

CRM ENGINES



THE 18 CYLINDER SERIES

**18D/SS
18D/SS BR-1
18D/SS BR-2**

Construction features

- W type configuration with 40° angle
- Pre-chamber fuel injection
- Closed-circuit fresh-water cooling
- Pressure-pulse supercharging
- Intercooling by sea water

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Main features

- Compact construction
- Very high power/mass ratio
- Modular construction
- Optimized diameter for the highest mechanical and thermal coefficients

Engine design features	18 DPM	18 DPM (80-1)	18 DPM (80-2)
Configuration	SI	SI	SI
No. of cylinders	18	18	18
Single-bank/cylinder bank	48°	48°	48°
Bore × stroke	mm 6.25 × 6.25	62.5 × 62.5	62.5 × 62.5
Block plate displacement	cc ³ 1000.0	1000.0	1000.0
Individual piston displacement	cc ³ 1000.0	1000.0	1000.0
Compression ratio	14	14	14
Supercharging ratio	1.4	1.4	1
Duration of injection	2°	2°	2°
Fueling system	direct fuel injection	direct fuel injection	direct fuel injection
Supercharging system	positive pressure	positive pressure	positive pressure
Timing system	electronic, 18 cc type	electronic, 18 cc type	electronic, 18 cc type
Valve gear drive	variable speed mechanical type (electronic gear management)		
Exhaust backwater pump delivery	cc ³ /h 45	45	45
Exhausting exhaust pump delivery	cc ³ /h 35	35	35
Bottom water pump delivery, seawater pump delivery	cc ³ /h 35	35	
Low speed pump delivery	cc ³ /h 35	35	35
Exhausting system	dry pump	dry pump	dry pump
Key words with standard measures of fit, autocorrelation at starting	100 1000	1000	1000
R ²	1000 ± 1.5	1 ± 1.5	1 ± 1.5

Year	1999	2000	2001
1999	1999	1999	1999
2000	2000	2000	2000
2001	2001	2001	2001

STATION	PA Input (dB)	THz Input (dBm)	PA Input (dBm)	THz Input (dBm)
STATION-1	PA Input (dBm)	THz Input (dBm)	PA Input (dBm)	THz Input (dBm)
STATION-2	PA Input (dBm)	THz Input (dBm)	PA Input (dBm)	THz Input (dBm)

1000

EN 1594	Compressing bag for 1000 gms (2000)	Max. weight for 1000 gms (2000)
EN 1594-100-1	Compressing bag for 1000 gms (2000)	Max. weight for 1000 gms (2000)
EN 1594-100-2	Compressing bag for 1000 gms (2000)	Max. weight for 1000 gms (2000)

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Standard construction	68	70
Special construction	68	68
With multiple treatment	68	7



Coupling options

- Fixed-pitch or adjustable-pitch self-cavitating, super-cavitating and super-ventilated propellers by means of reduction gears or over-gears.
- Waterjets by means of clutch or reduction gear with clutch.

A U type transmission
with self-cavitating propeller



A U type transmission
and super-cavitating propeller



An in-line engine with
clutch and waterjet



An in-line engine with
Axiomatic transmission and
super-ventilating propeller



Drives	Standard	Power take-up		kgf. 55
		Reverse-reduction gear	Rg up to 3:1	kgf. 680
	On Request	Waterjet clutch	Hydraulically driven multiple-disc type	kgf. 240
		The following complete assemblies:		
		■ Engine - Reduction gear - Shaft line - Propeller		
		■ Engine - clutch - waterjet.		
		Each assembly is individually designed and optimized for each hull.		
		Rg = reduction ratio > 1		

Exhaust glands in weight from kgf. = 1.00
Exhaust in-line from kgf. = 100.00
Exhaust glands x Exl from 9.00 = 0.100

Exhaust specific consumption in $\frac{\text{grams}}{\text{kg} \cdot \text{h}}$ from $\frac{\text{kg}}{100 \cdot \text{h}}$ = 1.00



Consorzio Roma Roma

Head office and plant: Via F. Craxi, 100 - 00144 Roma (RM)
Phone: 06/520.00.00 - Fax: 06/520.00.00 - Web: www.crm.it