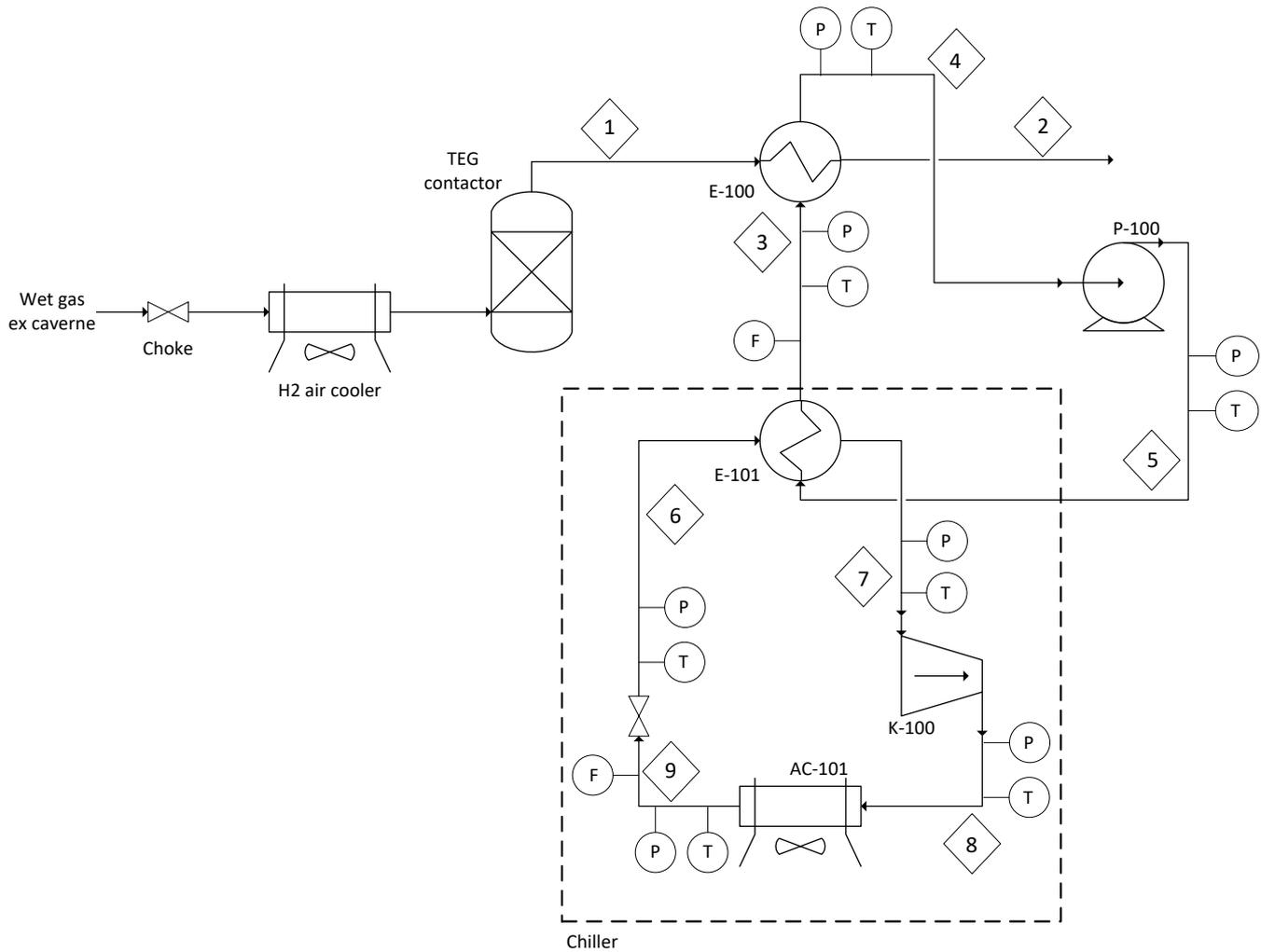


# Process Flow Diagram 40t/h H2



Stream		1	2	3	4	5	6	7	8	9
vapor fraction*)	-	1	1	0	0	0	0,1117	1	1	0
P	bara	70,6	70,1	6,0	5,5	6,5	6,6	6,1	15,9	15,4
T	degC	42,4	30,0	20,0	30,0	30,0	12,3	10,0	104,2	40,0
$\rho$	kg/m <sup>3</sup>	6,343	6,556	1061	1053	1053	42,48	4,687	9,303	576,3
$\Phi_{\text{mass}}$	kg/h	48944	48944	200862	200862	200862	6575	6575	6575	6575
$\Phi_{\text{act vol}}$	m <sup>3</sup> /h	7716	7465	189	191	191	155	1403	707	11
$\Phi_{\text{mol}}$	kmol/h	20248	20248	7984	7984	7984	386	386	386	386
Cp	kJ/kg*degC	12,00	12,00	3,63	3,64	3,64	4,55	2,21	2,40	5,30
Heat flow	kW	-1486	-3509	-698154	-696131	-696124	-7032	-5002	-4662	-7032
<b>component mole fraction</b>										
H2	-	0,9799	0,9799	0	0	0	0	0	0	0
N2	-	0,0100	0,0100	0	0	0	0	0	0	0
CH4	-	0,0100	0,0100	0	0	0	0	0	0	0
H2O	-	0,0001	0,0001	0,8379	0,8379	0,8379	0	0	0	0
MEG	-	0	0	0,1621	0,1621	0,1621	0	0	0	0
NH3	-	0	0	0	0	0	1	1	1	1

\*) mass based

\*\*) note that for stream 6  $p_{\text{vap}}=5,052$  and  $p_{\text{liq}}=616\text{g/m}^3$ ;  $\Phi_{\text{mass,vap}}=734,1$  and  $\Phi_{\text{mass,liq}}=5841\text{kg/h}$ ;  
 $C_{p,\text{vap}}=2,22$  and  $C_{p,\text{liq}}=4,84\text{kJ/kg*degC}$

\*\*\*) note that the duty for P-100 is 7,064kW, while the duty for K-100 is 339,4kW

\*\*\*\*) Note that streams 3, 4 and 5 are 60%wt water and 40%wt MEG