

SOFIM HPI

S23 ENT C

FOR AUTOMOTIVE APPLICATIONS

4 CYLINDERS IN LINE - DIESEL CYCLE

85 kW (116 CV) @ 3900 rpm

270 Nm @ 1800 rpm



T E C H N O L O G I C A L E X C E L L E N C E

**IVECO
MOTORS**

S23 ENT C FOR AUTOMOTIVE APPLICATIONS

Technical code		F1AE0481B*A	F1AE0481B*B
Thermodynamic cycle			Diesel 4 stroke - C.R.
Air intake			TAA
Arrangement			4L
Bore x Stroke	mm		88 X 94
Total displacement	l		2.3
Valves per cylinder			4
Cooling			liquid
Direction of rotation (viewed facing flywheel)			CCW
Compression ratio			19 : 1
Rotation mass moment of inertia (without flywheel)	kgm ²		0.005
Standard flywheel inertia	kgm ²		0.35

Air induction

Max suggested intake restriction with clean air filter	kPa(bar)		4.0 (0.040)
Max allowable restriction with dirty air filter	kPa(bar)		6.5 (0.065)
Air requirement for combustion at 100% load/rated speed	kg/h (m ³ /h)		530 (448)
Turbocharging pressure at full load/rated speed	kPa(bar)		125 (1.25)
Turbocharging air max temperature (engine inlet)	°C		50 (at 20°C amb.)
Heat rejected to intercooler at maximum power	kJ/s(kcal/h)		14 (12,048)
Intercooler system max pressure drop	kPa(bar)		9 (0.09)

Exhaust system

Max allowable backpressure	kPa(bar)	150 (1.5)	120 (1.2)
Max exhaust temperature at full load/rated speed	°C		520
Exhaust flow at max output	kg/h		550

Lubrication system

Minimum oil pressure at idle	kPa(bar)		100 (1.0)
Max oil temperature at full load/rated speed	°C		130
Engine angularity limits continuous operation: max front up and front down	0/360		30
max left hand and right hand	0/360		30
Total system capacity including pipes, filters etc.	liters		6

Cooling system

Coolant capacity (engine only)	liters		4
Water pump flow at rated speed	m ³ /h		9.8
Heat to reject by heat exchanger at max power	kJ/s(kcal/h)		60 (51,600)
Thermostat (modulating range)	°C		82 to 94
Cooling liquid max temperature	°C		105
Max inner pressure in the cooling circuit	kPa (bar)		200 (2.0)
External cooling system max pressure drop	kPa (bar)		180 (1.8)

Fuel system

Injection system			Common Rail
Minimum diesel fuel pressure in engine input	kPa(bar)		200 (2.0)
Minimum diesel fuel pressure in engine output	kPa(bar)		60 (0.6)
Gas oil max intake temperature	°C		70

Electrical system

Voltage	V		12
---------	---	--	----

S23 ENT C FOR AUTOMOTIVE APPLICATIONS

F1AE0481B*A

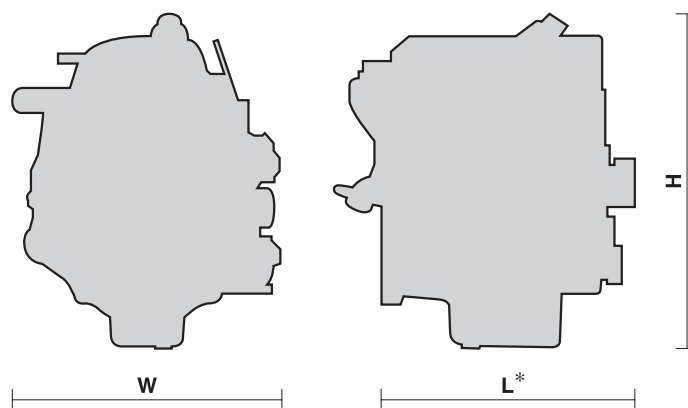
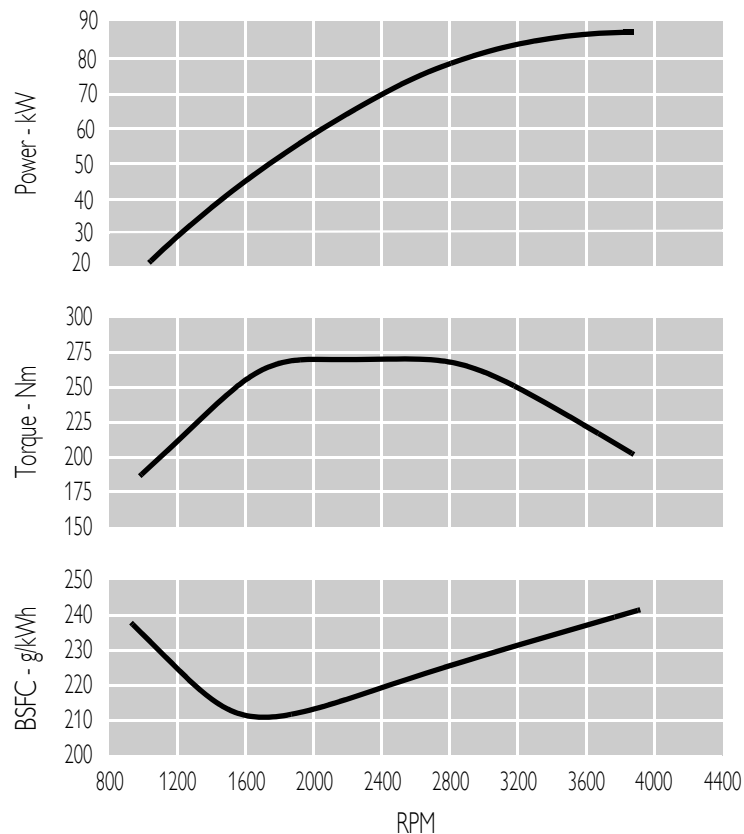
F1AE0481B*B

Maximum rating *	kW(CV)	85.5 (116)
At speed	rpm	3900
Maximum torque	Nm (kgm)	270 (27.5)
At speed	rpm	1800 - 2800
Maximum no load governed speed at max rating	rpm	4600
Minimum idling speed	rpm	800
Mean piston speed at rated speed	m/s	12.2
BMEP at max torque	kg/cm ²	12.4
Available certifications		2001 / 27 / EC - EURO 3 96/69/EEC step 3
Specific fuel consumption at full load (best value)	g/kWh @ rpm	210 @ 1800/1900
Oil consumption at max rating	(% of fuel consumption)	0.1
Noise at max rating (ISO 3744)	dBA	93
Minimum starting temperature without auxiliaries	°C	-10
Oil and oil filter maintenance interval for replacement	km	40,000 km
Dry weight (standard configuration)	kg	210

FOR INFORMATION ON THE AVAILABLE RATINGS NOT LISTED IN THIS DOCUMENT PLEASE CONTACT THE IVECO MOTORS SALES NETWORK.

* **Power** at flywheel according to directive EEC 88/195 (ECE 24.03) after 50 hours operation at the engine test bench.

Test conditions : compressor input temperature: 25°C - intercooler outlet temperature: 45°C - atmospheric pressure: 100 kPa - loss of load in engine input: 6.5 kPa - diesel density: 835 g/dm³ - cetane number: >52.



L* = 592 mm

W = 642 mm

H = 833 mm

* Flywheel excluded

S23 ENT C FOR AUTOMOTIVE APPLICATIONS

Standard configuration

Flywheel housing	SAE	-
Flywheel size	inch	9" 1/4 - 10" 1/2
Intake manifold location		left side
Exhaust manifold / turbocharger location		right side
Turbocharger		waste gate controlled
Turbocharger location		right side /middle position
Fan transmission ratio		1.15 : 1 on crankshaft
Distance between fan - crankshaft centers	mm	y = -19 z = 165
Fuel filter	n°	included
Fuel prefilter		included
Fuel pump		included
Oil filter	n°	1 - left side
Oil sump		sheet steel / front well
Oil vapours blow-by circuit		recycled blow-by
Oil heat exchanger		plate exchanger
Oil filler		onto the valve cover
Exhaust counter flange		included
Starting motor		12 V - 2.3 kW
Alternator		12 V - 110 A
Engine stop device		electronic switch-off device
Wiring harness		engine harness
Power take off (PTO)		in front of crankshaft by pulley
PTO transmission ratio		1 : 1
PTO maximum available torque		80 Nm
Painting		grey and black on ferrous components and final transparent protection

Not included in the standard configuration

Battery - minimum capacity recommended	110 Ah
Battery - minimum cold cranking capacity recommended	580 A

IVECO MOTORS OFFERS THE WIDEST AVAILABILITY OF ENGINE BUILD OPTIONS TO CUSTOMER SPECIFIC REQUIREMENTS WITHIN THE ENGINE SUPPLY. TO FIND OUT MORE ABOUT THE CONFIGURATIONS AND ACCESSORIES WHICH ARE AVAILABLE, CONTACT THE IVECO MOTORS SALES NETWORK.

HEAD OFFICE AND BRANCHES

<p>IVECO S.p.A. Iveco Motors Lungo Stura Lazio, 49 - 10156 Torino Tel. +39 (011) 0076245 - Fax +39 (011) 0076275 www.ivecomotors.com</p>	<p>Italy</p>	<p>IVECO S.p.A. Iveco Motors Viale dell'Industria, 15/17 - 20010 Pregnana Milanese - Milano Tel. +39 (02) 935101 - Fax +39 (02) 93590029</p>	<p>Italy</p>
<p>IVECO FRANCE S.A. Iveco Motors 50 Rue Ampère - B.P. 103 - 69685 Chassieu Cedex Tel. +33 (04) 72472222 - Fax +33 (04) 78905990</p>	<p>France</p>	<p>IVECO N.V. Iveco Motors - Liaison office-India Second Floor - 50, Okhla Industrial Estate - Phase III 110020 New Delhi Tel. +91 11 51613573 - Fax +91 11 26931271</p>	<p>India</p>
<p>IVECO MAGIRUS A.G. Iveco Motors Heiner Fleischmann-Strasse, 9 - 74172 Neckarsulm Tel. +49 (07132) 97690 - Fax +49 (07132) 976935</p>	<p>Germany</p>	<p>IVECO FIAT Representative Office in P.R. China 10/F Jinling Hotel World Trade Center 2 Hanzhong Road - 210005 Nanjing Tel. +86 25 4710981 - Fax +86 25 4701105</p>	<p>China</p>
<p>IVECO U.K. Ltd Iveco Motors Road One - Industrial Estate CW7 3QP Winsford Tel. +44 (01606) 541027 - Fax +44 (01606) 541124</p>	<p>Great Britain</p>	<p>IVECO LATIN AMERICA Ltda. Iveco Motors Rua Alameda da Serra, 222 Vale do Sereno - 34000 - 000 Nova Lima (MG) Tel. +55 31 3286 3732/33/34 - Fax +55 31 3286 3735</p>	<p>Brazil</p>
<p>IVECO SWEDEN A.B. Iveco Motors Lergöskgatan, 12 - 42150 Västra Frölunda Tel. +46 (31) 492450 - Fax +46 (31) 492457</p>	<p>Sweden</p>	<p>IVECO Motors of N.A. 245 E. North Avenue Carol Stream, IL 60188 - 2021 USA Tel. +1 630 260 4226 - Fax +1 630 260 4267</p>	<p>North America</p>

