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MAN B&W Two-Stroke Marine Engine Spare Parts Reference — MC, MC-C, ME, ME-C, ME-B, G-Series (S26MC to G95ME-C)

cBallast Technical Sourcing · MAN B&W low-speed two-stroke crosshead marine main engines — S/L/K/G bore families · issued 2026-08-29 · cballast.com/documents/man-b-w-two-stroke-marine-engine-spare-parts-reference-mc-mc-c-me-me-c-me-b-g-series

MAN B&W two-stroke crosshead engine spare parts reference across MC / MC-C / ME / ME-C / ME-B / G-series families. Bore range S26MC (260 mm) through G95ME-C (950 mm) — the world's dominant ship main propulsion in tanker, container, bulk-carrier and cruise service. Wear parts covered: main bearing (top-, bottom- and thrust), crankshaft, connecting rod bottom-end bearing, crosshead bearing, piston with piston-rod, piston rings, cylinder cover with 4-valve head (exhaust valve on some, hydraulic on ME), fuel valve (injector), high-pressure fuel pipe, fuel pump plunger + barrel, exhaust valve seat, cylinder liner (with lubricator quills), turbocharger cartridge (ABB TPL85/93 / MHI MET / Napier NA40-96). MAN diesel A/S authorised parts and IACS-approved equivalents on 24-72 h port drop.

MAN B&W two-stroke marine engine spare parts reference

MAN B&W low-speed two-stroke crosshead engines — now branded MAN Energy Solutions — power the majority of the world's deep-sea merchant fleet: tankers, container ships, bulk carriers, cruise ships and LNG carriers all typically carry a MAN B&W main engine. Every one carries a scheduled wear-part list built around cylinder-liner service, piston-crown/skirt overhaul, fuel-valve refresh and main-bearing renewal on the classical MC / MC-C series, or hydraulic / electronic control equipment on the ME / ME-C / ME-B / G-series. cBallast supplies MAN Energy Solutions authorised parts and IACS-approved equivalent spares ex-EU warehouse with 24-72 h air-freight to major bunkering ports and dry-dock locations globally.

Engine family reference

Family / bore | Cylinder config | Rated power range | Applications |

S26MC (260 mm) | L4-L9 | 1,930 - 4,340 kW | Small tanker, auxiliary propulsion |

S35MC / S35ME-B (350 mm) | L5-L9 | 2,900 - 5,220 kW | Coaster, medium ferry |

S40ME-B (400 mm) | L5-L9 | 4,350 - 7,830 kW | Handysize, coastal |

S46MC-C / S46ME-B (460 mm) | L5-L9 | 5,750 - 10,350 kW | Handymax, chemical parcel tanker |

S50MC / S50MC-C / S50ME-B (500 mm) | L5-L9 | 7,010 - 12,620 kW | Supramax, LR1, feeder container |

S60MC-C / S60ME-C / S60ME-B (600 mm) | L5-L9 | 10,000 - 21,600 kW | Panamax, LR2, feeder-max container |

S65ME-C (650 mm) | L5-L9 | 13,750 - 26,750 kW | Aframax tanker, larger container |

S70MC / S70MC-C / S70ME-C (700 mm) | L5-L8 | 15,700 - 25,000 kW | Suezmax, VLCC-lite, container 8,000 TEU |

S80MC-C / S80ME-C (800 mm) | L5-L9 | 21,600 - 39,000 kW | VLCC, container 8,000-14,000 TEU |

S90ME-C (900 mm) | L5-L9 | 28,500 - 50,000 kW | Ultra-large container ULCC |

K90MC / K98MC-C / K98ME-C (900/980 mm) | L5-L14 | 27,000 - 87,000 kW | Ultra-large container (ULC), post-panamax |

G70ME-C / G80ME-C / G90ME-C / G95ME-C (700-950 mm) | L5-L9 | 20,000 - 82,000 kW | Green-technology (longer stroke, lower speed, higher efficiency) |

The suffix codes: MC = original camshaft-controlled 1980s-2000s series (mechanical fuel injection, camshaft valve gear); MC-C = compact/high-power MC variant; ME = electronic control (mid-2000s onward, hydraulic-electronic fuel and exhaust valve actuation); ME-C = compact ME; ME-B = ME with mechanical exhaust valve (cost-optimised); G-series = green (long-stroke) design; the number = bore in cm (S70MC = 700 mm bore); -C = compact/high-output subvariant. Every scheduled overhaul lands on a common set of parts by design-family.

Wear parts — scheduled overhaul reference by family

Wear part | Typical interval | Notes across MC / ME families |

Cylinder liner | 16,000 - 24,000 h | Cast iron with anti-polish ring at TDC and lubricator quills; measure ovality at every overhaul |

Cylinder cover (head) | 16,000 - 32,000 h | Includes exhaust valve seat and (on MC series) intake valve seats; hydraulic valve actuation on ME |

Exhaust valve | 8,000 - 16,000 h | Nimonic-alloy stem, Stellite face; scheduled replacement per operating hours + inspection |

Exhaust valve seat | 16,000 - 32,000 h | Interference-fit; scheduled replacement or return-to-service refurbishment |

Fuel valve / injector | 4,000 - 8,000 h | Slide-type on ME; conventional needle on MC; higher-hardness nozzle on VLSFO service |

Fuel pump plunger + barrel (matched) | 16,000 - 24,000 h | MC series only; ME has hydraulically-actuated fuel-oil booster |

Fuel valve high-pressure pipe | Per inspection | Fatigue-critical; visual + dye-penetrant at every overhaul |

Piston crown | 16,000 - 24,000 h | Forged steel with cooling gallery; scheduled overhaul or replacement at MRV limit |

Piston skirt | 32,000 - 48,000 h | Cast iron; longer life than crown; scheduled inspection at every crown-out |

Piston-rod (rod + stuffing box) | 32,000 h | MAN B&W crosshead design; stuffing-box overhaul at each piston-rod removal |

Piston ring set (compression + oil-scraper) | 8,000 - 16,000 h | Typically 4× compression + 1× oil-scraper on MC/ME; replace as complete set |

Main bearing (top + bottom shell) | 32,000 h | White-metal or Al-Sn shell; specialised toolset; MAN B&W-certified installation practice |

Thrust bearing (main + collar) | 48,000 h | Takes propeller thrust; scheduled inspection at every drydock |

Connecting rod bottom-end bearing | 32,000 h | Matched-set replacement |

Crosshead bearing (top-end) | 32,000 h | Sliding-block design; heavy-load Al-Sn or white-metal shell |

Turbocharger cartridge | 24,000 - 32,000 h | ABB TPL85/93 / TCA / A200 series, MHI MET-83/91, Napier NA84/96; cartridge exchange usual |

Auxiliary blower | Per PMS | Electric-drive scavenge blower for low-load operation on modern ME |

Cylinder lube-oil (BN-70/BN-40) | Consumable | Alkalinity matched to fuel sulphur; specify BN-70 for HFO, BN-40 for VLSFO/HFO 0.5%S |

S70MC-C main bearing (and other high-frequency spares)

The S70MC-C main bearing is one of the most frequently RFQ-ed MAN B&W spares. Take particular care to specify:

Engine serial number (from the nameplate on the engine platform).

Cylinder configuration (L5 / L6 / L7 / L8 — main bearings are numbered from forward end).

Bearing position (main bearing 1, 2, 3… — the forward-most is bearing 1).

Bearing type: top shell vs bottom shell — the shells are handed and non-interchangeable.

Bearing material spec: white-metal, Al-Sn (aluminium-tin), or the newer bimetal composite. Specify per current MAN B&W service bulletin for the engine's build date.

Any previous MAN Energy Solutions service-letter modifications (upgraded shell material, revised profile).

A wrong-side or wrong-material bearing is impossible to install without damage; verifying serial + build sheet before quotation is standard cBallast practice. Every S70MC-C main-bearing RFQ ships with a MAN Energy Solutions material certificate and a class-society-acceptable installation report.

Turbocharger — typical MAN B&W engine matches

Engine | Typical turbocharger | Notes |

S26MC / S35MC (small bore) | ABB TPL65 / MHI MET-53 | Single-turbo; scheduled 24,000 h overhaul |

S46MC-C / S50MC-C (medium bore) | ABB TPL71 / TPL77 / MHI MET-66 / Napier NA84 | Single-turbo typical L5-L7 |

S60MC-C / S60ME-C | ABB TPL77 / MHI MET-71 | Single-turbo L5-L7; twin on L8-L9 |

S70MC-C / S70ME-C | ABB TPL85 / TPL91 / MHI MET-83 | Larger frame; often twin-turbo on high-power L8 |

S80MC-C / S80ME-C | ABB TPL85 / TPL91 / MHI MET-83 / MET-91 | Twin-turbo standard |

S90ME-C / G95ME-C | ABB A180-M / A280-M / MHI MET-83MB / MET-91MB | Latest ABB Advantage series turbo for green fuel-efficient engines |

K98MC-C / K98ME-C | ABB TPL85 / TPL93 / MHI MET-91 | Twin- or triple-turbo on the largest ULC engines |

MC vs ME — spare parts differences at a glance

Fuel injection — MC uses cam-driven mechanical fuel pumps (plunger+barrel matched pair); ME uses hydraulically-actuated fuel oil booster and electronic timing. Different spare-parts trees.

Exhaust valve actuation — MC uses cam-driven pushrods + hydraulic amplifier; ME uses electrically-controlled hydraulic actuator ("HCU"). Different spare-parts trees.

Common between MC and ME: cylinder liner, cylinder cover casting, piston crown/skirt, piston-rod, main bearing shells, connecting rod, crosshead bearing, exhaust valve, piston rings — all interchangeable across MC/ME within the same bore/cylinder count.

ME-B — reverts to mechanical exhaust valve (cost-optimised variant of ME); parts list is closer to MC on the exhaust side, ME on the fuel side.

G-series — longer stroke, lower speed, higher expansion ratio; parts geometry differs (longer piston rod, taller liner) but same wear-part categories.

Class-society acceptance & OEM/IACS parts

MAN B&W main-engine spares must be either MAN Energy Solutions authorised OEM parts, or IACS-approved equivalent supplier parts with material and dimensional certification. cBallast supplies both:

MAN Energy Solutions OEM parts through the authorised distribution chain, with MAN material certificate and IACS-acceptable inspection reports.

IACS-approved equivalent parts from certified alternative suppliers, typically 15-30 % cost saving on non-warranty items; ships with material and dimensional cert accepted by DNV, ABS, LR, BV, ClassNK, KR, NK, RINA, CCS surveyor.

Refurbished / remanufactured parts — cylinder covers, cylinder liners, turbocharger cartridges — from IACS-approved

workshops with recertification. Typical 30-50 % cost saving on the big-ticket items.

HS codes for MAN B&W spare parts shipping

Part | HS Code |

Cylinder liner, piston, connecting rod, general engine parts | 8409.99 (parts for compression-ignition engines) |

Fuel injection pump plunger + barrel, fuel valve | 8409.99 |

Turbocharger cartridge (as spare) | 8414.90 (parts for pumps and compressors) |

Main bearing shell, connecting-rod bearing, thrust-bearing shells | 8483.30 (plain shaft bearings) |

Cylinder lube-oil (BN-70, BN-40) | 2710.19 (petroleum oil products) |

Common questions

Q: What is the difference between an S70MC and S70MC-C? The MC-C ("compact") is a higher-power / higher-mep variant of the same-bore MC. Same cylinder liner and piston, but the S70MC-C has higher rated cylinder power and a matched turbocharger uprate. Main bearings and most wear parts interchange between the two.

Q: Can we refit an MC engine with ME-B-style electronic control? No — the ME hydraulic-electronic system requires a completely different top-end (hydraulic power supply unit, HCU, ELFI valves, ELFI cabinets). MAN Energy Solutions does offer specific in-service ME retrofit packages for larger MC engines; feasibility is engine-by-engine and typically justified only on high-hour engines where fuel efficiency saving over remaining life exceeds retrofit CapEx.

Q: My VLSFO fuel is degrading fuel-valve nozzle life. What's the fix? Post-IMO 2020 VLSFO fuels vary in cat-fine content and viscosity. MAN Energy Solutions has published specific service bulletins on VLSFO handling; the standard fix is (a) upgrade to the harder-material nozzle spec, (b) confirm centrifuge cat-fine reduction is meeting spec at engine inlet, and (c) monitor injection-pressure trend as an early wear indicator.

Q: What is the ABB TPL vs A-series difference on newer engines? ABB TPL is the previous-generation axial-flow turbocharger; ABB A-series (A170, A175, A180, A280) is the current-generation with higher pressure ratio and better part-load efficiency. Green (G-series) engines specify A-series by default; retrofit from TPL to A-series is possible but requires engine-family-specific certification.

Related products & references

All MAN B&W products on cBallast

S70MC-C spare parts

Main bearings (all makes) on cBallast

Cylinder liners on cBallast

Fuel valves and injectors on cBallast

Wärtsilä 32 / W46 / W50DF spare parts reference (companion doc)

Marine fuel oil viscosity & homogeniser (MDO / HFO / VLSFO)

Marine engine cooling water (SW / FW loop design)

Class society type approval (DNV, ABS, LR, BV, ClassNK)

HS codes for marine & industrial parts

How to request an RFQ from cBallast

Fast-track your MAN B&W RFQ by including: (1) engine model with cylinder count (e.g. "6S70MC-C", "8S80ME-C9", "12K98ME-C"); (2) engine serial number from the nameplate (typical format 000000 or a 6-8 digit serial); (3) vessel name and IMO number; (4) MAN Energy Solutions 6-8 digit part number from the parts book or previous PO if available; (5) quantity per cylinder and per engine; (6) ship-to port and port-agent details; (7) required-on-board date and criticality (routine PMS vs urgent). cBallast responds within 8 business hours during EU working days with itemised quote, OEM vs IACS-equivalent labelling, lead-time and shipping options.

Wear-part intervals, family designations and spare-part references above are compiled from MAN Energy Solutions service literature and industry norms. Actual overhaul schedules follow the operator's PMS and MAN's engine-specific service-bulletin recommendations. MAN B&W and MAN Energy Solutions are trademarks of MAN Truck & Bus SE / MAN Energy Solutions SE. cBallast is an authorised parts stockist and independent supplier; not the OEM.

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