APÉNDICE D

CONEXIONES RÁPIDAS

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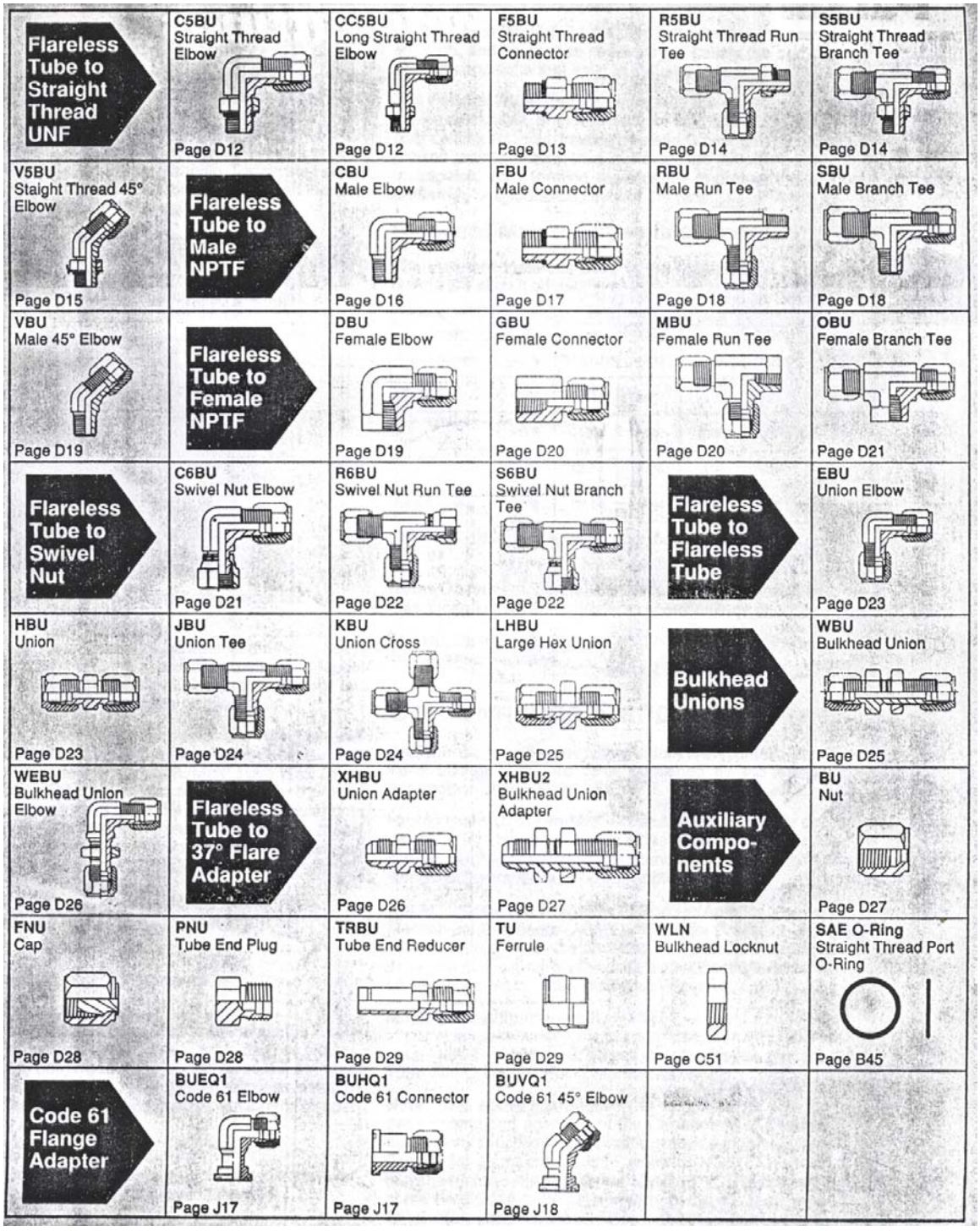
CATÁLOGO DE CONEXIONES RÁPIDAS DE ACERO INOXIDABLE



APÉNDICE D (cont)

INSTRUCCIONES DE AJUSTE

U.S. Army Ordnance Department Specifications — Ferulok fittings are fully qualified for the latest approved series of Ordnance Drawings 51811 through 51843 for flareless tube fittings used on ordnance vehicles. (Across the flats dimensions for sizes 2, 3, 5, & 14 forged fittings do not conform.)

U.S. Coast Guard — Ferulok fittings satisfy the applicable requirements of ASTM F1387, standard specification for performance of mechanically attached fittings.

How Ferulok Fittings Work

In assembly, the ferrule is driven forward on the tube by the nut during pre-set. As the ferrule moves forward it contacts the tapered seat area of the body, which causes the ferrule to cam inward into the tube. The leading edge of the hardened ferrule is thus able to make a clean 360 degree cut into the outside diameter of the tubing. This cut in the tubing is often referred to as a "Bite"; thus the term: Bite Type Fitting. As the ferrule makes its bite, a small ridge of tube material is plowed up in front of the ferrule.

Fig. D2 — Ferrule enters fitting body

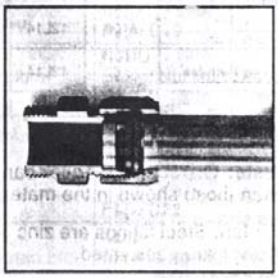


Fig. D3 — Ferrule cams inward and "bites" tubing

Fig. D4 — Plowed up ridge of tubing at ferrule's bite edge

Fig. D5 — Ferrule bows and grips tubing at rear

The intimate contact of this tube ridge with the ferrule's front face and bite edge gives the fitting its ability to retain high pressure without leaking or blowing off. When properly assembled to the recommended tubing, Ferulok fittings will consistently seal until the applied pressure is high enough to cause tube burst.

Additionally, as the ferrule bites into the tubing, its mid-section bows and the inside diameter of the back area firmly grips the tubing. This keeps service stresses, particularly flexural and vibration loadings from being concentrated in the bite area, and adversely affecting the life of the connection.

A second seal point is also effected by the hard contact of the ferrule with the tapered seat area of the fitting body.

Table D2 provides the minimum and maximum values for wall thickness.

Tube Wall Thickness

Size		Steel St. Steel Monel
O.D. Inches	Dash Number	SAE Flareless Ferulok
1/8	-2	.010 - .035
3/16	-3	.020 - .049
1/4	-4	.028 - .065
5/16	-5	.028 - .065
3/8	-6	.035 - .095
1/2	-8	.049 - .120
5/8	-10	.058 - .120
3/4	-12	.065 - .120
7/8	-14	.072 - .120
1	-16	.083 - .148
1 1/4	-20	.095 - .188
1 1/2	-24	.095 - .220
2	-32	.095 - .220

Table D2 — Recommended "Min./Max" Tube Wall Thickness for Ferulok

Maximum tube wall thickness is based on the pressure holding capability of Ferulok fittings. Tubing above the recommended range can be used. However, the pressure holding capability of the tube should be closely observed so as not to exceed the pressure capability of the fitting.

The proper Ferulok assembly procedures as outlined on pages D4 to D6 are critical to the performance of the fitting. Ferulok works best with seamless or welded and drawn fully annealed tubing. SAE J356, SAE J524, SAE J525 (max. hardness, RB72) or equivalent specification steel tubing is recommended for steel Ferulok fittings. For stainless steel Ferulok fittings, types 304 and 316 of ASTM A269, ASTM A213 (max. hardness, RB 90) or equivalent stainless steel tubing is recommended.

Monel Ferulok fittings should be assembled to fully annealed Monel 400 or similar tubing with a maximum hardness of RB 70.

Consult the Parker Hannifin Tube Fittings Division for other combinations of tube and tube fitting materials not shown.

Assembly

Ferulok fitting assembly consists of the following steps: 1) cutting, deburring and cleaning the tube; 2) pre-setting the ferrule to the tubing; 3) inspection after pre-set; and 4) assembly or installation.

Cutting, Deburring and Cleaning

Cut tubing reasonably square (within ± 1°) using a circular toothed cut-off saw, or a hacksaw with a fine tooth blade. A square cut can be easily attained when a hacksaw is used with Parker Tru-Kut sawing vise.

Lightly deburr the I.D. and O.D. of the tube end to remove burrs and sharp edges. The Parker IN-EX deburring tool is adequate for this task. If a hacksaw is used to cut the tubing, a suitable grade emery paper may be used to remove burrs.

Remove metal chips from tube end using a brush or compressed air. Wipe clean the I.D. and O.D. of the deburred tube end with a clean rag.

Caution: Use only seamless or welded and drawn tubing that is fully annealed for bending and flaring. (See Table A30 for tube selection information.)