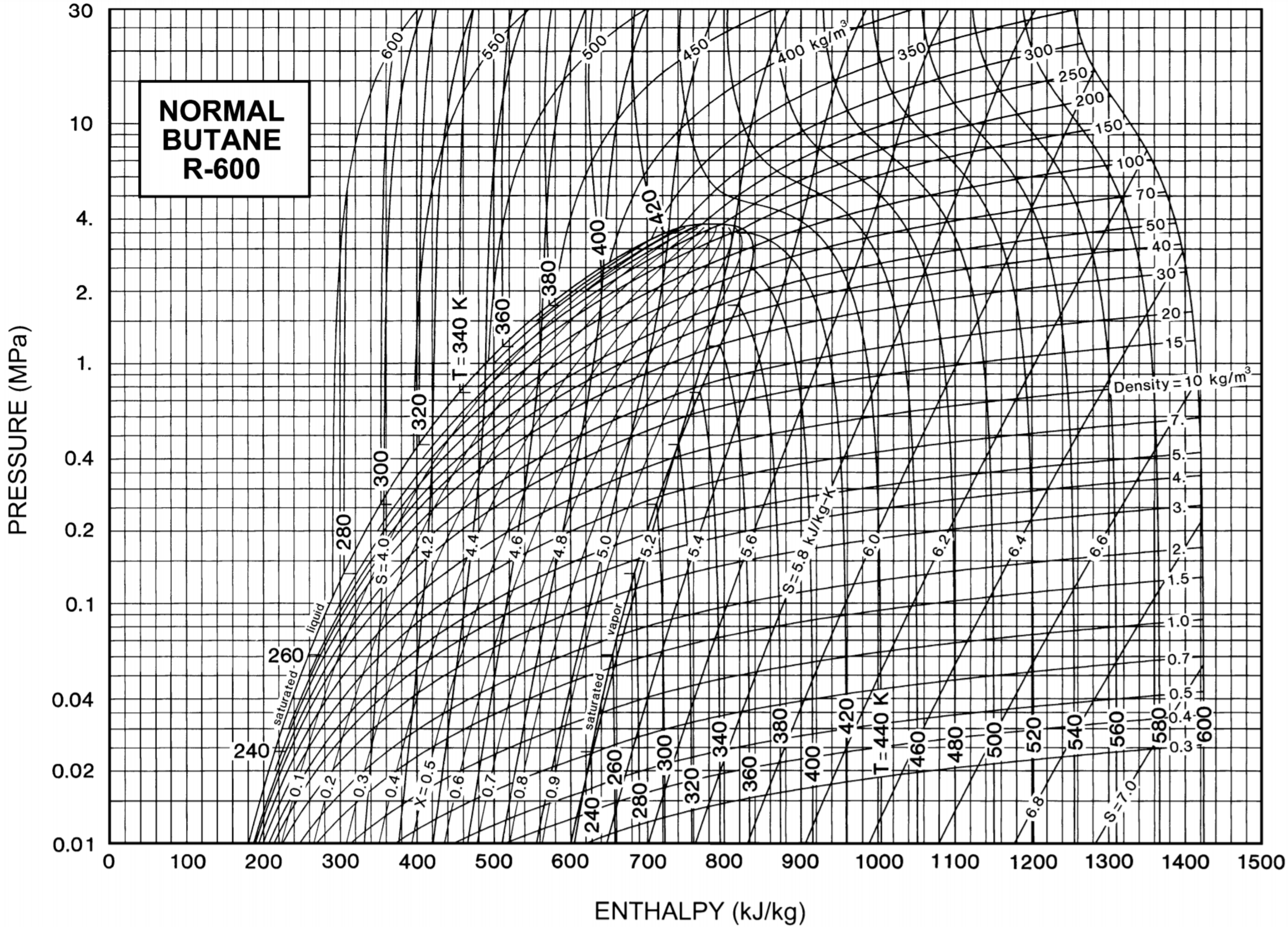
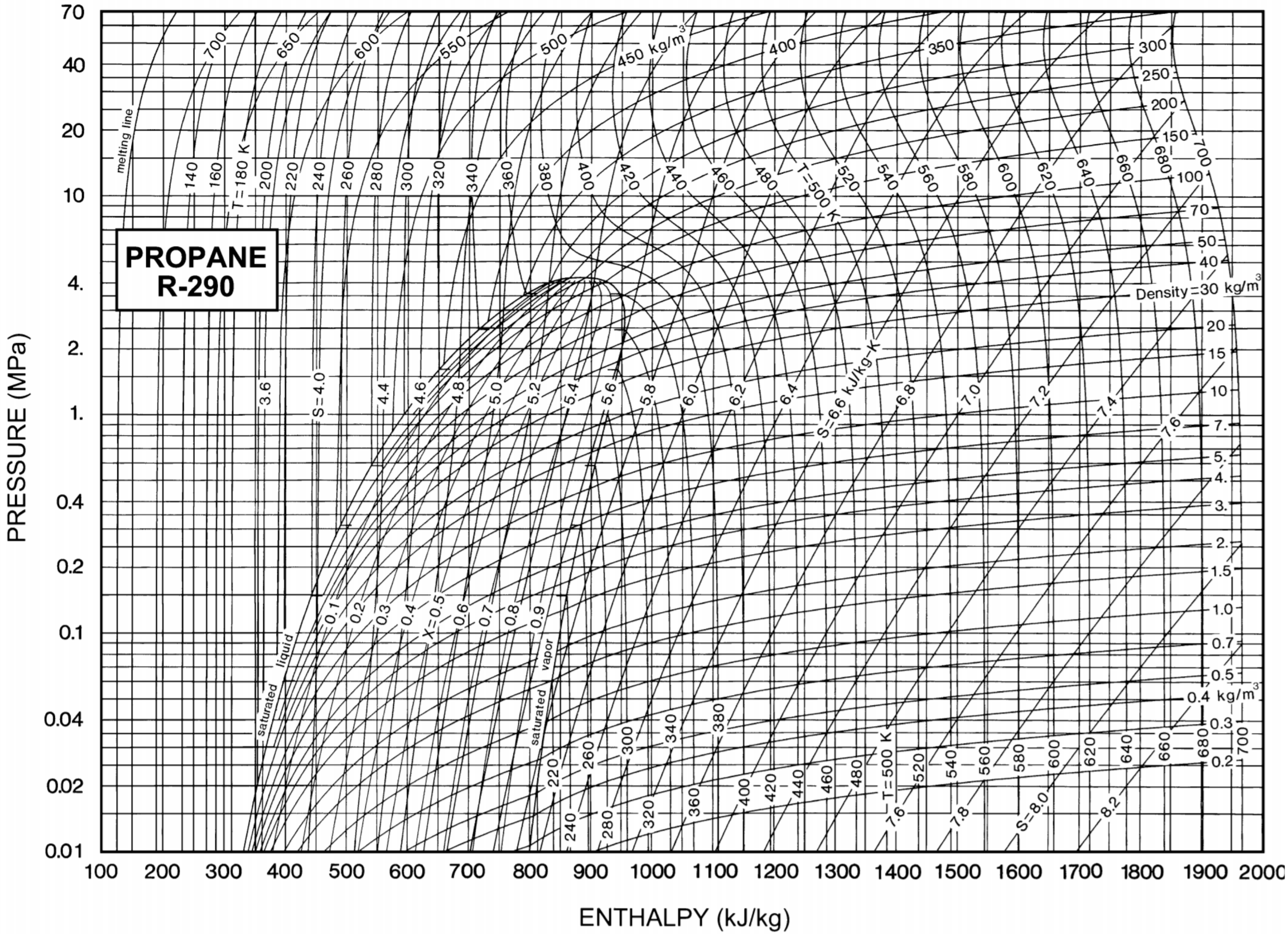
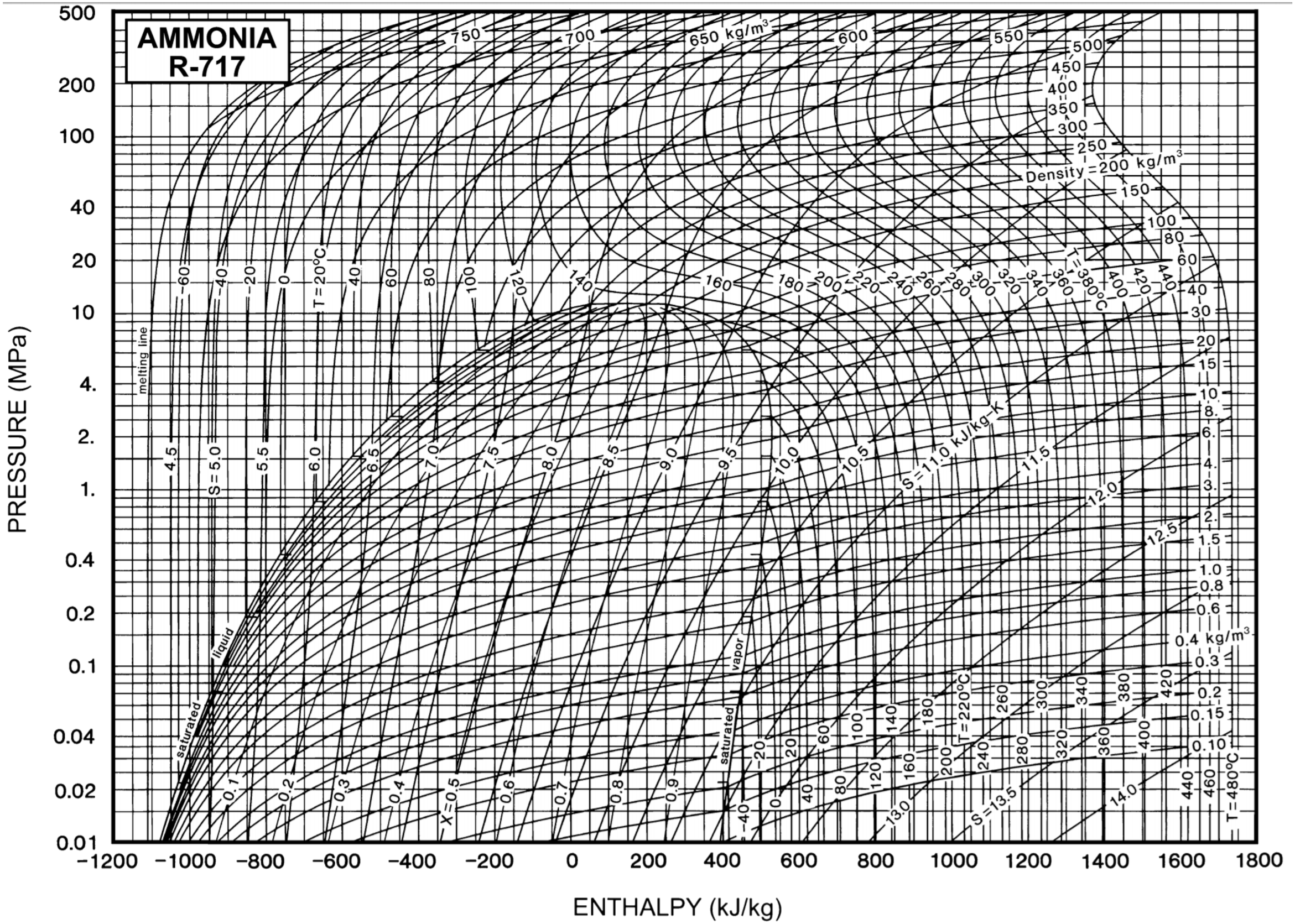
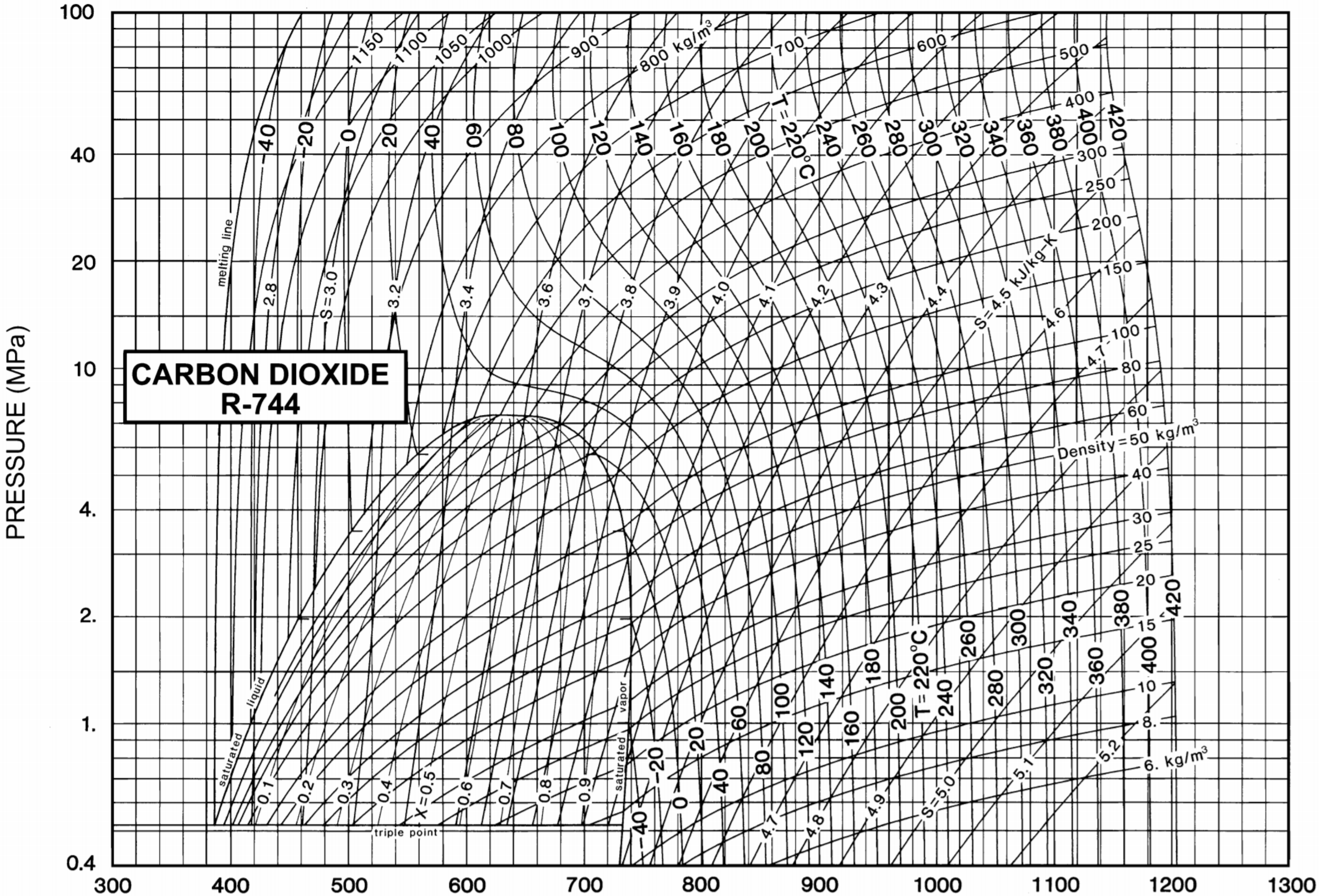

NORMAL
BUTANE
R-600
PRESSURE (MPa)
ENTHALPY (kJ/kg)
Density = 10 kg/m³
T = 340 K
T = 440 K
S = 4.0
S = 5.8 kJ/kg-K
S = 7.0
X = 0.5
saturated liquid
saturated vapor


PROPANE
R-290
PRESSURE (MPa)
ENTHALPY (kJ/kg)
melting line
saturated liquid
saturated vapor
T=180 K
T=500 K
S=4.0
S=6.6 kJ/kg-K
S=8.0
X=0.5
Density=30 kg/m3
0.4 kg/m3
450 kg/m3


AMMONIA
R-717
PRESSURE (MPa)
ENTHALPY (kJ/kg)
500
200
100
40
20
10
4.
2.
1.
0.4
0.2
0.1
0.04
0.02
0.01
−1200
−1000
−800
−600
−400
−200
0
200
400
600
800
1000
1200
1400
1600
1800
750
700
650 kg/m³
600
550
500
450
400
350
300
250
Density = 200 kg/m³
150
100
80
60
40
30
20
15
10
8.
6.
4.
3.
2.
1.5
1.0
0.8
0.6
0.4 kg/m³
0.3
0.2
0.15
0.10
T = 20°C
T = 380°C
T = 220°C
T = 480°C
S = 5.0
S = 11.0 kJ/kg-K
S = 13.5
X = 0.5
melting line
liquid
saturated
vapor
saturated


CARBON DIOXIDE
R-744
PRESSURE (MPa)
100
40
20
10
4.
2.
1.
0.4
300
400
500
600
700
800
900
1000
1100
1200
1300
melting line
saturated liquid
saturated vapor
triple point
800 kg/m³
T = 220°C
S = 4.5 kJ/kg-K
Density = 50 kg/m³
6. kg/m³
S=3.0
S=5.0
X=0.5