



THIELE



Reclaimer Chains

CHANGE[®]
for Success



THIELE quality philosophy



Our quality philosophy

- customer satisfaction
- our products are designed to the highest quality, environmental and safety standards
- continuous and sustainable process improvements
- QA system to ISO 9001 standard
- environmental management system to ISO 14001
- energy management system to ISO 50001
- our CIP (continuous improvement process) stands guarantee for the durability and high quality of our products



Certified trading partner



All information given is based on our current knowledge and expertise and is supplied without obligations or commitments. This also applies to the patent rights of third parties. Neither do we make any obligatory warranty in the legal sense as to the properties of the products described in this publication. We expressly reserve the right to change our specifications in accordance with technical progress and company developments. This does not release the buyer from his obligation to inspect all incoming products. The quality of all our products is of course guaranteed in accordance with our general terms and conditions of sale.

THIELE company profile

The THIELE company

The THIELE company was founded more than 80 years ago and is now one of the world's foremost chain manufacturers. THIELE's product line includes round-link chains, bush conveyor chains, forged conveyor chains and a full range of fittings and accessories. THIELE's know-how has been built up over many years of designing and producing complete chain systems and our highly skilled workforce and modern, high-performance production facilities stand guarantee for products of the finest quality.

Consulting and product development

THIELE specialises in chain systems for conveying and lifting. THIELE engineers provide an on-site consulting service and work alongside the client to analyse the technical requirements before planning and sizing up the moving chain assembly. Customised solutions are then worked out in detail in THIELE's own design department.

Chain production

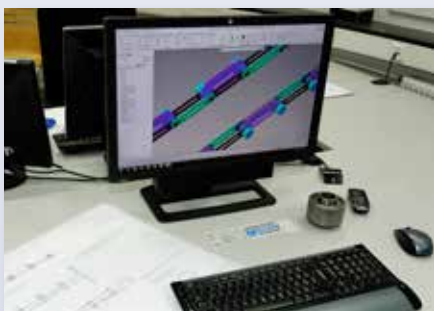
All our chains and components are manufactured in-house. Our production facilities include equipment for welding, laser-, plasma- and gas-cutting, solid forming, heat treatment and mechanical processing using the latest CNC lathes and multi-spindle milling machines.

Quality

High-integrity production methods are used to ensure that all products leaving the THIELE factory are of the finest quality, as confirmed by continuous monitoring in our laboratory and testing house. THIELE was one of the world's first chain making companies to meet the DIN EN ISO 9001 quality management standard.



Design



THIELE can supply a wide range of standard reclaimer chains. An in-house engineering design department ensures that all interfaces can be adapted to meet the technical requirements of the job at hand. This means that individual customer needs can be met to the letter.

Production



The individual components are finished on CNC machining centres.



The latest plasma and laser cutting machines turn out products of the very highest quality.



Reclaimer Chains

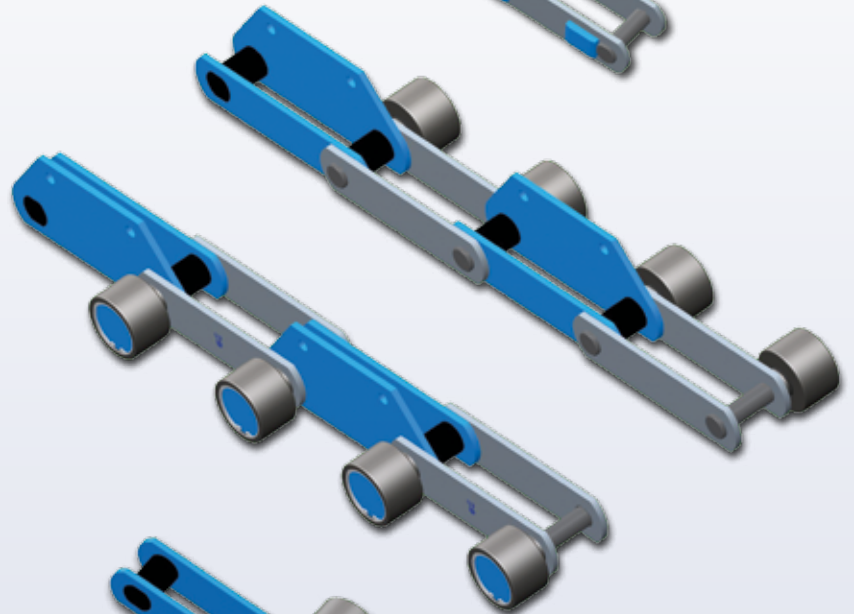
THIELE HDR-I

Heavy Duty Reclaimer Chain
– Inside Roller



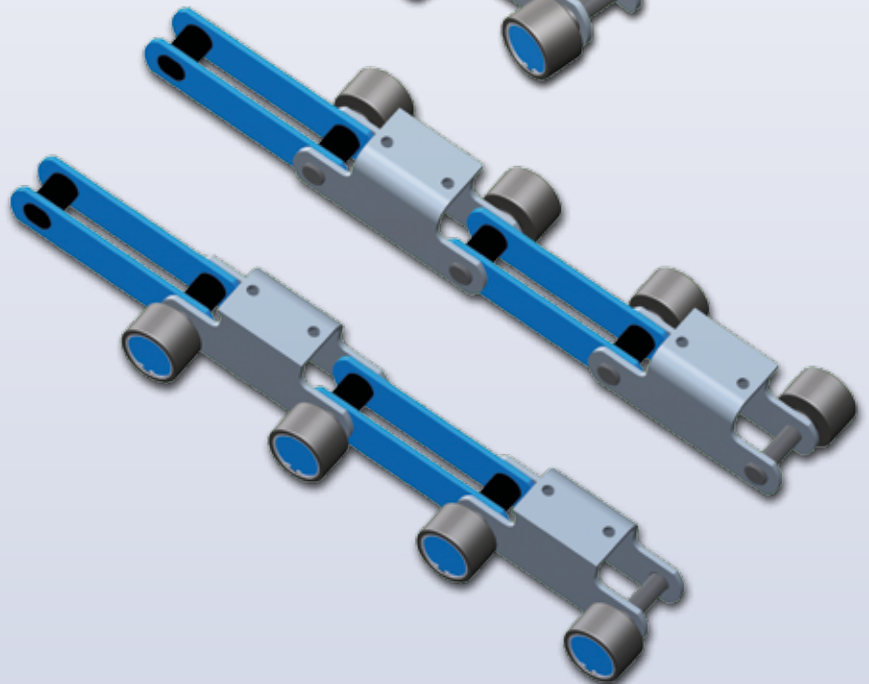
THIELE HDR-O

Heavy Duty Reclaimer Chain
– Outside Roller



THIELE HDR-BO

Heavy Duty Reclaimer Chain
– Box Profile



Selection factors

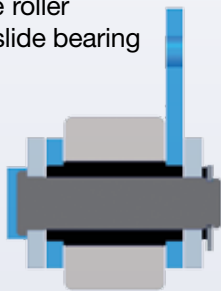
Overview of THIELE reclaimer chains									
pitch p [mm]				HDR-I (inboard roller)	HDR-O (outboard roller)	HDR-BO (box profile, outboard roller)	F_{Br} [kN]	h x t [mm]	d [mm]
250	315	400	500	25	25	25	250	60 x 8	24
				40	40	40	400	65 x 10	26
315	400	500	60	60	60	600	85 x 10	32	
			80	80	80	800	95 x 12	36	
			100	100	100	1000	110 x 12	42	
			130	130	130	1300	110 x 16	45	
			160	160	160	1600	115 x 20	50	
			200	200	200	2000	135 / 120 x 20	55	
			250	250	250	2500	145 / 130 x 25	60	
400	500	300	300	300	3000	165 / 150 x 25	68		
		350	350	350	3500	175 / 160 x 30	74		

F_{Br} = breaking strength h x t = plate section d = pin diameter

Subdivision of design types

HDR-I

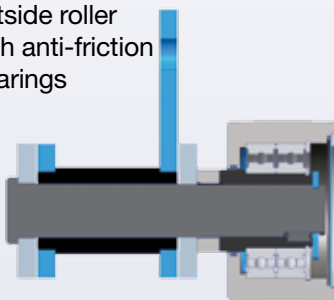
inside roller
with slide bearing



Standard chain for applications with external lubrication of the rollers. Integrated wearing plates provide lateral chain guidance.

HDR-O

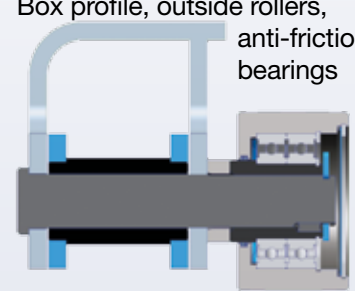
outside roller
with anti-friction bearings



Standard chain with maintenance-free, dust-tight rollers for abrasive materials. The lateral forces are absorbed by separate central guide rollers.

HDR-BO

Box profile, outside rollers,
anti-friction bearings



Strengthened version of standard chain with type HDR-O characteristics, intended for highly-stressed applications.

Chain wheels

Design recommendation

Standard design		Optional designs	
Toothed drive wheel	Smooth return wheel	Toothed return wheel	Noise-reduced return wheel
			

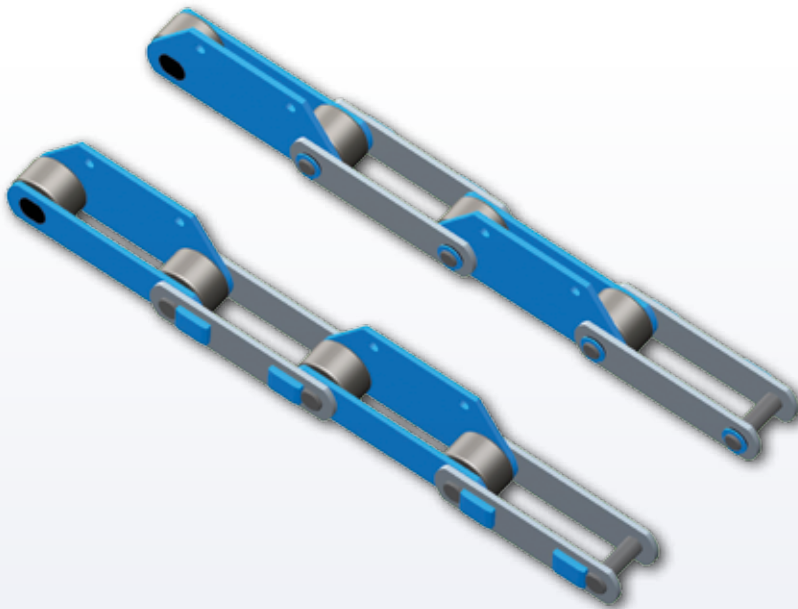
Replaceable, machined ring segments

Inductive surface hardening of tooth flanks / wheel outer diameter

Other options available as an alternative to THIELE-recommended designs

Type THIELE HDR-I

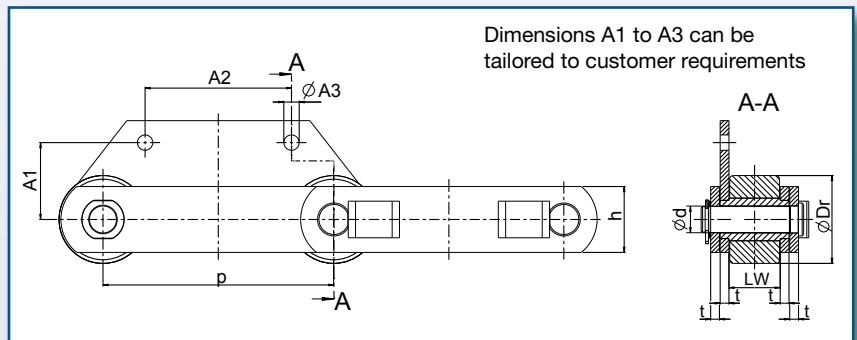
THIELE HDR-I



The experience acquired from numerous client reference projects has been put to good use in producing standardised THIELE reclaimer chains.

Accurately machined link holes mated with rotation-locked pins and bushes reflect the quality workmanship of the THIELE HDR chains.

The bucket connector links can be designed as angle-plates to provide also the possibility of horizontal mounting.



Chain	F_{Br} [kN]	p [mm]	LW [mm]	h x t [mm]	d [mm]	Dr [mm]	Weight [kg/m]
HDR-I 25	250	250	45	60 x 8	24	80	20
HDR-I 40	400	250 / 315	50	65 x 10	26	90	35 / 30
HDR-I 60	600	315	60	85 x 10	32	110	37
HDR-I 80	800	315 / 400	70	95 x 12	36	120	50 / 45
HDR-I 100	1000	400	90	110 x 12	42	135	60
HDR-I 130	1300	400 / 500	100	110 x 16	45	135	70 / 65
HDR-I 160	1600	400 / 500	110	115 x 20	50	140	95 / 90
HDR-I 200	2000	500	120	135 / 120 x 20	55	165	110
HDR-I 250	2500	500	130	145 / 130 x 25	60	175	135
HDR-I 300	3000	500	150	165 / 150 x 25	68	195	160
HDR-I 350	3500	500	170	175 / 160 x 30	74	205	190

F_{Br} = breaking strength
p = pitch

LW = clearance
h x t = plate section

d = pin diameter
Dr = roller diameter

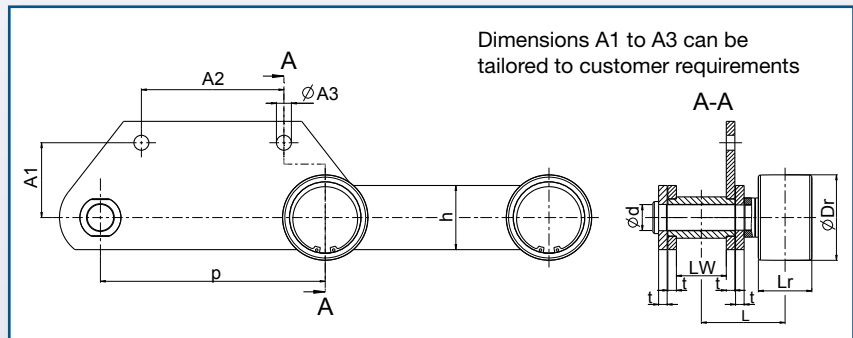
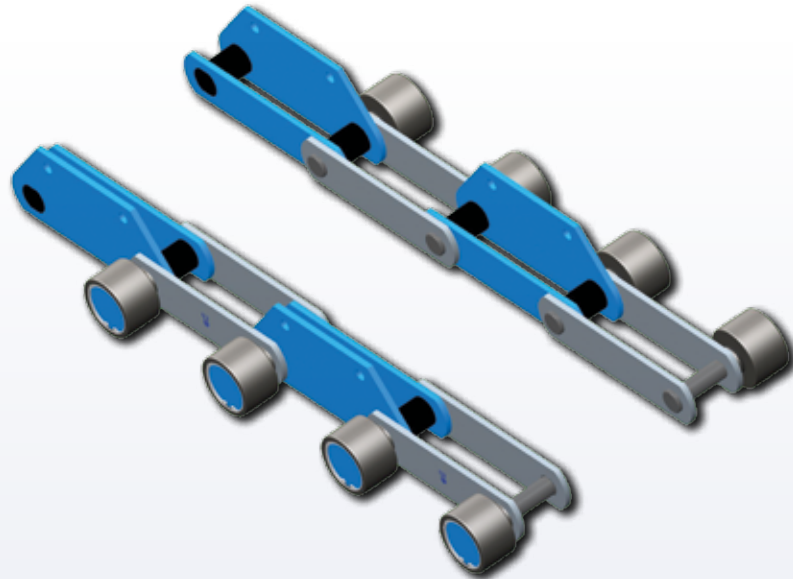
weight indication for one strand

Type THIELE HDR-O

The THIELE HDR-O chain features outside rollers that are fitted as fully assembled units. The antifriction rollers reduce the amount of force required at the chain drive.

THIELE's own fully-sealed, maintenance-free standard components are also used as centre guide rollers for the chain.

The bucket connector links can be designed as angle-plates to provide also the possibility of horizontal mounting.



Chain	F_{Br} [kN]	p [mm]	LW [mm]	h x t [mm]	d [mm]	Dr [mm]	Lr [mm]	L [mm]	Weight [kg/m]
HDR-O 25	250	250	45	60 x 8	24	85	55	80	35
HDR-O 40	400	250 / 315	50	65 x 10	26	85	55	90	38 / 35
HDR-O 60	600	315	60	85 x 10	32	100	60	95	41
HDR-O 80	800	315 / 400	70	95 x 12	36	120	70	110	52 / 47
HDR-O 100	1000	400	90	110 x 12	42	130	75	125	62
HDR-O 130	1300	400 / 500	100	110 x 16	45	130	75	140	72 / 67
HDR-O 160	1600	400 / 500	110	115 x 20	50	150	90	160	90 / 85
HDR-O 200	2000	500	120	135 / 120 x 20	55	170	100	170	100
HDR-O 250	2500	500	130	145 / 130 x 25	60	180	110	190	125
HDR-O 300	3000	500	150	165 / 150 x 25	68	180	110	200	145
HDR-O 350	3500	500	170	175 / 160 x 30	74	200	130	230	175

F_{Br} = breaking strength
p = pitch

LW = clearance
h x t = plate section

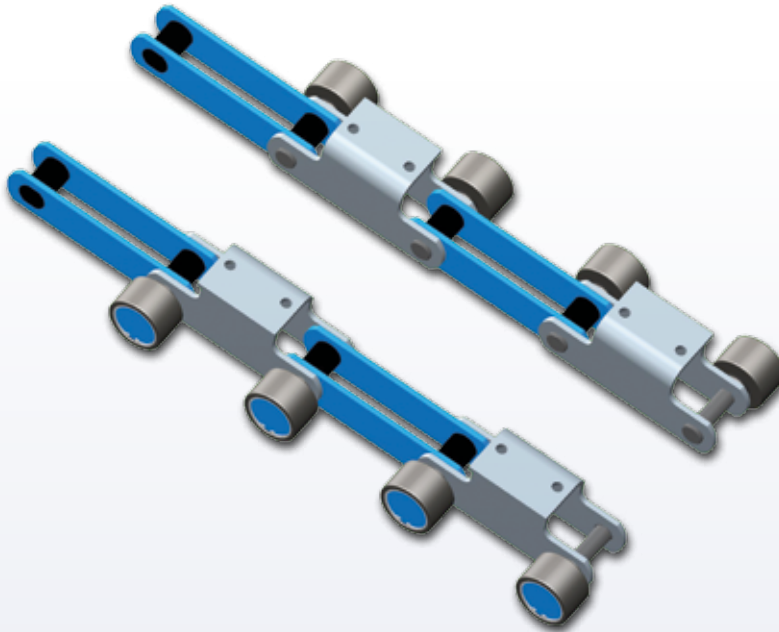
d = pin diameter
Dr = roller diameter

Lr = roller width
L = distance between centres

weight indication
for one strand

Type THIELE HDR-BO

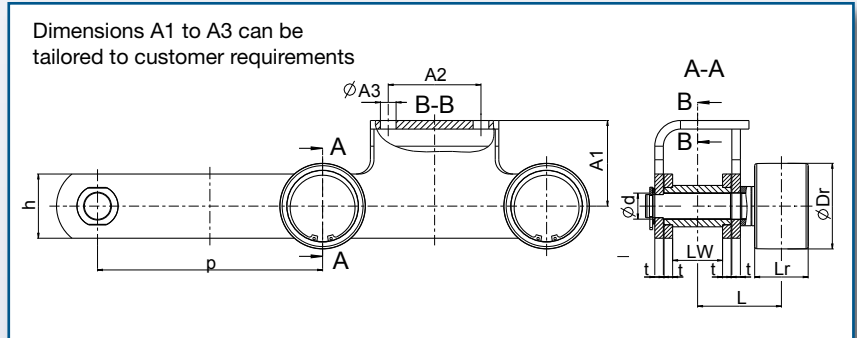
THIELE HDR-BO



The weld-connected outer link form the box profile of the THIELE HDR-BO chain. Highly fluctuating external forces, which include frequent load peaks, are effectively induced into the chain thanks to the robust design of the bucket connections.

The buckets are mounted horizontal. THIELE's extensive HDR range is entirely produced in-house to the most stringent quality standards.

This is a product well deserving of the 'Made in Germany' label.



Chain	F_{Br} [kN]	p [mm]	LW [mm]	$h \times t$ [mm]	d [mm]	Dr [mm]	Lr [mm]	L [mm]	Weight [kg/m]
HDR-BO 25	250	250	45	60 x 8	24	85	55	80	29
HDR-BO 40	400	250 / 315	50	65 x 10	26	85	55	90	30 / 27
HDR-BO 60	600	315	60	85 x 10	32	100	60	95	44
HDR-BO 80	800	315 / 400	70	95 x 12	36	120	70	110	55 / 50
HDR-BO 100	1000	400	90	110 x 12	42	130	75	125	65
HDR-BO 130	1300	400 / 500	100	110 x 16	45	130	75	140	76 / 71
HDR-BO 160	1600	400 / 500	110	115 x 20	50	150	90	160	95 / 90
HDR-BO 200	2000	500	120	135 / 120 x 20	55	170	100	170	105
HDR-BO 250	2500	500	130	145 / 130 x 25	60	180	110	190	131
HDR-BO 300	3000	500	150	165 / 150 x 25	68	180	110	200	141
HDR-BO 350	3500	500	170	175 / 160 x 30	74	200	130	230	182

F_{Br} = breaking strength
 p = pitch
 LW = clearance
 $h \times t$ = plate section

d = pin diameter
 Dr = roller diameter

Lr = roller width
 L = distance between centres

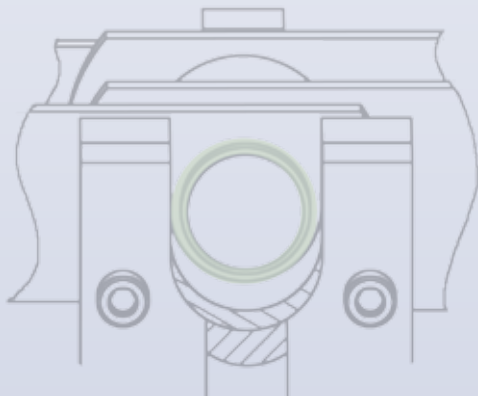
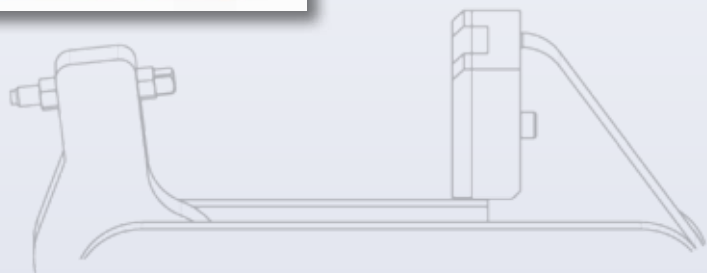
Weight for one strand

THIELE Assembly Master

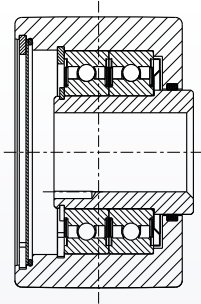


The Assembly Master is an assembly device specially designed for THIELE chains.

This tool ensures that the chain strands are connected according workshop standards. Interchangeable adapter plates can be fitted to enable the tool to be used for a wide range of chain types.



THIELE standard roller

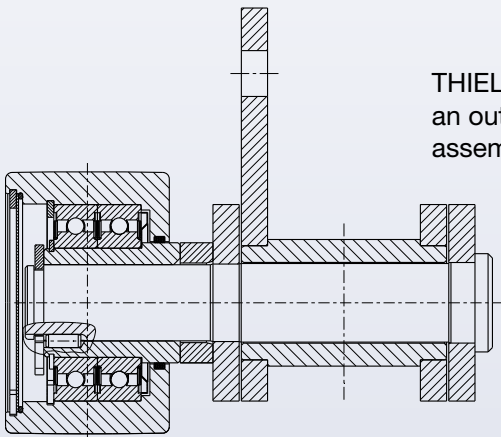


The THIELE roller is a fully pre-assembled, maintenance-free unit. Experience from numerous client reference projects has been put to good use in its design and production.

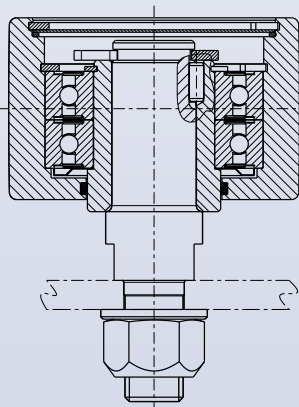
The sealing elements offer reliable protection against intrusions no matter what the application.

Standardised material specifications and high-end components underlie the consistent high quality of THIELE rollers.

Using identical rollers for a range of applications greatly simplifies the spare-part stocking



THIELE roller installed as an outside unit on a chain assembly.

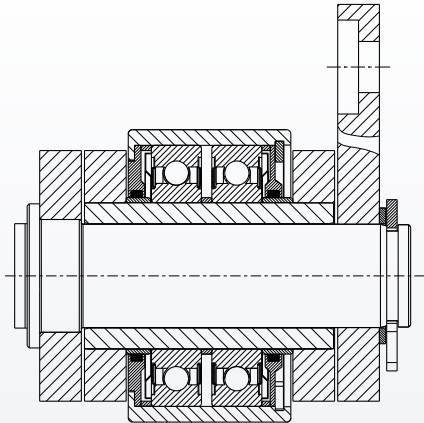


THIELE roller installed as a central guide unit on a threaded bolt.



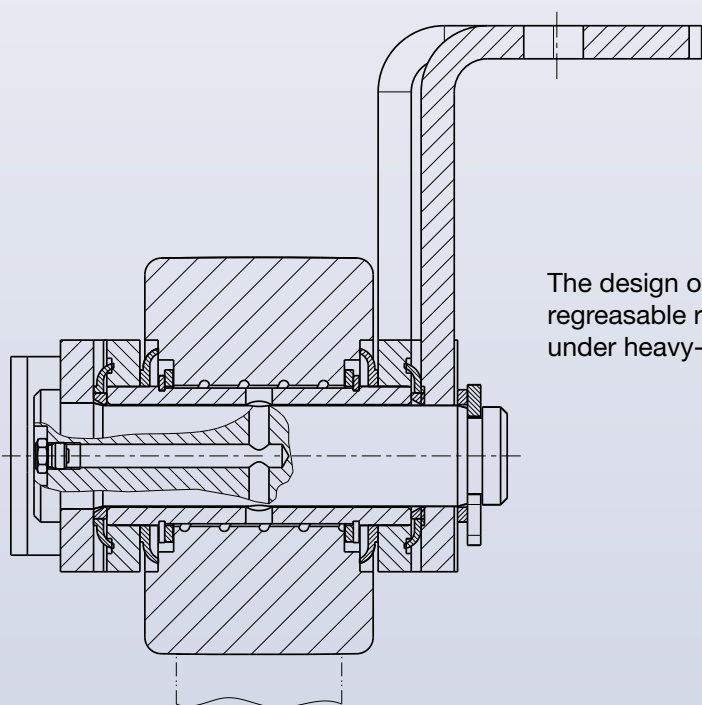
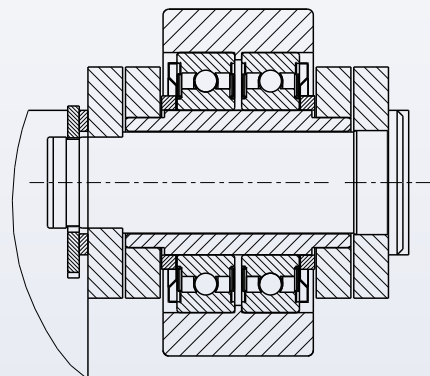
Inside roller – special solutions

Modern production facilities combined with an in-house design department enable the company to address individual customer needs.



The contact seals can withstand highly abrasive material, resulting in a maintenance-free chain with an extended operating life.

Converting from rollers with slide bearings to sealed, antifriction rollers increases chain reliability and reduces the driving power requirement.



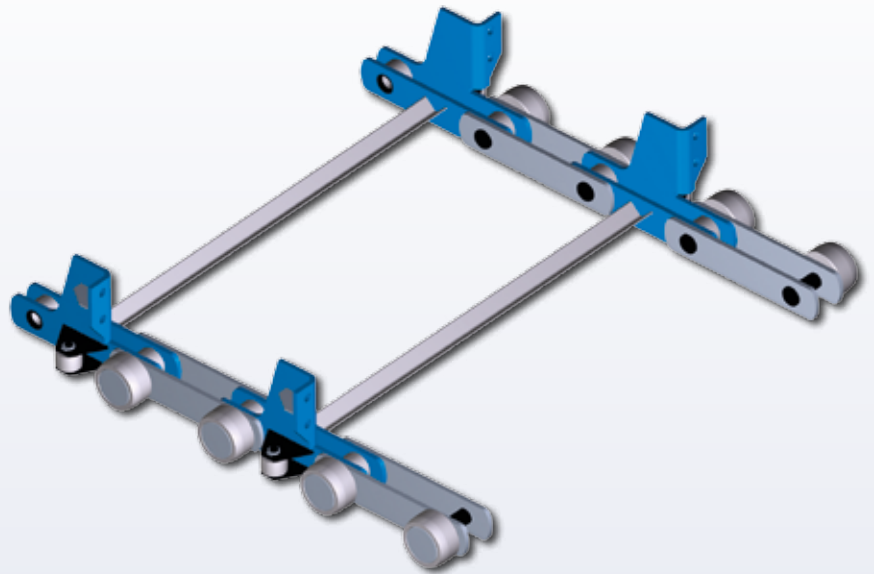
The design of a fully sealed chain with regreasable rollers results in a longer service life under heavy-duty operating conditions.

Reclaimer chains - special solutions

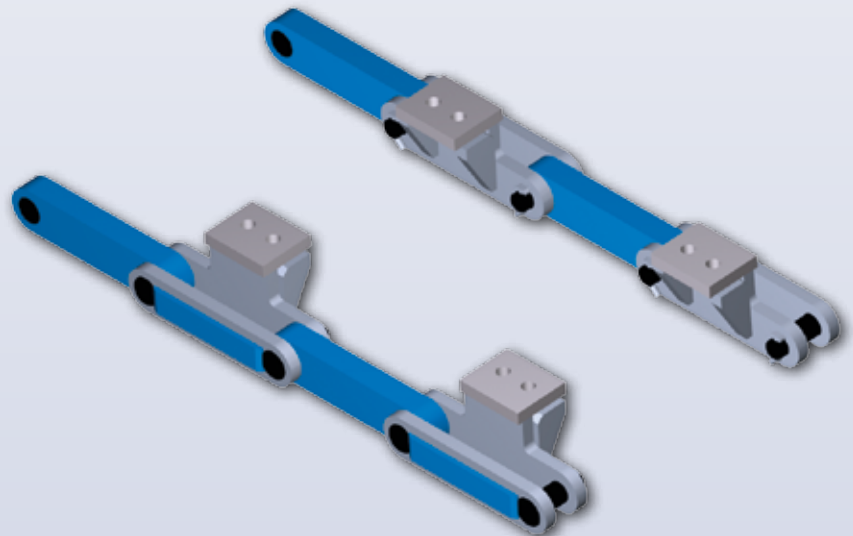
We can plan and design taylor made solutions for your individual requirements based on THIELE's tried and tested quality standards.



Bush link chain with outside rollers and lateral guiding rollers for a portal reclaimer. Welded profiles are used to connect the chain strands and to transfer the lateral forces.

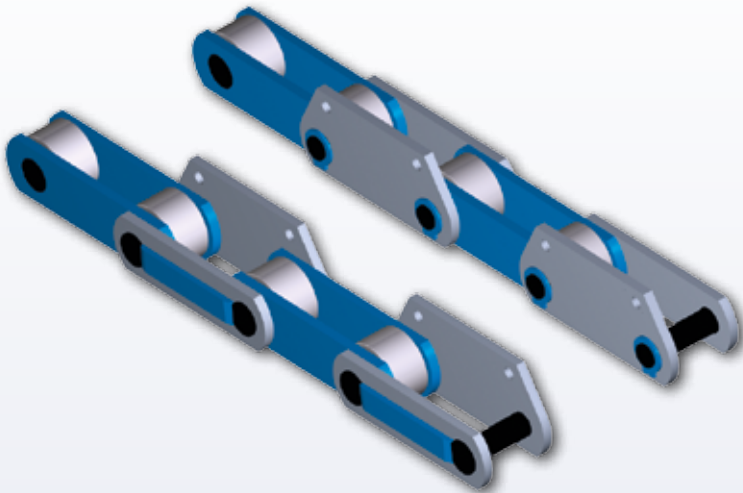


Bushed block link chain with lateral wearing plates used for a reclaimer application.

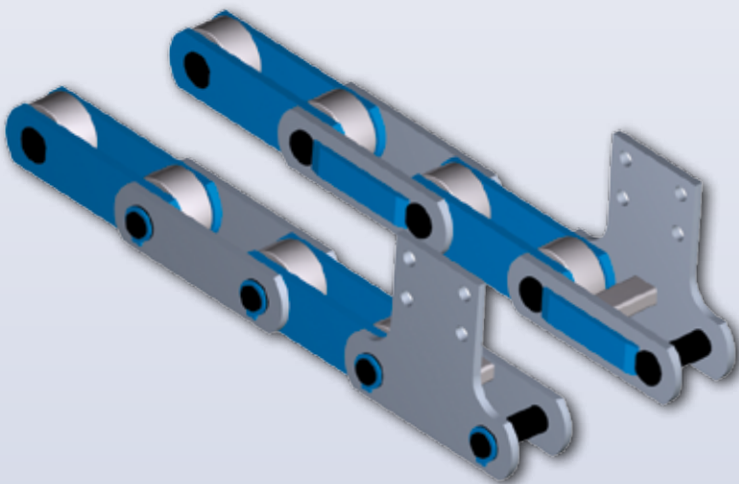


Reclaimer chains - special solutions

Bush link chain with inside, maintenance-free rollers for reclaiming abrasive bulk material (bauxite).



Reinforced bush link chain for a bucket reclaimer used for handling solidified bulk material at low temperatures.



THIELE services: upgrades, repairs and inspections



As well as producing chains and components THIELE also offers a complete support service for system operators. This includes:

- wear measurements and inspections
- maintenance and repair work
- technical support during assembly
- complete installation and assembly
- plant commissioning
- technical consultation
- personnel training



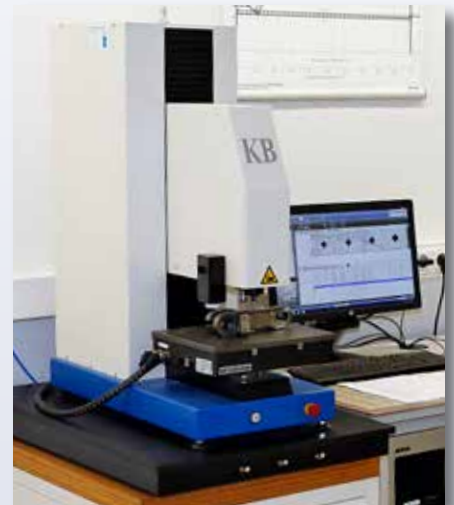
THIELE quality management



Rigorous monitoring and control of the production process plays a crucial role in the high quality of our products. Modern laboratory facilities and 3D measuring technology provide a fast route to the scientific data needed for quality assessment purposes.

Services available:

- certified technicians for non-destructive testing work (VT, MT, PT)
- test track facilities for complete component inspection to 5000 kN
- dynamic component testing to 700 kN
- macroscopic and microscopic examinations





THIELE



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