

MOTORSPORT PLUMBING

COURSE CHEAT SHEET



AN Dash Fitting Conversions

AN Dash Size	Hose Inner Ø / Tube Outer Ø	SAE 37° (JIC) Equivalent
-02	1/8"	5/16" -24
-03	3/16"	3/8" -24
-04	1/4"	7/16" -20
-05	5/16"	1/2" -20
-06	3/8"	9/16" -18
-08	1/2"	3/4" -16
-10	5/8"	7/8" -14
-12	3/4"	1 1/16" -12
-16	1"	1 5/16" -12
-20	1 1/4"	1 5/8" -12
-24	1 1/2"	1 7/8" -12
-28	1 3/4"	2 1/4" -12
-32	2"	2 1/2" -12

Typical Fuel Line Sizes

HP Rating	AN Dash Size	Line Diameter
<350	-05	5/16"
350-450	-06	3/8"
450-650	-08	1/2"
650-1000	-10	5/8"
1000+	-12	1 1/16"

Notes

- Ensure the pump is as close to the tank as possible and below the outlet of the tank. (*External Pumps*)
- This ensures gravity feeds fuel to the pump. (*External pumps push fuel. They don't pull it very well.*)
- Consider installing a 100 Micron In-Line Fuel Filter between the tank and the pump. (*External Pumps*)
- The fuel line after the pump can be a size smaller than the feed line. (*External Pumps*)
- When using E85, alcohol, methanol, etc. go up to the next bigger fuel line.

Intercooler Inlet/Outlet Diameter

Diameter	Max Horsepower Recommended	Max Airflow (CFM)
1 3/4"	285	430
2"	370	560
2 1/4"	470	710
2 1/2"	580	870
2 3/4"	700	1050
3"	840	1260
3 1/4"	985	1480
3 1/2"	1145	1720
3 3/4"	1300	1970
4"	1500	2250
4 1/4"	1680	2530
4 1/2"	1885	2830
4 3/4"	2100	3160
5"	2330	3500

Typical BSFC Values

lbs/hp/hr

Naturally Aspirated + Carburetor

0.48 - 0.55 lbs/hp/hr 290-335 g/kWh

Naturally Aspirated + Fuel Injection

0.45 - 0.50 lbs/hp/hr 274-304 g/kWh

Forced Induction + Carburetor

0.58 - 0.65 lbs/hp/hr 352-395 g/kWh

Forced Induction + Fuel Injection

0.55 - 0.60 lbs/hp/hr 335-365 g/kWh

Porsche Air Cooled + Turbo

~0.70 lbs/hp/hr ~425 g/kWh

Honda K20A

~0.30 lbs/hp/hr ~183 g/kWh