

Ejectors Exercise

Make a program replicating the explained gas-gas ejector model, taking as reference the following conditions, for refrigerant R-141b

Table 1. Geometry data and efficiencies

Geometry		Efficiencies	
d_t [mm]	2.64	η_p	0.95
d_1 [mm]	4.50	η_{py}	0.88
d_2 [mm]	6.70	η_s	0.85
		ϕ_m	0.82

Data extracted from the papers of Huang et al. (1999) and Chen et al. (2013)

Table 2. Pressure and temperature data for both fluids and critical

	Temperature [°C]	Pressure [bar]
Primary	95.0	6.04
Secondary	8.0	0.40

Work required:

- 1-Program the model. Attach the Matlab file in the Atenea upload
- 2-For the nominal point, describe in detail the results, progress of conditions inside the ejector
- 3-Analyse the effect of some operating and geometry conditions (e.g. three parameters, 4 values each), by making a parametric study. Do some graphs and comment the trends.