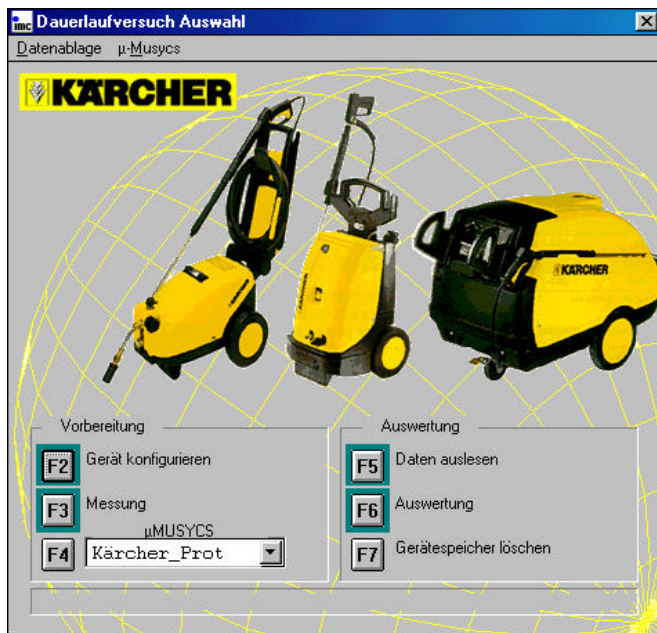


When KÄRCHER, the world's largest manufacturer of pressure cleaners, approached imc for the development of a mobile test system for their products, their requirements were very special. On one hand, the system is to be used in mobile applications at the customer's site. On the other hand, testing of standard types and prototypes within KÄRCHER itself was required. These tests serve to improve the quality of KÄRCHER product components and parts.

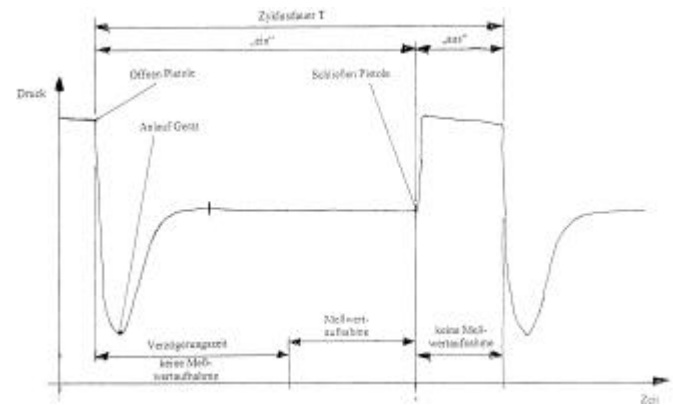
With the help of specially tailored software, the system can be set up for different jobs. Predefined test configurations allow maximum information extraction in accordance with the test's requirements. The user interface doesn't require extensive training to setup, start or stop the  $\mu$ -MUSYCS unit.



An easy to use configuration software allows the setup of the measurement system

The basis for the KÄRCHER project is the imc measurement system  $\mu$ -MUSYCS. This mobile system with its self-start capability and its various functions provides KÄRCHER development engineers with suitable hardware for their tasks. A special housing makes the system robust, to face harsh environmental conditions. Since the system is mounted directly on the cleaner unit, it must withstand field tests with ambient temperatures from 0°C up to 45°C and storage temperatures of -20°C to 85°C. Under such conditions, operational safety and reliability of the entire hardware play an important role.

The required data collection capabilities were: 3 x voltage (400V); 3 x current (20A); 1 RPM; 8 temperatures (thermocouples); 1 flow (water flow sensor). Online data calculation and evaluation as well as alarm outputs were also necessary.



Only the relevant data of a wash cycle will be stored.

The measurement data from field tests as well as from long-term trials is stored inside the system. An Ethernet interface enables a PC connection and allows downloading of data from the system. For stand-alone measurements, the PC is only necessary for configuring the system and for final offline data evaluation. For this purpose a specially designed program analyses the measurement. Together with descriptive data about the test, coming from a data server, final print-outs document the complete trial.

KÄRCHER										Dauerlaufversuch - EVH				Datum: 03.03.08	
Gruppe	Typ	Hersteller	Werk-Nr.	Teil-Nr.	Speisenspann.	Propens.	Drehzahl	Schaltfrequenz	Optik	Druck	Fluss	Temper.	Fluss	Fluss	
TTTTT			123	22222	12345	220	90	8.8.8	100%	100.1.000	1	1			
Anmerkungen: 100-Akt. wurde beibehalten nach Versuchsende.															
Nr.	Ordnung	Frage	Antwort	Einheit	Einheit	Einheit	Einheit	Einheit	Einheit	Einheit	Einheit	Einheit	Einheit	Einheit	
1	20.02.00	0.0	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
2	20.02.00	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
3	20.02.00	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
4	20.02.00	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
5	20.02.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
6	20.02.00	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
7	20.02.00	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
8	20.02.00	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
9	20.02.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
10	20.02.00	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
11	20.02.00	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
12	20.02.00	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
13	20.02.00	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
14	20.02.00	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
15	20.02.00	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
16	20.02.00	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

The integrated report generator allows to report every step engineers have taken during the trial

