

WRV COMPRESSOR DATABOOK

3.1 Compressor Capacity and Design Limitations (Nominal) (Cont'd)

Compressor Type		WRV163/180				
Rotor Diameter	mm	163.2				163.2
L/D Ratio		1.8				1.74
Min. Male Rotor Speed	rpm	1500				1500
Max. Male Rotor Speed	rpm	4500				4500
Min. Tip Speed	m/s	12.8				12.8
Max. Tip Speed	m/s	38.5				38.5
Theoretical Volume (Range)	cfm	200-601				195-585
Theoretical Volume (Range)	m ³ /h	341-1022				331-993
Built-in Volume Ratio	Vi	2.1	2.6	3.6	5.0	5.8
Max. Pressure Difference	psi	188	203	236	260	270
	bar	13	14	16.3	18	18.7
Max. Inlet Pressure	psig	87	75	50	30	25
	barg	6	5	3.5	2	1.7
Max. Outlet Pressure	psig	260				
	barg	18				
Min. Inlet Temperature	°F	-76				
	°C	-60				
Max. Inlet Temperature	°F	122				
	°C	50				
Max. Outlet Temperature	°F	212				
	°C	100				
Hydraulic Test Pressure	psig	600				
	barg	42				
Max. Power (at max. speed)	hp	470				
	kW	350				
Max. Allowable Torque (at Male Rotor)	lb.ft	550				
	Nm	746				
Direction of rotation of male rotor looking from drive unit		CLOCKWISE				