

Design Data

According to details received from client our input data is:

Subject	Value		Remarks
Q_{in}	52.6	m ³ /hr	Filling rate
Q_{out}	52.6	m ³ /hr	Pump out rate
Flash point	above 37.8°C		Acc to Datasheet
Design pressure	15	mbarg	(Acc to data sheet) and is equal to = 152.96 mm water
Set Pressure	14	mbarg	142.76 mm water
Working Pressure	7.5	mbarg	(Acc to data sheet) and is equal to = 76.48 mm water
Tank Dia	12.5	m	Acc to Datasheet
Tank Height	11.41	m	Acc to Datasheet
Wetted Surface Area	358.7	m ²	$A = D \times \pi \times 9.14$
Venting Requirement (for air)	19910.0	Nm ³ /hr	As per API2000, Table 3B
Venting Requirement (for N)	20643	Nm ³ /hr	based on 3034-08-ED-SE-CAL-VP-0226-0004-B6

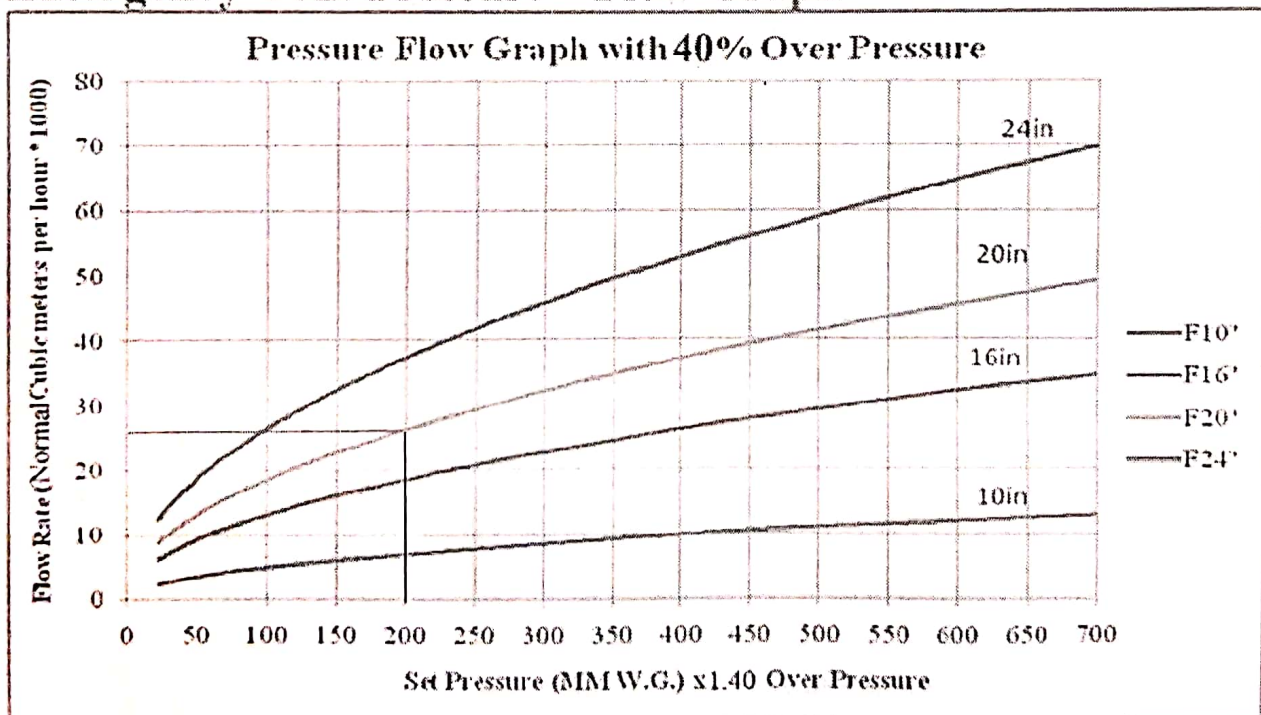
For 20in Emergency Vent, Flow rates are obtained from below diagram

(Fig.3800 Persian GPE.Co Catalog)

Flow Capacity According to Diagram

Over Pressure	Pressure	Flow	Remarks
1	142.76 mm Water	23000 NCMPH	Based on set pressure
1.4	199.86 mm Water	27000 NCMPH	Based on 1.4 time of pressure (based on API2000 page 33(part C.2.3) and page 37)

Emergency Vent Pressure – Flow Graph



Due to the results, our proposal is 1 set of EV (20in) for each tank (TK0801/5801)