



Standard Parts

Number:	FM-030
Date Issued:	C-MAR09

ELECTRONIC DOCUMENT IN THE VIEWER IS CONTROLLED. PRINTED COPY IS AN UNCONTROLLED DOCUMENT.

SPACERS (Superseded)

This standard has been superseded by CNH Standard Parts, STPF650 (87307111), Spacers. For information on superseded standards refer to ENS0050 (87523699).

The controlled versions of CNH specifications and standards are published on the CNH Intranet site.

The documents are also available on the CNH electronic viewing system (e.g. eViewer). Suppliers are able to access these documents on CSCN (CNH Supplier Communications Network).

The superseded standard remains available for viewing following this page if needed.

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GENERAL SPECIFICATIONS

GENERAL: This standard consists of pipe spacers which shall be square cut and made from standard weight, extra strong, and double extra strong common black pipe, and tubing which shall be made from commercial grade, mechanical steel tubing.

To be classified as a spacer, a length of pipe or tubing must be more than .328 in (8.33 mm) but less than 6 in (152.4 mm). Spacers must not have specific surface finishes or coatings, nor must they have special restrictive tolerances other than that which is indicated in the tolerance section below.

Since there are no National or International standards on this product, the specifications are based on present user requirements. All dimensions are shown in inch and in direct metric conversions.

PREFERRED PARTS POLICY: Because of the differentiation of even modules in the inch and the metric systems of measurement, it is not feasible to offer a stringent preferred dimensional policy, instead, the dimensions are shown in order of design requirement and in numerical progression.

TOLERANCES: Spacers shall conform to the following:

Nominal Size	Pipe		Tube		Pipe	Tube	Pipe	Tube	Tube	
	Outside Diameter (C)				Thickness (T)		Length (B)		Max. ID Weld Flash	
	in	mm	in	mm	in	mm			in	mm
Up to 1-½ in (38.1 mm)	+ .015 - .031	+0.38 - 0.79	±.005	±0.13	-12%	±12%	± .016 in ±0.41 mm		.010	.025
Over 1-½ in (38.1 mm)	±1%		+ .010 - .005	+0.25 - 0.13						

METHOD OF MANUFACTURE: Spacers shall be square cut with parallel ends within .016 in (0.41 mm).

MATERIAL: Pipe: Welded or seamless steel pipe per Case Materials Specification MS 415.
Tube: 1010 through 1020 Steel (STL). Spacers shall be square cut from one of the following grades of mechanical steel tubing as shown in Case Materials Specification:

MS 407 Round Mechanical Tube Permits the Following:

MS 403 Electric Resistance Welded Tubing Option 25

MS 404 Cold Drawn Seamless Tubing

MS 405 Cold Drawn Butt Welded Tubing

MS 406 Drawn Over Mandrel Welded

FINISH: Plain

Zinc Dichromate (ZND) - CNH MAT0310 (87303277) ZN YCR 5

MECHANICAL PROPERTIES:

	Pipe	Tube
Min. Yield	35,000 psi (241 MPa)	32,000 psi (221 MPa)
Min. Tensile	58,000 psi (400 MPa)	45,000 psi (310 MPa)

WORKMANSHIP: Spacers must be free from loose scale, sharp edges, and all other defects which might affect their serviceability.

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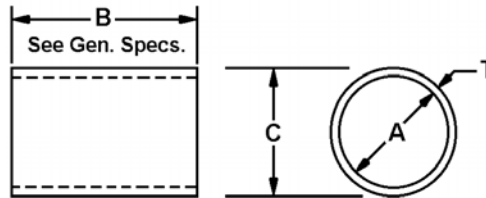


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PIPE

Nom. Size	C		Standard Weight				Extra Strong				Double Extra Strong			
			T		A		T		A		T		A	
	Outside Diameter		Wall Thickness		Inside Diameter		Wall Thickness		Inside Diameter		Wall Thickness		Inside Diameter	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
1/8	.405	10.29	.068	1.73	.269	6.83	.095	2.41	.215	5.46				
1/4	.540	13.72	.088	2.24	.364	9.25	.119	3.02	.302	7.67				
3/8	.675	17.14	.091	2.31	.493	12.52	.126	3.2	.423	10.74				
1/2	.840	21.34	.109	2.77	.622	15.8	.147	3.73	.546	13.87	.294	7.47	.252	6.4
3/4	1.050	26.67	.113	2.87	.824	20.93	.154	3.91	.742	18.85	.308	7.82	.434	11.02
1	1.315	33.4	.133	3.38	1.049	26.64	.179	4.55	.957	24.31	.358	9.09	.599	15.21
1-1/4	1.660	42.16	.140	3.56	1.380	35.05	.191	4.85	1.278	32.46	.382	9.7	.896	22.76
1-1/2	1.900	48.26	.145	3.68	1.610	40.89	.200	5.08	1.500	38.1	.400	10.16	1.100	27.94
2	2.375	60.32	.154	3.91	2.067	52.5	.218	5.54	1.939	48.25	.436	11.07	1.503	38.18
2-1/2	2.875	73.02	.203	5.16	2.469	62.71	.276	7.01	2.323	59	.552	14.02	1.771	44.98
3	3.500	88.9	.216	5.49	3.068	77.93	.300	7.62	2.900	73.66	.600	15.24	2.300	58.42
3-1/2	4.000	101.6	.226	5.74	3.548	90.12	.318	8.08	3.364	85.45	.636	16.15	2.728	69.29
4	4.500	114.3	.237	6.02	4.026	102.26	.337	8.56	3.826	97.18	.674	17.12	3.152	80.06

TUBING

7/16	.438	11.13	.083	2.11	.271	6.88	
1/2	.500	12.88	.083	2.11	.334	8.48	
5/8	.625	15.88	.109	2.77	.407	10.34	
11/16	.688	17.48	.109	2.77	.469	11.91	
3/4	.750	19.05	.109	2.77	.532	13.51	
27/32	.844	21.44	.109	2.77	.625	19.88	
7/8	.875	22.22	.109	2.77	.657	16.69	
1	1.000	25.4	.109	2.77	.782	19.86	
1-1/16	1.062	26.97	.109	2.77	.844	21.44	
1-1/8	1.125	28.58	.109	2.77	.907	23.04	
1-1/4	1.250	31.75	.109	2.77	1.032	26.21	
1-1/2	1.500	38.1	.109	2.77	1.282	32.56	
1-5/8	1.625	42.18	.109	2.77	1.407	35.7	
1-3/4	1.750	44.45	.109	2.77	1.532	38.91	

TUBING METRIC

15		15.00		4.25		6.5	
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