

EFI FUEL RAILS - NEW .970" I.D. RAIL!

We can supply a completed fuel rail for our manifold or yours, or we can machine a rail to your print or supply a partially machined rail for you to finish. Individual components available!

Our 8 AN fuel rails with .685" ID are more than adequate for most applications. Our 12 AN fuel rails with .970" ID have twice the cross-sectional area of the 8 AN rails... we recommend these for very high horsepower gas engines, most methanol engines, systems with very large injectors, or two injectors call our technicians for advice.

The problem: When a very large EFI injector is pulsed (opened), it takes a very quick "gulp" of fuel out of the rail, causing a large instantaneous pressure drop. These pressure drops can reinforce each other in a random ram tuning within the rail and attached fuel hoses that cause chaotic pressure pulsing; we have seen plus and minus 30 psi on a 130 psi supply (100 - 160 psi range). As the pressure waves travel through the fuel rail, some injectors are likely to open when there is a high or low local pressure... this causes very significant cycle to cycle rich and lean conditions to the cylinders, as once the injector opens, it's simply a function of the pressure acting on it's outlet orifice(s). A pressure gauge will not respond accurately to these pulses as they are too fast; we use very fast response piezoelectric pressure transducers to analyze these systems.

Why the larger rails help: All fuel has some air in it, especially after the system has run a little, because the return fuel absorbs more air as it falls back into the tank. This makes the fuel a bit compressible, thus the larger rail assists the ability to take a "gulp" with less pressure drop. We have seen 45 horsepower picked up by just switching from our 8 AN to our 12 AN rails.

Avoid using individual supply hoses to the injectors; they cause huge pressure drops because of the pulsing flows. If you must use them, make them all the same length, and as large an ID as possible... 3/16" ID is too small; 3/8" would be much better



WELD-IN INJECTOR BOSSES FOR MANIFOLD

FUEL RAILS

TO MACHINE YOUR OWN FUEL RAIL
SEE PAGE #144 FOR TOOLING



STANCHIONS

FUEL RAIL ADAPTER FITTINGS

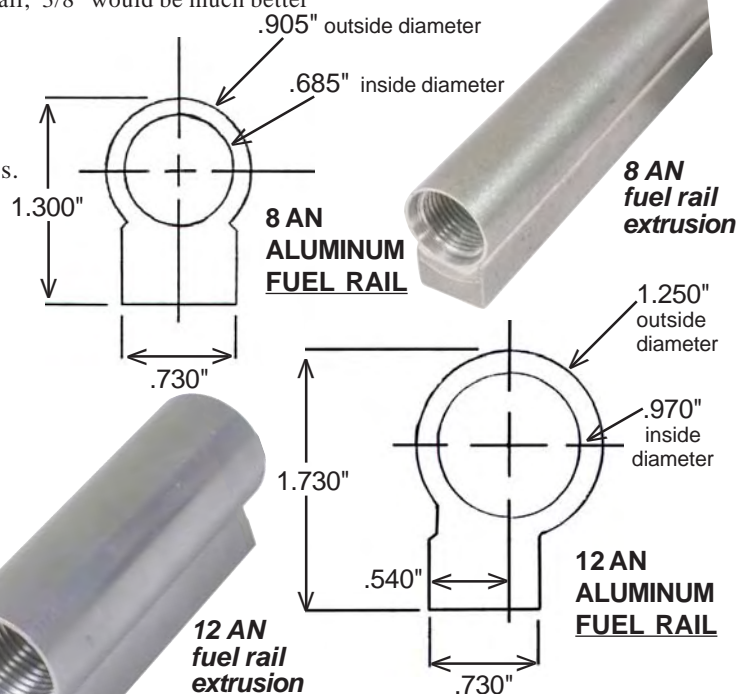
STANCHION MOUNT STUDS

ALUMINUM FUEL RAILS

Extruded aluminum fuel rail material in bulk form, cut to desired length, partially machined, or machined to fit. Billet aluminum mounting stanchions are available in varying heights to aid in the installation of EFI injectors with different overall body lengths. We offer a complete line of mounting hardware and adapter fittings. Our extrusion design allows for the drilling and tapping of 8 AN female o-ring end ports (NO pipe thread which can crack the tube, or sealer compound to get in your fuel system).

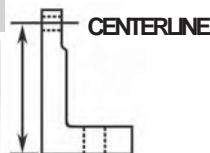
- 10300 Extruded aluminum fuel rail tubing, 6061-T6 alloy, .680" I.D., .110" wall, .900" wide x 1.3" tall, priced per foot
- 10301 Extruded aluminum fuel rail tubing, 6061-T6 alloy, .970" I.D., .140" wall, 1.250" wide x 1.730" tall, priced per foot
- 10365 Labor, machine one end of extruded aluminum fuel rail for 8 AN female o-ring thread
- 10366 Labor, machine both ends of one rail to square off raw cut piece
- 10303 Stanchion, 2.000" tall, L-type, billet aluminum
- 10305 Stanchion, 2.050" tall, L-type, billet aluminum
- 10308 Stanchion, 2.100" tall, L-type, billet aluminum, used on Kinsler manifolds with Bosch or Rochester EFI injectors
- 10310 Stanchion, 2.150" tall, L-type, billet aluminum
- 10312 Stanchion, 2.200" tall, L-type, billet aluminum
- 10313 Stanchion, 2.000" tall, L-type, billet aluminum, Special L-type, pad for installation of #10314 bell crank bracket
- 10314 Bracket, bolts to stanchion #10313 to mount Kinsler #5485 bell crank bearing, used on Buick V6 'Indy Light' cars
- 10317 Stanchion, 2.250" tall, L-type, billet aluminum
- 10319 Stanchion, 2.300" tall, L-type, billet aluminum

- 10355 Injector cup extension, 1.135" long, 6 AN male + o-ring, billet aluminum
- 10357 Injector cup extension, 1.355" long, 6 AN male + o-ring, billet aluminum
- 10359 Injector cup extension, 2.0" long, 6 AN male + o-ring, billet aluminum, not machined for injector detail



U-Type Stanchions are for severe vibration applications

- 10329 Stanchion, 2.100" tall, U-type, billet aluminum
- 10330 Stanchion, 2.220" tall, U-type, billet aluminum
- 10331 Stanchion, 1.960" tall, U-type, billet aluminum
- 10348 Stud kit, set of (4) 5/16-18 x 1 1/4" studs with recess hex, washers, and jet nuts
- 10349 Bolt kit, set for mounting (4) U-type stanchions, 5/16-18 x 1 1/4" cap screws, (4) special washers, (4) small hex nuts for studs, cross bolts, washers, and nuts
- 10350 Bolt kit, set of (4) for mounting fuel rail to stanchion, 1/4-20 x 1" long small head 12-pt. bolts with washers and jet nuts



Stanchion height is measured from bottom of stanchion to the centerline of the fuel rail mounting hole.

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