

TATA STEEL



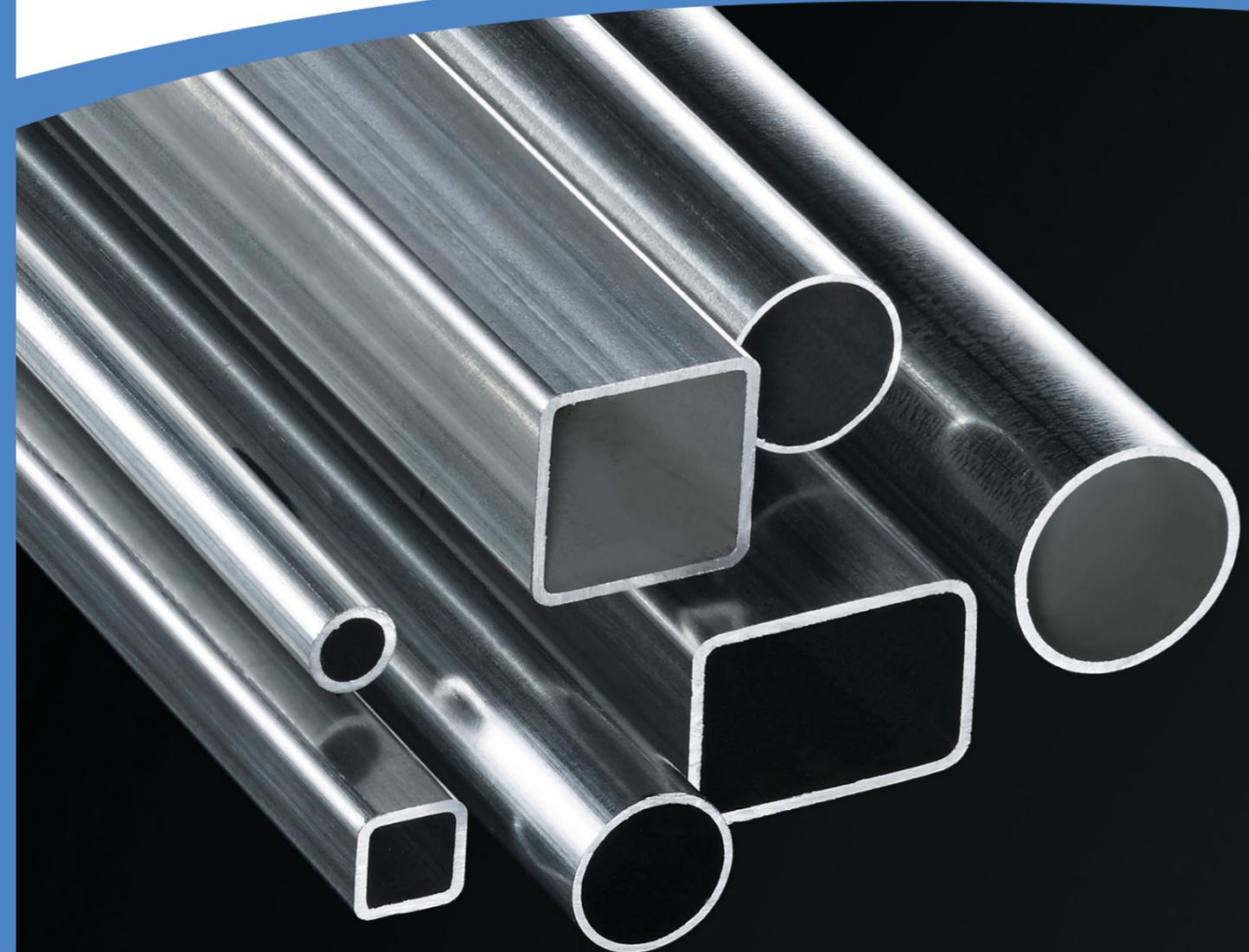
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Contiflo[®]
Premium galvanized precision tubes



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Contiflo®

The flexibility to meet all your needs

We are Tata Steel

Tata Steel is one of Europe's largest steel manufacturers with many decades of experience in the delivery of high quality steel products and related services. Contiflo® Tubes specialises in the production of coated welded steel precision products. These tubes are produced at our dedicated site in Oosterhout in the Netherlands.

Working in partnership

We regard our customers as partners and we will work closely with them to provide the best advice on the use of our precision tubes. Our technical experts are available to assist in the development of existing or new products to meet customer and market demands.

Contiflo® galvanized precision Tubes

Our Contiflo® tubes are made for various applications, such as closed heating systems for buildings and greenhouse aerating, screening, industrial packaging, gardening tools and automotive components. We manufacture in line with international standards and agreed customer specific requirements.



CONTIFLO® IMPROVED PERFORMANCE

Galvanized precision tubes

Wide range

A well as a wide range of sizes and profiles, our precision tube products are available with a range of external and internal coating options to meet your application requirements.

Product performance

Improved product performance can be guaranteed by selecting the best coating and primary coating thickness option. Our technical experts are available to assist in product selection.

Market approach

In the face of growing market demand, and taking into account end-user trends, we have developed a range of tube and coating products to meet the widest range of applications.

Product development

Our technical experts undertake continuous product development to ensure that our precision tube products meet our customers expectations in full.

Technical specifications

For full details of our precision tube specifications, please refer to page 8.

Made-to-measure solutions

We take a flexible approach to our customers requirements, and are always ready to assist you in finding your ideal profile, material grade, tolerance and length etc.

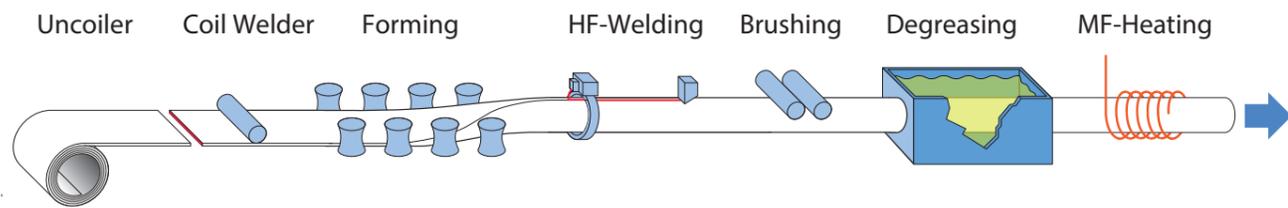
Key characteristics

Product name	Contiflo®	Contiflo® HEVAC	Forcas
Primary standard	EN10305 - 3 & 5	EN10305 - 3 & 5	EN10305 - 3 & 5
Profiles	Various profiles and shapes available	Rounds	Rounds
Primary Coating	Various options available: Standard Zinc: 7 - 12µm Semi Heavy Duty Zinc: 12 - 25µm Heavy Duty Zinc: > 25µm	Zinc 7 - 12µm	Zinc coat 7 - 12µm Powder coat 50 - 80 µm
Passivation layer added as standard	Yes	Yes	Yes
Inside coating	Burned in oil as standard (optional zinc compound)	Burned in oil as standard	Burned in oil as standard
Targeted applications	Green house, Automotive, mechanical and engineering, gardening tools etc.	Closed Heating, Ventilation and Air Conditioning systems and other building services	Green house, closed heating systems

CONTIFLO® MADE WITH CONFIDENCE

Galvanized precision tubes

Continuous production process



In line galvanising

Contiflo® tubes are galvanized on the outside using our in line coating process, which gives the tube a shiny finish and also hides the weld. The zinc layer is available in various thicknesses.

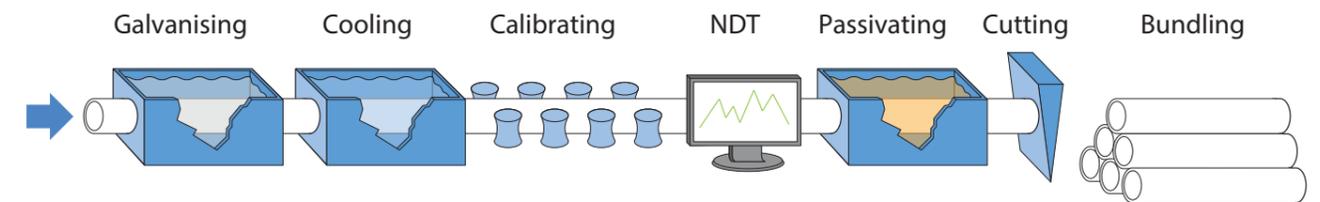
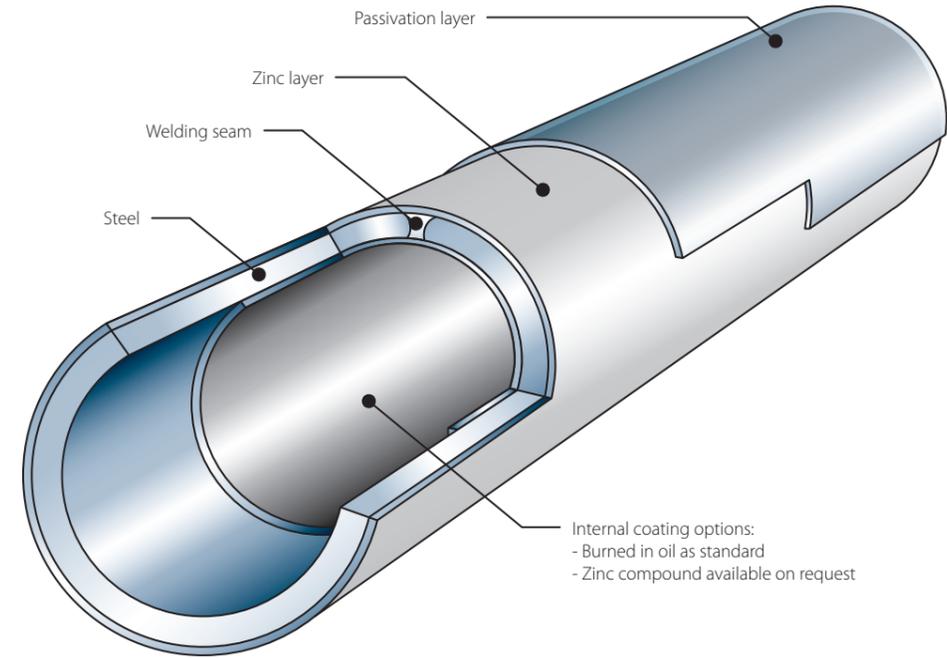
Robustness

Our galvanising process ensures an exceptionally robust and strong bond. This allows the tube to undergo deformation without the risk of disbondment.

External surface quality

The surface of our Contiflo® tubes is of a high quality and is clean, dry and grease and oil free. The galvanized surface is passivated, which also provides an excellent protection against unsightly white rust.

Tube construction



Other external options

As well as galvanized finishes, we also offer powder coatings and PP/PE options in a variety of colours. We are always willing to discuss customer coating and performance requirements.

Internal protection

The inside of our Contiflo® tubes receive a burned-in oil treatment as standard. The option of an internal applied zinc spray is available upon request.

Delivery options

For confirmation of size range, coating options and key technical delivery conditions, please contact us to discuss your requirements in full. We are always willing to discuss customer specific requirements.

TECHNICAL SPECIFICATIONS

Delivery options

Technical delivery condition

Precision tubes are supplied to EN10305 - 3 & 5 (depending on product type ordered).

Steel quality

Steel in accordance with EN10111 and EN10130.

Size range capability

Please refer to page 10 and 11.

Profiles

The standard profiles are round and rectangular, but other cross sections are also possible.

Zinc thickness

- 7 – 12 µm as standard,
- 12 - 25 µm semi heavy duty
- >25 µm heavy duty

External protection

- The tube is protected against ferrous rust by a zinc layer.
- Durable protection of the zinc layer from white rust is provided by a passivating coating.

Internal protection

Depending on the product type ordered, (internal) protection will be provided via a burned-in oil treatment or with possibility of an internal zinc spray.

Corner radius (on profiles)

- 1.50 – 1.75 x wall thickness.

Bendability

- 2 – 2.5 x external diameter.

Lengths

- Standard from 4 – 10 mtr (-0/+50 mm on length tolerances as standard).
- Optional fix lengths and sizes <4 mtr

Bundles

- Round tubes supplied in hexagonal bundles, profiles in rectangular bundles.
- Customer-specific packing is possible.

Finishing options

On request, powder coating, polymer finishes, reducing, bending, punching, cutting, marking, caps etc.

Putting the customer first

Different qualities, dimensions and cross sections may be available upon request.

Additional technical support

For additional confirmation of size range and technical delivery conditions, we have a team of technical experts available to help.

Please contact us to discuss your requirements in full.



SIZE RANGE

An extensive offering of sizes and profiles

Generic squares

(mm)	Thickness (mm)									
	0.80	0.90	1.00	1.20	1.50	1.80	2.00	2.20	2.50	3.00
10.00 x 10.00	0.230	0.256	0.281	0.329	0.397	0.458				
12.00 x 12.00	0.280	0.312	0.344	0.405	0.491	0.571				
15.00 x 15.00	0.356	0.397	0.438	0.518	0.632	0.741	0.810	0.876	0.971	
18.00 x 18.00	0.431	0.482	0.532	0.631	0.773	0.910	0.998	1.08	1.21	
20.00 x 20.00	0.481	0.538	0.595	0.706	0.868	1.02	1.12	1.22	1.36	
25.00 x 25.00			0.752	0.894	1.10	1.31	1.44	1.57	1.76	
25.40 x 25.40			0.764	0.909	1.12	1.33	1.46	1.59	1.79	
30.00 x 30.00			0.909	1.08	1.34	1.59	1.75	1.91	2.15	

Generic rectangle

(mm)	Thickness (mm)									
	0.80	0.90	1.00	1.20	1.50	1.80	2.00	2.20	2.50	3.00
20.00 x 10.00	0.356	0.397	0.438	0.518	0.632	0.741	0.810	0.876	0.971	
20.00 x 15.00	0.418	0.468	0.516	0.612	0.750	0.882	0.967	1.05	1.17	
25.00 x 15.00	0.481	0.538	0.595	0.706	0.868	1.02	1.12	1.22	1.36	
25.00 x 20.00	0.544	0.609	0.673	0.800	0.985	1.16	1.28	1.39	1.56	
29.00 x 20	0.594	0.666	0.736	0.876	1.08	1.28	1.41	1.53	1.72	
30.00 x 10.00	0.481	0.538	0.595	0.706	0.87	1.02	1.12	1.22	1.36	
30.00 x 16.00	0.557	0.623	0.689	0.819	1.01	1.19	1.31	1.43	1.60	
30.00 x 20.00			0.752	0.894	1.10	1.31	1.44	1.57	1.76	
30.00 x 25.00			0.830	0.989	1.22	1.45	1.59	1.74	1.95	2.16
33.00 x 20.00			0.799	0.951	1.17	1.39	1.53	1.67	1.87	
38.00 x 20.00			0.878	1.05	1.29	1.53	1.69	1.84	2.07	
40.00 x 20.00			0.909	1.08	1.34	1.59	1.75	1.91	2.15	
40.00 x 27.00			1.02	1.21	1.50	1.79	1.97	2.15	2.42	2.72
40.00 x 30.00			1.07	1.27	1.57	1.87	2.07	2.26	2.54	2.86

Generic flat oval

(mm)	Thickness (mm)									
	0.80	0.90	1.00	1.20	1.50	1.80	2.00	2.20	2.50	3.00
30.00 x 16.00	0.493	0.553	0.612	0.728	0.899	1.07	1.17			
38.00 x 20.00	0.612	0.686	0.760	0.906	1.12	1.33	1.47			
40.00 x 20.00	0.677	0.759	0.841	1.00	1.24	1.48	1.63			

Note: All values in table are KG per metre

Generic rounds

OD (mm)	Thickness (mm)									
	0.80	0.90	1.00	1.20	1.50	1.80	2.00	2.20	2.50	3.00
10.00	0.182	0.202	0.222	0.260						
11.00	0.201	0.224	0.247	0.290						
12.00	0.221	0.246	0.271	0.320	0.388	0.453				
12.70	0.235	0.262	0.289	0.340	0.414	0.484				
13.00	0.241	0.269	0.296	0.349	0.425	0.497				
14.00	0.260	0.291	0.321	0.379	0.462	0.542	0.592			
15.00	0.280	0.313	0.345	0.408	0.499	0.586	0.641			
16.00	0.300	0.335	0.370	0.438	0.536	0.630	0.691			
18.00	0.339	0.380	0.419	0.497	0.610	0.719	0.789			
18.30	0.345	0.386	0.427	0.506	0.621	0.732	0.804			
18.50	0.351	0.393	0.434	0.515	0.633	0.746	0.819			
18.60	0.351	0.393	0.434	0.515	0.633	0.746	0.819			
19.00	0.359	0.402	0.444	0.527	0.647	0.764	0.838			
20.00	0.379	0.424	0.469	0.556	0.684	0.808	0.888			
21.00	0.399	0.446	0.493	0.586	0.721	0.852	0.937			
22.00	0.418	0.468	0.518	0.616	0.758	0.897	0.986	1.07	1.20	
22.20	0.422	0.473	0.523	0.621	0.766	0.906	0.996	1.09	1.21	
24.00	0.458	0.513	0.567	0.675	0.832	0.985	1.09	1.18	1.33	
25.00	0.477	0.535	0.592	0.704	0.869	1.03	1.13	1.24	1.39	
25.40	0.485	0.544	0.602	0.716	0.884	1.05	1.15	1.26	1.41	
26.00	0.497	0.557	0.617	0.734	0.906	1.07	1.18	1.29	1.45	1.70
26.70	0.511	0.573	0.634	0.755	0.932	1.11	1.22	1.33	1.49	1.75
27.00	0.517	0.579	0.641	0.764	0.943	1.12	1.23	1.35	1.51	1.78
27.90	0.535	0.599	0.663	0.790	0.977	1.16	1.28	1.39	1.57	1.84
28.00	0.537	0.601	0.666	0.793	0.980	1.16	1.28	1.40	1.57	1.85
30.00	0.576	0.646	0.715	0.852	1.05	1.25	1.38	1.51	1.70	2.00
31.70	0.610	0.684	0.757	0.903	1.12	1.33	1.46	1.60	1.80	2.12
32.00	0.616	0.690	0.764	0.911	1.13	1.34	1.48	1.62	1.82	2.15
33.50			0.801	0.956	1.18	1.41	1.55	1.70	1.91	2.26
35.00			0.838	1.00	1.24	1.47	1.63	1.78	2.00	2.37
38.00			0.912	1.09	1.35	1.61	1.78	1.94	2.19	2.59
40.00			0.962	1.15	1.42	1.70	1.87	2.05	2.31	2.74
41.50			0.999	1.19	1.48	1.76	1.95	2.13	2.40	2.85
42.00			1.01	1.21	1.50	1.78	1.97	2.16	2.44	2.89
42.40			1.02	1.22	1.51	1.80	1.99	2.18	2.46	2.91
50.00					1.79	2.14	2.37	2.59	2.93	3.48
54.00					1.94	2.32	2.56	2.81	3.18	3.77
60.00					2.16	2.58	2.86	3.14	3.55	4.22
60.70					2.19	2.61	2.90	3.17	3.59	4.27
76.10					2.76	3.30	3.65	4.01	4.54	5.41