



THIELE CONVEYOR CHAINS

for Poultry Industry



Conveyor Chains for Poultry Industry

The round steel chain has been the central element in the power transmission in the poultry processing industry for many years, especially for slaughterhouse operations. Round steel chains are being used on nearly all type of production lines, e.g. at slaughter, cutting and cooling lines.

Round Steel Chains in Alloyed Steel TWN 0085

Round steel chains 8 x 25,4 mm are offered in standard lengths of 50 m. THIELE provides a connecting link with a grub screw to connect the standard chain lengths.

Dimension [mm]	Articel-No.	Pitch p [mm]	Pitch tol. \pm [mm]	Inner Width w_1 [mm min.]	Outside Width w_2 [mm max.]	Multi Pitch Length 11 x p [mm]	Multi Pitch Length tol \pm [mm]	Weight app. [kgs/m]
8 x 25,3	F05470	25,3	-0,1/+0,3	9,4	26,0	278,3	-0,0/+1,0	1,4
8 x 25,4	F05471	25,4	-0,2/+0,3	9,0	26,1	279,4	-0,4/+0,6	1,4
8 x 38,0	F05472	38,0	-0,2/+0,5	13,3	30,0	418,0	-0,0/+1,1	1,2
10 x 38,0	F05473	38,0	-0,2/+0,5	12,5	34,0	418,0	-0,5/+1,4	2,0

Finish: Electro galvanized

Technical Properties:

Description	Nominal Size [mm]	Test Force [kN min.]	Breaking Force [kN min.]	Surface Hardness [HV10]	Hardening Depth at HV 550 [mm]	Surface Thickness [μ min.]	Compatible with*
T50E	8x25,3	22	37	min. 750	min. 0,5	25	S
T50E	8x25,4	24	40	720-800	0,6-1,0	12	S, M, F, L
T80E	8x38,0	22	40	750-850	0,12 \pm 0,01	12	
T50E	10x38,0	38	64	720-800	0,6-1,0	12	
T80E	10x38,0	60	98	720-800	0,6-1,0	12	
T50V	8x25,4	24	40	min. 250	-	-	

Material: Manganese steel, chrome-nickel-steel

* S = Marel Stork; M = Meyn; F = FOODMATE; L = Linco





Conveyor Chains for Poultry Industry

Round Steel Chains in corrosion-resistant Austenitic Steel

The fine-toleranced round steel chains are made out of austenitic steel and are offered in standard lengths of 50 m.

Dimension [mm]	Article-No.	Nominal Size d [mm]	Pitch p [mm]	Inner Width w ₁ [mm min.]	Outside Width w ₂ [mm max.]	Multi Pitch Length 11 x p [mm]	Multi Pitch Length tol. ± [mm]	Weight app. [kgs/m]
8 x 25,4	F054711	25,4	-0,2/+0,3	9,0	26,1	279,4	-0,4/+0,6	1,32

Technical Properties:

Description	Dimension [mm]	Test Force [kN min.]	Breaking Force [kN min.]
T60R	8x25,4	37,5	60

Material: Grade 1.4404 (or similar) corrosion-resistant austenitic steel



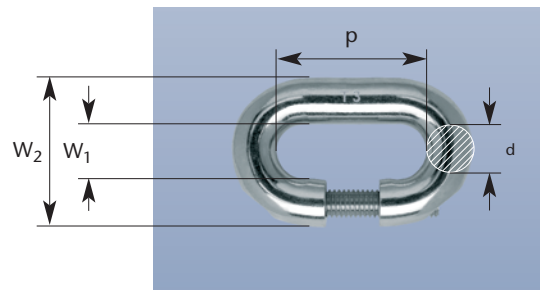
Finish: Bright finish

Chain Connecting Link TWN 0086

The connecting link with grub screw is especially designed for the round steel chain 8 x 25,4 mm acc. to TWN 0085.



Dimension [mm]	Article-No.	Pitch p [mm]	Inner Width w ₁ [mm min.]	Outside Width w ₂ [mm max.]	Breaking Force [kN min.]	Surface Hardness [HV10]	Hardening Depth at HV 550 [mm]	Weight app. [kgs]
8 x 25,4	F42077	25,4	9,3	26,1	30	550-600	0,2-0,3	0,04



Finish: Electro galvanized



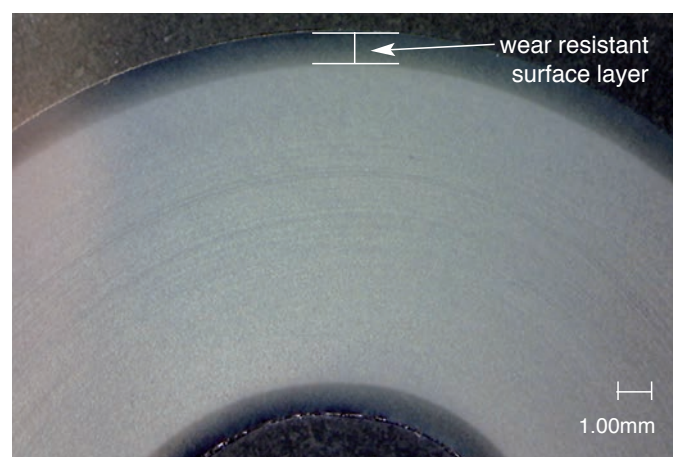
Conveyor Chains for Poultry Industry

The two key factors that affect the service life of round steel chains are wear and corrosion. Therefore, THIELE fine-toleranced round steel chains are manufactured with a high dimensional accuracy over a defined measuring distance.

Dimensional accuracy plays a decisive role and has a major impact on the operating life of the chain. Another important factor in ensuring a possible frictionless operation between the chain and the drive and take-up wheels, is the use of components which match in terms of dimension.

THIELE uses a specific case hardening process to minimise wear on its round steel chains. This process applies carbon diffusion into the surface of the material in order to render the wear resistancy of the chains.

Case Hardened Round Steel Chain 8x25,4 mm



Round steel chains operating in slaughterhouse lines are exposed to chemical influences, such as cleaning agents. As a result, round steel chains are exposed to a continuous process of corrosion. Therefore, the round steel chains TWN 0085 are protected with a galvanic coating to counteract the effect of corrosion for many years.



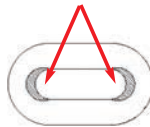
Conveyor Chains for Poultry Industry

Wear:

In operation, round steel chains are exposed to wear at the interlink.

The interlink wear causes pitch elongation of the chain link and therefore of the complete conveyor chain.

Primary wear at the interlinks

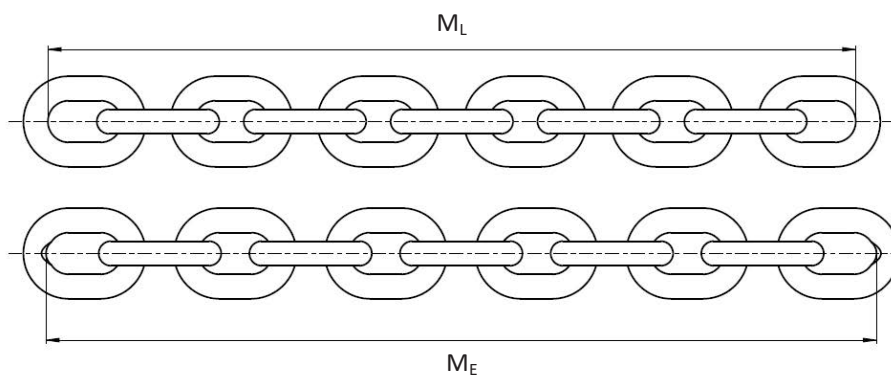


For this reason, THIELE conveyor chains are produced with a corresponding surface hardness and hardening depth.

Discard criteria:

Any frictional process will inevitably result in material loss, especially in the interlink areas. THIELE as a manufacturer recommends to take a round steel chain out of operation, once the total elongation over a defined length exceeds 2%.

The definition of the discard criteria is calculated with the following formular, taking a measuring length of 11 chain pitches into consideration:



$$\text{POINT OF DISCARD} = M_E > 2\% M_L$$

Legend:

M_E = actual measured test section in use (actual value)

M_L = Original length of the section (as per manufacturer specification)

To continue using the chain beyond this limitation may result in an excessive wear of the chain and chain wheels. It may also cause functional failures which may lead to costly production downtimes.



Conveyor Chains for Poultry Industry

The requirements imposed on the fracture mechanics of round steel chains are derived from the process parameters.

The speed and load conditions under consideration of the coefficients of friction and deflection, are essential to determine the breaking-strength requirements of the chain.

THIELE provides a range of material grades and heat treatments for individual customer applications. They are precisely coordinated with the equipment manufacturer or plant operator on a case-by-case basis.

THIELE draws on decades of experience in manufacturing round steel chains for poultry slaughter plants.

THIELE round steel chains work as the central element in power transmission of poultry processing plants.

THIELE Conveyor Chains – The central element in power transmission.



Conveyor Chains for Poultry Industry



THI-Roll

The corrosion-protected and ball bearing-mounted rollers are made of high-quality POM. They are characterized by their high strength, hardness and rigidity, as well as high abrasion resistance.

Art.-No.	Trade Size	Diameter [mm]	Width [mm]	Radius Tread (Crowning) [mm]	Material	Weight [kgs]	Compatible with	Type
	D49	48,7	22,5	45	POM	0,05	Meyn	Clip design
	D49	48,7	21,6	45	POM	0,05	Meyn	Screw design
	D51	51,5	21,6	29	POM	0,06	Marel Stork	Screw design

Color: RAL 5017 other colors on request



Clip design

Screw design

THI-Bracket (chain holder)

The high-quality THI-Brackets are made of glass fiber reinforced PA impress with their noise and vibration damping. The stable chain holder has a high abrasion resistance with high mechanical strength at the same time. Due to the optimal formulation, it is ideally suited for the use in poultry slaughterhouses.

Art.-No.	Height	Width [mm]	Depth [mm]	Distance Bracket parts [mm]	Material	Weight [kgs]	Compatible with	Type
	110	50,5	30,0	62	PA	0,07	Meyn	Clip design
	110	50,5	29,8	62	PA	0,06	Meyn	Screw design
	110	50,5	29,8	62	PA	0,06	Marel Stork	Screw design

Color: grey - other colors on request



THI-Trolley

The chain mounting bed of the THI-Trolley is specially designed for the chain geometry of the THIELE conveyor chains and provides a precise fit with screws and self-locking nuts made of rust- and acid-resistant material.

Art.-No.	Height	Chain dimension d x t [mm]	Distance between the rollers [mm]	Weight [kgs]	Compatible with	Type
	110	8 x 25,4	≈ 19	0,27	Meyn	Screw design
	110	8 x 25,4	≈ 19	0,23	Meyn	Clip design
	110	8 x 25,3	≈ 19	0,27	Marel Stork	Screw design

Color: grey - other colors on request



THI-Trolley mounted with chain including connecting link

The high-quality THI-trolley is also offered assembled with the high-quality, special abrasion-resistant, heat-treated, corrosion-protected and true-to-gauge THIELE round steel chain.

Standard distance: 6". Other distances (4", 8", 10" and 12") are possible.

The first THI-Trolley is installed according to customer requirements.

The chains are delivered with a test certificate.

Art.-No.	Height	Chain [mm]	Material	Breaking Force [kN]	Length [m]	Weight [kgs/m]	Compatibel with	Type
	110	8 x 25,4	Mn-steel	40	50	3,1	Meyn	Screw design
	110	8 x 25,4	Mn-steel	40	50	3,1	Meyn	Clip design
	110	8 x 25,3	Mn-steel	37	50	3,2	Marel Stork	Screw design
	110	8 x 25,4	Stainless steel	40	50	3,1	Meyn	Screw design
	110	8 x 25,4	Stainless steel	40	50	3,1	Meyn	Clip design
	110	8 x 25,3	Stainless steel	40	50	3,2	Marel Stork	Screw design

Color: THI-Rolls: RAL 5017; THI-Trolleys: grey - other colors on request



THIELE GmbH & Co. KG

Werkstr. 3
58640 Iserlohn - Kalthof
Germany

Telefon +49 2371 947 - 0
Web www.thiele.de
E-mail Hebetechnik@thiele.de

Folgen Sie uns

