DEKSPRAY NOZZLE

Brentwood's DekSpray Nozzle is a lightweight, versatile, and virtually maintenance-free nozzle system capable of providing optimal distribution over a wide range of water loadings.

Features

- Four nozzle configurations widen the operating range.
- One DekSpray Nozzle can do the job of 10-20 conventional nozzles.
- Multiple adaptors allow for different installation methods.
- Serviceable at temperatures up to 180°F (82°C).
- Durably engineered for long life.

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ORIFICE REMOVER/INSERT

ORIFICE INSERT

1-A 1-B 1-C

NOZZLE BODY

TURBULATORS

1-A 1-B 1-C 1-D

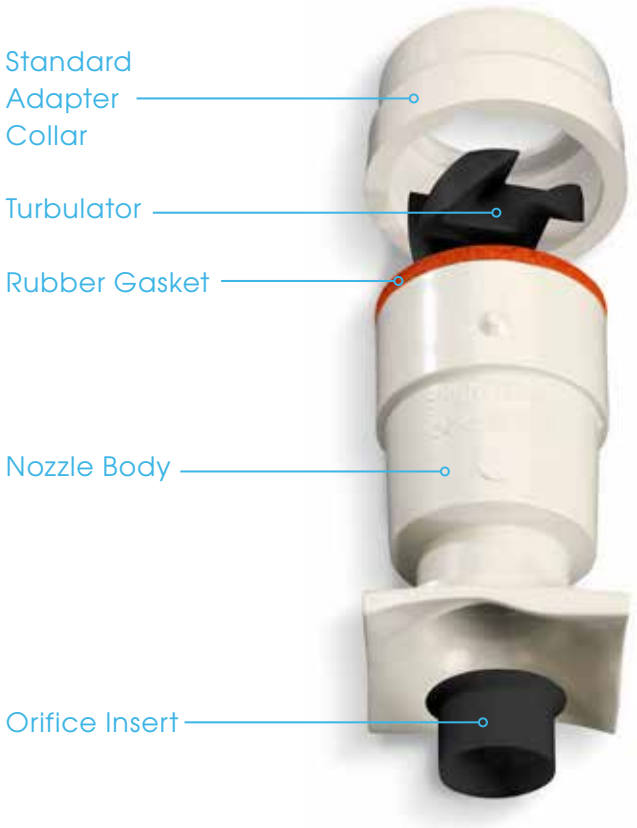
Nozzle Components & Assembly

The Brentwood DekSpray "solid rectangle" spray nozzle consists of a standard plastic body and a choice of four different plastic turbulators and three orifice inserts. The result is four different water capacities. In order of increasing capacity, the nozzles are 1-A, 1-B, 1-C, and 1-D. The 1-D nozzle does not use an orifice insert but utilizes the full orifice of the nozzle body.

The standard plastic used for manufacturing the nozzle body is ABS, which is suitable for service at temperatures up to 180˚F (82˚C). Each nozzle is supplied with its own silicone gasket, plastic turbulator, and orifice insert, forming the nozzle assembly. Adapters are available as shown on page 3.

The orifice remover/inserter shown in the top photo is a special nylon tool for inserting and removing the orifice insert.

Nozzle Assembly



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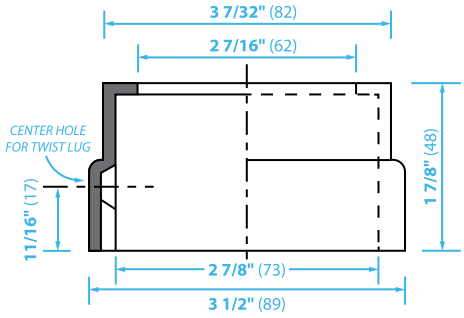
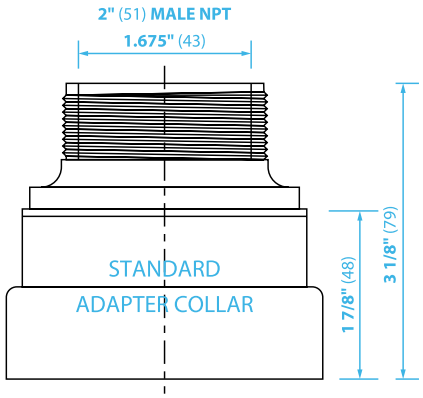
Available Adapters for the Brentwood DekSpray

STANDARD
ADAPTER COLLAR
IN PVC OR ABS



STANDARD
2" (51mm) MALE
THREADED ADAPTER
IN ABS



NOTE: Dimensions in parentheses are in milimeters (mm).

Features:

- Uniform distribution.
- Less weight and cost in piping system.
- Reduces frequency of clogging.
- Made of corrosion resistant plastic.
- Wide spray angle.
- Easy twist-lock installation and removal.
- Water capacity can be readily changed within single nozzle body.

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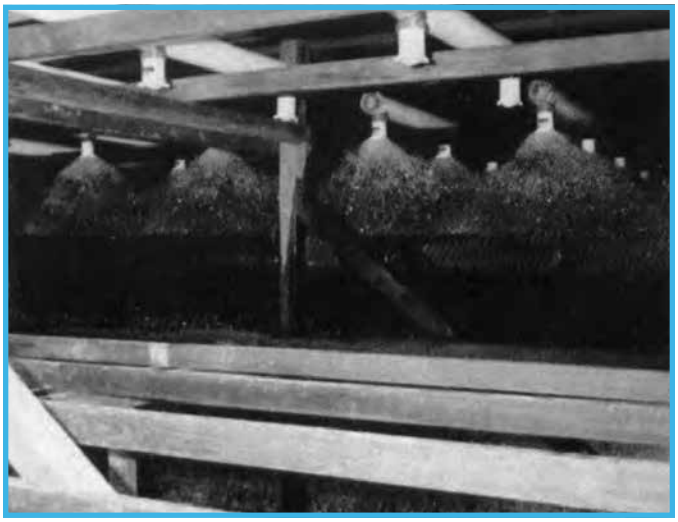


How to Select the Proper Nozzle and Spacing

1. Divide fill area into squares or as near to squares as possible, between 18 x 18" (457 x 457 mm) and 48 x 48" (1219 x 1219 mm). Count one nozzle per square.

2. Calculate the flow/nozzle.

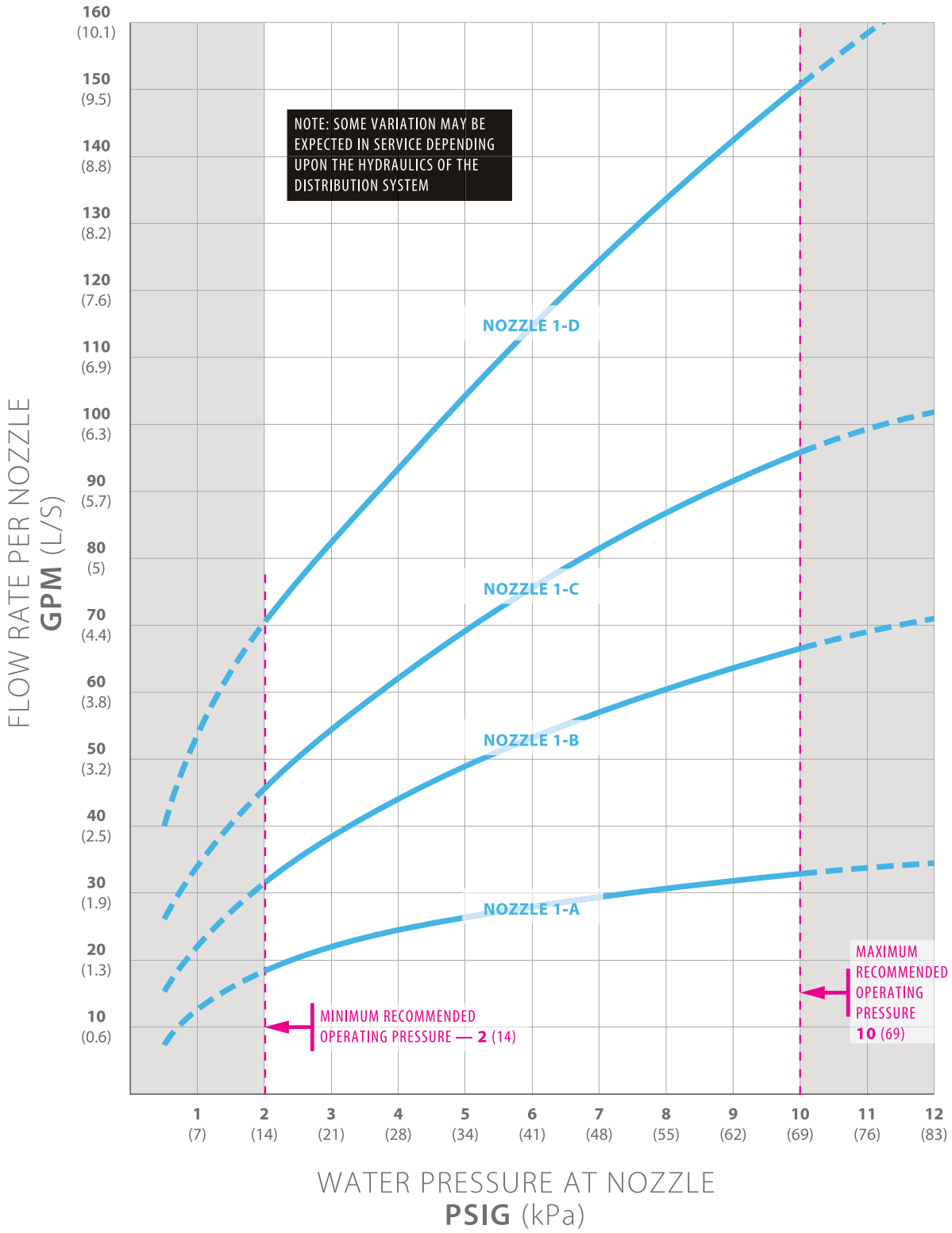
3. Go to the Nozzle Capacity chart. For the chosen flow rate, draw a horizontal line across the page. Every nozzle whose performance line is intersected between 2 and 10 psi (14 and 69 kPa) is suitable for that flow rate.

4. Turn to the corresponding coverage charts and determine the distance from fill to nozzle which is required to cover the chosen area, with the available pressure. Actual nozzle elevation should be increased to allow a 1-2" (25 - 51 mm) overlap of spray patterns.

Examples of Calculations

	Example No. 1 (IP)	Example No. 2 (IP)	Example No. 3 (SI)	Example No. 4 (SI)
Tower Area	9' x 18'	20' x 20'	7.92 m x 9.14 m	3.05 m x 3.05 m
Tower Flow Rate	1296 GPM	4000 GPM	567.8 L/s	37.9 L/s
Nozzle Coverage	36"x 36'	30" x 30"	914 mm x 914 mm	610 mm x 610 mm
Number of Nozzles	18	64	90	25
Flow per Nozzle	72 GPM	62.5 GPM	6.31 L/s	1.51 L/s
Nozzle Size	1-C	1-C	1-D	1-A
Pressure	5.5 PSIG	4.1 PSIG	32.4 kPa	2736 kPa
Distance from Nozzle to Fill	11.4"	9.5"	216 mm	267 mm

Nozzle Capacity for 1-A, 1-B, 1-C, 1-D



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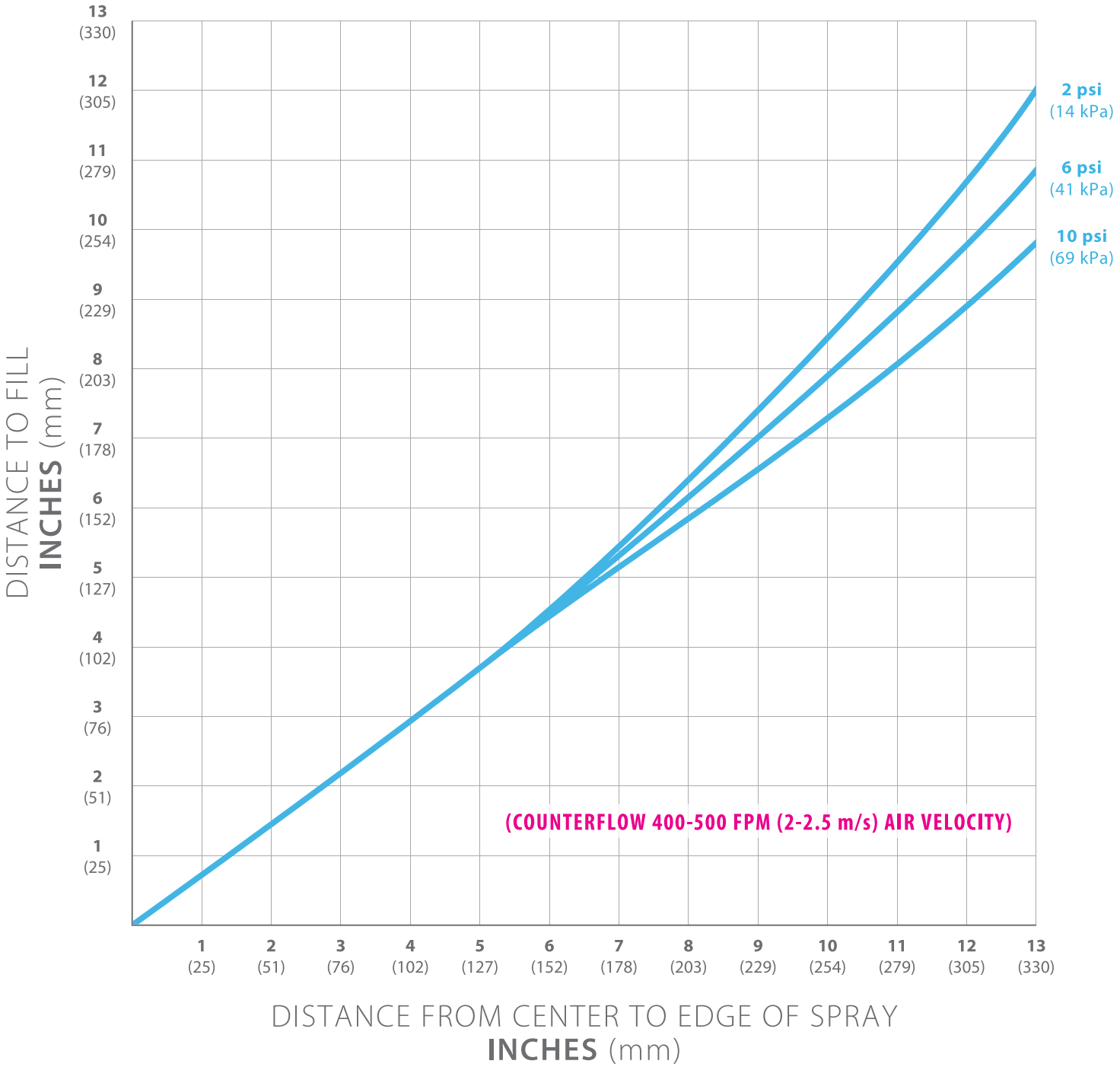
1-A Nozzle Coverage Chart



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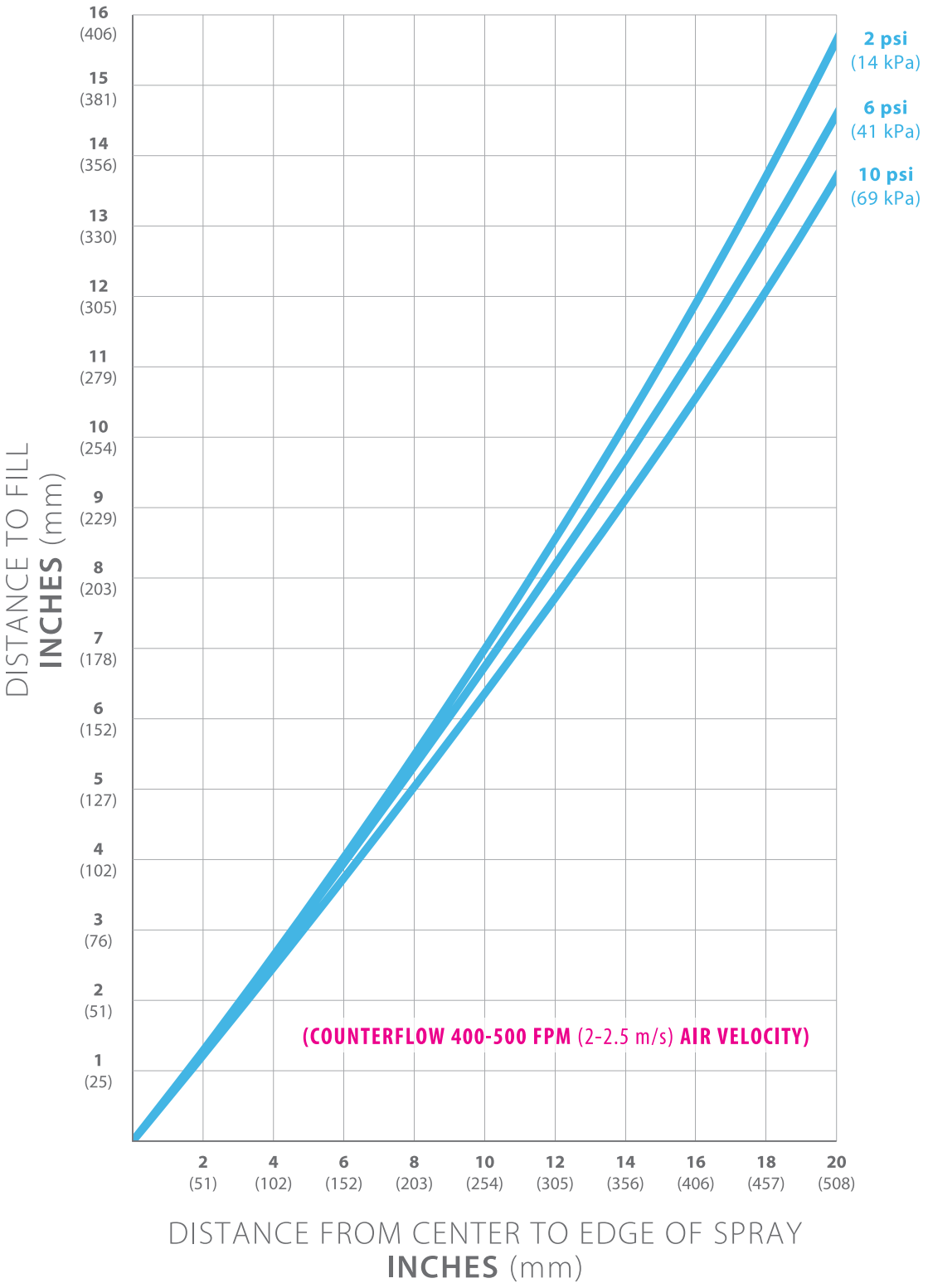
1-B Nozzle Coverage Chart



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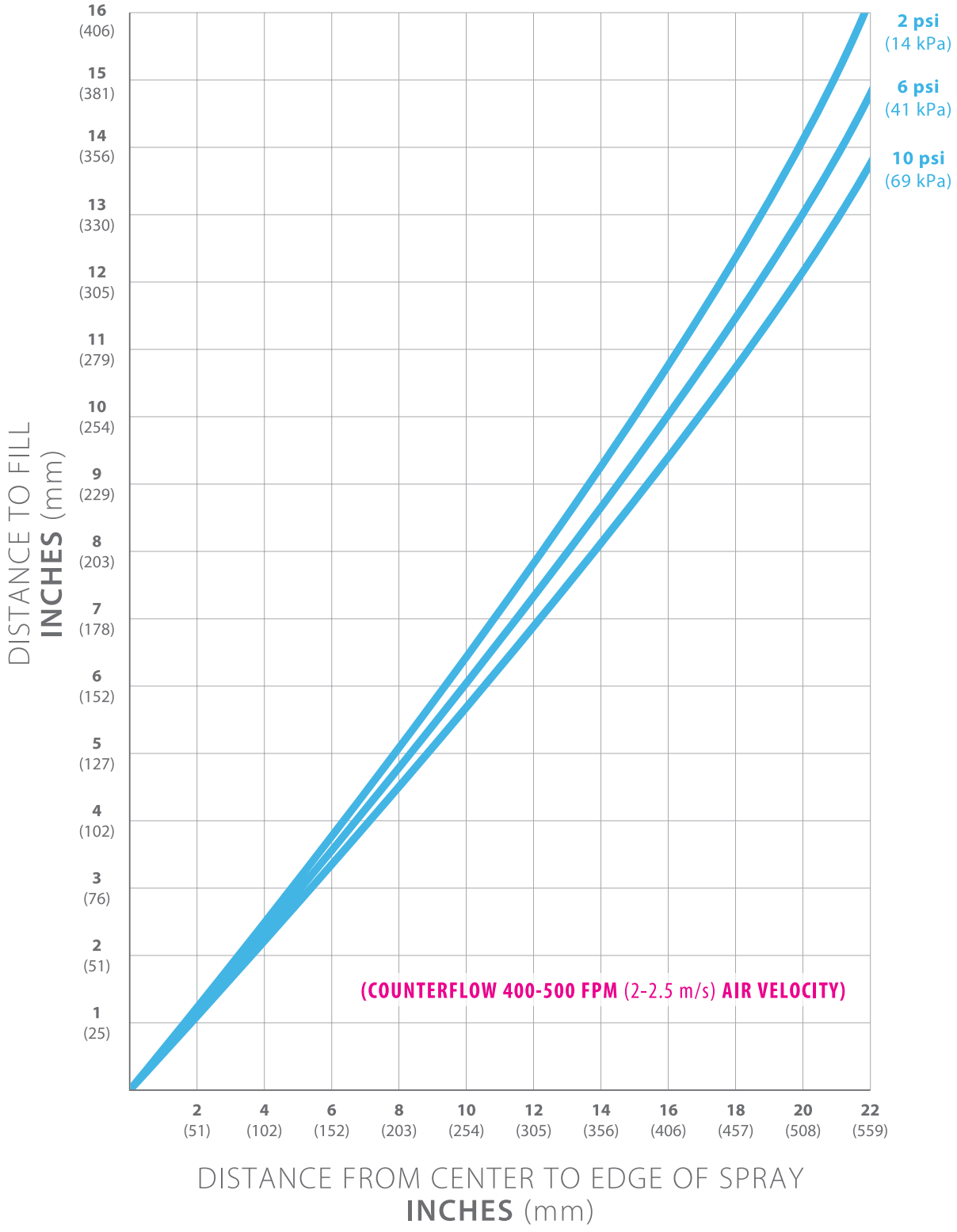
1-C Nozzle Coverage Chart



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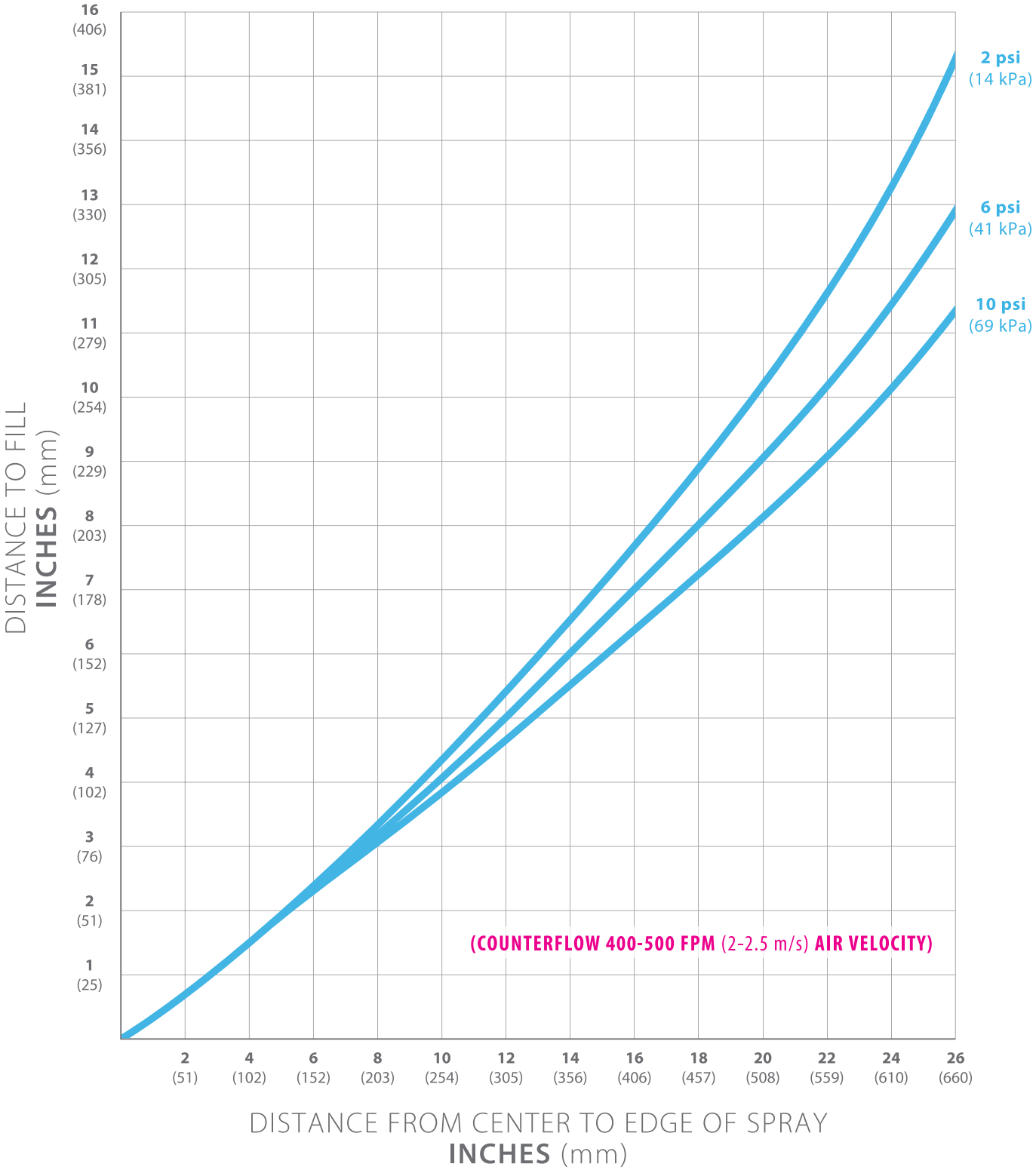
1-D Nozzle Coverage Chart



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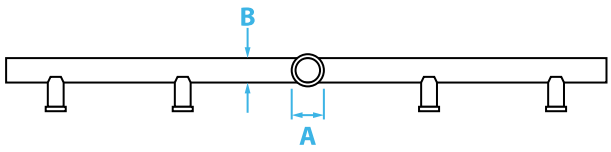
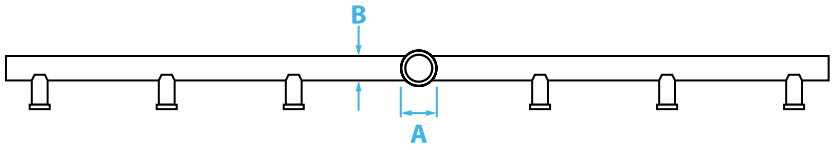
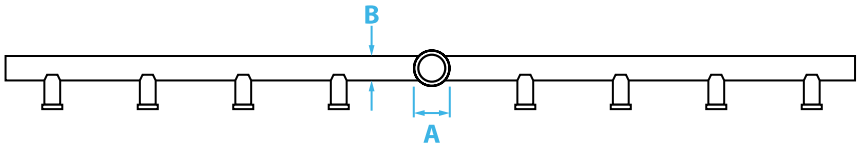
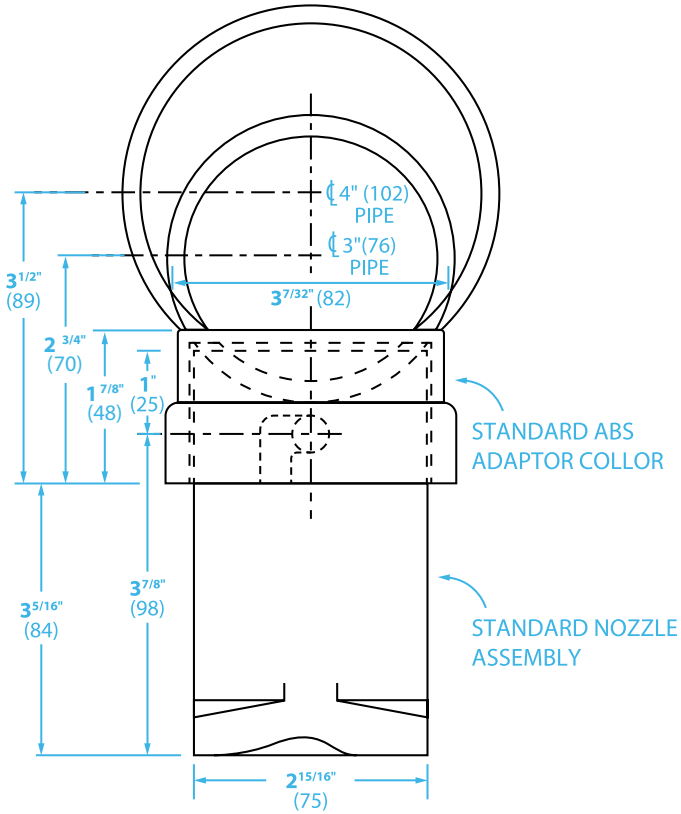
Sizing the Piping System

The dimensional data given below should be used as a guide in selecting the minimum diameter of the plastic piping system. These sizes will minimize pressure losses and keep nozzle pressures uniform.

Nozzle Size	A	B	
1-A	3" (76 mm)	3" (76 mm)	
1-B	4" (102 mm)	3" (76 mm)	
1-C	5" (127 mm)	4" (102 mm)	
1-D	6" (152 mm)	4" (102 mm)	
1-A	4" (102 mm)	3" (76 mm)	
1-B	5" (127 mm)	4" (102 mm)	
1-C	6" (152 mm)	4" (102 mm)	
1-D	8" (203 mm)	5" (127 mm)	
1-A	4" (102 mm)	3" (76 mm)	
1-B	6" (152 mm)	4" (102 mm)	
1-C	8" (203 mm)	5" (127 mm)	
1-D	8" (203 mm)	6" (152 mm)	



NOTE: Dimensions in parentheses are in milimeters (mm).

Critical Nozzle Dimensions

The distance from the center line of the pipe to the tip of the nozzle will vary with the diameter of the pipe and the type of adapter. Check page 2 for the difference in dimension of the adapters.

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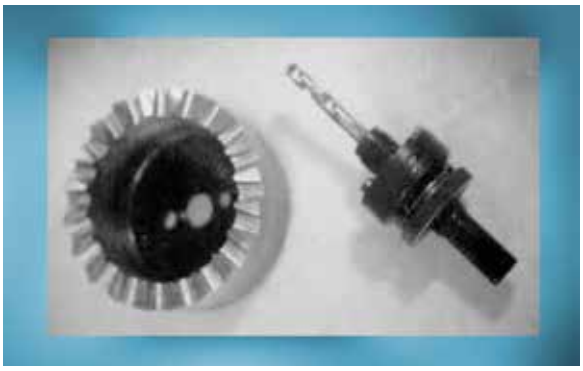
Installation of Standard Adapter

STEP 1: Brentwood will supply a special heavy-duty cutting tool to fit any drill press. This tool is designed to rapidly and accurately cut the proper opening in a 3" or 4" pipe. Note: A standard hole saw may not be strong enough to cut through the piping.



STEP 2: When drilling the adapter collar holes in the plastic pipe, make certain the cutter is positioned exactly at a 90˚ angle with the centerline of the pipe.

STEP 3: The best way to join the standard adapter collar to the pipe is by the solvent welding method. It is cheap, quick, and convenient. ABS solvent can be purchased at any hardware store. Follow the directions on the label, be sure to use plenty of solvent, and work fast before it evaporates.

STEP 4: Every adapter collar has a small notch at the top edge (Alignment Groove) as well as a small pin on the bottom surface (Alignment Pin.) When installing the adapter, the Alignment Groove must be aligned such that it is parallel with the centerline of the water distribution pipe. The Alignment Pin will be oriented 90° from the centerline of the pipe. This will assure proper positioning of the nozzle, enabling the square spray pattern to fall in line with those adjacent to it.

BRENTWOOD INDUSTRIES, INC.
brentwoodindustries.com
coolingtower@brentw.com
+1.610.236.1100

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