

DAF design				Clarificador secundario/espesador	
raw feed flow Qf	1800 m3/h	7926 U.S. GPM	A/S	0.04	
liquid temperature	22 °C	71.6 °F	load rate	1.25 gpm/sq.ft.	
altitude	30 m	98 ft			
oil or SS concentration	5000 mg/L		Operating pressure	40 psig	3.72 atm
			Sys Sat efficiency f	0.8	
			Solubility ratio B	1	
Barometric pressure Pb	14.7 psia	1.00 atm	air solubility ml/L	18.32	
			Henry's constant	67888.856	
reduced pressure Pr	1.00 atm	(assumed equal to barometric pressure)			

pressurized-to-feed Qp/Qf ratio = **4.243** less 1 use partial or recycle pressuration
 equal 1 use total or recycle pressuration

pressurized flow Qp = Qf * Qp/Qf = 33628 U.S. gpm **greater 1 use recycle pressuration**
 7636.8 m3/h

	TP option	R option
Air rate for total or partial flow pressuration option		Recycle option
Qa/Qp	0.0077 SCF/gal	0.005115 SCF/gal
Qa	258.70 SCFM	172.01 SCFM

TP option compressor data

Air supply compressor to provide 3x or 4x required flow rate at a pressure about 75% above system operating pressure

Unit selection anywhere between			S-I units		
Compressor 3x capacity	776.1 SCFM	at	70 psig	1318.6 m3/h	5.76 atm
Compressor 4x capacity	1034.8 SCFM	at	same	1758.2 m3/h	same

R option compressor data

Air supply compressor to provide 3x or 4x required flow rate at a pressure about 75% above system operating pressure

Unit selection anywhere between			S-I units		
Compressor 3x capacity	516.0 SCFM	at	70 psig	876.7 m3/h	5.76 atm
Compressor 4x capacity	688.0 SCFM	at	same	1169.0 m3/h	

tentative tank dimensions

hydraulic sizing

Circular

Rectangular

L

W

solid load sizing

Circular

Rectangular

L

W

TP option tank

Qp/Qf less than 1 dimensions

Circular **89.9 ft dia.** **27.40 m dia.**

Rectangular

L **130.0 ft** **39.64 m**

W **48.8 ft** **14.87 m**

216000 kg/day 475371 lb/day

Circular **129.7 ft dia.** **39.54 m**

Rectangular

L **187.7 ft** **57.21 m**

W **70.4 ft** **21.45 m**

R option tank

Qp/Qf greater than 1 dimensions

Circular **205.8 ft dia.** **62.74 m dia.**

Rectangular

L **297.7 ft** **90.77 m**

W **111.7 ft** **34.04 m**

19807 lb/hr **1.5 lb/h per sq.ft.**