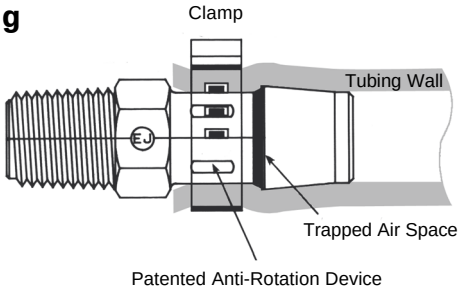
Eldon James

Only Eldon James fittings offer the benefits of these combined features:

- Single Barb design - Precision molded barb with no mold parting line
- Bulkheads - to insure optimum connector insertion depth into tubing
- Anti-Rotation device on barb shaft - prevents tubing from rotating on the barb
- Clean functional design - no protruding sharp edges, boxed corners, or excess material

Eldon James Fitting

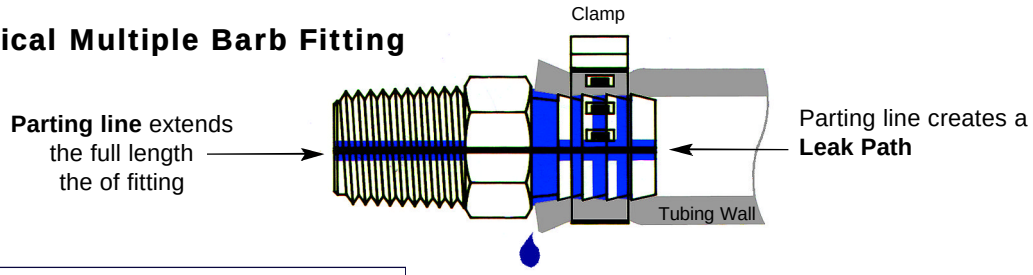
Anti-rotation devices behind the the barb work in conjunction with a clamp to prevent rotational stress and wear on the tubing.



The barb's surface is smooth and glass-like because the molded-in parting line stops at the base of the barb, allowing for an excellent seal

- Eldon James threads are molded in precision-ground cavities resulting in perfectly matched threads at the parting line. While this method is the most costly, it produces the cleanest, most accurate molded thread possible.
- The addition of a clamp ensures that the diameter of the hose will remain smaller than the flare of the barb. If the tubing swells from internal pressure, the clamp will be pulled up tight against the back of the barb and maintain the integrity of the seal.

Typical Multiple Barb Fitting



Where Multiple Barb Fittings Fail

Multiple barbs are typically in close succession. This prevents the tubing from relaxing to it's original size, which is essential to the barb's performance. Since the effective clamp diameter is limited by the barbs' circumference a less effective seal is produced.

- Tooling mismatches in poor-quality molds often result in fittings with misaligned threads and barb sections, that can cause leakage.
- Molds for multiple barb fittings cannot be designed to avoid a parting line. As the mold wears, this parting line becomes more pronounced, resulting in a molded-in leak path on the fittings surface.

ADDITIONAL NOTE: Brass fittings are machined and do not have the problem of molded-in parting lines. However, brass fittings are usually designed with multiple barbs. In addition, machinable brass contains free lead. Brass parts should not be used on any system, if internal heavy metals are undesirable or dangerous.

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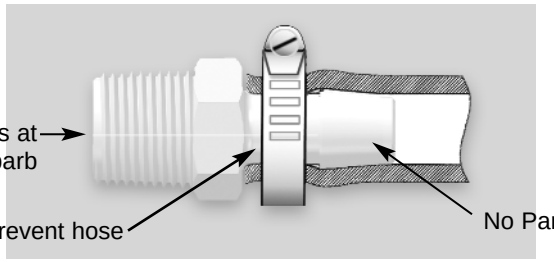
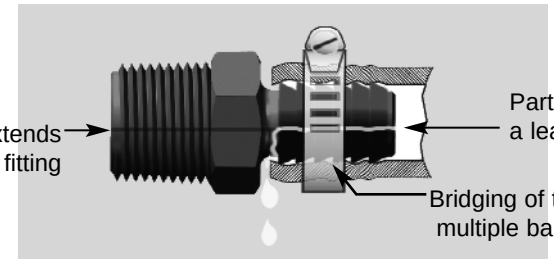
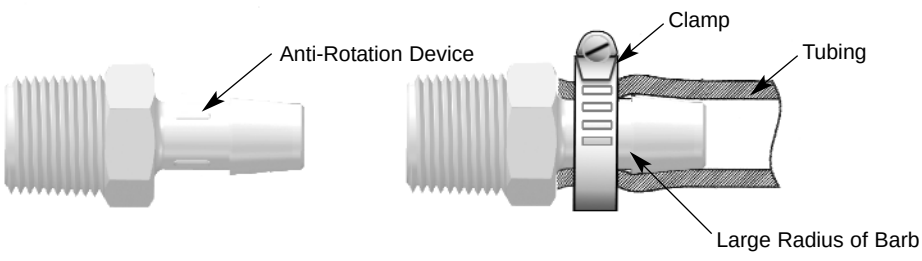


Eldon James *Single Barb* Fitting Design



Typical Multiple Barb Fitting Design Illustrating Failure Potential

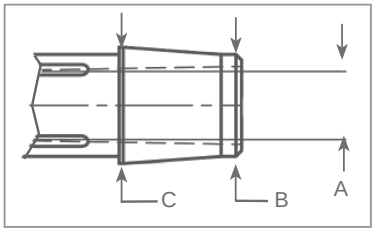
• Correct Clamp Placement - Single Barb Fitting •



Barb Dimensions and Thread Specifications - Approximate

Barb Dimensions

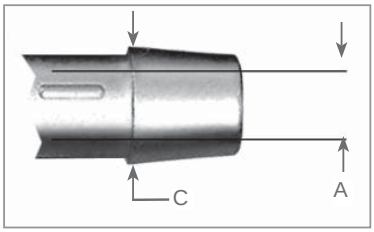
EJ Barb Size	Fits Hose ID	Dim. A	Dim. B	Dim. C
1	1/16"	.048"	.070"	.098"
1.5	3/32"	.068"	.100"	.135"
2	1/8"	.075"	.125"	.161"
2.5	5/32"	.097"	.160"	.207"
3	3/16"	.117"	.180"	.244"
4	1/4"	.140"	.250"	.300"
5	5/16"	.200"	.313"	.364"
6	3/8"	.250"	.375"	.450"
8	1/2"	.368"	.500"	.570"
10	5/8"	.470"	.625"	.712"
12	3/4"	.580"	.750"	.855"
16	1"	.800"	1.00"	1.100"



EJ Nominal Barb Dimensions
Plastic Hose Barbs

Stainless Steel Barb Dimensions

Use with Hose ID	EJ Barb #	Thru Hole ID A	Barb Diameter C	Barb Dia. Metric
3/32"	1.5	.066"	.152"	3.86 mm
1/8"	2	.082"	.180"	4.57 mm
5/32"	2.5	.100"	.215"	5.46 mm
3/16"	3	.127"	.260"	6.60 mm
1/4"	4	.167"	.314"	7.98 mm
5/16"	5	.217"	.372"	9.45 mm
3/8"	6	.312"	.498"	12.65 mm
1/2"	8	.400"	.619"	15.72 mm
5/8"	10	.495"	.743"	18.87 mm
3/4"	12	667"	.956"	24.28 mm

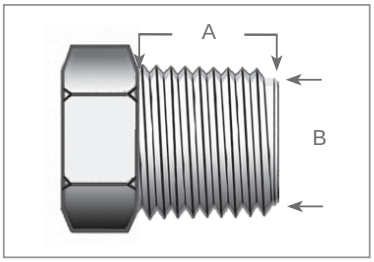


Stainless Steel Barbs

Thread Specifications

EJ Thread	Thread Length (A)	Thread Type	Threads Per Inch	Pitch Dia. Start/ Ext. Thread (B)
	Unified National Fine (UNF) Threads			
1032	1/4"	UNF	32	.1658
1032T	3/8"	UNF Taper	32	–
1/4-28	3/8"	UNF	28	.2208
	National Standard Taper Pipe Thread (NPT)			
1	1/16"	NPT	27	0.27118
2	1/8"	NPT	27	0.36351
4	1/4"	NPT	18	0.47739
6	3/8"	NPT	18	0.61201
8	1/2"	NPT	14	0.75843
12	3/4"	NPT	14	0.96768
16	1"	NPT	11.5	1.21363
	British Standard Pipe Thread (BSPT)			
2B	1/8"	BSPT	28	0.3601
4B	1/4"	BSPT	19	0.4506
6B	3/8"	BSPT	19	0.5886

Thread Torque:
The general rule for plastic threads is - finger-tight plus 1/2 to 1 turn with a wrench.



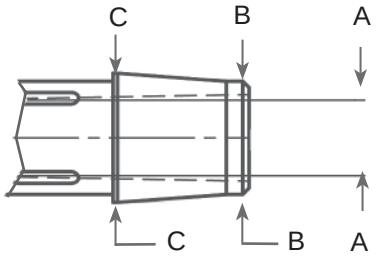
*Over-tightened plastic threads can put stress on the fitting and may cause it to fail.

Eldon James

Metric Barb Dimensions - Approximate

METRIC SIZE EQUIVALENTS

Eldon James fittings work well in most applications using metric size hose and tubing. Due to the varying flexibility of different tubing formulations, requesting samples is recommended before placing quantity orders. The size chart below is provided to assist you in making sample requests.



EJ Nominal Barb Dimensions
Plastic Hose Barbs

Fits Metric Size Hose ID	Eldon James Barb #	US Hose ID Inches	Dim C	Dim B	Dim A
1.59 mm	1"	1/16”	2.49 mm	1.78 mm	1.22 mm
2.38 mm	.1.5	3/32”	3.43 mm	2.54 mm	1.73 mm
3.18 mm	2	1/8”	4.09 mm	3.18 mm	1.91 mm
3.97 mm	2.5	5/32”	5.26 mm	4.06 mm	2.46 mm
4.76 mm	3	3/16”	6.20 mm	4.57 mm	2.92 mm
6.35 mm	4	1/4”	7.62 mm	6.35 mm	3.56 mm
7.94 mm	5	5/16”	9.25 mm	8.00 mm	5.08 mm
9.5 mm	6	3/8”	11.43 mm	9.53 mm	6.35 mm
12.7 mm	8	1/2”	14.48 mm	12.70 mm	9.35 mm
15.9 mm	10	5/8”	18.08 mm	15.88 mm	11.94 mm
19 mm	12	3/4”	21.72 mm	19.05 mm	14.73 mm
25.4 mm	16	1”	27.94 mm	12.54 mm	20.32 mm

Nominal dimensions for Eldon James plastic barb fittings. Dimensions may vary slightly due to the variable shrink rate of different materials.

Eldon James

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