TAPPING SCREWS
METRIC SERIES

GENERAL SPECIFICATIONS

GENERAL: This specification contains the essentials of the following standards.

International Organization for Standardization
ISO 1478, 1479, 1481, 1482, 1483, 4757, 7049, 7050, 7051, 7053

The inclusion of dimensional data is not intended to imply that all the screws described are stock production sizes.

PREFERRED PARTS POLICY: Preferred parts are so designated to reduce variety of parts and assure maximum availability, interchangeability and cost savings in volume buying.

Material:	Carbon Steel (CST)
Head Types:	Flat, Oval, Pan, Hex
Drive:	Cross Recess ISO/DIN Type H (Phillips) Type Z (Pozidriv) and Hex
Diameters:	3.5, 4.2, 4.8, 5.5, 6.3, 8, 9.5
Point Types:	C, F
Finish:	Zinc with Chromate (ZND)
Lengths:	As shown below:

Dimensions in millimetres

Length					ST 3.5	ST 4.2	ST 4.8	ST 5.5	ST 6.3	ST 8	ST 9.5
	Type C		Type F								
nom.	min.	max.	min.	max.							
9.5	8.7	10.3	8.7	9.5	X	X	X				
13	12.2	13.8	12.2	13	X	X	X	X	X		
16	15.2	16.8	15.2	16	X	X	X	X	X	X	X*
19	18.2	19.8	18.2	19	X	X	X	X	X	X	X
22	21.2	22.8	20.7	22	X	X	X	X	X	X	X
25	24.2	25.8	23.7	25	X	X	X	X	X	X	X
32	30.7	33.3	30.7	32		X	X	X	X	X	X
38	36.7	39.3	36.7	38				X	X	X	X
45	43.7	46.3	43.5	45						X	X
50	48.7	51.3	48.5	50						X	X

* Pan and Hex Head ONLY.

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SERVICE PARTS SUBSTITUTION POLICY: In the event that Engineering does not indicate "Do not substitute" in Engineering Specifications, the following substitutions may be implemented in service.

To be Replaced	Service Replacement
Slotted or cross recess, plain (PLN) finish	Zinc with Chromate (ZND) cross recess or (ZND) slotted (if cross recess is not set up for service)
Slotted, zinc with chromate (ZND) finish	Cross recess, zinc with chromate (ZND) finish

MATERIALS: Tapping screws shall be fabricated from cold heading, case hardening quality steel of manufacturer's choice. After heat treatment, surface hardness shall be Rockwell 15N83 (C45) min. with a core hardness of Rockwell C26-40. Case depth per size shown below.

Nominal Size	min.	max.
ST 2.9 - 3.5	.04	.18
ST 3.9 - 5.5	.05	.23
ST 6.3 - 9.5	.10	.28

Tapping screws must form mating threads in materials into which they are normally driven without deforming their own thread and without breaking during assembly or service.

FINISHES: Tapping screws shall be furnished plain (PLN), plated or coated in accordance with Case Engineering Materials Specification:

Phosphate Coating (PHC) - MS 91
Zinc with Chronate (ZND) - MS 201
Black Teflon (PTF) - MS 61
Black Zinc (BZN) - MS 203

WORKMANSHIP: Tapping screws shall be free from burrs, seams, laps, loose scale, irregular surfaces and any defects affecting their serviceability.

RECOMMENDED HOLE SIZES: Refer to Case IH Drawing Standards B12 for details on recommended hole sizes for tapping screws.

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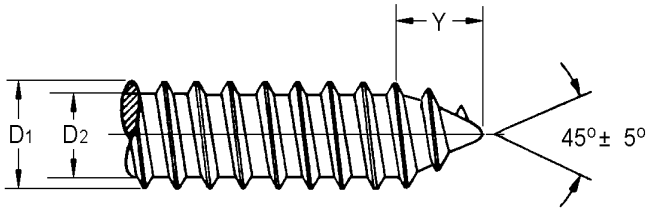
TYPE C THREAD FORMING CONE END: Primarily intended for use in thin metal.



Dimensions in millimetres

Nominal Screw Size	Thread Pitch	D1		D2		Y
		Major Diameter		Minor Diameter		Point Taper Length
		max.	min.	max.	min.	Ref.
ST 2.9	1.1	2.9	2.76	2.18	2.08	2.6
ST 3.5	1.3	3.53	3.35	2.64	2.51	3.2
ST 3.9	1.3	3.91	3.73	2.92	2.77	3.5
ST 4.2	1.4	4.22	4.04	3.10	2.95	3.7
ST 4.8	1.6	4.8	4.62	3.58	3.43	4.3
ST 5.5	1.8	5.46	5.28	4.17	3.99	5
ST 6.3	1.8	6.25	6.03	4.88	4.70	6
ST 8	2.1	8	7.78	6.20	5.99	7.5
ST 9.5	2.1	9.65	9.43	7.85	7.59	8

For complete dimensions of thread form and profile, and Type C thread end refer to ISO 1478.

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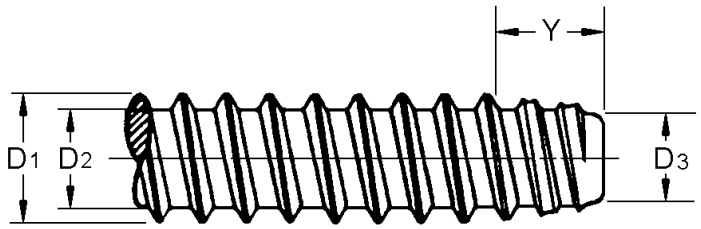
TYPE F THREAD FORMING FLAT END: Intended for use in thin metal, nonferrous castings and plastics where large internal stresses are permissible, or desirable, to increase resistance to loosening. Also used when end of screw is exposed and Type C would create a scratch hazard.



Dimensions in millimetres

Nominal Screw Size	Thread Pitch	D_1		D_2		D_3		Y
		Major Diameter		Minor Diameter		Point Diameter		Point Taper Length
		max.	min.	max.	min.	max.	min.	Ref.
ST 2.9	1.1	2.9	2.76	2.18	2.08	2.01	1.88	2.1
ST 3.5	1.3	3.53	3.35	2.64	2.51	2.41	2.26	2.5
ST 3.9	1.3	3.91	3.73	2.92	2.77	2.67	2.51	2.7
ST 4.2	1.4	4.22	4.04	3.10	2.95	2.84	2.69	2.8
ST 4.8	1.6	4.8	4.62	3.58	3.43	3.30	3.12	3.2
ST 5.5	1.8	5.46	5.28	4.17	3.99	3.86	3.68	3.6
ST 6.3	1.8	6.25	6.03	4.88	4.70	4.55	4.34	3.6
ST 8	2.1	8	7.78	6.20	5.99	5.84	5.64	4.2
ST 9.5	2.1	9.65	9.43	7.85	7.59	7.44	7.24	4.2

For complete dimensions of thread form and profile, and Type F thread end refer to ISO 1478.