The MarPrime system is a simple, user-friendly device for measuring cylinder pressure. It is designed to measure and analyze the combustion process of 2- and 4-stroke marine diesel engines and stationary power plants. This easy-to-use system offers the potential to gauge all the engines in your machine room and draw up well-founded diagnostic reports quickly with a high degree of accuracy.

Together with MarPrime Ultra and MarPrime Instruct, a single unit is now able to offer you full assessment of your engines in one hand: The MarPrime System.

Precision made in Germany.
The MarPrime system uses a high performance electric pressure transducer of well proven design which allows the cylinder pressure to be measured very accurately. With the MarPrime handheld device you have a “one-hand/one-person” tool which quickly and easily collects and records the full range of engine performance data.

Fast data transfer via network or USB connection and an automatic detection of the device guarantee an easy operation when reading out and displaying data. Using the supplied software the measured pressure sequences can be displayed accurately as a function of the crank angle.

MarPrime System: Precise one-hand diagnosis with one click.

MarPrime Instruct: Full-featured, optimizing software solution

Together with our indication device MarPrime Ultra, the software MarPrime Instruct makes any other additional software obsolete.

MarPrime Instruct determines the performance of your engine and enables you to compare it with other parameters. A complete tool to assist you while operating engines, fleets and power plants.

The measurement information provided by the MarPrime System can be used for:

- Optimizing the engine operation
- Monitoring the load balance
- Checking the valve timings
- Reducing fuel consumption and emissions
- Determining condition of the cylinder head assembly
- Reducing costs of replacement parts and maintenance

MarPrime Ultra: Ultrasonic sound sensor for perfect timing

An additional feature in the MarPrime Ultra version is the ultrasonic sensor. It enables the engine timing – such as the start and finish of the injection process and the engine valve timing – to be determined very precisely. However, its main function is to determine the leak tightness of the valve unit, which it does by analysing and displaying the sound of the fluid flow at points where leakages occur. The ultrasonic measurement supports you in detecting damage of the valves at an early stage and enables overhauls based on the condition of the engine.

The included, basic software of the MarPrime System requires no additional installation of pick-up sensors or crankshaft position transmitters and will carry out the TDC correction of the pressure sequences automatically. Based on the measured pressure curve and the TDC correction further parameters like mean indicated/effective pressure, compression pressure and engine power will be calculated.

The most important process parameters (such as maximum pressure, average indicated pressure, compression pressure and engine output) are displayed in the form of graphs, bar charts and statistics. Report functions are also provided. All thresholds can be customized according to which engine you deploy, and one click will give you an immediate overview of the entire engine process.

MarPrime Basic Software: Nothing to add

The computer requirements are:

- Pentium IV processor or higher
- 512 MB RAM or more
- At least 500 MB free disk space
- Display with 1024 x 768 resolution or higher
- CD-ROM drive
- Mouse
- Network communication or USB port

Supported operating systems:

- Microsoft® Windows all series

Scope of supply:

- MarPrime handheld device
- Pressure sensor
- Carrying case
- Manual
- Software CD
- Indicator knob
- Power charger, adaptor and cable
- Network and USB cable
- Ultrasonic sound sensor cable (only with MarPrime Ultra)
After the cylinder pressure measurement with MarPrime upload the data file, record the additional parameters by hand as usual and enter them into the input mask. A review is carried out immediately and will be displayed in plain and simple data. A practical universal evaluation concept, implemented in software, coming directly from the operating ship.

A closer look!

**Comparison function**
- The comparison function is capable of comparing several measurements with one another
- Compare measurements of time, of different vessels or power plants.

**Easy-to-use report system**
- All data can be exchanged between the programs as file or PDF
- Use your database just like any other business documents
- Easy-to-use reporting application allows better communication between engine operator and manager of fleet or manager of energy efficiency

**SEEMP – Ship Energy Efficiency Management Plan**
- MarPrime Instruct supports improvement of the ship’s efficiency, reporting and monitoring
- It contributes to the SEEMP initiative for monitoring, implementing improvements and reporting of efficiency
- The expert system gives improvement advises for engines and the propulsion system without additional expenses

**Optional MSC cloud services**
- Optional cloud services can be used for maritime and power plant applications and data can be accessed web-based
- The combination of this data with other products results in a logical extension to products
- Examples for product extensions: Power Meter MarTorque or our Noon-To-Noon Report with certified CO2 monitoring
- Your benefit: Online access to your data from everywhere
Contact us and learn more about our product range and services:

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Carrying case