DIN Fittings - Basic Guide

The DIN Standard and DIN 11851 Sanitary Unions -
DIN short for ‘Deutsches Institut für Normung’ or ‘German Institute of Standardization’, is a set of standards that cover a wide array of items from sanitary tubing and fittings, all the way to paper sizes and snow skis. Our sanitary unions specifically called DIN 11851 Sanitary Unions, are generally called “DIN fittings” in the brewing industry. Because this is also a metric standard, matching sizing to inches can be an issue. The sizes we chose to carry match closely to inch tubing, and these size choices generally match others in the industry. This guide will go over how to identify and then size DIN fittings, so you can order the right parts for the job.

2 Key features to look for: Thread type and Gasket style -
There are many different types of threaded sanitary unions; such as SMS, Bevel Seat, RJT, IDF, to name a few. To narrow your search there are 2 main things to look at before trying to choose a size. The shape of the threads, and the style of the gasket.

First the threads: DIN 11851 fittings use large rounded loose fittings threads. Other thread types in unions will be square (ACME), triangular, and fine pitched tight fitting threads.

Second is the gasket style: DIN 11851 gaskets are D shaped in the profile, and can have a sanitary lip for a P shape; lower quality gaskets have the seat side square. DIN are not - Z shaped, bevel seat, o-ring, or none.

Part Descriptions and General Sizing Guide -
The table to the right describes the different types of DIN parts and what their function is in the union. The DIN Part title is a standard naming designation for all DIN fittings. They are named by number; 13 for Nut, 14 for Liner, 15 for Male, and 16 for Blank.

The Basic Sizing Table lists some of the exact sizes of features. When using a ruler you do not have to be exact, close will work. The features listed below are chosen to be the easiest to measure with a ruler, and to photograph for identification assistance.

Part Name - The parts will be labeled either with an Inch size (G100) or a DIN size (DN25), sometimes parts will be marked. The reason the DIN and Inch sizes are listed together is because we manufacture them to be compatible between these sizes. Ex: 2.0”=50mm, 2.5”=65mm, etc.

INCHES - If the union is used with inch tubing, this dimension is outside diameter of the tubing (heavy wall inch tubing will be larger).

METRIC - If the union is used with metric tubing, this dimension is the inside diameter of the tubing.

THREAD - Listed as RD 52 x 1/6; this describes a rounded thread with RD, 52 for the 52mm outside diameter, and 1/6 for 6 threads per 1”

LINER - Is the diameter of the leading or face edge of a DIN Liner or blank, this is dimensioned across the surface that touches the gasket.

NUT - This is the outside diameter of a round DIN Nut (some DIN Nuts are hexagonal or flat faced to be used with a wrench)