

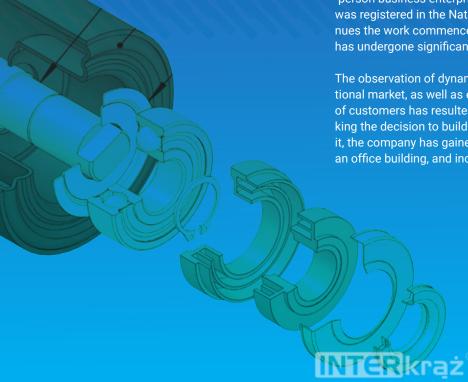


(O) STRATEGY

Our company's strategy is based on building long lasting relations with the Customer. The key to success in shaping such relations is an individual approach to the needs of every Partner. Throughout the entirety of our 30year activity we have successfully carried out even the most demanding orders placed by our Customers. Manufacturing products for the purposes of the mining, construction industry and many others where the transportation of loose materials is required, we understand perfectly that our reliability determines the success of our Customers' undertakings. We continuously strive to strengthen our position and increase our market share. Our development dynamic is evidenced not only by increasing production capacities and sales results, but also the continuously expanding Customer base. It consists of several hundred companies representing a wide spectrum of trades, operating in different markets, domestic and foreign. We establish long-term cooperation with most of them. Currently our products are sold on the markets of many European countries, as well as in Russia and Africa.

The beginning of our business dates back to the year 1987, when Zakład Ślusarski (the Ironworks Company) was established in the form of a one-person business enterprise. In 2006 the company INTERkrąż Spółka z o.o. was registered in the National Court Register, and this company now continues the work commenced in the eighties. In the mean time, the company has undergone significant development and modernization.

The observation of dynamic changes on the domestic, as well as international market, as well as expanded analysis of the needs and expectations of customers has resulted in the INTERkrąż Company's Management making the decision to build a second manufacturing plant in 2011. Thanks to it, the company has gained a modern manufacturing and storage hall with an office building, and increased production capacities.





TRADITION AND

The range of conveyor belt rollers manufactured by us is continuously being expanded, while simultaneously raising their quality. Our experienced and highly qualified staff and incorporated technologies make it possible for us to maintain the parameters required by the Customer. We have certificates which enable us to label our products with the "B" safety mark, as well as a quality management system in place, in accordance with PN-EN ISO 9001-2009. Cooperating with the best raw material suppliers, we guarantee high durability of our products. We offer not only high product quality and ability to adapt technical parameters to the needs of our Customers, but also our reliability as a partner – especially in terms of timely deliveries.

The result of a conscious and well thought out policy in terms of new product implementations is the 2008 production launch of a completely new product group – steel structural elements for belt conveyors, and in 2012 – rockbolt support elements.

We continuously invest in new technologies, which is why for many years we are able to maintain a leading position among roller manufacturers. We cooperate with the world of science on the improvement of our products. Thanks to the work of our research and development department, the quality of our rollers is continuously raised, which makes the INTERkrąż® brand one of the most recognizable on the market.

Our manufacturing process is to a large extent automated, which is why we are able to achieve high production efficiency and repeatability. The precision of executed details allows us to manufacture a product of the highest quality and corresponding to modern standards. We have our own powder coating shop, hence we are able to carry out the entire production process, including coating, in-house.

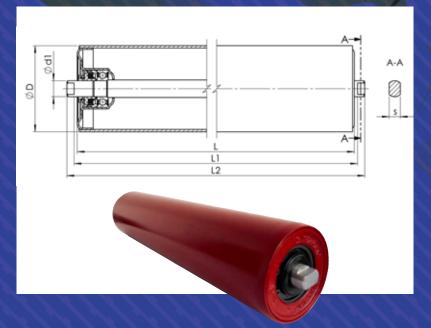
We know that the success of our company is created by the people it employs, whose daily work is the foundation of our dynamic development.





SMOOTH ROLLERS

Smooth rollers are designed for installation in the belt conveyors operating overground and underground, used for transport of loose materials. The basic task of rollers is proper forming, supporting, and protection of belt, as well as reducing the movement resistance of handled material.



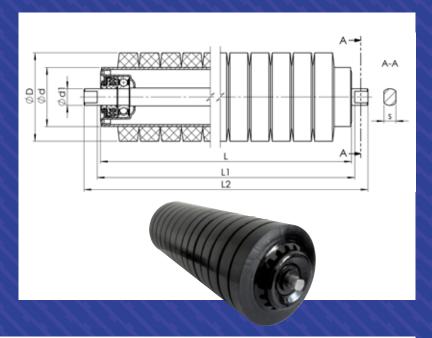
Standard lengths and diameters of smooth rollers with axis tip of TYPE C

					φ	D D					
L	L1	Ø51	Ø63.5	Ø88.9	-	Ø108		Ø133		Ø159	Ø194
						L	.2				
160	168	186	186	186	192	186	192				
200	208	226	226	226	232	226	232				
250	258	276	276	276	282	276	282	276	282		
315	323	341	341	341	347	341	347	341	347	347	
380	388	406	406	406	412	406	412	406	412	412	
465	473	491	491	491	497	491	497	491	497	497	497
500	508	526	526	526	532	526	532	526	532	532	532
530	538	556	556	556	562	556	562	556	562	562	562
600	608	626	626	626	632	626	632	626	632	632	632
670	678	696	696	696	702	696	702	696	702	702	702
700	708	726	726	726	732	726	732	726	732	732	732
750	758	788	788	788	798	788	798	788	798	798	798
800	808	838	838	838	848	838	848	838	848	848	848
900	908	938	938	938	948	938	948	938	948	948	948
950	958	988	988	988	998	988	998	988	998	998	998
1,000	1008	1038	1038	1038	1048	1038	1048	1038	1048	1048	1048
1100	1108	1138	1138	1138	1148	1138	1148	1138	1148	1148	1148
1150	1158	1188	1188	1188	1198	1188	1198	1188	1198	1198	1198
1400	1408		1438	1438	1448	1438	1448	1438	1448	1448	1448
1500	1508		1538	1538	1548		1548	1538	1548	1548	1548
1600	1608			1638	1648		1648	1638	1648	1648	1648
1800	1808						1848	1838	1848	1848	1848
2000	2008						2048		2048	2048	2048
	aring Ze	6204	6204 6205	6204 6305	6206	6204 6305	6206 6307	6204 6305	6206 6307 6308	6305 6206 6307 6308 6310 6312	6308 6310 6312



IMPACT (RING) ROLLERS

Impact (ring) rollers are the rollers supporting the upper band of the transport belt, usually used for absorption and dissipation of energy of the falling load in the reloading points. Rubber disks, due to their flexibility, prevent damages of the pipe coat, belt, and falling load.

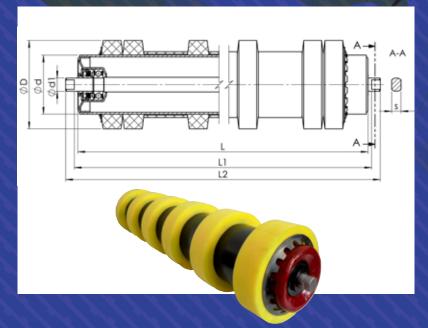


Standard lengths and diameters of impact (ring) rollers with axis tip of TYPE C

					ØD/Ød					
L	L1	89/51 108/51 133/51 89/63.5 108/63.5 133/63.5 159/63.5		,	/88.9 /88.9	159, 190, 194,	/108	215,	/133	
160	168	186	186	192	186	192	186	192		
200	208	226	226	232	226	232	226	232		
250	258	276	276	282	276	282	276	282	276	282
315	323	341	341	347	341	347	341	347	341	347
380	388	406	406	412	406	412	406	412	406	412
465	473	491	491	497	491	497	491	497	491	497
500	508	526	526	532	526	532	526	532	526	532
530	538	556	556	562	556	562	556	562	556	562
600	608	626	626	632	626	632	626	632	626	632
670	678	696	696	702	696	702	696	702	696	702
700	708	726	726	732	726	732	726	732	726	732
750	758	788	788	798	788	798	788	798	788	798
800	808	838	838	848	838	848	838	848	838	848
900	908	938	938	948	938	948	938	948	938	948
950	958	988	988	998	988	998	988	998	988	998
1000	1008	1038	1038	1048	1038	1048	1038	1048	1038	1048
1100	1108	1138	1138	1148	1138	1148	1138	1148	1138	1148
1150	1158	1188	1188	1198	1188	1198	1188	1198	1188	1198
1400	1408		1438	1448	1438	1448	1438	1448	1438	1448
1600	1608			1648	1638	1648	1638	1648	1638	1648
1800	1808							1848	1838	1848
2000	2008							2048		2048
	iring ze	6204	6204	6205	6204	6305 6206	6204	6305 6206 6307	6204	6305 6206 6307 6308

) DISK ROLLERS WITH SPACING SLEEVES

Disk rollers with sleeves support and form the lower band of the transport belt in the return run and remove the adhering material from it. The disk rollers are made from the powder-coated steel pipe, on which one type of rubber or polyurethane disks are installed, separated with plastic spacing sleeves.



Standard lengths and diameters of disk rollers with axis tip of TYPE C

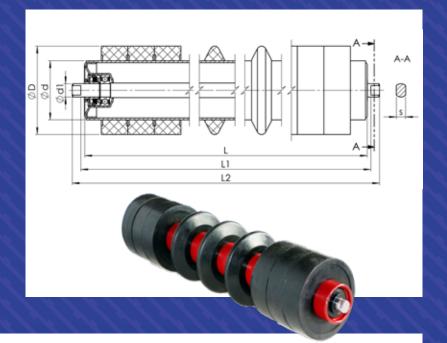
WD/W4											
L	L1	89/51 89/63.5 108/51 108/63.5 133/51 133/63.5 159/63.5				133/88.9 159/88.9		/108 /108 /108	215,	/133	
						L2					
160	168	186	186	192	186	192	186	192			
200	208	226	226	232	226	232	226	232			
250	258	276	276	282	276	282	276	282	276	282	
315	323	341	341	347	341	347	341	347	341	347	
380	388	406	406	412	406	412	406	412	406	412	
465	473	491	491	497	491	497	491	497	491	497	
500	508	526	526	532	526	532	526	532	526	532	
530	538	556	556	562	556	562	556	562	556	562	
600	608	626	626	632	626	632	626	632	626	632	
670	678	696	696	702	696	702	696	702	696	702	
700	708	726	726	732	726	732	726	732	726	732	
750	758	788	788	798	788	798	788	798	788	798	
800	808	838	838	848	838	848	838	848	838	848	
900	908	938	938	948	938	948	938	948	938	948	
950	958	988	988	998	988	998	988	998	988	998	
1000	1008	1038	1038	1048	1038	1048	1038	1048	1038	1048	
1100	1108	1138	1138	1148	1138	1148	1138	1148	1138	1148	
1150	1158	1188	1188	1198	1188	1198	1188	1198	1188	1198	
1400	1408		1438	1448	1438	1448	1438	1448	1438	1448	
1600	1608			1648	1638	1648	1638	1648	1638	1648	
1800	1808							1848	1838	1848	
2000	2008							2048		2048	
	aring ze	6204	6204	6205	6204	6305 6206	6204	6305 6206 6307	6204	6305 6206 6307 6308	

Other diameters and lengths of rollers, as well as realization versions are available on demand



DISK ROLLERS

Disk rollers with sleeves support and form the lower band of the transport belt in the return run and remove the adhering material from it. The disk rollers are made from the powder-coated steel pipe, on which special rubber or polyurethane disks are installed.

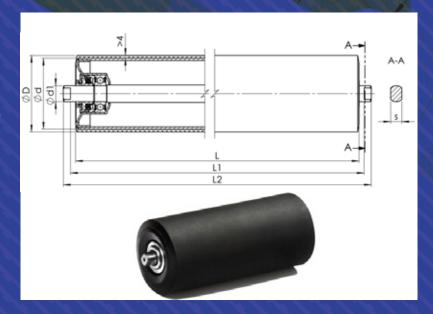


Standard lengths and diameters of disk rollers with spacers with axis tip of TYPE C

WD/W4												
	1				ØD/Ød		1					
L	108/5 L1		51 108/63.5 133/63.5		150/	′88.9 ′88.9 ′88.9	180,	/108 /108 /108	194,	/133		
			L2									
160	168	186	186	192	186	192	186	192				
200	208	226	226	232	226	232	226	232				
250	258	276	276	282	276	282	276	282	276	282		
315	323	341	341	347	341	347	341	347	341	347		
380	388	406	406	412	406	412	406	412	406	412		
465	473	491	491	497	491	497	491	497	491	497		
500	508	526	526	532	526	532	526	532	526	532		
530	538	556	556	562	556	562	556	562	556	562		
600	608	626	626	632	626	632	626	632	626	632		
670	678	696	696	702	696	702	696	702	696	702		
700	708	726	726	732	726	732	726	732	726	732		
750	758	788	788	798	788	798	788	798	788	798		
800	808	838	838	848	838	848	838	848	838	848		
900	908	938	938	948	938	948	938	948	938	948		
950	958	988	988	998	988	998	988	998	988	998		
1000	1008	1038	1038	1048	1038	1048	1038	1048	1038	1048		
1100	1108	1138	1138	1148	1138	1148	1138	1148	1138	1148		
1150	1158	1188	1188	1198	1188	1198	1188	1198	1188	1198		
1400	1408		1438	1448	1438	1448	1438	1448	1438	1448		
1600	1608			1648	1638	1648	1638	1648	1638	1648		
1800	1808							1848	1838	1848		
2000	2008							2048		2048		
	ıring ze	6204	6204	6205	6204	6305 6206	6204	6305 6206 6307	6204	6305 6206 6307 6308		

COATED ROLLERS

Rollers of similar use as disk rollers. The steel pipe is covered with hot-vulcanized rubber coating. Increased roller diameter extends its life span.



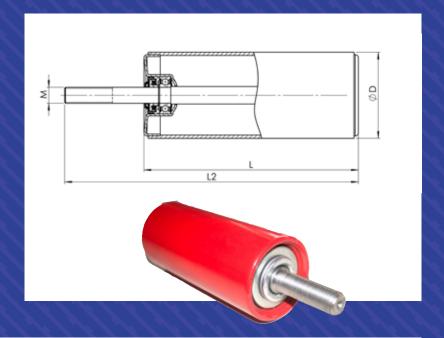
Standard lengths and diameters of rubber-coated rollers with axis tip of TYPE C

						φD						
L	L1	Ø51	Ø6	3.5	Ø8	8.9	Ø1	08	Ø1	33	Ø159	Ø194
							L2					
160	168	186	186	192	186	192	186	192				
200	208	226	226	232	226	232	226	232				
250	258	276	276	282	276	282	276	282	276	282		
315	323	341	341	347	341	347	341	347	341	347	347	
380	388	406	406	412	406	412	406	412	406	412	412	
465	473	491	491	497	491	497	491	497	491	497	497	497
500	508	526	526	532	526	532	526	532	526	532	532	532
530	538	556	556	562	556	562	556	562	556	562	562	562
600	608	626	626	632	626	632	626	632	626	632	632	632
670	678	696	696	702	696	702	696	702	696	702	702	702
700	708	726	726	732	726	732	726	732	726	732	732	732
750	758	788	788	798	788	798	788	798	788	798	798	798
800	808	838	838	848	838	848	838	848	838	848	848	848
900	908	938	938	948	938	948	938	948	938	948	948	948
950	958	988	988	998	988	998	988	998	988	998	998	998
1000	1008	1038	1038	1048	1038	1048	1038	1048	1038	1048	1048	1048
1100	1108	1138	1138	1148	1138	1148	1138	1148	1138	1148	1148	1148
1150	1158	1188	1188	1198	1188	1198	1188	1198	1188	1198	1198	1198
1400	1408		1438	1448	1438	1448	1438	1448	1438	1448	1448	1448
1600	1608			1648	1638	1648	1638	1648	1638	1648	1648	1648
1800	1808							1848	1838	1848	1848	1848
2000	2008							2048		2048	2048	2048
Bea si:	ring ze	6204	6204	6205	6204	6305, 6206	6204	6305 6206 6307	6204	6305 6206 6307 6308	6305 6206 6307 6308 6310 6312	6308 6310 6312

Other diameters and lengths of rollers, as well as realization versions are available on demand

DIRECTIONAL ROLLERS

Directional rollers are designed for proper guiding of belt in the upper run, which prevents its lateral displacement. They are used in the centring stations and curved sections of conveyors.



L	L1	Ø63.5	Ø88.9		Ø108		Ø133				
				Thr	ead						
100	150										
150	200	M16	M16	M16	M20	M24	M16	M20	M24		
215	265										
	ring ze	6204	6204	6204	6305	6206	6204	6305	6206		

O ROLLER CODE DESIGNATION

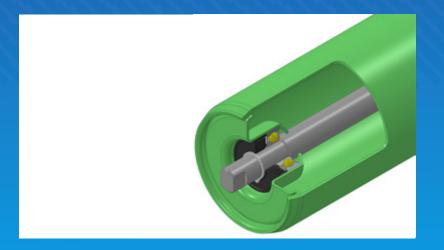
. (Series		Туре		External diameter		Pipe diameter		Coat length		Bearing type		Axle end type		Coat coating or ring material (material in contact with belt)		Rings arrangement		Version
4	Α	-	В	-	С	/	D	х	Е	-	F	-	G	-	Н	-	1	-	J

A-B-C/DXE-F-G-H-I-J

SERIES

A-B-C/DxE-F-G-H-I-J

- Light
 - rollers perfect for light operating conditions
 - Steel hubs of RL type permanently connected with coat with use of staking method
 - Two-element labyrinth sealing assures satisfactory tightness in the dusty environment
 Axle made from rolled rod acc.
 - to EN 10060



Standard

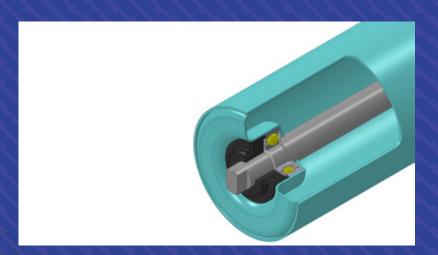
Rollers designed for medium operating conditions
Hub made from sheet with use of cold stamping method, permanently connected with

jacked by welding

Multistage labyrinth sealing assures perfect tightness in the very dusty and humid environment.

Axle made from rolled rod acc. to EN 10060

M7 fitting assures durable and reliable mounting of bearing in the hub



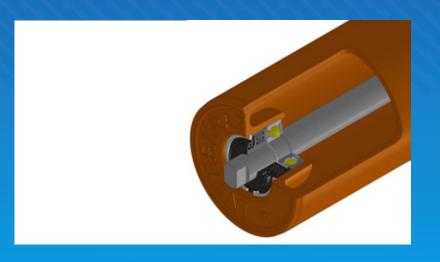
Standard plus

- Reinforced stamped hub assuring better durability and higher load capacity of the roller
- Thicker coat wall assuring longer life span and better resistance to abrasive wear.
- Axis is made of rolled bar in accordance with EN 10060 or drawn rod in accordance with EN 10278
- Multistage labyrinth sealing assures perfect tightness against dusts and water through the whole operational period
- Ball bearing of type 2RS or 2Z sealed on both sides
- M7 fitting assures durable and reliable mounting of bearing in the hub



Heavy Duty

- Rollers designed for heavy operating conditions
- Hub made from steel with use of die forging or cast from grey cast iron
- Axis is made of rolled bar in accordance with EN 10060 or drawn rod in accordance with EN 10278
- Multistage hybrid sealing assuring perfect tightness against dusts and water through the whole operational period
- Additional bearing protection and seals in the hub
- Ball bearing of type 2RS or 2Z sealed on both sides
- Hub material removing machining allows for obtaining higher bearing durability and better motion properties of the roller



	Summary	Light	Standard	Standard+	Heavy duty
Roller coat	Pipe	Steel se- amed pipe	Seamed pipe acc. to EN 10219 with nar- rowed dimensio- nal tolerances (INTERkrąż inter- nal standard)	Seamed pipe acc. to EN 10219 with narrowed dimen- sional tolerances (INTERkrąż internal standard)	Seamed pipe acc. to EN 10219 with nar- rowed dimensional tolerances (INTERkrąż internal standard)
	Material	S235 JR acc. to EN 10025-2	S235 JR acc. to EN 10025-2	S235 JR acc. to EN 10025-2	S235 JR acc. to EN 10025-2
	Туре	stamped - for quick installation	stamped	stamped - reinfor- ced version	cast iron or forged steel
Hub	Material	DD11 acc. to EN 10111	DD11 acc. to EN 10111	DD11 acc. to EN 10111	Hub forged from steel S235JR acc. to EN 10025 or from cast iron EN-GJL-200 acc. to EN 1561
	Bearing seating realization tolerance	M7	M7	M7	M7
Axle	Rod	round, rolled acc. to EN 10060	round, rolled acc. to EN 10060	Round rolled in accordance with EN 10060 or round drawn in accordan- ce with EN 10278	Round rolled in accordance with EN 10060 or round drawn in accordance with EN 10278
	Material	S235JR	S235JR	S235JR	S235JR+C
	Bearing fitting	h6	h6	h6	h6
	Туре	Radial conta	ct single-row ball be	earing	
I if alima	Sealing	1Z	2Z	2Z or 2RS	2Z or 2RS
Lifetime lubricated bearings	Radial clearance	C3	C3	C3 or C4 are selected individually for use	C3 or C4 are selected individually for use
	Tolerance class	P0	P0	P0	P0
Labyrinth seal is lifetime	Туре	2-element labyrinth sealing	5-element com- pact labyrinth sealing	5-element compact labyrinth sealing or for heavy rollers	5-element compact labyrinth sealing or for heavy rollers
lubricated to provide the protection against the ingress of dust and water	Material	polyamide	polyamide	polyamide	polyamide
	Radial run-out	<0.7	<0.7	<0.5	<0.5
Motion properties	Rolling resistance	<2.5 N	<2.5 N	<2.0 N	<2.0 N
	Alignment class	≤G40	≤G25	≤G16	≤G16





ROLLER EXTERNAL
DIAMETER / PIPE DIAMETER
A-B-**C/D**xE-F-G-H-I-J

D [mm]	code	inches
63.5	63	2.5
88.9	89	3.5
108.0	108	4.25
127.0	127	5
133.0	133	5.25
152.0	152	6,
159.0	159	6.25
194.0	194	7.625
219.0	219	8.625

COAT LENGTH
A-B-C/DX**E**-F-G-H-I-J



		Rollers arr	rangement	
Belt width [mm]		-	_ /	
		Coat len	gth [mm]	
400	500	250	165	-
500	600	315	200	-
650	750	380	250	-
800	950	465	315	165
1000	1150	600	380	205
1200	1400	700	465	250
1400	1600	800	530	290
1600	1800	900	600	340
1800	2000	1000	670	380
2000	2200	1100	750	420
2200	-	1250	800	460
2400	-	1400	900	500
2600	-	1500	950	540

BEARING SIZE **A**-B-C/DXE-**F**-**G**-H-I-J

Ød				Bea	ring			
	6204	6205	6305	6206	6307	6308	6310	6312
51	S							
63.5	S	S						
88.9	L, S	S	S, H	S, H				
108	L, S	S	S, H	S, H	S	S		
133	L, S	S	S, S⁺, H	S, S⁺, H	S, S ⁺	S, S ⁺		
159			S, S⁺, H	S, S⁺, H	S, S⁺, H	S, S ⁺ , H	Н	Н
194.3							Н	Н

L - LIGHT

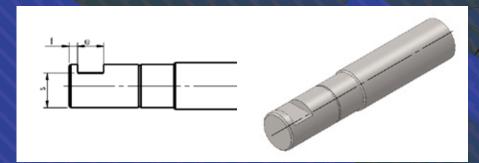
S- STANDARD

S+-STANDARD PLUS

H - HEAVY DUTY

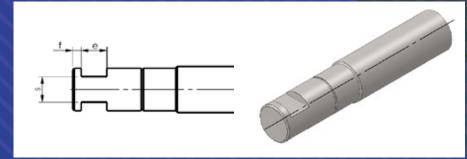
AXLE END TYPE A-B-C/DxE-F-**G**-H-I-J

TYPE A
One-side milled
with edge

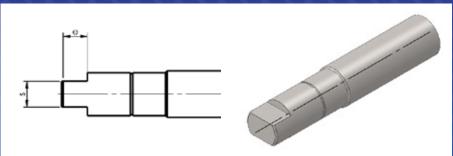


TYPE B

Double-side milled
with edge

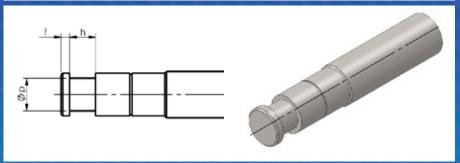


TYPE C Double-side milled

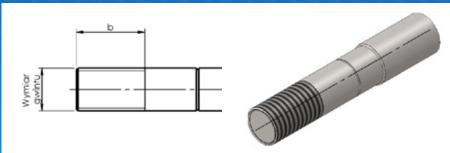


TYPE D

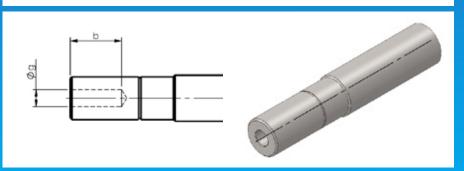
Round reduced axle
with edge



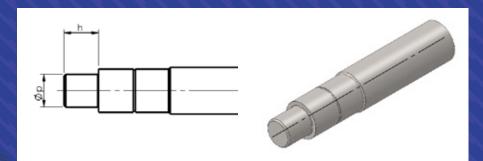
TYPE E
Axle with external thread



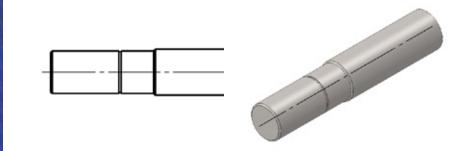
TYPE F
Axis with smooth/
threaded hole



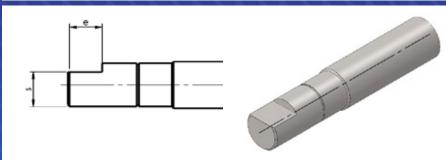
TYPE G Round reduced axle



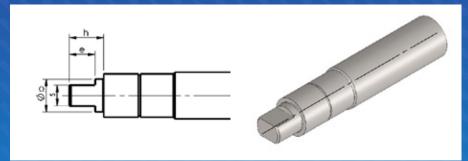
TYPE H Smooth axle



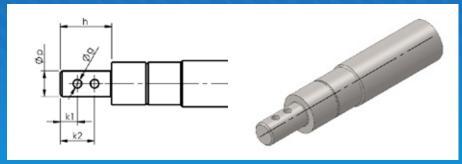
TYPE I One-side milled axle



TYPE J Round reduced double-side milled axle



TYPE K Round reduced axle with transverse holes



TYPE L Round axle with transverse hole

f - shoulder width

e - milling depth

s - milling width

h - undercut depth фр - undercut diameter

фg transverse hole diameter

k1, k2, ..., kn distances from holes to the edge

Other axis tips are manufactured upon the customer's order

COAT COATING OR RING MATERIAL

A-B-C/DxE-F-G-**H**-I-J

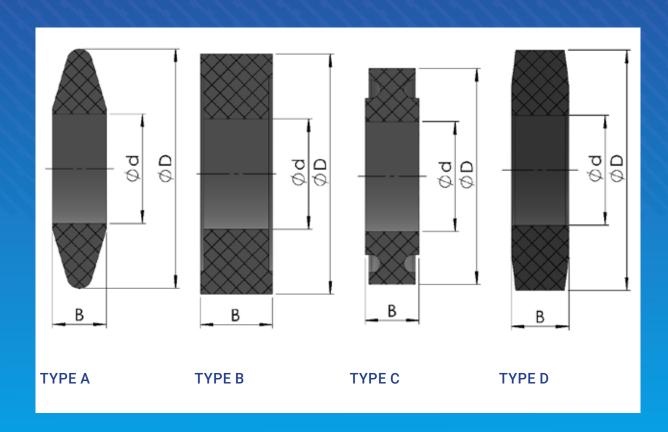
SMOOTH AND DIRECTIONAL ROLLERS

Steel	SO
Powder-coated steel	SP
Galvanized steel	SC

IMPACT, DISK, COATED ROLLERS

GU
PE
PU

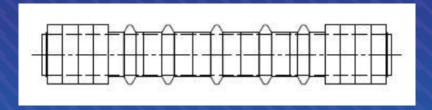
RINGS ARRANGEMENT
A-B-C/DXE-F-G-H-I-J



Dimensions						
Roller coat diameter	Ring external diameter	Type A	Type B	Type C	Type D	
ød	ØD	Width B				
63.5	88.9			25	25	
	108	25	40	30	25	
	133	30	40		27	
	159	30			30	
89	133	30	40		37	
	159	30	40	35	30	
108	190	35				
133	215	40			50	

Other shapes and sizes of disks are available on demand

E.G. 4B+5A+4B



VERSION
A-B-C/DXE-F-G-H-I-J

DESIGN VERSION CUSTOMIZED FOR CUSTOMER'S INDIVIDUAL REQUIREMENTS

ORDERING EXAMPLE

SERIES EXTERNAL DIAMETER COAT LENGHT AXLE END TYPE RINGS ARRANGEMENT

STANDARD PLUS-D-133/63X1100-6205-C-GU-4B+5A+4B

TYPE PIPE DIAMETER BEARING SIZE RING MATERIAL

