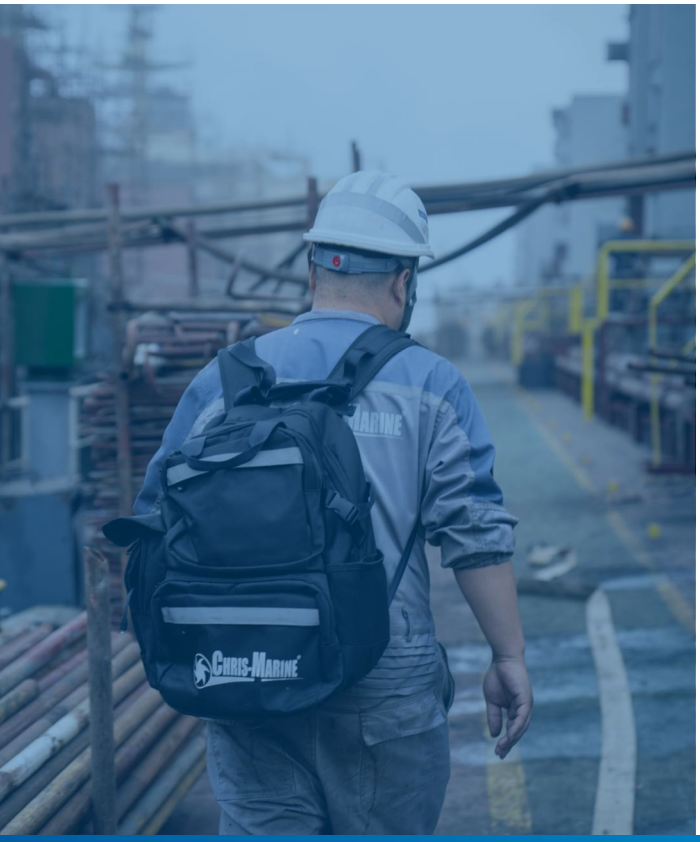
Complete Product Range

Monitoring & Maintenance Solutions

for 2-stroke & 4-stroke Diesel and Gas Engines

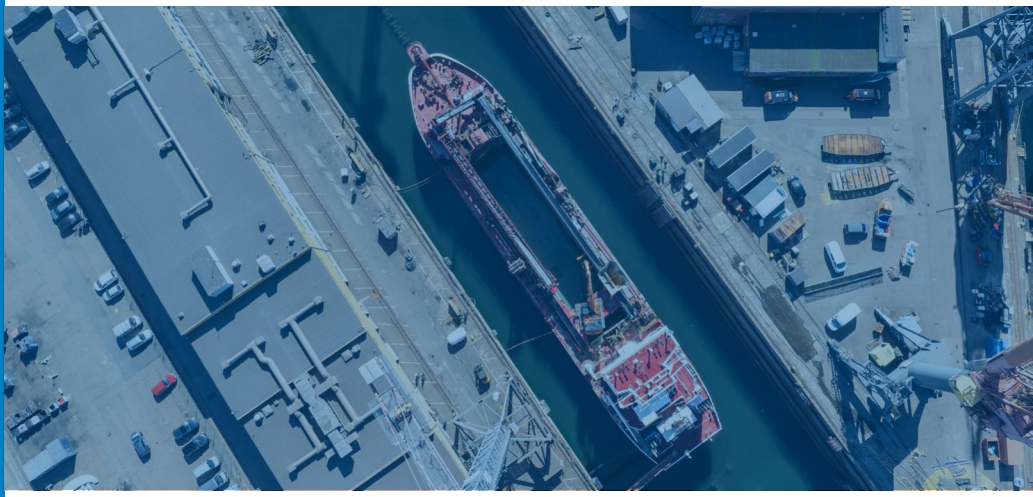




Innovative engineering since 1962

CHRIS-MARINE®

Committed to Engine Excellence



For more than 60 years, Chris-Marine has specialized in the development, manufacturing, and supply of precision equipment for the maintenance of large 2-stroke and 4-stroke engines. Our solutions are trusted worldwide by engine manufacturers, ship owners, shipyards, workshops, and power generation operators.

We focus on the critical stages of engine maintenance: from condition monitoring and machining to verification and performance optimization. Our equipment is designed for accuracy, reliability, and practical use in real working environments, both onboard vessels and in workshops.

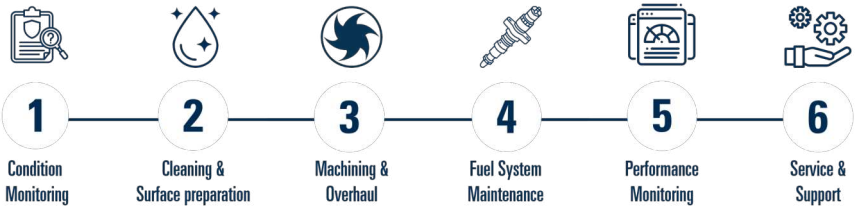
Through our brands Chris-Marine®, Obel-P®, and LEMAG®, we deliver complete solutions for engine care, fuel system maintenance, and monitoring. With a global organization, local presence, and dedicated service support, we help our customers improve engine performance, reduce downtime, and extend component lifetime, while supporting more efficient and sustainable operation.

CHRIS-MARINE®

Precision tools for engine professionals.

Where Our Solutions Fit

Engine maintenance is a process, not a single operation.
Chris-Marine solutions support the critical stages of the engine maintenance lifecycle, from initial assessment to final verification.



Typical maintenance workflow:

Inspection & Condition Monitoring
Assess engine condition, identify wear, and support maintenance decisions.

Cleaning & Surface Preparation
Ensure accurate measurements, reliable machining results, and correct assembly conditions.

Machining & Overhaul
Restore critical engine components through in-situ and workshop-based machining, grinding, and honing.

Fuel System Maintenance
Fuel injector test rigs and precision sealing surface grinding solutions to ensure consistent combustion performance and reliable engine operation.

Performance Monitoring
Continuous monitoring of engine and vessel performance during operation, providing data-driven insight that supports condition monitoring, maintenance planning, and operational efficiency.

Service & Lifecycle Support
Training, service, and spare parts to support long-term reliability and performance.

Chris-Marine products are designed to work together across these stages, enabling efficient, precise, and repeatable engine maintenance in marine and industrial environments.



Our Product Portfolio

Condition Monitoring _____ **5**
Cleaning & Surface Prep. _____ **12**
Machining & Overhaul
- Cylinder liners_____ **15**
- Cylinder heads _____ **14**
- Sealing surfaces_____ **27**

Fuel Injector Test Rigs
- 2-stroke Dual Fuel_____ **34**
- 2-stroke _____ **36**
- 2-stroke & 4-stroke _____ **37**
- 4-stroke _____ **38**

Fuel System Maintenance _____ **40**
Power Packs_____ **41**
Performance Monitoring _____ **42**
Accessories & Consumables ___ **44**
Service & Aftersales_____ **46**

Cylinder Condition Monitoring

Accurate assessment of cylinder condition is essential for planning maintenance, optimizing overhaul intervals, and ensuring long-term engine reliability. Chris-Marine's Cylinder Condition Monitoring approach combines precise measurement methods with structured evaluation and reporting.

By using complementary measurement techniques, cylinder geometry, wear patterns, and surface condition can be assessed objectively and documented consistently. The collected data forms the basis for maintenance decisions and supports trend analysis over time.

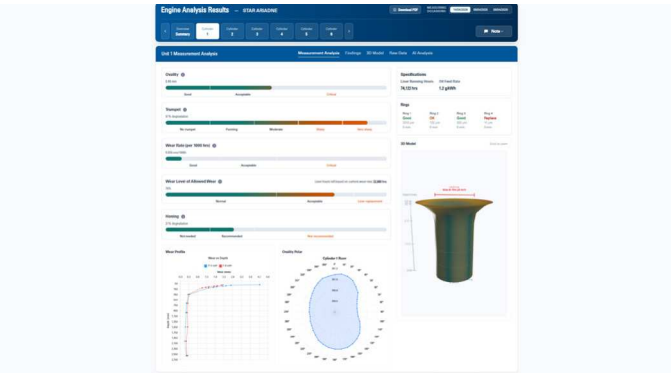
Chris-Marine Cylinder Condition Monitoring tools are designed to work together. From onboard measurement to structured reporting — enabling reliable condition assessment across fleets, engine types, and operating profiles.

LEMAG®
LDM — Liner diameter and wear measurement

LEMAG®
LCC — Liner condition camera

CHRIS-MARINE®
CTM — Ring pack coating thickness measurement

CHRIS-MARINE®
RAM — Surface condition & wear pattern analysis



Measurement data can be fed directly into Engine Insights, enabling automated report generation and continuous condition tracking over time.



Liner Diameter Measurement

Used to accurately measure cylinder liner diameter and wear without removal of cylinder head or valve housing in order to assess liner condition and support maintenance planning for 2-stroke engines.

LEMAG®
LDM



KEY BENEFITS
- Provides objective data on liner wear & geometry
- Supports trend analysis and comparison over time
- Core input to cylinder condition reports

TYPICAL APPLICATIONS
- Periodic cylinder condition assessment
- Pre-overhaul evaluation
- Fleet-wide liner wear comparison

Liner Condition Camera

LCC provides visual documentation of the liner surface condition, forming the qualitative and evidential layer of the cylinder condition.

LEMAG®
LCC



KEY BENEFITS
- Visual inspection and documentation of liner surface condition
- Identifies polishing, scuffing, and surface anomalies
- Provides visual evidence for condition reports

TYPICAL APPLICATIONS
- Periodic cylinder condition assessment
- Documentation of liner surface for cylinder condition reports
- Comparative assessment of liner condition across cylinders or engines

Automatic report generation with Engine Insights
See more on page 8



Coating Thickness Measurement (CTM)

CTM provides quantitative measurement of coating thickness on piston ring packs, adding a critical wear-life parameter to Cylinder Condition Monitoring.

CHRIS-MARINE®

CTM



KEY BENEFITS

- Measures remaining coating thickness on piston ring packs
- Supports assessment of piston ring wear and lifetime
- Provides quantitative input for maintenance and overhaul decisions

TYPICAL APPLICATIONS

- Periodic cylinder condition assessment
- Documentation for cylinder condition reports
- Support of overhaul scope and timing decisions

Replica Test

Replica Test provides detailed documentation of surface micro-structure, enabling in-depth analysis of wear mechanisms that are not visible through dimensional measurement or standard visual inspection.

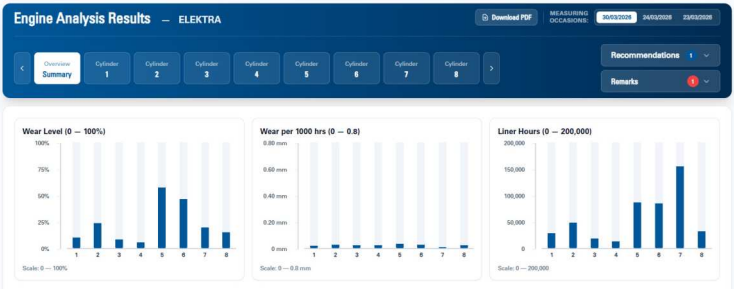
CHRIS-MARINE®

RAM



TYPICAL APPLICATIONS

- Detailed analysis of abnormal liner wear or damage
- Support of root-cause analysis following wear incidents
- Inclusion in comprehensive cylinder condition reports



Automated Engine Diagnostics

The Chris-Marine Reporting Portal transforms measurement data from LDM, LCC, CTM and Replica Test into standardized, professional reports.

Designed to reduce administrative workload, improve technical transparency and ensure consistent documentation across vessels and fleets.

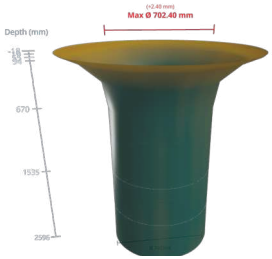
DIGITAL REPORTING

KEY BENEFITS

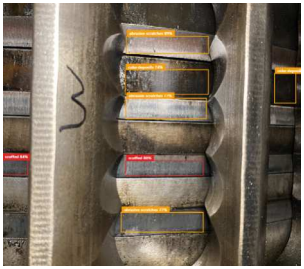
- **Automated Report Generation**
  Upload measurement data and generate structured reports within minutes.
- **Fleet-Level Standardization**
  Uniform format across technicians, vessels and time periods.
- **Traceability & History**
  Secure cloud-based storage with documented measurement records.
- **Professional Output**
  Clear, structured reports suitable for technical management and customer documentation.

Measurement → Report → Decision

3D model of cylinder deformation



Instant analysis of ring packs

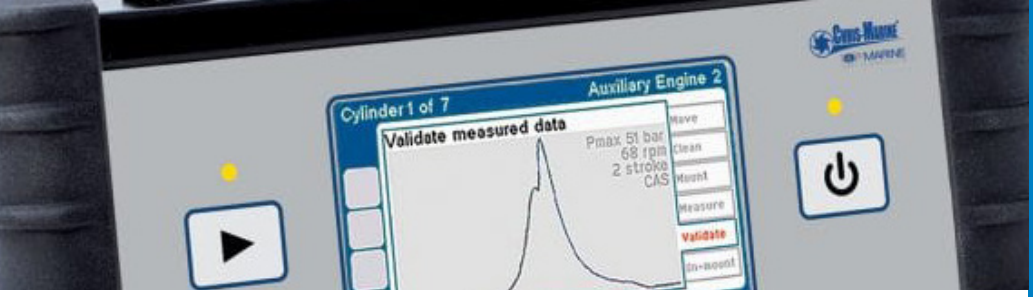


Replica test analysis



Enhancing the value of every measurement.

www.ei.chris-marine.com



Electronic Cylinder Pressure Indicator

The Electronic Cylinder Pressure Indicator (ECI) is designed for accurate measurement and analysis of cylinder pressure in 2-stroke & 4-stroke engines. It enables precise evaluation of combustion performance, supporting engine balancing, optimization, and condition monitoring.

LEMAG®
ECI



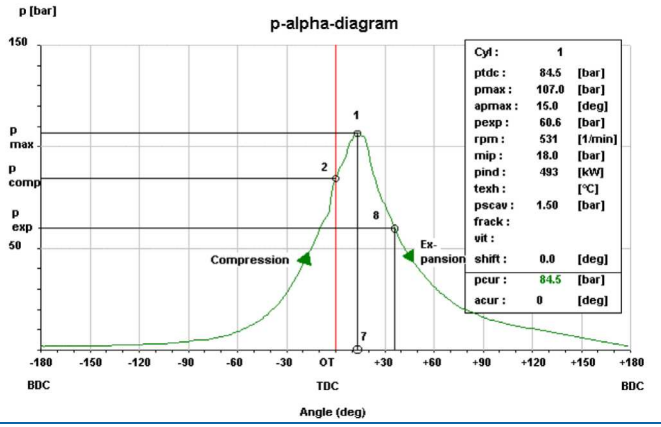
KEY BENEFITS

- Enables fine-tuning of engine performance
- Takes continuous engine readings
- Detects problems before downtime occurs

TYPICAL APPLICATIONS

- Cylinder pressure measurement
- Misfiring analysis & engine balancing
- MIP & power calculation

Example figure of a pressure curve vs crank angle



The ECI provides the essential link between condition monitoring and performance optimization, translating combustion data into actionable insights.

Condition Monitoring

LEMAG®

LDM

Techincal Specification	
• Diameter measuring range	2-stroke engines 500 - 980 mm liner diameters or 4-stroke engines (cylinder cover removed) >=500 mm liner diameters
• Measurement capability	Cylinder wear (two diameters) and clover leafing (60 radii)
• Height measuring range	0-4000 mm
• Electric power supply	Battery operated Charging equipment included
• Normal measuring time	One cylinder liner (2 diameters/15 levels): 1 Hr
• Weight complete with case	20 kg

LEMAG®

LCC

Technical Specifications	
• Weight	550 g (camera unit) 9 kg (complete equipment in storage box)
• Dimensions (L x W x H)	176 x 78 x 33 mm (camera unit) 510 x 310 x 130 mm (storage box)
• Camera resolution	1280 x 1024 pixels per camera (4 cameras included in the unit)
• Power supply	Battery operated Charging equipment included
• Batteries	Camera unit: 6 Ni MH batteries with a total capacity of 3.6 Wh Operator's unit: 1 Li Ion battery with a capacity of 29.6 Wh
• Mains supply (chargers)	Camera unit: 100-240 V, 50/60 Hz, 0.35 A Operator's unit: 100-240 V, 50/60 Hz, 0.5 A
• Ambient air temperature (camera unit)	0-85°C
• Cylinder diameter range	480 to 980 mm
• Normal measuring time	15 minutes per cylinder liner

CHRIS-MARINE®

CTM

Technical Specifications	
• Measuring Principle	Magnetic induction and eddy current
• Thickness range	0 - 2000 µm
• Accuracy	Magnetic up to 75 µm ± 1.5 µm 75 to 1000 µm: < 2% 1000 to 2000 µm: < 3% Eddy current up to 50 µm: ± 1 µm 50 to 1000 µm: < 2% 1000 to 2000 µm: < 3%
• Operating temperature	5-60°C
• Data memory	1000 measurements
• Weight	400 g
• Battery	2 x 1.5V
• Dimensions (L × W × H)	140 × 50 × 70 mm

Portable Diagnostics & Calibration

Compact tools for onboard diagnostics, calibration, and verification. Designed to complement core measurement systems and support fast, reliable condition assessment during operation and overhaul.

LEMAG®
PEAKMAG & LS



KEY BENEFITS
- Measures peak cylinder pressure
- Supports engine balancing
- Quick onboard verification

LEMAG®
PRESSOTEST



KEY BENEFITS
- Measures compression pressure
- Identifies leakage and wear
- Supports troubleshooting

CHRIS-MARINE®
DEC-TESTER



KEY BENEFITS
- Measures injection performance
- Supports fault identification
- Suitable for onboard diagnnostics

LEMAG®
TEMPMAG



KEY BENEFITS
- Measures surface temperature
- Identifies hotspots
- Quick onboard use

CHRIS-MARINE®
CAL GAUGE



KEY BENEFITS
- Verifies measurement accuracy
- Supports consistent data quality
- Used for routine checks

CHRIS-MARINE®
SRM



KEY BENEFITS
- Verifies honing pattern and surface condition
- Supports correct lubrication performance
- Consistent and repeatable surface assessment

LEMAG®
DI-5 & DI-5C



KEY BENEFITS
- Supports dimensional checks
- Reliable and easy to use
- Suitable for onboard inspection

LEMAG®
CONTROLMAG I & II



KEY BENEFITS
- Supports engine condition checks
- Enables quick diagnostics
- Complements measurement tools

Cleaning & Surface Preparation

Effective engine maintenance depends on properly cleaned components. Deposits, combustion residues, and contaminants can distort measurements, affect machining accuracy, and compromise surface quality.

Chris-Marine cleaning solutions support maintenance operations by combining high-efficiency spray washing with precision ultrasonic cleaning. Together, these technologies ensure that engine components are properly prepared prior to inspection, measurement, and mechanical restoration.

By integrating robust cleaning and precision surface preparation, components are made ready for accurate measurement, reliable machining, and consistent reassembly.

ULTRASONIC CLEANING

SPRAY CLEANING

APPROVED CLEANING CHEMICALS



ULTRASONIC CLEANING CHEMICAL

Ultra Rinse intercooler is specifically designed and developed for ultrasonic cleaning methods, enabling rapid penetration and removal of deposits.



Proper cleaning is the foundation for accurate measurement, reliable machining, and consistent engine performance.

Ultrasonic Cleaning System

Compact ultrasonic cleaning systems designed for precision cleaning of smaller engine components in workshop environments.

CHRIS-MARINE®

UCS 4600/1500/1000



KEY BENEFITS

- Precision ultrasonic cleaning for small and medium-sized parts
- Compact solution suitable for workshop integration
- Efficient removal of combustion residues and contaminants

TYPICAL APPLICATIONS

- Cleaning of fuel injectors and valves
- Cleaning of small engine components during overhaul
- Removal of stubborn combustion deposits

Technical Specifications	USC 4600	USC 1500	USC 1000
• Internal dimension	2150 x 1200 x 1200 mm	1000 x 1000 x 1000 mm (1350 L)	1000 x 1500 x 1000 mm (760 L)
• Power supply	400 V, 50-60 Hz, 3 phase + neutral + PE	AC 380–415 V, 50/60 Hz, 3-phase	AC 380–415 V, 50/60 Hz, 3-phase
• Max load weight	2000 kg	1000 kg	1000 kg
• External dimension	3930 x 1500 x 3685 mm	1200 x 1700 x 1200 mm	1300 x 1100 x 1200 mm

Spray Cleaning

For cleaning of small and medium size components.

CHRIS-MARINE®

SWM



KEY BENEFITS

- Pre-cleaning of workshop engine parts
- Removes heavy deposits and contaminants
- Rotating spray system with full flow coarse filtration

TYPICAL APPLICATIONS

- Cleaning of cylinder heads, pistons, and large components
- Removal of combustion residues prior to overhaul
- Preparation for inspection and machining operations

Technical Specifications	SWM B	SWM C
• Internal capacity	1665 x 1930 x 811 mm	2185 x 2530 x 790 mm
• Power supply	3 x 400 V, 50 Hz with neutral	3 x 400 V, 50 Hz with neutral
• Weight	1200 kg	1400 kg
• External dimension	1800 x 2090 x 3000 mm	2400 x 2690 x 3050 mm

Machining & Overhaul

When wear exceeds acceptable limits, restoration of critical engine components becomes essential to maintain performance, efficiency, and reliability.

Chris-Marine machining and overhaul solutions are designed to restore geometry, surface condition, and sealing integrity of key engine components, including cylinder heads, cylinder liners, and sealing surfaces.

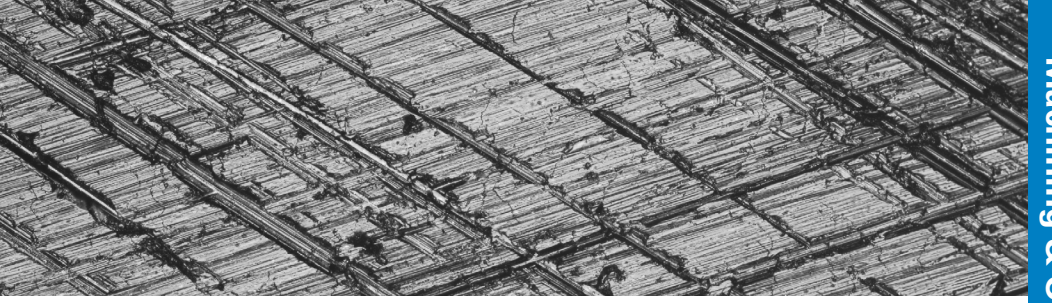
By combining controlled material removal with stable setups and dedicated tooling, our systems enable accurate, repeatable results in both in-situ and workshop environments.

Precision machining ensures that components are restored in accordance with engine manufacturers requirements — supporting correct sealing, reliable operation, and extended component lifetime.

CYLINDER HEADS	Valve spindle & grinding machines
CYLINDER LINERS	Reconditioning of cylinder liners
SEALING SURFACES	Grinding & Machining tools for sealing surfaces



Controlled machining restores critical surfaces to OEM tolerances, ensuring proper sealing, reliable operation, and extended component lifetime



Cylinder Liners

Cylinder liner restoration requirements differ significantly between large 2-stroke and medium-speed 4-stroke engines. Bore dimensions, surface structure, and wear characteristics demand tailored machining solutions.

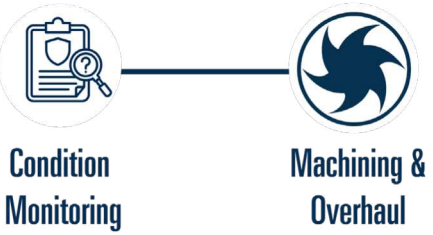
Chris-Marine provides dedicated liner restoration systems for both engine types, ranging from heavy-duty in-situ honing and wavecut grinding for large-bore 2-stroke engines to versatile honing solutions for 4-stroke applications.

Accurate control of geometry and surface finish ensures reliable piston ring interaction, proper lubrication, and extended liner lifetime.

CHRIS-MARINE®
HONING RIGS — Enables controlled restoration of cross hatch pattern

CHRIS-MARINE®
WAVECUT MACHINE — Portable machine for in-situ wavecut grinding

CHRIS-MARINE®
DEGLAZING MACHINE — Portable machine for in-situ deglazing of cylinder liners



Correct measurements set the foundation of planned maintenance and an understanding of how to take care of your engine components.



2-Stroke Cylinder Liner Restoration

Large-bore 2-stroke engines require robust machining systems capable of restoring liner geometry and surface structure in-situ. Precision honing and surface pattern control are essential to ensure correct piston ring sealing and lubrication behavior.

Chris-Marine's flagship 2-stroke liner solutions are designed for controlled material removal and repeatable surface finish restoration onboard vessels.

CHRIS-MARINE®

HON 2A



KEY BENEFITS

- Controlled restoration of liner geometry and surface finish
- Automatic feed control for consistent material removal
- Repeatable and reliable honing results

TYPICAL APPLICATIONS

- Restoration of worn cylinder liners in 2-stroke engines
- Reconditioning during scheduled overhauls
- Correction of diameter and geometry deviations

APPROVED CONSUMABLES



Honing stones for HON 2A

A correct honing pattern can support stable lubrication at lower cylinder oil feed rates (e.g., SLOC around 0.4 g/kWh, depending on system configuration) potentially contributing to reduced liner wear and oil consumption.

Technical Specifications	HON 2A
• Machine capacity	Ø500–1000 mm
• Power supply	Electric, 3-phase 380/415 V 50/60 Hz
• Weight	590 kg
• Dimensions (L × W × H)	Dependent on size



Wavecut Grinding Machine

Controlled surface structure is critical for proper lubrication behavior in large 2-stroke cylinder liners. The WGM generates precise and repeatable wavecut patterns directly on the liner surface.

Its controlled grinding process ensures consistent surface characteristics in accordance with engine manufacturers requirements.

CHRIS-MARINE®

WGM



KEY BENEFITS

- Controlled generation of wavecut surface structure
- Supports improved lubrication behavior
- Suitable for large-bore 2-stroke engines

TYPICAL APPLICATIONS

- Generation of wavecut surface patterns during liner overhauls
- Surface structure restoration following honing
- Compliance with engine manufacturers surface requirements

APPROVED CONSUMABLES



Grinding wheel for WGM

Technical Specifications	WGM
• Machine capacity	Ø350–980 mm
• Power supply	Pneumatic / Electric, 1-phase 220–240 V 50/60 Hz
• Weight	220 kg



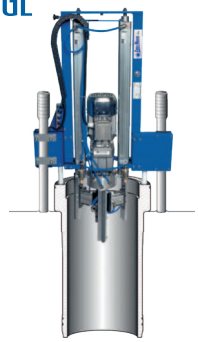
Deglazing Machine

Surface glazing can occur during operation, affecting lubrication behavior and piston ring interaction. The DGL is designed to lightly refresh the liner surface by removing glazing and restoring a functional surface structure.

The machine enables controlled in-situ deglazing when full honing is not required, supporting efficient maintenance interventions onboard.

CHRIS-MARINE®

DGL



KEY BENEFITS

- Controlled removal of surface glazing
- Restores functional surface characteristics
- Efficient intervention without full honing

TYPICAL APPLICATIONS

- Surface refresh during intermediate overhauls
- Removal of liner glazing
- Preventive maintenance operations

Feature	Honing	Deglazing
Honing pattern	✓	✓
Corrects ovality	✓	⛔

APPROVED CONSUMABLES



Honing stones for DGL

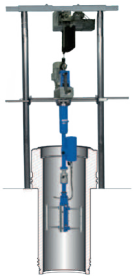
Technical Specifications	DGL			
• Machine capacity		Ø320–500 mm		
• Power supply		Pneumatic / Electric, 3-phase 380/415 V 50/60 Hz		
• Cylinder liner diameter(mm)		320-340	380-400	460-500
• H (mm)	Min	910	1180	1380
	Max	1510	1930	2330
• Weight (kg)		50	53	56



Cylinder Liner Honing Machines

Medium-speed 4-stroke engines require accurate restoration of liner geometry and surface characteristics during overhaul.
The HON A and HON S machines are designed to provide controlled honing in workshop or in-situ environments, depending on operational requirements.
Both models enable precise material removal and consistent surface finish.

CHRIS-MARINE®
HON A



KEY BENEFITS

- Controlled restoration of liner geometry
- Consistent and repeatable surface finish
- Adaptable for workshop or in-situ use

CHRIS-MARINE®
HON S



TYPICAL APPLICATIONS

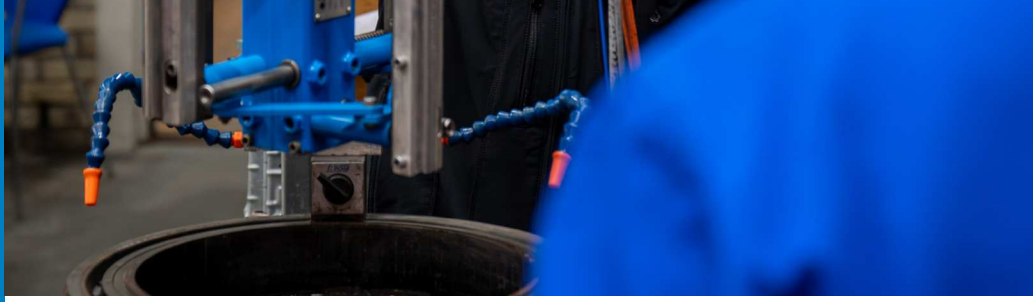
- Liner reconditioning during engine overhaul
- Correction of diameter and surface deviations
- Surface finish restoration prior to reassembly

APPROVED CONSUMABLES



Honing stones for HON A & HON S

Technical Specifications	HON A	HON S
• Machine capacity	Ø150–670 mm	Ø150–750 mm
• Power supply	Electric, 3-phase 380/415 V 50/60 Hz	Pneumatic
• Weight	Dependent on size	Dependent on size
• Base machine height	1490–2190 mm	1320–2020 mm



Support Equipment

Effective liner restoration requires not only precision machining, but also proper positioning and preparation of the liner surface.

Chris-Marine support equipment is designed to improve stability, handling, and corrective preparation during liner maintenance operations, both in workshop and onboard environments.

CHRIS-MARINE®
HR



HONING RIG

The HR Honing Rig provides a secure and stable setup for cylinder liners during workshop restoration. By supporting proper alignment and positioning, the rig ensures controlled honing operations when liners are not machined in-situ.

Designed to improve working conditions and machining stability, the HR enables efficient liner handling and repeatable results in workshop environments.

- Stable mounting for liner honing
- Improves workshop workflow and ergonomics
- Supports accurate alignment during machining

CHRIS-MARINE®
VKS



WEAR EDGE MILLING MACHINE

Portable machine for safe removal of wear edges in cylinder liners.

- For liners 250–1000 mm diameter
- Easily adjustable for different wear edge positions
- Reduces piston pulling time
- Preserves piston rings and liners
- Complete removal of a wear edge within less than 15 min
- Down to 250 mm diameter depending on engine type
- Pneumatically driven
- Workshop and onboard versions available
- Version not requiring a "Hot Work Permit" is available

CHRIS-MARINE®
HON LIQ



HONING LIQUID

To ensure a smooth and efficient honing process.

- Water mixable honing fluid based on mineral oil
- Ensures shortest possible honing time
- Prevents residues from clogging the stones
- Provides corrosion resistance for the cylinder liner
- Tested and approved by leading engine designers

Machining or Lapping

Sealing surface restoration is critical for ensuring correct contact pressure, leak prevention, and long-term engine reliability.

While manual lapping is still widely used in the industry, controlled machining provides a structured and measurable alternative aligned with engine manufacturers' specifications. Manual lapping influences overall results and increases the risk of unplanned maintenance between scheduled maintenance intervals.

Controlled Machining

A guided process using dedicated sealing surface equipment.

Advantages

Controlled material removal
OEM tolerances restored
Verified flatness
Repeatable results



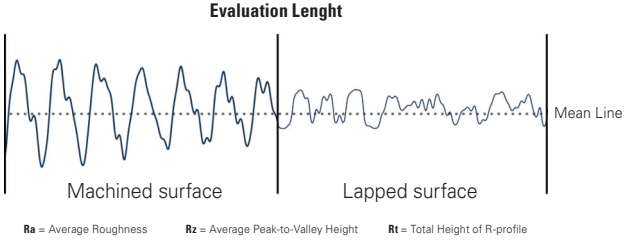
Manual Lapping

A manual process relying on operator skill and pressure control.

Limitations

May not meet OEM specs
Uneven removal risk
Geometry not measurable
Time-consuming & inconsistent





Surface roughness profiles illustrated on two figures comparing machining versus lapping



Several engine builders restrict lapping as a method for restoring sealing surfaces due to the surface becoming too smooth, causing exhaust gases to leak into the cooling water circuit.



Valve Spindle and Seat Grinding Machine

The LBD is designed for controlled restoration of valve spindle and seat surfaces directly onboard or in workshop environments.

Accurate grinding ensures proper gas tightness and combustion performance while minimizing component replacement.

CHRIS-MARINE®

LBD



KEY BENEFITS

- Combined grinding of valve spindle and seat
- Controlled restoration of sealing geometry
- Supports extended component lifetime

TYPICAL APPLICATIONS

- Restoration of valve seat sealing surfaces
- Correction of minor wear without full component replacement
- Grinding of exhaust valve spindles on 2-stroke engines

APPROVED CONSUMABLES



Grinding wheel for LBD & VGT

Additional Solutions

CHRIS-MARINE®

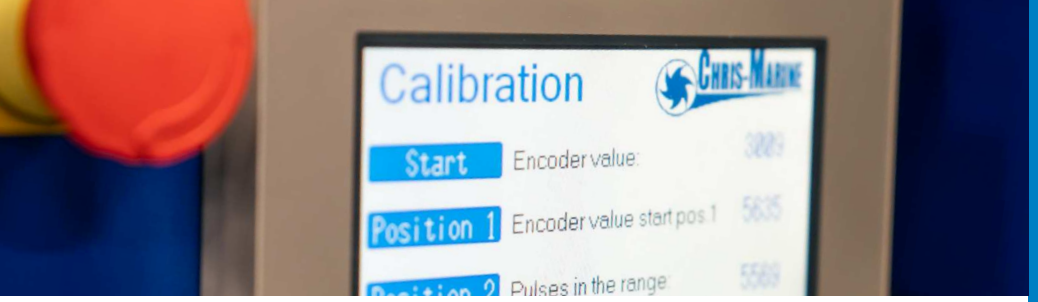
VGT



VALVE SPINDLE AND SEAT GRINDING MACHINE

Designed and developed for grinding of valves and valve seats on 2-stroke diesel engines.

Technical Specifications	LBD	VGT
• Machine capacity	Up to 650 mm valve disc and valve seat	Up to 96 mm valve stem diameter
• Power supply	Pneumatic	Electric, 3-phase
• Weight	440–460 kg	250 kg
• Dimensions (H × W)	1300–1700 × 700–960 mm	1300–1700 × 700–960 mm



Valve Spindle Grinding Machine

The BSP30 is optimized for workshop-based restoration of valve spindle surfaces on medium-speed engines. Its design enables stable setup, precise grinding control, and repeatable results across multiple valve sizes.

CHRIS-MARINE®

BSP30



KEY BENEFITS

- Precision spindle grinding for multiple angles
- Stable workshop-based setup
- Consistent and repeatable surface finish

TYPICAL APPLICATIONS

- Grinding of exhaust and inlet valve spindles
- Preparation of valves for reassembly
- Valve overhaul in workshop environments

APPROVED CONSUMABLES



Grinding wheel for BSP30 & BSP2

Additional Solutions

CHRIS-MARINE®

BSP2



KEY BENEFITS

- Precision spindle grinding for multiple angles
- Stable workshop-based setup
- Consistent and repeatable surface finish

Technical Specifications	BSP30	BSP2
• Stem diameter	Up to 50 mm	Up to 50 mm
• Valve disc diameter	Up to 250 mm	Up to 250 mm
• Power supply	Electric, 3-phase	Electric, 3-phase
• Weight	320 kg	295 kg
• Dimensions (L × W × H)	1100 × 1100 × 800 mm	1100 × 1100 × 736 mm

Cylinder heads

Cylinder heads are exposed to high thermal and mechanical stress. Wear, deformation, and damage to valve seats and sealing areas directly affect combustion efficiency and engine performance.

Chris-Marine cylinder head machining solutions enable controlled restoration of valve spindles, valve seats, and associated components. Both in-situ and workshop-based solutions ensure accurate geometry, reliable sealing, and repeatable machining results.

By restoring valve and seat surfaces to specification, combustion performance and operational reliability can be maintained without unnecessary component replacement.

CHRIS-MARINE®

VRL / VSL

Lathes for sealing surfaces in cylinder heads

OBEL-P®

MPI

Valve seat remover by induction



Ensures correct sealing and geometry — reducing risk of leakage, performance loss, and premature wear



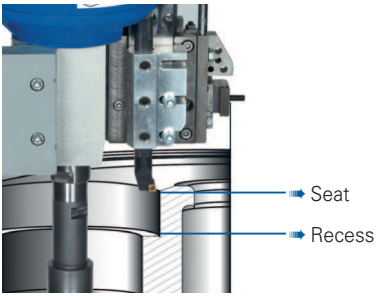
Valve Seat Lathes

Used for precision machining of valve seats to restore correct sealing geometry and alignment in cylinder heads.

CHRIS-MARINE®

VRL





KEY BENEFITS

- Controlled and accurate seat machining
- Restoration of correct sealing angle and geometry
- Stable and repeatable machining process

TYPICAL APPLICATIONS

- Machining of worn or damaged valve seats
- Restoration of sealing geometry during overhaul
- Correction of seat misalignment or surface damage

CHRIS-MARINE®

VSL



CHOOSING BETWEEN VRL & VSL

VRL is designed for machining both the valve seat and the seat recess in a single setup, providing extended capability for comprehensive restoration work.

VSL is a compact solution focused on precision seat machining where recess machining is not required.

Technical Specifications	VRL	VSL
• Power supply	1-phase 180–252 V, 48–62 Hz	1-phase 180–252 V, 48–62 Hz
• Base machine weight	15 kg	13 kg
• Valve seat diameter	54–200 mm	50–230 mm
• Seat recess diameter	74–200 mm	N/A
• Length of cut	30 mm	32 mm



Induction Valve Seat Remover

The MPI removes valve seats using controlled induction heating, allowing the seat to be expanded and extracted without excessive force.
Induction minimizes the risk of damage to the surrounding cylinder head material.

OBEL-P®

MPI



KEY BENEFITS

- Non-contact removal method using induction heating
- Reduced risk of cylinder head damage
- Suitable for workshop overhaul operations

TYPICAL APPLICATIONS

- Removal of worn or damaged valve seats
- Overhaul of cylinder heads in workshop environments
- Controlled seat extraction prior to recess machining

APPROVED CONSUMABLES



Induction coils for MPI

Technical Specifications	MPI
• Output power / frequency	Max 32 kW / 35-55 kHz
• Output frequency	35-55 kHz
• Power supply	Electric, 3-phase 360-400 V, 50/60Hz and protective earth (neutral not required)
• Cooling requirements	Min 7 l/min @ 2.5-4 bar
• Weight	100 kg
• Generator dimensions (HxWxD)	1400 x 600 x 600 mm (56 x 24 x 24) excluding fittings, handles.

OBEL-P®

VSR



MANUAL REMOVAL OF VALVE SEATS

- In-situ removal of valve seats
- Easy alignment and single operator use
- Hydraulic pump for tough conditions



Sealing Surfaces

Accurate sealing surfaces are essential to prevent leakage and maintain structural integrity in engine components. Irregularities, deformation, or damage to contact surfaces can compromise sealing performance and operational reliability.

Chris-Marine solutions for sealing surface restoration enable controlled machining of cylinder covers, frames, and related components. By restoring flatness and surface integrity, secure reassembly and long-term sealing performance can be achieved.

Both in-situ and workshop-based solutions are available, supporting efficient maintenance across marine and industrial engines.

CHRIS-MARINE®
CPL Sealing Surface Grinding Machine

CHRIS-MARINE®
CPM Sealing Surface Grinding Machine

CHRIS-MARINE®
PSL Portable Surface Lathe

CHRIS-MARINE®
PTL Portable Turning Lathe



Portable Surface Lathe

The PSL enables controlled restoration of sealing surfaces without removing large engine components from their installed position. It allows accurate machining of flat contact surfaces onboard or in workshop environments.

Its stable mounting and precision cutting ensure consistent surface quality and reliable sealing performance in accordance with OEM requirements.

CHRIS-MARINE®

PSL



KEY BENEFITS

- Restores sealing surface to a concentric pattern
- Controlled and accurate surface restoration
- 5 times faster than grinding

TYPICAL APPLICATIONS

- Machining of cylinder cover seating surfaces
- Restoration of engine frame contact areas
- Compliance with engine manufacturers surface requirements

PSL is available in two configurations, ensuring optimal access and stability across a wide range of sealing surface applications

APPROVED CONSUMABLES



Turning bits for PSL

Technical Specifications	PSL
• Machine capacity	190–600 mm
• Power supply	Electric 230–240 V, 1-phase 50/60 Hz
• Weight	52 kg / 55 kg
• Dimensions (L × W × H)	470 × 220 × 570 mm / 585 × 220 × 570 mm



Sealing Surface Grinding Machines

The CPM and CPL machines are designed for controlled restoration of flat sealing surfaces in workshop environments. Accurate grinding ensures proper contact between mating components, preventing leakage and maintaining structural reliability.

By enabling consistent material removal and stable setup, the machines support repeatable restoration of sealing surfaces across a wide range of engine types.

CHRIS-MARINE®

CPL



CHRIS-MARINE®

CPM



KEY BENEFITS

- Accurate restoration of surface flatness
- Controlled and uniform material removal
- Suitable for cylinder covers and frames

TYPICAL APPLICATIONS

- Correction of surface irregularities during overhaul
- Grinding of cylinder cover sealing surfaces
- Restoration of engine frame contact surfaces

APPROVED CONSUMABLES



Grinding wheel for CPL & CPM

Technical Specifications	CPL	CPM
• Machine capacity	Ø200–650 mm	Ø350 - 700 mm
• Power supply	Pneumatic	Pneumatic
• Weight	30–35 kg	95 kg
• Dimensions (H)	704 mm	642 mm



Portable Turning Lathe

The PTL is designed for portable turning operations on circular contact surfaces. It enables precise machining of seating areas where flatness and concentricity are critical.

By allowing machining directly on installed components, the PTL supports efficient maintenance and reduces downtime during overhaul operations.

CHRIS-MARINE®

PTL



KEY BENEFITS

- Controlled restoration of seating geometry
- Portable setup for onboard applications
- Supports accurate and repeatable results

TYPICAL APPLICATIONS

- Machining of circular sealing surfaces
- Restoration of seating areas on engine components
- Onboard corrective machining operations

MACHINING CAPABILITY



Technical Specifications	PTL
• Machine capacity	300–900 mm
• Power supply	Electric, 3-phase 320–440 V 48/62 Hz
• Weight	290 kg
• Dimensions (H)	1631 mm

Structural Alignment and Controlled Restoration

Engine frame sealing surfaces are exposed to wear, corrosion, micro-movement and structural stress during operation. Progressive degradation increases clearance between liner and frame, affecting stability and long-term reliability. The PTL enables precise in-situ machining of all critical sealing surfaces in one aligned setup, restoring geometry and structural integrity

TYPICAL STRUCTURAL DEGRADATION



Irregular wear and corrosion degrade sealing surfaces and landing geometry.



STRUCTURAL CONSEQUENCE



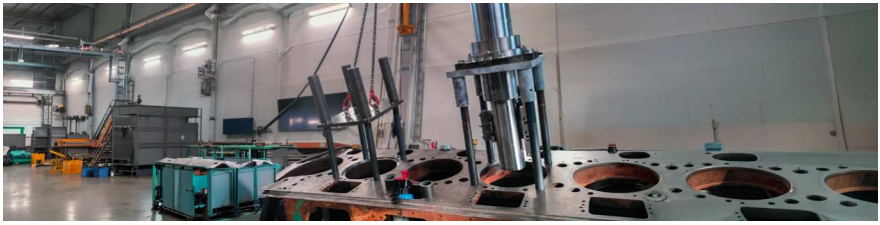
Increased clearance and unstable contact lead to vibration, fretting and accelerated wear.



CONTROLLED MACHINING



Precision machining restores alignment, geometry and sealing performance in one setup.



PTL is the industry standard for OEM-compliant restoration of engine frames.

Working Rig Series

The Chris-Marine Working Rig Series (WR) is designed to support safe and efficient handling, maintenance, and overhaul of engine components for both 2-stroke and 4-stroke engines.

The working rigs provide a stable and adjustable platform for workshop operations, facilitating dismantling, cleaning, inspection, and machining of key components such as cylinder covers, exhaust valve cages, and fuel pumps.

Equipped with a self-locking turning gear, the WR ensures safe handling and controlled rotation during maintenance procedures, including operation of valve seat grinding equipment.



KEY BENEFITS

- Safe and controlled handling of heavy engine components
- Supports dismantling, cleaning, and machining operations
- Self-locking turning gear for secure positioning

TYPICAL APPLICATIONS

- Machining of circular sealing surfaces
- Restoration of seating areas on engine components
- Onboard corrective machining operations





The Working Rig Series provides the foundation for safe handling and preparation of components prior to precision machining and fuel system testing.

Fuel System Maintenance

Accurate fuel injection is essential for efficient combustion, emission control, and engine reliability. Wear, contamination, and surface damage to fuel system components can directly affect injection performance and operational stability.

Chris-Marine fuel system maintenance solutions enable precise restoration of fuel injection components, ensuring correct geometry and surface integrity during overhaul operations.

Designed for workshop environments, these systems support controlled reconditioning of fuel pumps, injector components, and related parts.

OBEL-P®
VPU/VPUD/VPA
Test rigs

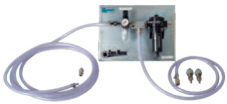
OBEL-P®
FPG/IGT
Grinding tools

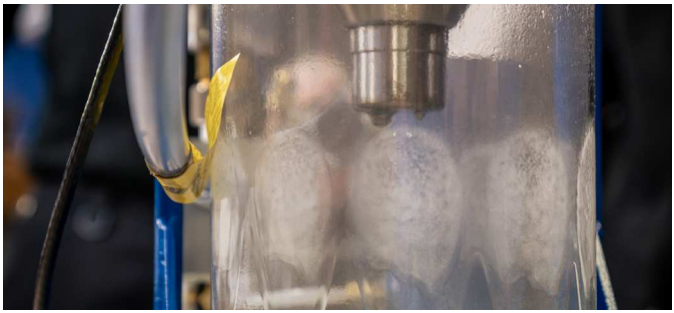
Support Equipment for Fuel System Maintenance

OBEL-P®
UVH



OBEL-P®
OIL MIST SEPARATOR





Precision fuel system maintenance ensures reliable injection performance, efficient combustion, and stable engine operation over time.



2-Stroke Dual Fuel System

Dual-fuel injection systems require precise calibration and verification to ensure reliable performance under varying operating conditions.

Approved for MAKE MAN B&W engines, these systems support controlled calibration procedures in accordance with manufacturers requirements.

OBEL-P®

VPU 500 GI Everllence



FUEL TYPE

- Gas injection testing for methane / ethane

OBEL-P®

VPU 500 LGIP Everllence



FUEL TYPE

- Propane injection testing

OBEL-P®

VPUD 1000 LGI Everllence



FUEL TYPE

- Ammonia injection testing (LGIA)
- Methanol injection testing (LGIM)

KEY BENEFITS

- Controlled and repeatable testing procedures
- Approved for MAKE Everllence engines
- Workshop or onboard solutions

TYPICAL APPLICATIONS

- Testing and calibration of dual-fuel injectors
- Verification of performance during overhaul
- Adjustment of fuel injection parameters

Everllence – MAN B&W engine types

Technical Specifications	VPU 500 GI	VPU 500 LGIP	VPUD 1000 LGI
• Fuel type	Methane / Ethane	Propane	Methanol / Ammonia
• Output pressure	up to 450bar	up 300bar	up to 500bar
• Power Supply	1×115/230 V, 50/60 Hz	1x115VAC (110VAC) + PE or 1x230VAC (220VAC + PE; 50/60 Hz; 100 VA	1x115 or 1x230 V 50/60 Hz, 100 VA
• Air Supply	7bar	7bar	7bar
• Dimensions (L x W x H)	694 × 1431 × 1475 mm	694 × 1431 × 1475 mm	694 × 1431 × 1475 mm
• Weight	100 kg empty valve holder 80 kg	230 kg	230 kg



2-Stroke Dual Fuel System

Accurate testing and calibration of 2-stroke fuel injection components are essential to maintain correct injection performance and engine reliability.

Selected models are approved by WinGD, supporting compliance with manufacturers testing standards.

OBEL-P®

VPUD 1000 A WINGD



FUEL TYPE

- Gas injection testing for ammonia

KEY BENEFITS

- Controlled and repeatable testing procedures
- WinGD-approved models
- Workshop or onboard solutions

OBEL-P®

VPU 500F-M WINGD



FUEL TYPE

- Gas injection testing for methanol

TYPICAL APPLICATIONS

- Testing of 2-stroke fuel injectors during overhaul
- Verification of injection parameters
- Adjustment of fuel injection parameters

WinGD – Sulzer/Wärtsilä engine types

Technical Specifications	VPUD 1000 A	VPU 500 F-M
• Fuel type	Ammonia	Methanol
• Output pressure	up to 1000bar	up to 600bar
• Power Supply	1x115 or 1x230 V 50/60 Hz, 100 VA	Pneumatically operated
• Air Supply	7bar	7bar
• Dimensions (L x W x H)	560 × 950 × 1525 mm	840 × 1030 × 1500 mm
• Weight	85 kg	150 kg



2-Stroke Test rigs

Reliable testing and calibration of 2-stroke fuel pumps are essential to maintain correct injection performance and operational stability.

Designed for repeatable testing procedures, these systems support accurate calibration across a wide range of 2-stroke engine applications.

OBEL-P®

VPU 500F WIN GD



FUEL TYPE

- Conventional fuel injector testing

KEY BENEFITS

- Accurate calibration of 2-stroke fuel injectors
- Controlled and repeatable testing process
- Workshop or onboard solutions

OBEL-P®

VPUD 1000 CR WIN GD



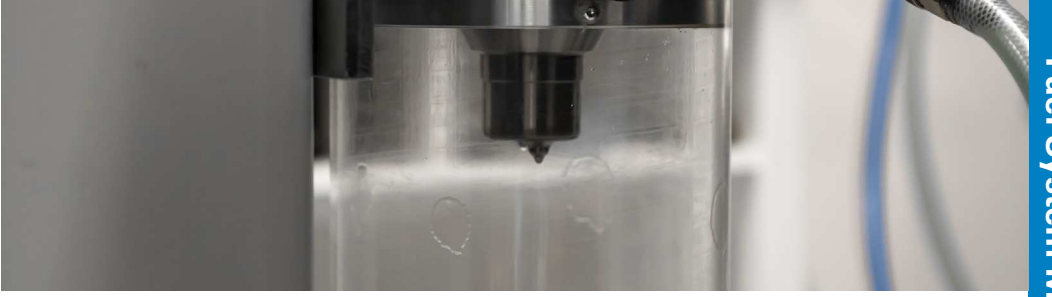
FUEL TYPE

- Conventional fuel injector testing

TYPICAL APPLICATIONS

- Testing of 2-stroke injectors pumps during overhaul
- Verification of fuel system performance
- Built for Wärtsilä RT flex engines

Technical Specifications	VPU 500F	VPUD 1000 CR
• Fuel type	Conventional liquid fuels	Conventional liquid fuels
• Output pressure	up to 600bar	up to 1000bar
• Power Supply	Pneumatically operated	1x115 or 1x230 V 50/60 Hz, 100 VA
• Air Supply	7bar	7bar
• Dimensions (L x W x H)	1000 × 850 × 1460 mm	560 × 950 × 1525 mm
• Weight	140 kg (excl. valve holder)	75 kg



2- & 4-Stroke Test Rigs

The VPUD test rig series provides a flexible and scalable platform for accurate fuel injector testing and calibration. Designed to support a wide range of injector types and safety valves, the series enables repeatable test procedures and precise adjustment in both workshop and onboard environments.

OBEL-P®

VPUD 1000
Everllence



FUEL TYPE
- Conventional fuel injector testing

KEY BENEFITS
- Modular and adaptable testing platform
- Suitable for both 2-stroke and 4-stroke injectors
- Digital read-out for clear results interpretation

OBEL-P®

VPUD 1100



FUEL TYPE
- Conventional fuel injector testing

TYPICAL APPLICATIONS
- Testing of 4-stroke fuel injectors during overhaul
- Verification of injection performance
- Multi-engine or workshop injector testing

Technical Specifications	VPUD 1000	VPUD 1100	VPUD 1100 SV
• Fuel type	Conventional liquid fuels	Conventional liquid fuels	Conventional liquid fuels
• Output pressure	up to 1000bar	up to 1000bar	up to 1000bar
• Power Supply	1-phase 115/230 V AC	1-phase 115/230 V AC	1-phase 115/230 V AC
• Air Supply	7bar	7bar	7bar
• Dimensions (L x W x H)	560 × 950 × 1525 mm	560 × 950 × 1525 mm	560 × 950 × 1525 mm
• Weight	90 kg	90 kg	90 kg
• For MAN Slide Valves	YES	NO	YES



2- & 4-Stroke Test Rig

The VPA 1100-6 represents a premium fuel injector test rig engineered for demanding workshop environments. With extended configuration options and precise control, it supports comprehensive verification and calibration of fuel injectors for both conventional and complex fuel systems.

OBEL-P®

VPA 1100-6



KEY BENEFITS

- High-precision calibration capability
- Extended testing flexibility for various injector types
- Digital read-out and measurement interface

TYPICAL APPLICATIONS

- Precision verification in multi-engine workshops
- Verification of injector performance for multiple engines
- Suitable for advanced workshop applications

OBEL-P®

STB



SINGLE TRIGGER BOX

- Stand-alone trigger box for activation of the solenoid valve inside electronic fuel/pilot injectors at pre-set test parameters.

OBEL-P®

MPT



MULTI-PURPOSE TRIGGER BOX

- Electronic fuel injector test rig accessory enabling testing and activation of electronic fuel injectors/pilot valves in larger 2- & 4-stroke engines.

Technical Specifications	VPA 1100-6
• Fuel type	Conventional liquid fuels
• Output pressure	up to 1000bar
• Power Supply	1-phase 208-230 V AC, 50-60 Hz
• Air Supply	7bar
• Dimensions (L x W x H)	930 × 540 × 1480 mm
• Weight	200 kg



4-Stroke Test Rig

The VPU 1600 is designed for controlled verification and adjustment of 4-stroke fuel injectors during overhaul operations. Accurate calibration ensures correct injection timing, fuel delivery, and operational stability.

Enables repeatable testing in workshop and onboard environments.

OBEL-P®

VPU 1600



KEY BENEFITS

- Accurate calibration of 4-stroke fuel injectors
- Suitable for workshop and onboard use
- Controlled and repeatable testing procedures

TYPICAL APPLICATIONS

- Testing of 4-stroke fuel injectors during overhaul
- Verification of injection performance
- Calibration prior to reinstallation

OBEL-P®

TEST FLUID



FOR FUEL INJECTOR TESTERS

Test fluid based on mineral oil designed to meet the requirements of high tolerance fuel injectors and ensure optimal calibration of fuel injectors.

- Preserves the fuel injectors
- No cleaning needed after test procedure
- Protects the core parts of pump unit
- Extends the lifetime of the test rig

Technical Specifications	VPU 1600
• Fuel type	Conventional liquid fuels
• Output pressure	up to 1000bar
• Power Supply	Pneumatically operated
• Air Supply	7bar
• Dimensions (L x W x H)	480 × 290 × 410 mm
• Weight	16 kg



Fuel System Maintenance

Accurate injector performance depends not only on calibration, but also on correct surface condition of critical components.

Grinding and restoration of sealing surfaces support reliable injector testing and long-term operational performance.

CHRIS-MARINE®

FPG



KEY BENEFITS

- Accurate and repeatable grinding
- Supports injector performance consistency
- Suitable for workshop overhaul operations

APPROVED CONSUMABLES



Grinding wheels for PSL

OBEL-P®

IGT



TYPICAL APPLICATIONS

- Compact and easy to handle
- Supports correction for accurate injector testing
- Suitable for onboard environments

Technical Specifications	FPG	IGT
• Machine capacity	L: 540 mm Ø: 250 mm	Fuel pipe min. Ø: 250 mm
• Power Supply	1-phase 200–250 V, 48–62 Hz	Battery driven
• Dimensions	W: 1224 mm H: 506 mm	510 × 350 × 190 mm
• Weight	320 kg	2.8 kg



Power Packs

Hydraulic power packs provide the required energy for portable machining and grinding equipment used during engine maintenance operations.

Designed for reliable performance in workshop and onboard environments, Chris-Marine power packs ensure stable hydraulic output for controlled and repeatable machining processes.

Compact construction and durable design make them suitable for demanding marine and industrial service conditions.

OBEL-P®

HPU



HYDRAULIC POWER UNIT SERIES

Portable Hydraulic Power Units for all hydraulic tools.

- Hydraulic pressure up to 3.500 bar at 7 bar air inlet pressure
- Flow rates up to 1.9 l/min
- Adjustable maximum outlet pressure for tool protection
- Back-up hand power optional
- Hoses and couplings available as an option

Model	Typical Engine/Tool	Hydraulic output	Air pressure
• HPU 1500 (1050 bar)	MAN ≤60 MC - Tool series	1050 bar	7 bar
• HPU 1500 (1450 bar)	4-stroke and ≥60MC 2-stroke	1450 bar	7 bar
• HPU 1500-2	MAN ≥70 MC, Sulzer Z-series	1450 bar	7 bar
• HPU 2250	MAN MC-C - Tool series	2050 bar	7 bar
• HPU 2250S	RTA ≤72, RTA Flex ≤72	2050 bar	7 bar
• HPU 2250-2S	RTA ≥84, RTA Flex ≥84	2050 bar	7 bar
• HPU 2800-3	MAN ME engines, Workshop	2650 bar	7 bar
• HPU 3500-3	MAN ME engines, Workshop	2650 bar	7 bar
• HPU 3500W	Workshop	Up to 4000 bar	7 bar



Performance Monitoring

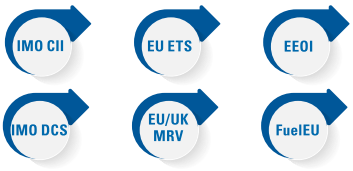
Trust-Ocean delivers real-time vessel performance monitoring & analytics, compliance tracking, and automated reporting — helping maritime professionals optimise operations, cut fuel costs, and stay ahead of evolving regulations. Trust-Ocean is the development of SPEAT.

CHRIS-MARINE®

TRUST-OCEAN

- Operational Cost Savings
  - Reduce fuel consumption and optimize vessel performance
- Data-Driven Fleet Management
  - Enable consistent decision-making across vessels
- Real-Time Performance Benchmarking
  - Monitor and compare performance continuously
- Regulatory Compliance Tracking
  - Support IMO and EU reporting requirements
- Reduced Manual Work for Crew
  - Automate reporting and data handling

Compliance standards covered





DELIVERY OPTIONS

CLOUD / ONLINE	OFFLINE / STANDALONE
Web-based. Fleet-wide access.	No internet required.



Shaftpower Meter

Energy efficiency and regulatory compliance require reliable monitoring of propulsion systems. LEMAG Shaftpower reliably delivers continuous data, insight and control.

Our Shaftpower pairs seamlessly with Trust-Ocean.

LEMAG®

SHAFTPOWER

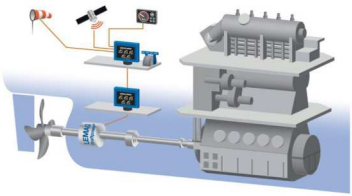


Permanent shaft power measuring system. Monitors vessel efficiency relative to the design propeller curve — enabling cost-efficient maintenance of hull and propeller.

- Helps to improve efficiency
- Protects from overload and breakdown
- Optimises fuel consumption
- Controls effect of energy saving devices
- Robust and maintenance free design

LEMAG®

SHAPOLI



The ShaPoLi system

Chris-Marine's ShaPoLi system measures the actual power and limits it at the maximum allowed to meet the ship's required EEXI.
The system has been designed according to the guidance of major classification societies.

- LEMAG® Shaftpower torque meter
- LEMAG® SPEAT Monitoring system
- Ensures EEXI regulatory compliance

Technical Specifications	Shaftpower
• Operating Range	Ø:250–1025 mm
• Power Supply	1-phase 100-240 V, 50-60 Hz, 280 VA
• Dimensions	330 mm / 555 mm (depending on version)
• Work Temperature	5–70 °C

Accessories & Consumables

Precision machining and testing equipment requires correctly specified accessories and consumables to maintain accuracy and reliability.

Chris-Marine original accessories and consumables are developed to match our equipment specifications, ensuring consistent performance, dimensional accuracy, and long-term operational stability.

Using correctly matched components supports controlled machining results and protects equipment performance over time.

WHY ORIGINAL EQUIPMENT MATTERS

- Engineered to match machine tolerances and specifications
- Ensures consistent surface finish and machining accuracy
- Supports equipment longevity and operational stability
- Reduces risk of dimensional deviation and premature wear
- Maintains documented performance standards

Using non-specified consumables may:

- Affect machining precision
- Influence surface finish quality
- Reduce equipment lifetime
- Lead to inconsistent performance results

CHRIS-MARINE®
HONING STONES

CHRIS-MARINE®
GRINDING WHEELS

CHRIS-MARINE®
TURNING BITS

Original accessories ensure consistent results and long-term equipment performance.



Honing Stones, Grinding Wheels & Turning Bits

Machining accuracy depends on correctly specified tooling. Honing stones, grinding wheels, and turning bits are critical to achieving the required surface finish, dimensional control, and repeatable results.

Chris-Marine original tooling is engineered to match machine specifications and operating parameters, ensuring controlled material removal and consistent performance.

HONING STONES

KEY BENEFITS

- Specified grain and bond composition
- Designed for consistent cross-hatch pattern
- Matched to Chris-Marine honing machines

GRINDING WHEELS

KEY BENEFITS

- Optimized for controlled material removal
- Ensures correct surface finish
- Developed for Chris-Marine grinding equipment

TURNING BITS

KEY BENEFITS

- Defined cutting geometry
- Supports accurate surface flatness
- Designed for compatibility with Chris-Marine lathes



Service & Aftersales

Reliable equipment performance depends on proper commissioning, maintenance, and long-term support. Chris-Marine provides structured service and aftersales solutions to ensure continued operational reliability across our product range.

Our global service network supports customers with technical expertise, spare parts supply, training, and equipment refurbishment, both onboard and in workshop environments.

CHRIS-MARINE®
TECHNICAL SUPPORT

- Troubleshooting and diagnostics
- Spare parts identification
- Remote technical assistance
- Application guidance

CHRIS-MARINE®
SERVICE

- Equipment overhaul and inspection
- Performance verification
- Machine upgrades
- Calibration services

CHRIS-MARINE®
SPARE PARTS

- Original spare parts supply
- Global distribution network
- Fast response and availability
- Technical manuals and service documentation



CHRIS-MARINE®
CERTIFIED TRAINING



- Chris-Marine Certified Operator Training
- Workshop-based or onsite programs
- Machine configuration and operation support

Long-term equipment performance is supported by structured service, original spare parts, and technical expertise.

Complete Engine Maintenance Solutions

From condition monitoring and surface preparation to precision machining, fuel system testing, and long-term service support, Chris-Marine delivers structured solutions across the entire engine maintenance lifecycle.

Our equipment, tooling, and service expertise are developed to ensure controlled processes, repeatable results, and reliable performance in demanding marine and industrial environments.

With global presence and decades of experience, we support our customers with precision engineering and long-term commitment.





www.chris-marine.com



Chris-Marine Headquarters and Subsidiaries

CHRIS-MARINE SWEDEN HEADQUARTERS
Tel: +46 - 40 671 2600
info@chris-marine.com

CHRIS-MARINE DENMARK
Tel: +45 - 4498 3833
iop@chris-marine.com

CHRIS-MARINE GERMANY
Tel: +49 4101 5880 0
lemag@chris-marine.com

CHRIS-MARINE SINGAPORE
Tel: +65 - 6268 8611
info.sg@chris-marine.com

CHRIS-MARINE CHINA
Tel: +86 - 21 6575 9331
info.cn@chris-marine.com

CHRIS-MARINE INDIA
Tel: +91 - 712 224 2719
info.in@chris-marine.com

CHRIS-MARINE ECUADOR
Tel: +593 979 000 379
info.ec@chris-marine.com

CHRIS-MARINE USA
Tel: +1 786 212 9592
info.us@chris-marine.com

Contact one of our offices to get in touch with your local agent.

CHRIS-MARINE®

Innovative engineering since 1962

H031-2604/E