



Latest modification date: 021101

Basic data

General

Configuration and number of cylinders	.....	90° V 8
Working principle	.....	4 stroke
Bore x stroke	mm	127 x 154
Displacement	dm ³	15,6
Firing order	.....	1 - 5 - 4 - 2 - 6 - 3 - 7 - 8
Compression ratio	.....	18:1
DC16	.....
Piston speed		
at 1500 r/min	m/s	7,70
at 1800 r/min	m/s	9,24
Rotation, seen from flywheel end	.....	Counter clockwise
Moment of inertia		
with flywheel for 14" coupling	kgm ²	3,3
Number of teeth on flywheel ring gear	.....	163
Weight approx., excl. oil, coolant, radiator		
DC16, incl. fan	kg	1290

Lubrication

Oil capacity	dm ³	35
Oil consumption	g/kWh	< 0,3
Oil change intervals	h	400
Oil grade	.....	At least: ACEA E3, E4 or E5
Oil Pressure		
Normal	bar	3 - 6
Minimum permitted	bar	0,7
Oil temperature		
Normal	°C	90 - 110
Oil cleaner	.....	Centrifugal
Filtration	Micron	5 - 7
Oil filter	.....	Paper, full flow
Oil cooler	.....	Water cooled/Full flow



Injection system

Type	.....	Electronic Unit Injectors
Governor		Scania Engine Management System (EMS)
Fuel filter	.....	Paper filter element
Fuel pre-filter with water separator	.....	Paper filter element

Cooling system

Coolant volume, excl. radiator DC16	dm ³	approx. 70
Coolant temperature	°C	75 - 85
Number of thermostats	.....	2
Opening temperature	°C	79

Intake system

Permissible pressure drop in intake system with cleaned or new filter	mmWc	300
Permissible pressure drop in intake system with blocked (dirty) filter	mmWc	500

Electric system, optional equipment

Type	.....	1-pole, 24 V, DC
Starter, standard equipment	1-pole, 24 V - 6,7 kW
Optional	2-pole, 24 V - 6,7 kW
Alternator, standard equipment	1-pole, 28 V - 80 A



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Technical data and cooling equipment recommendation

DC16 43A, order ref 10-22

		1500 r/min		1800 r/min	
		PRP	ESP	PRP	ESP
Gross power	kW	439	481	438	480
Specific fuel consumption	g/kWh				
full load		192	195	193	198
3/4 load		188	188	190	191
1/2 load		192	190	197	194
Heat rejection	kW				
to cooling water		168	187	167	186
to exhaust gas		302	338	298	339
to charge air		84	103	96	116
to surrounding air		37	41	34	38
Air consumption	kg/min	35	39	42	45
Air temperature after charge air cooler	°C	41	43	44	47
Fall of pressure, charge air cooler	Bar	0,10	0,10	0,11	0,12
Exhaust flow	kg/min	36	41	43	47
Exhaust temperature	°C	478	484	415	431

		1500 r/min				1800 r/min			
		PRP		ESP		PRP		ESP	
		Air-on temp.		Air-on temp.		Air-on temp.		Air-on temp.	
		35 °C	50 °C	35 °C	50 °C	35 °C	50 °C	35 °C	50 °C
Radiator									
front area	m ²	1,24	1,24	1,24	1,24	1,24	1,24	1,24	1,24
Coolant pump flow	dm ³ /min	368	368	368	368	443	443	443	443
Fan									
type		Pusher	Pusher	Pusher	Pusher	Pusher	Pusher	Pusher	Pusher
Ø	mm	965	965	965	965	965	965	965	965
power losses	kW	13	13	13	13	12	12	12	12
number of drive belts (poly-V)		2	2	2	2	2	2	2	2
speed ratio		1:1	1:1	1:1	1:1	1:0,8	1:0,8	1:0,8	1:0,8
Air flow									
free air flow	m ³ /s	9,8	9,8	9,8	9,8	8,5	8,5	8,5	8,5
pressure reserve	mm Wc	40	40	40	40	35	35	35	35