



TECH DATA

DS series

Air cooled
Fixed Speed Oil free screw compressor
55kW / 75HP

Effective Date: 3/22/2023
TDS-000438

Engineering Data

MODEL (PRESSURE RATING):	DS5507AC		DS5509AC		DS5510AC	
COMPRESSOR DATA						
Pressure [psig(barg)]	Capacity FAD [cfm(m ³ /min)]	Specific Power @ Stated Pressure [kW/100cfm (kW/(m ³ /min))] ⁽⁷⁾	Capacity FAD [cfm(m ³ /min)]	Specific Power @ Stated Pressure [kW/100cfm (kW/(m ³ /min))] ⁽⁷⁾	Capacity FAD [cfm(m ³ /min)]	Specific Power @ Stated Pressure [kW/100cfm (kW/(m ³ /min))] ⁽⁷⁾
150 (10.3)	N/A	N/A	N/A	N/A	259 (7.33)	27.8 (9.82)
125 (8.6)	N/A	N/A	290 (8.21)	24.9 (8.78)	259 (7.33)	25.0 (8.82)
100 (7.0)	351 (9.94)	20.8 (7.33)	290 (8.21)	22.5 (7.94)	259 (7.33)	22.3 (7.87)
73 (5.0)	353 (9.99)	18.2 (6.42)	292 (8.26)	19.4 (6.84)	261 (7.38)	18.8 (6.65)
58 (4.0)	355 (10.04)	16.9 (5.95)	294 (8.31)	17.8 (6.28)	263 (7.43)	17.1 (6.02)
PRESSURE DATA						
Full Load Operating Pressure	psig (barg)	100 (7.00)	125 (8.60)	150 (10.30)		
Maximum Operating Pressure	psig (barg)	100 (7.00)	125 (8.60)	150 (10.30)		
Minimum Operating Pressure	psig (barg)	58 (4.00)	58 (4.00)	58 (4.00)		
Operating Interstage Pressure	psig (barg)	40 (2.70) or Lower	40 (2.70) or Lower	44 (3.00) or Lower		
TEMPERATURE DATA						
Maximum Ambient Temperature	° F (° C)	115 (46)	115 (46)	115 (46)		
Minimum Ambient Temperature	° F (° C)	32 (0)	32 (0)	32 (0)		
Maximum Inlet Temperature	° F (° C)	115 (46)	115 (46)	115 (46)		
Minimum Inlet Temperature	° F (° C)	32 (0)	32 (0)	32 (0)		
1st Stage Airend Discharge Temperature	° F (° C)	381 (194)@68°F of ambient temp.	381 (194)@68°F of ambient temp.	381 (194)@68°F of ambient temp.		
2nd Stage Airend Discharge Temperature	° F (° C)	390 (199)@68°F of ambient temp.	435 (224)@68°F of ambient temp.	480 (249)@68°F of ambient temp.		
PERFORMANCE DATA⁽¹⁾						
Capacity FAD @ Rated Pressure ⁽²⁾	cfm (m ³ /min)	351 (9.94)	290 (8.21)	259 (7.33)		
Compressor Shaft Power ⁽⁴⁾⁽⁷⁾	kW (HP)	65.7 (88.1)	65.0 (87.1)	64.9 (87.0)		
Package Power Input ⁽⁴⁾⁽⁷⁾	kW	72.9	72.1	72		
Specific Package Power Input @ Rated Pressure ⁽³⁾⁽⁷⁾	kW/100cfm (kW/(m ³ /min))	20.8 (7.33)	24.9 (8.78)	27.8 (9.82)		
Power Input @ No Load ⁽⁵⁾	kW	14.1	12.8	14.8		
Maximum Altitude Operation	ft(m)	See note (9)	See note (9)	See note (9)		
AIREND DATA						
# of Stages	#	2	2	2		
Primary Rotor Maximum Speed - 1st Stage	rpm	16,065	13,955	12,852		
Primary Rotor Diameter - 1st Stage	inches	3.94	3.94	3.94		
Primary Rotor Maximum Speed - 2nd Stage	rpm	17,993	15,880	14,510		
Primary Rotor Diameter - 2nd Stage	inches	2.76	2.76	2.76		
AIRCOOLED COOLING DATA						
Intercooler Heat Removal	1,000 Btu/Hr.	79.1	65.4	58.4		
Aftercooler Heat Removal ⁽⁸⁾	1,000 Btu/Hr.	126.5	137.4	144.4		
Oil Cooler Heat Removal	1,000 Btu/Hr.	34.4	34.4	34.4		
Others Heat Removal	1,000 Btu/Hr.	11.2	11.2	11.2		
Total Package Heat Removal	1,000 Btu/Hr.	251.2	248.3	248.3		
Aircooled Aftercooler CTD	° F	27	27	27		
Cooling Air Flow	cfm	6,710	6,710	6,710		
Cooling Air Differential Temperature (approx.)	° F	33	38	38		
OIL DATA						
Oil Type	Type	AWF	AWF	AWF		
Oil Pump	Type	Trochoid	Trochoid	Trochoid		
Normal Operating Oil Pressure	psig	15 - 26	15 - 26	15 - 26		
Normal Operating Oil Temperature	° F	154 or Lower	154 or Lower	154 or Lower		
Oil Capacity	Gallons	8	8	8		
SOUND LEVEL⁽⁶⁾						
Low Sound Enclosure	dB(A)	73	73	73		



TECH DATA

DS series

Air cooled
Fixed Speed Oil free screw compressor
55kW / 75HP

Effective Date: 3/22/2023
TDS-000438

Engineering Data

MODEL (PRESSURE RATING):	DS5507AC	DS5509AC	DS5510AC
--------------------------	----------	----------	----------

MAIN MOTOR ELECTRICAL DATA			
Main Motor	Type	TEFC	TEFC
Main Motor Frame Size	Size	225S/M	225S/M
Number of Poles	#	2	2
Voltage	V	460	460
Main Motor Nominal Shaft Power	kW (Hp)	55 (75)	55 (75)
Main Motor Service Factor	S.F.	1.25	1.25
Main Motor Shaft Power @ Full Load	kW (Hp)	65.7 (88.1)	65.0 (87.1)
Main Motor Nominal Amperage	A	84.4	84.4
Main Motor Rated Speed	rpm	3570	3570
Main Motor Efficiency @ Rated Speed	%	93.6	93.6

FAN MOTOR ELECTRICAL DATA			
Fan Motor	Type	Totally enclosed	Totally enclosed
Fan Motor Frame Size	Size	-	-
Number of Poles	#	4	4
Voltage	V	460	460
Fan Motor Nominal Shaft Power	kW (HP)	2.7 (3.6)	2.7 (3.6)
Fan Motor Nominal Amperage	A	5.1	5.1
Fan Motor Rated Speed	rpm	1,680	1,680
Fan Motor Efficiency @ Rated Speed	%	83.0	83.0

TOTAL PACKAGE ELECTRICAL DATA			
Voltage	V	460	460
Total Package Power Input	kW	72.9	72.0
Total Package Amperage at Full Load	A	108	106

CONSTRUCTION DATA			
Shipping Dimensions (L x W x H)	inches	86.6 X 55.1 X 71.9	86.6 X 55.1 X 71.9
Shipping weight	lbs.	4,057	4,057
Air Discharge Connection	NPT (inches)	NPT 2	NPT 2
Intercooler Condensate Drain Connection	NPT (inches)	NPT 1/2	NPT 1/2
Aftercooler Condensate Drain Connection	NPT (inches)	NPT 1/2	NPT 1/2
Power Cable Inlet Diameter	inches	3	3

NOTES

- (1) - Performance of the compressor package is measured according to ISO 1217, Annex C.
- (2) - Corresponds to "Volume Flow Rate" (ISO 1217).
- (3) - Guaranteed with a tolerance of $\pm 5\%$.
- (4) - Data may differ $\pm 2\%$ of other voltages.
- (5) - Guaranteed with a tolerance of $\pm 20\%$.
- (6) - Average sound pressure level is measured at a 3.28 ft. distance from the front, back and both side surfaces based on free field conditions. Tolerance is ± 3 dB.
- (7) - Including Auxiliary Motors.
- (8) - Including Hi-Precooler
- (9) - Refer to the correct DSPAltitude/Ambient Rerate Chart for applications of high altitudes. For applications above 9,840 feet, contact Sullair.