



# LISTED SPRINKLER SOLUTIONS

## B6TF42 OPERATION DATASHEET

### ENGINE GENERAL DATA

THERMODYNAMIC CYCLE	DIESEL - 4 STROKE
ENGINE ARCHITECTURE	6 CYLINDERS, IN LINE
FIRING ORDER	1 - 5 - 3 - 6 - 2 - 4
AIR INTAKE	TCA
COOLING	WATER
CHARGE AIR COOLING SYSTEM	CHARGE AIR/RAW WATER HEAT EXCHANGER
COMPRESSION RATIO	17,5:1
INJECTION SYSTEM	MECHANICAL ROTARY PUMP
COMBUSTION	DIRECT INJECTION
ENGINE DISPLACEMENT	6.7 l
VALVES PER CYLINDER	2
INTAKE	1
EXHAUST	1
ROTATION (VIEWED FROM ENGINE FLYWHEEL)	CCW
ENGINE CRANKCASE VENTILATION SYSTEM	RECIRCULATED
ENGINE WEIGHT	750 kg

### ENGINE PERFORMANCE

ENGINE SPEED [rpm]	NET POWER RATING [kW (cv) (1) (2)]	FUEL CONSUMPTION RATE [l/h]
1760 rpm	160 (218)	45
2100 rpm	173 (235)	52
2200 rpm	177 (240)	52
2350 rpm	189 (257)	56
2600 rpm	189 (257)	60
2800 rpm	189 (257)	64
2940 rpm	189 (257)	68

- (1) Power at flywheel according to 97/68 EC (without fan), after 50 hours running, 3% tolerance, fuel Diesel EN 590  
 (2) Power derating conditions: a deduction of 3 percent from engine horsepower rating at standard SAE conditions shall be made for diesel engines for each 1000 ft. (305 m) altitude above 300 ft. (91.4 m), a deduction of 1 percent from engine horsepower rating as corrected to standard SAE conditions shall be made for diesel engines for every 10°F (5.6°C) above 77°F (25°C) ambient temperature.

### EXHAUST SYSTEM

ENGINE SPEED [rpm]	EXHAUST MAX TEMPERATURE [°C]	MAX ALLOWABLE BACK PRESSURE [kPa]	EXHAUST GASES FLOW [kg/h]
1760 rpm	635	7	840
2100 rpm	595	7	860
2200 rpm	577	7	1100
2350 rpm	601	7	1150
2600 rpm	638	7	1250
2800 rpm	670	7	1300
2940 rpm	688	7	1375

### LUBRICATION SYSTEM

LUBRICATION OIL MINIMUM PRESSURE @ IDLE SPEED	0,7 bar
LUBRICATION OIL MAXIMUM PRESSURE @ RATED SPEED	3,5 bar
LUBRICATION OIL MAXIMUM TEMPERATURE	120°C
LUBRICATION CIRCUIT FULL CAPACITY	17,2 l



### ELECTRIC SYSTEM

VOLTAGE	12V	24V	(Optional config)
ALTERNATOR	90A	90A	(Optional config)
STARTER MOTOR	3 kW	3 kW	(Optional config)
BATTERIES PER BANK	1	2	(Optional config)
BATTERY CABLES MAX RESISTANCE	0,0013 ohm		
BATTERY CABLES MIN ALLOWED SIZE (3)			
1 M TO 3 M	AWG 0		
3 M TO 4 M	AWG 00		
4 M TO 5 M	AWG 000		
BATTERY CCA @ -18° C (4)	1000 A		
RESERVE CAPACITY (4)	430 min - 180 Ah		

(3) Length combination of positive and negative cables.

(4) Parameters evaluated according to SAE Standard J537.

### AIR INDUCTION SYSTEM

ENGINE SPEED [rpm]	COMBUSTION AIR FLOW [kg/h]	MAX INLET TEMPERATURE [°C]	MAX ALLOWED RESTRICTION (CLEAN FILTER) [kPa]	MAX ALLOWED RESTRICTION (DIRTY FILTER) [kPa]
1760 rpm	802	55	3,5	6,5
2100 rpm	816	55	3,5	6,5
2200 rpm	1056	55	3,5	6,5
2350 rpm	1102	55	3,5	6,5
2600 rpm	1199	55	3,5	6,5
2800 rpm	1246	55	3,5	6,5
2940 rpm	1317	55	3,5	6,5

### COOLING SYSTEM

ENGINE SPEED [rpm]	REJECTED HEAT [kW]	REQUIRED RAW WATER FLOW @ 15°C [l/min]	REQUIRED RAW WATER FLOW @ 38°C [l/min]	ENGINE RADIATED HEAT [kW]
1760 rpm	105	105	120	28
2100 rpm	110	105	120	29
2200 rpm	120	105	120	29
2350 rpm	128	105	120	31
2600 rpm	135	105	120	33
2800 rpm	137	105	120	35
2940 rpm	137	105	120	36

THERMOSTAT	START OPENING	83°C
	FULL OPENING	95°C
PRIMARY COOLANT TEMPERATURE RANGE		83-95°C
PRIMARY COOLANT MAXIMUM TEMPERATURE		99°C
PRIMARY COOLANT LOW TEMPERATURE ALARM		35°C
PRIMARY COOLANT CAPACITY		15 l
PRIMARY COOLANT PRESSURE (CAP)		0,7 bar
SECONDARY CIRCUIT MAXIMUM PRESSURE		3,8 bar
RAW WATER TEMPERATURE ALARM		40°C

### LIQUID HEATERS

COOLANT HEATER	1500W – 230V
LUBRICATION OIL HEATER	350W – 230V

### FUEL SYSTEM

FUEL PUMP MAX INTAKE RESTRICTION	0 bar
MAX ALLOWABLE FUEL HEAD ABOVE FUEL PUMP	1 m
MINIMUM FUEL LINE INTERNAL DIAMETER	10 mm