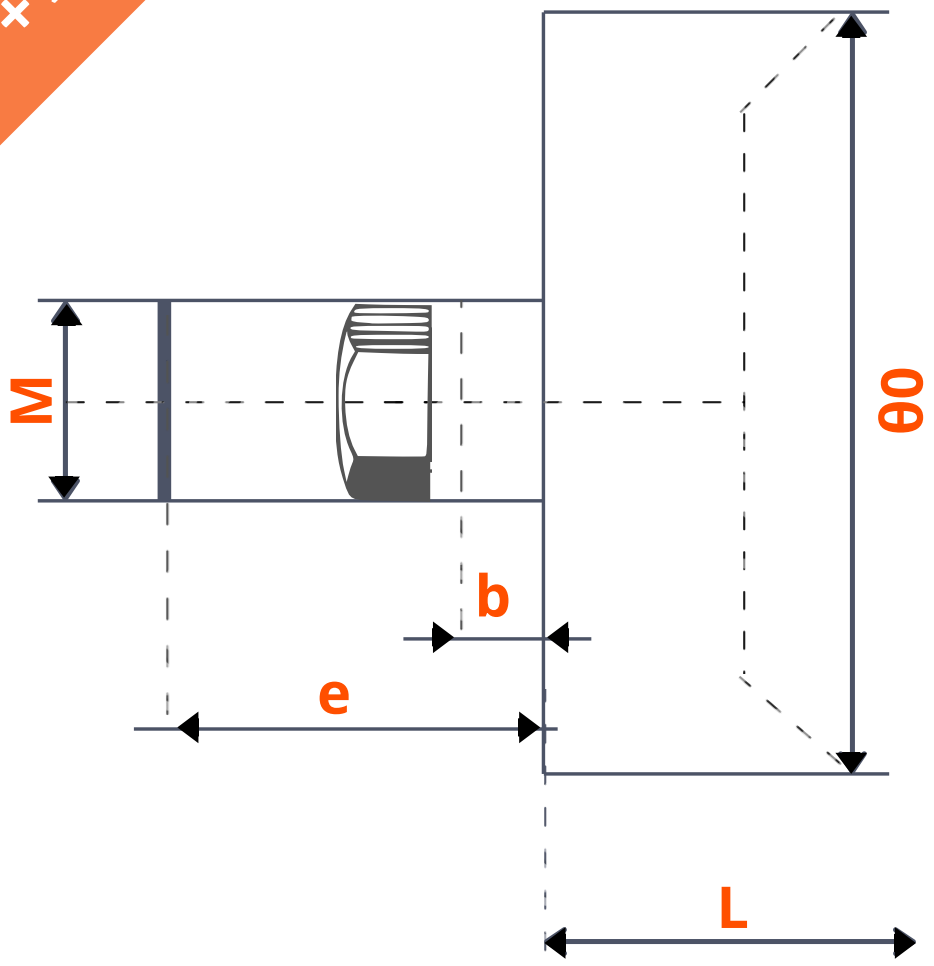
D-GARLAND



B E A R I N G

	6204, 420204	6205, 420205, 6305	6206, 6306	6308	6310	6310
θd	20	25	28	38	48	48
θd1	8,4	8,4	10,3	17,0	20,0	20,0
a	10	10	12	19	22	22
b	23	23	27	44	52	52

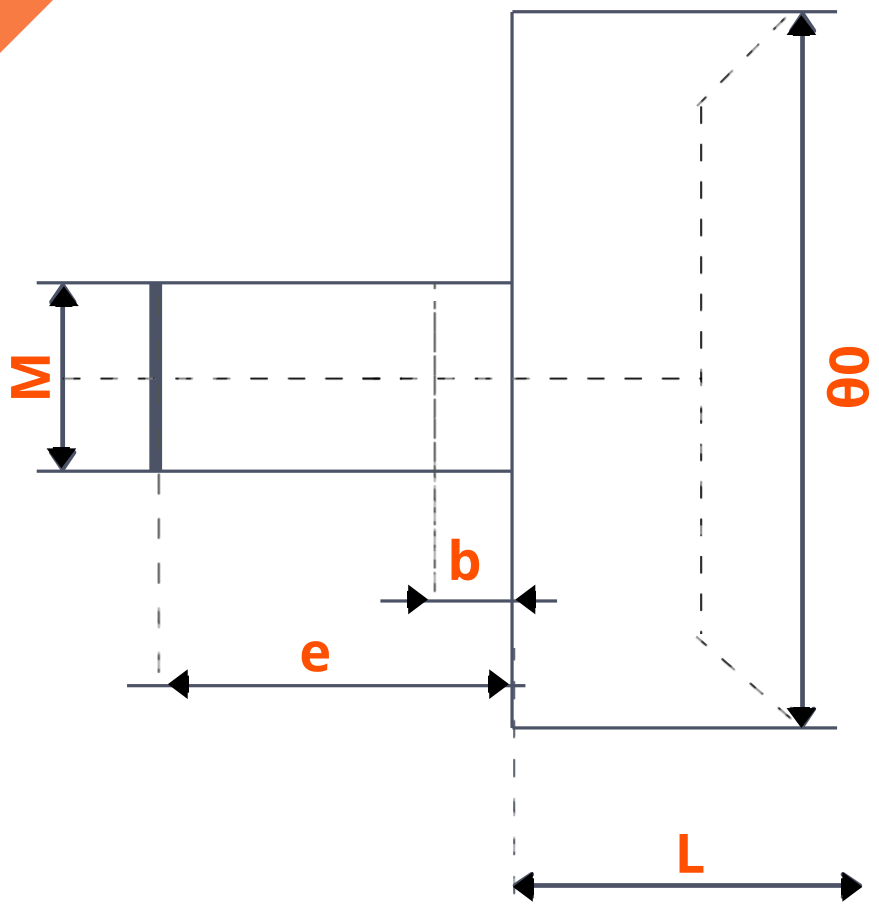
EXTERNAL THREAD + NUT

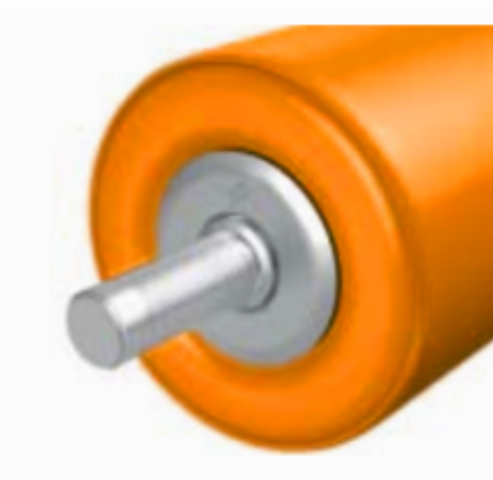


BEARING

	6204, 420204	6205, 420205, 6305	6206, 6306	6308
M	20	24	30	36
b	5	5	5	10
e	43	43	48	70

EXTERNAL THREAD

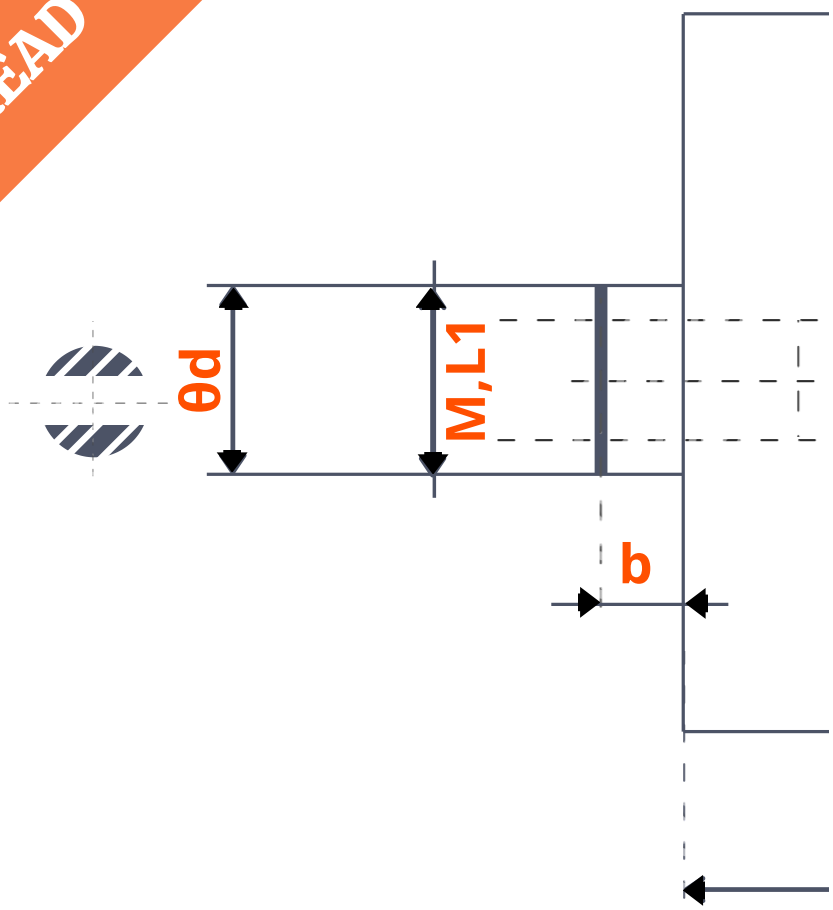




BEARING

	6204, 420204	6205, 420205, 6305	6206, 6306	6308
M	20	24	30	36
b	5	5	5	10
e	43	43	48	70

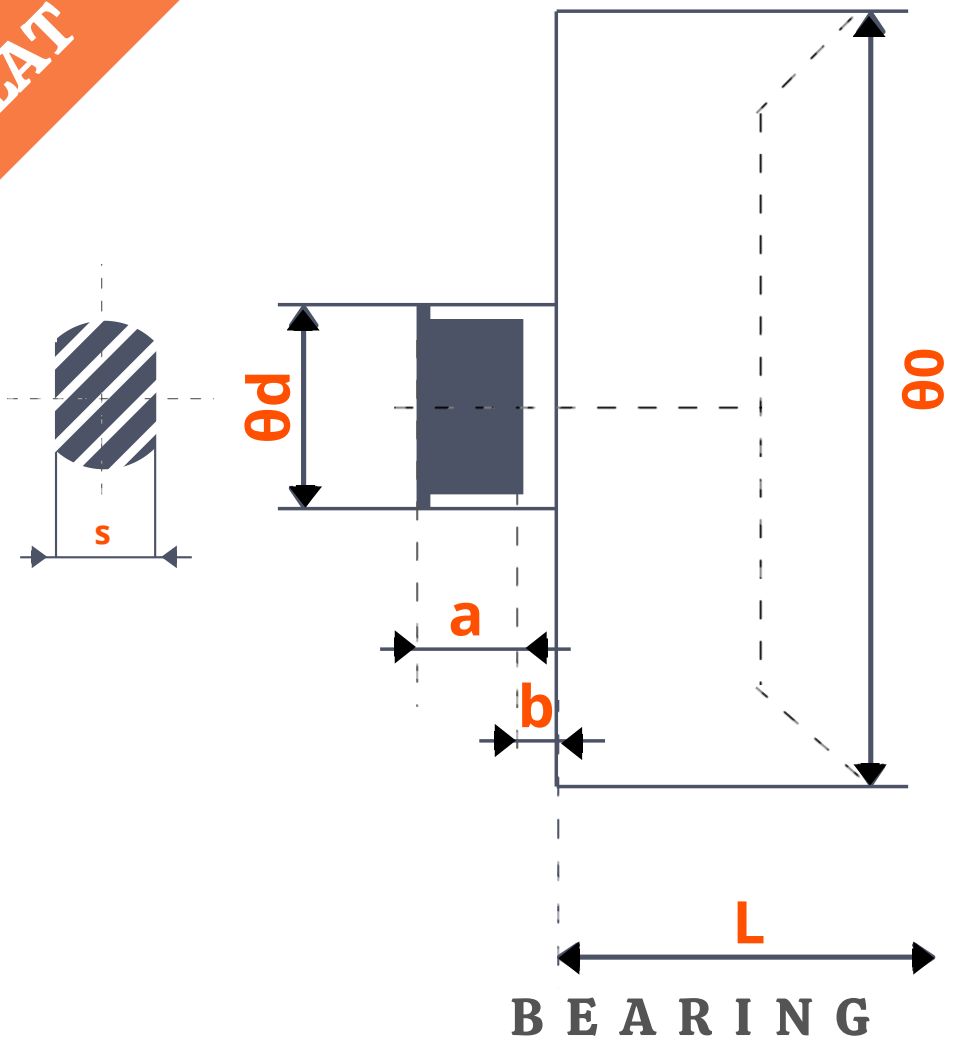
G - INTERNAL THREAD



BEARING

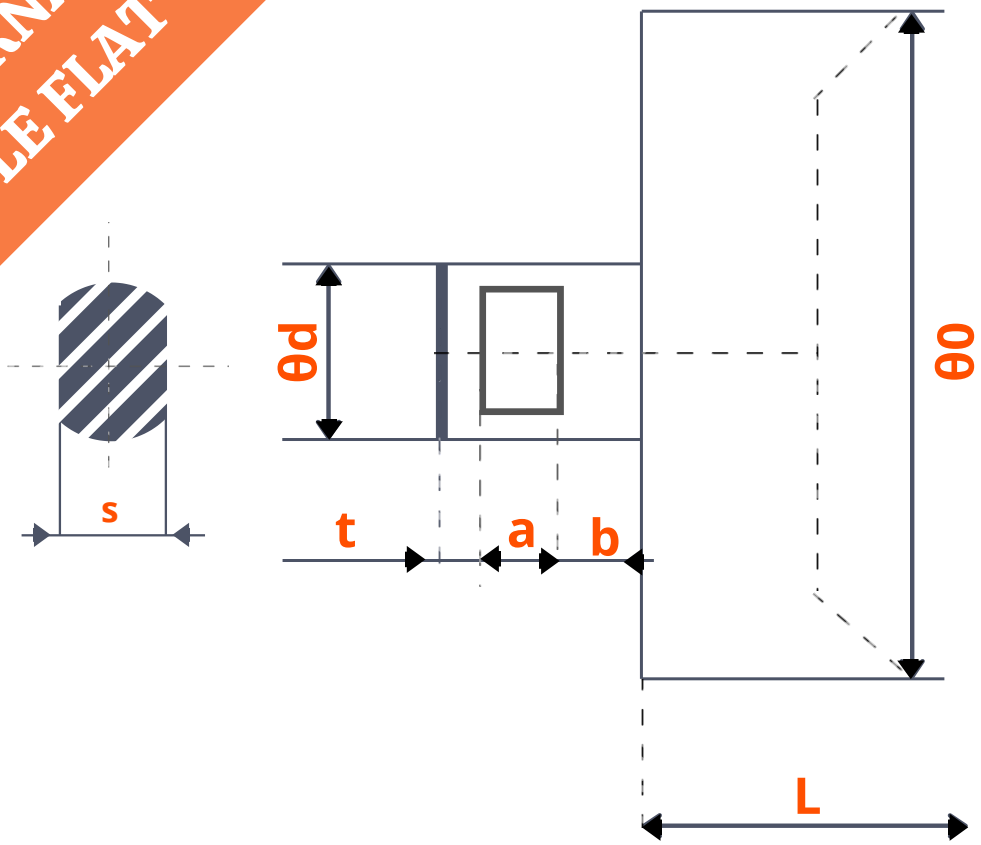
	6204, 420204	6205, 420205, 6305	6206, 6306	6308
Æd	20	25	30	40
M	12	16	16	20
L1	20	25	25	30
b	4	4	4	4

SINGLE FLAT



	6204, 420204	6205, 420205, 420205 6305	6206, 6306	6308	6310
Æd	20	25	30	40	45
s	17	22	26	36	38
a	9	12	12	12	15
b	4	4	4	4	4

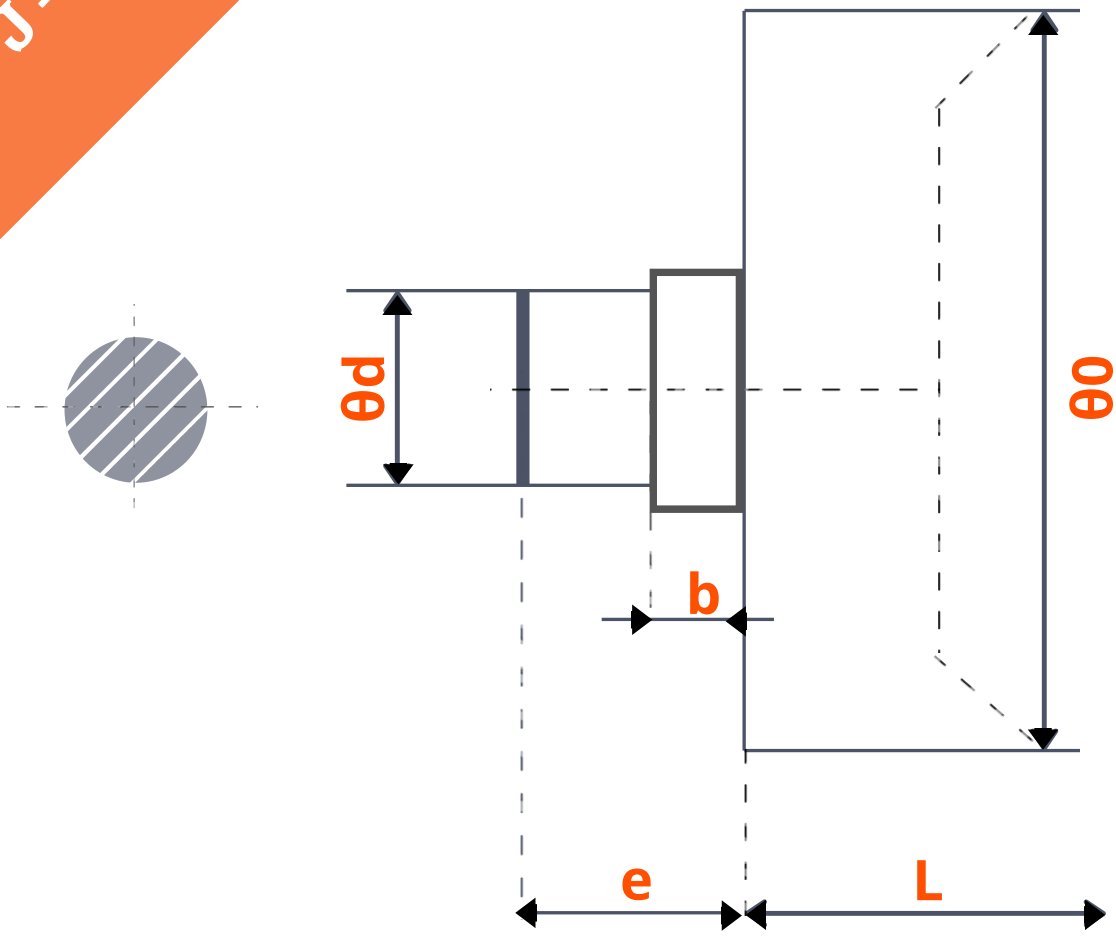
I - INTERNAL SINGLE FLAT



B E A R I N G

	6204, 420204	6205, 420205, 420205 6305	6206, 6306	6308	6310
Æd	20	25	30	40	45
s	17	22	26	36	38
a	9	12	12	12	15
b	4	4	4	4	4
t	4	4	4	5	6

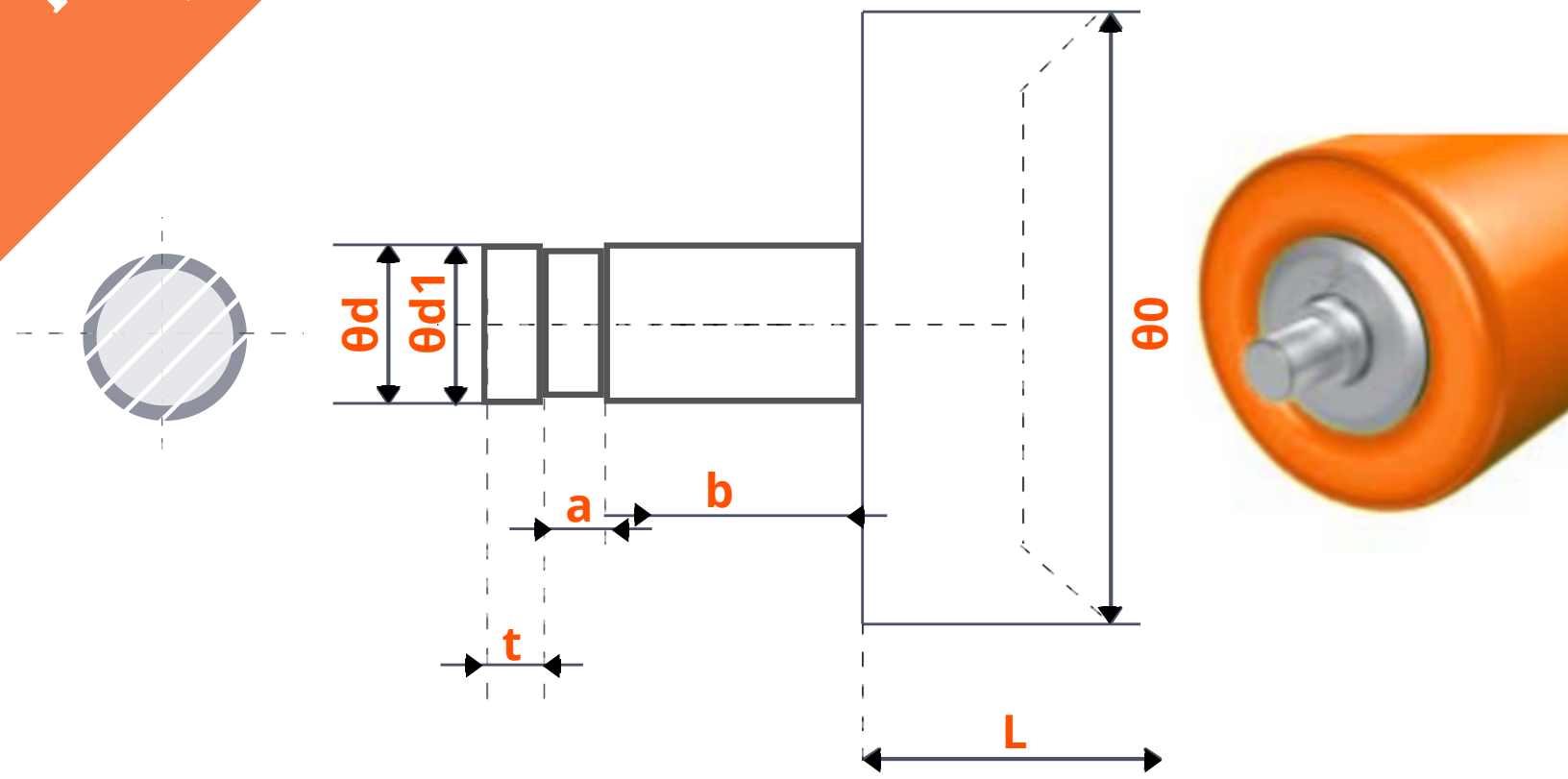
J - PLAIN



BEARING

	6204, 420204	6205, 420205, 420205 6305	6206, 6306	6308	6310
θd	20	25	30	40	45
e	13	16	20	30	30

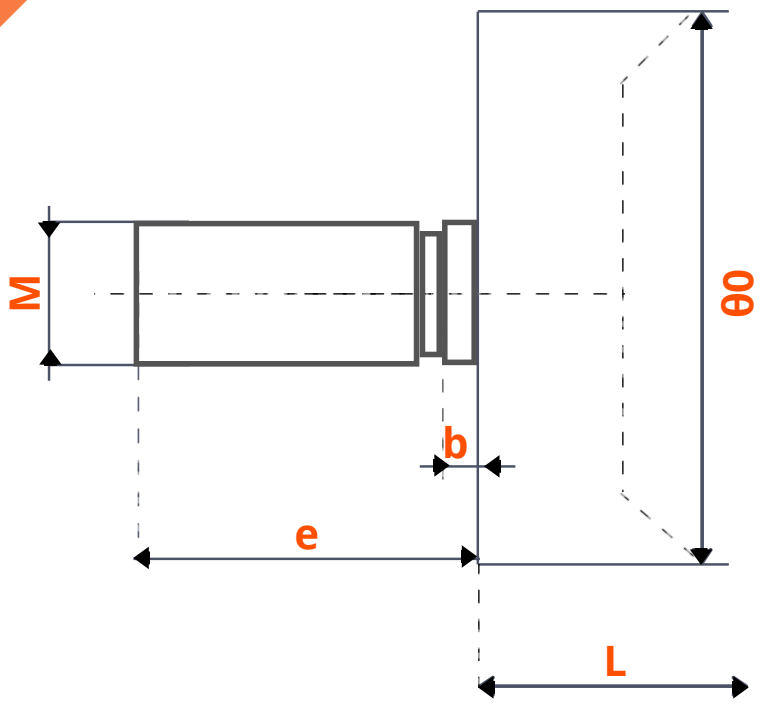
K - REDUCED PLAIN



B E A R I N G

	6204, 420204	6205, 420205, 420205 6305	6206, 6306	6308	6310
Æd	Æ £ 20	Æ £ 25	Æ £ 30	Æ £ 40	Æ £ 45
b	AS REQUIRED ³ 4				
e	AS REQUIRED				

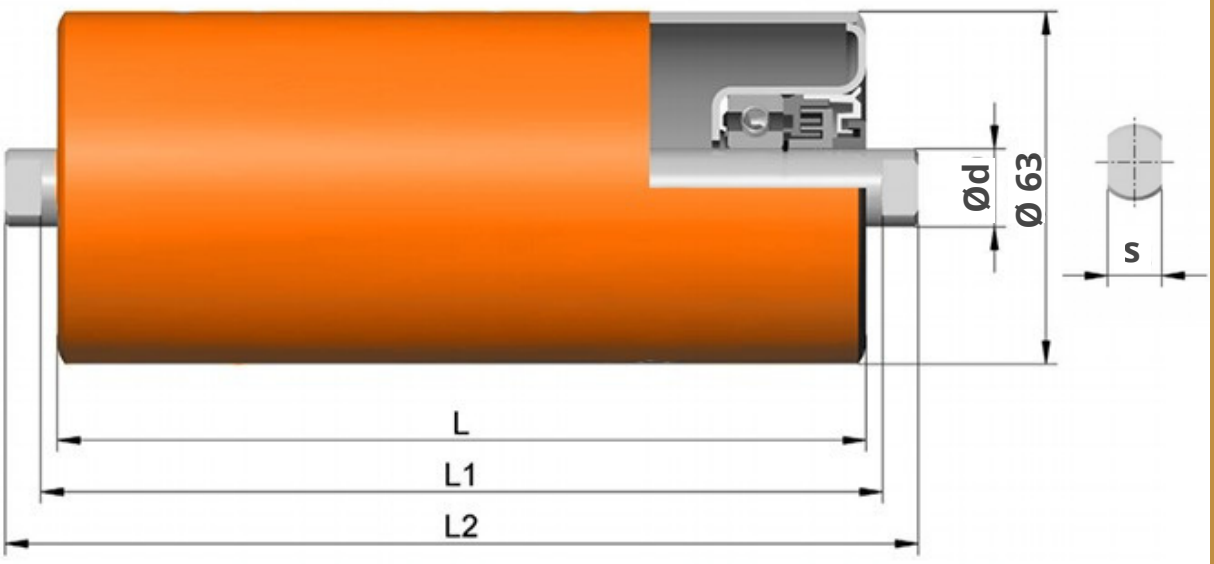
M - EXTERNAL REDUCED THREAD

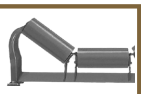
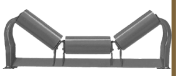


B E A R I N G

	6204, 420204	6205, 420205, 420205 6305	6206, 6306	6308
M	M £ 20	M £ 24	M £ 30	M £ 36
b	AS REQUIRED ³ 5			
e	AS REQUIRED			

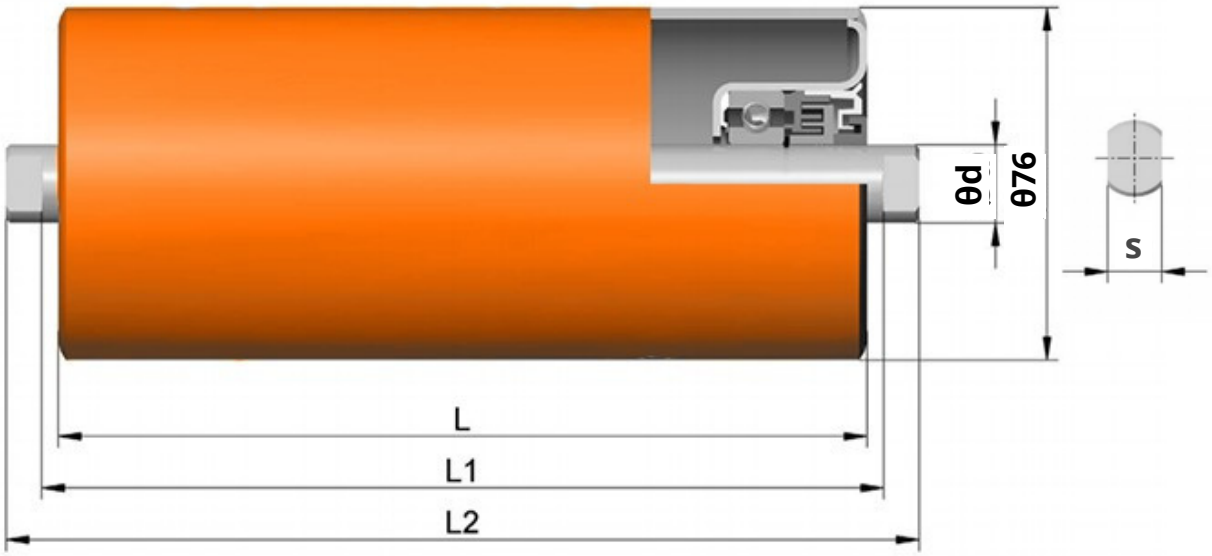
FLAT ROLLER Ø 63 MM

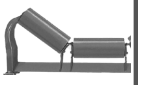


DIMENSIONS (MM)			WEIGHT (KG)		BELT WIDTH (MM)		
L	L1	L2	ROTATING PARTS	TOTAL			
160	168	186	1,01	1,5	--	- -	400
200	208	226	1,14	1,7	- -	- -	500
250	258	276	1,42	2,1	- -	400	650
315	323	341	1,56	2,4	- -	500	800
380	388	406	1,7	3,1	- -	650	1000
465	473	491	2,1	3,4	- -	800	1200
500	508	546	2,3	3,6	400	- -	- -
600	608	646	2,6	4,2	500	- -	- -
750	758	796	3,2	5,2	650	- -	- -
950	958	996	3,9	6,4	800	- -	- -
1150	1158	1196	4,7	7,7	1000	- -	- -
1400	1408	1446	5,5	9,2	1200	- -	- -

Other lengths, shafts and coatings are available on request.

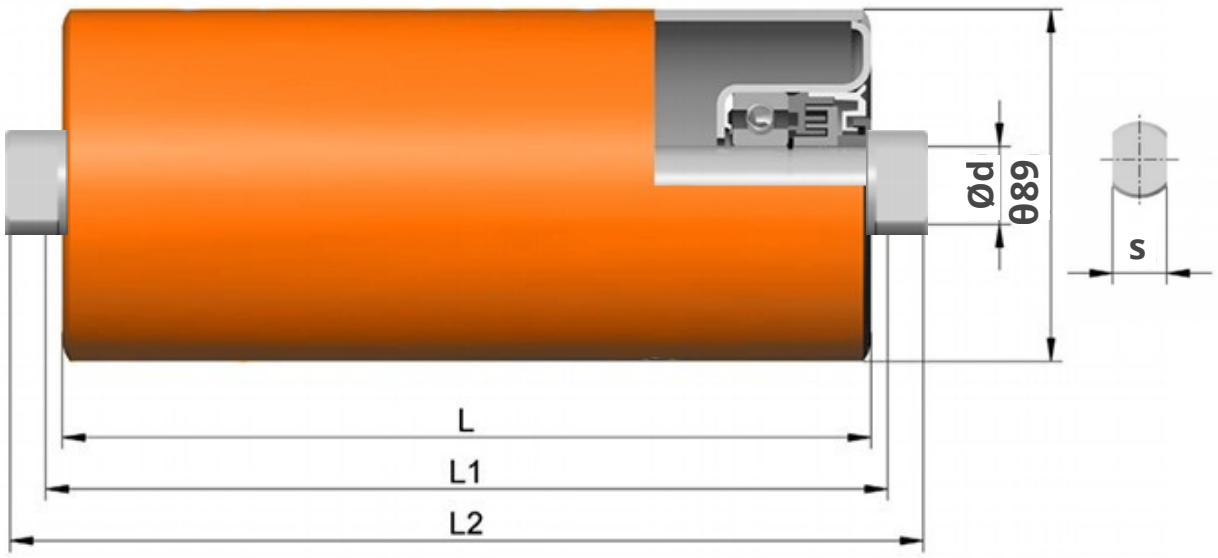
FLAT ROLLER Ø 76 MM

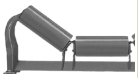
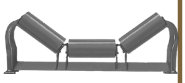


DIMENSIONS (MM)			WEIGHT (KG)		BELT WIDTH (MM)		
L	L1	L2	ROTATING PARTS	TOTAL			
160	168	186	1,2	1,8	--	- -	400
200	208	226	1,4	2,1	- -	- -	500
250	258	276	1,8	2,4	- -	400	650
315	323	341	2,0	2,9	- -	500	800
380	388	406	2,3	3,4	- -	650	1000
465	473	491	2,7	4,0	- -	800	1200
500	508	546	2,9	4,3	400	- -	- -
600	608	646	3,3	5,0	500	1000	- -
750	758	796	3,8	6,0	650	- -	- -
950	958	996	5,0	7,5	800	- -	- -
1150	1158	1196	5,9	8,0	1000	- -	- -
1400	1408	1446	7,1	10,8	1200	- -	- -

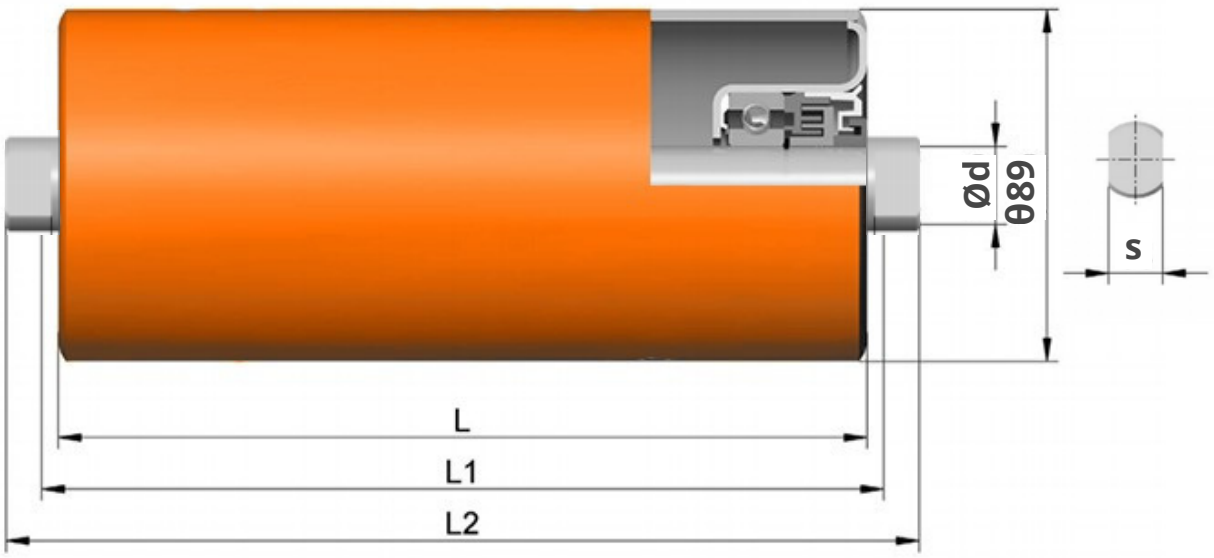
Other lengths, shafts and coatings are available on request.

FLAT ROLLER Ø 89 MM



DIMENSIONS (MM)			WEIGHT (KG)		BELT WIDTH (MM)		
L	L1	L2	ROTATING PARTS	TOTAL			
160	168	186	1,5	2,0	--	- -	400
200	208	226	1,7	2,3	- -	- -	500
250	258	276	1,9	2,7	- -	400	650
315	323	341	2,3	3,2	- -	500	800
380	388	406	2,6	3,7	- -	650	1000
465	473	491	3,1	4,4	- -	800	1200
500	508	546	3,3	4,7	400	- -	- -
600	608	646	3,9	5,5	500	1000	- -
750	758	796	4,7	6,7	650	- -	- -
950	958	996	5,8	8,3	800	- -	- -
1150	1158	1196	6,9	9,9	1000	- -	- -
1400	1408	1446	8,3	11,9	1200	- -	- -
1600	1608	1646	9,4	13,6	1400	- -	- -

FLAT ROLLER Ø 89 MM



DIMENSIONS (MM)			WEIGHT (KG)		BELT WIDTH (MM)	
L	L1	L2	ROTATING PARTS	TOTAL		
250	258	276	2,6	3,8	- -	650
315	323	341	3,2	4,6	- -	800
380	388	406	3,5	5,3	- -	1000
465	473	491	4,1	6,2	- -	1200
500	508	546	4,5	7,2	- -	1400
600	608	646	4,9	7,6	- -	1600
750	758	796	5,8	9,2	650	- -
950	958	996	7,2	11,4	800	- -
1150	1158	1196	8,4	13,3	1000	- -
1400	1408	1446	9,9	16,1	1200	- -
1600	1608	1646	11,3	18,3	1400	- -
1800	1808	1852	12,5	20,4	1600	- -