HYDAC INTERNATIONAL

MATCH
Machine Service Tool

Special features

- Flashing controllers
- Available for different user groups in different basic versions
- Language management:
  - Firstly, the MST independently supports several languages,
  - Secondly, the service project information can be made available in as many languages as desired
- Comprehensive user management with project-specific rights for up to eight access levels. User rights can be set for each parameter or error
- The data is transmitted to the controller via the CAN bus or GSM.
- Simultaneous access to all controllers and displays available in the vehicle project
- Machine-dependent homepage
- Extensive machine information can be incorporated as PDF
- Reading and writing of the NvMem, parameter and option lists
- Reading and writing of factory settings (Flash memory)
- Diagnosis of input and output pins and other system variables
- Overview of clear error information
- Support with integration tests directly performed on the machine, e. g. by setting individual error numbers and other error properties

Description

The **M**achine **S**ervice **T**ool (MST) is a PC program used to maintain the software of vehicle and machine controls comprising one or more embedded controllers and / or displays.

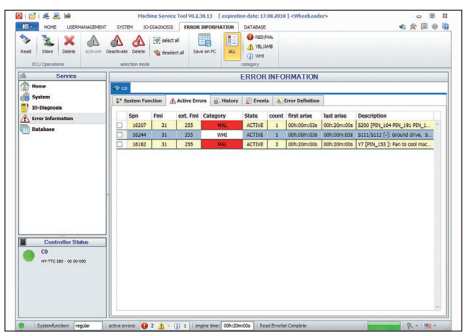
The following basic versions of the MST are available:

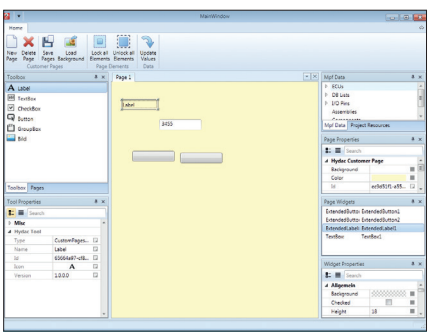
- **Service**: optimised for the field service organisation, as well as commissioning during production
- **Developer**: the complete package for system development, wide-ranging support with respect to the optimisation of machine functions and of machine integration tests performed on the machine
- **Designer:** for the design of program outputs and set-up of various language packages
- **Ultimate:** for power users, the complete package with all MST features

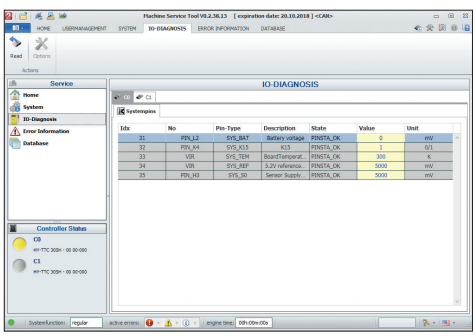
You can use the MST as a tool for developing and testing application software, for commissioning during production and for service tasks relating to machine maintenance.

Use the MST for the following work steps:

- Connect to the controllers via CAN or GSM
- Update the software on the controller (flash)
- Read and write default settings in the controller flash memory
- Read and write parameters from the controller's non-volatile memory (NvMem to EEPROM, for example)
- Display the machine information and detailed information on the controller hardware and software
- Calibrate and configure machine functions
- Access the error information of the individual controllers and displays (read, deactivate and delete errors)
- Diagnose controller input and output pins
- Diagnose application variables and CAN signals (based on the CAN definition file)
- Download the application software on the machine
- Perform integration tests on the machine (e. g. by activating individual error numbers, setting and approval conditions and restricted machine modes)







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Technical data

Software system requirements	
Supported operating systems	Windows® 7, 8 or 10 (32-/64-bit)
Other software	.NET 4.6 Framework
Hardware system requirements	
Processor	Minimum dual-core processor with 1.6 GHz
RAM memory requirements	Minimum 2 GB (4 GB or more recommended)
Hard drive memory requirements	Minimum 200 MB available memory
Connections	One free USB port
Screen resolution	Minimum 1,024 x 768
CAN USB interface	
PCAN-USB (additional dongles on request, see Accessories)	
GSM interface	
GSM modem HY-eVision² 7.0 -CD-P-R-000701-E-000 (display with GPS/GSM support)	

MST basic version model code

MATCH MST – XX – G10 – 000

Program variant
SV = “Service” version
DP = “Developer” version
DS = “Designer” version
UT = “Ultimate” version“

Software version
G10 = Current version

Modification number
000 = Standard

MST add-ons

An add-on is an extension of the MST’s range of functions.

MST Service add-on model code

MATCH MST SV – G10 – AO – YYY – 000

Software version
G10 = Current version

Add-on

Extension variant
MPDL = Machine Project Download
USRA = User Administration

Modification number
000 = Standard

The table below shows the add-ons available for the different program versions. The corresponding part numbers have been entered for available options. Unavailable options are marked with "–" and add-ons already included are marked with "✓".

Performance characteristics	Service version	Developer version	Designer version	Ultimate version
Support of multiple controllers and displays	✓	✓	✓	✓
Management of project data	✓	✓	✓	✓
User administration	9545 (USRA)	–	✓	✓
Project vehicle code	✓	✓	–	✓
Hardware and software information	✓	✓	–	✓
Software download	✓	✓	–	✓
Complete machine project download	9516 (MPDL)	✓	–	✓
Access to parameter lists	✓	✓	✓	✓
Access to default settings	✓	✓	–	✓
Error management	✓	✓	✓	✓
I/O diagnosis	✓	✓	–	✓
Error and SC, RC, RM tests on the machine	–	✓	–	✓
Remote access via GSM	✓	✓	✓	✓
Extra debug output	–	✓	–	✓

Scope of delivery

Installation program

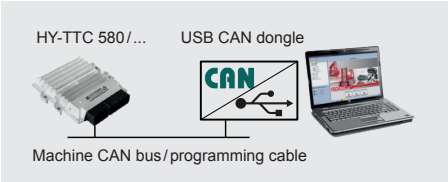
Accessories

(Not included in the scope of delivery; please order separately)

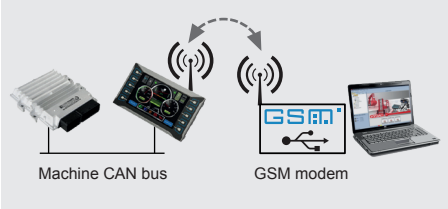
- Programming cable (CAN)
  Part number: 6149786
  for HY-TTC 50/60/90/94
  or
- Programming cable (CAN) part number: 61499787
  for HY-TTC 77
- 7" display with GSM support
  HY-eVision2 7.0 -CD-R-00-07-01-E-000
  Part number: 923775
- PCAN dongle ZBS PCAN USB connector
  Part number: 6163719

Connection to the controller

Establish the connection to the controller via a PCAN dongle. You can connect the dongle directly to the controller with a programming cable (available separately).

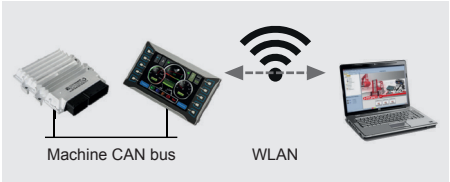


Alternatively, you can connect to a display with GSM support using a GSM modem. You can also access the controllers in this way using the display's CAN bus.



For the GSM connection via the display, you require the Vision² Basic Library and the Vision² MATCH Library (PDT add-on DCD3).

A WLAN connection from the Service laptop to the display is still possible with WLAN support. You can also access the controllers in this way using the display's CAN bus.



Note

The information in this brochure relates to the operating conditions and applications described.

For applications or operating conditions not described, please contact the relevant technical department.

Subject to technical modifications and corrections.

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