



HMI^{mc} MODULAR CONCEPT



reddot design award
winner 2012



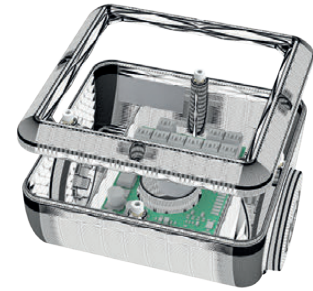
MOBA[®]
MOBILE AUTOMATION

The **MOBA HMI^{mc}** (mc = modular concept) provides you the unique opportunity to **easily and quickly create your individual operating unit**. Simply combine your required components out of a range of keypad, display, and joystick modules and profit from a major advantage of this modularity: **a short development time**.

The CANbus based technology enables you to flexibly replace or upgrade any module of **your personal operating unit**. This means an easy extension into an advanced operating unit with even more features when required.

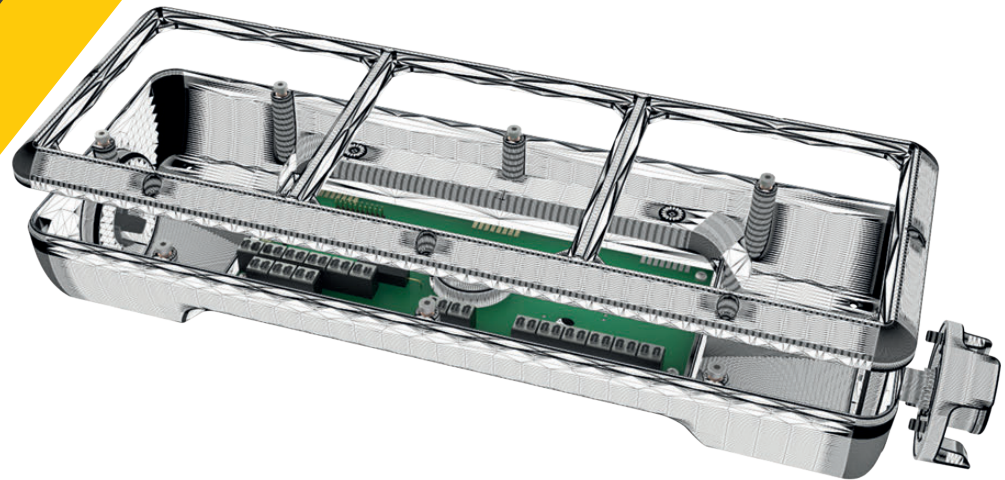
Cost-efficient upgrades additionally keep your operating unit up to date - at all times.

Never miss any innovations anymore while profiting from an individual, durable and **robust HMI**.



➤ HOW IT ALL BEGINS

THE BASE HOUSING



ADVANTAGES

- | | | | |
|----|-----------------------------------|-----|--------------------------------------|
| 1. | Individual, customized HMI | 7. | Easily modifiable |
| 2. | Proven modules | 8. | CANopen |
| 3. | Wide range of module combinations | 9. | Lifetime extending materials |
| 4. | Short development times | 10. | Durability by modularity |
| 5. | Flexible extension possibilities | 11. | Small production quantities possible |
| 6. | Anytime upgradable | 12. | Service-friendly |

THE NEW MOBA MODULAR CONCEPT

BASE MODULES



KEYPAD MODULES

Freely select the amount of keys (6 - 16) and their functions.
Optionally integrate an emergency stop into the keypad for optimum protection.



DISPLAY MODULES

Choose between a monochromatic or high-end color display to complete your individual operating unit.



JOYSTICK MODULES

Profit from wear-free joysticks, either lockable or non-lockable, which are magnetically attached to the operating unit.

ADDITIONAL OPTIONS



Encoder for a quick selection of functions



Emergency stop for constant safety



Display protection from environmental influences

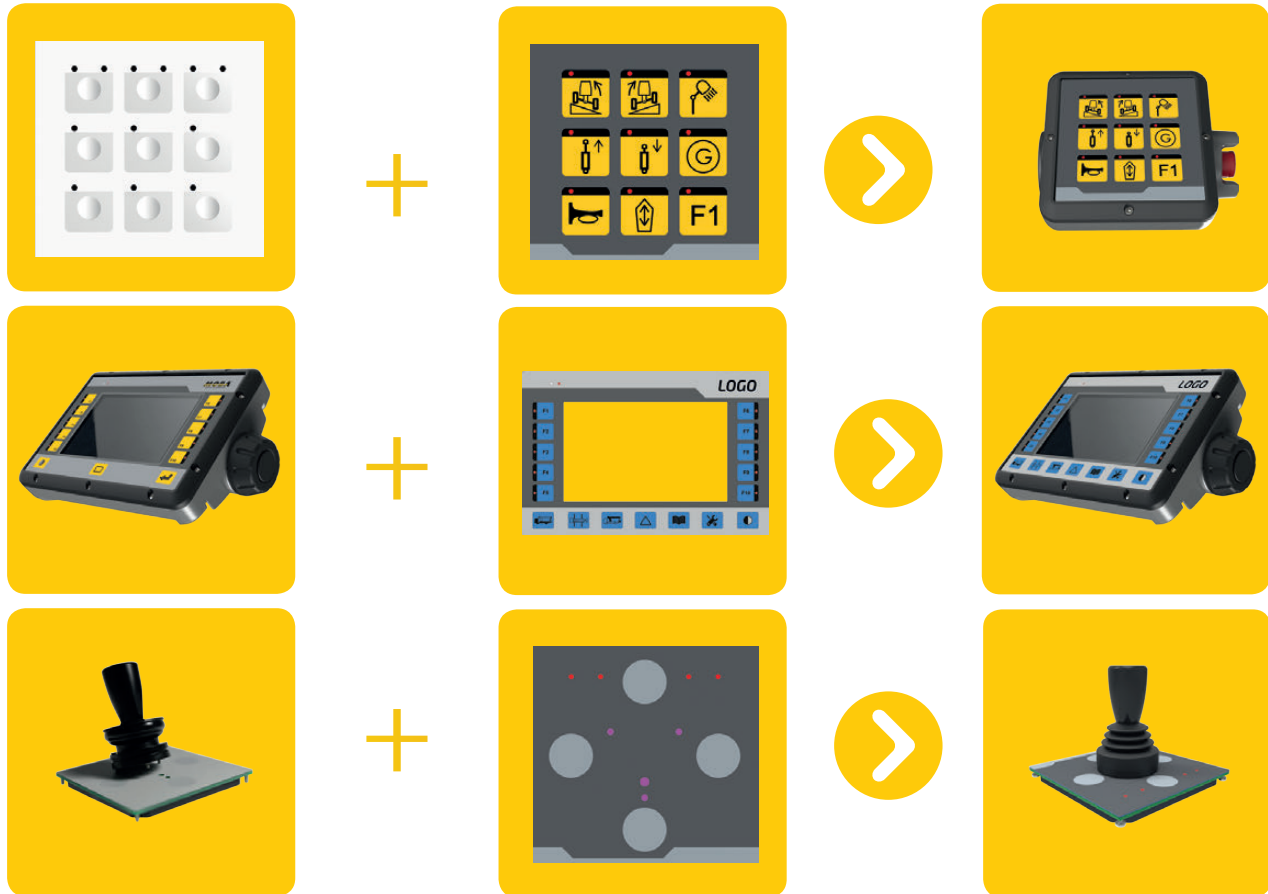
TECHNICAL DATA

address	Base unit input		Base unit module node ID's			Extension unit module node ID's		
	ADR1	ADR2	left	center	right	left	center	right
0	open	open	1	2	3	6	7	8
1	low	open	11	12	13	16	17	18
2	open	low	21	22	23	26	27	28
3	low	low	31	32	33	36	37	38
4	open	high	41	42	43	46	47	48
5	high	high	51	52	53	56	57	58
6	low	open	61	62	63	66	67	68
7	high	low	71	72	73	76	77	78
8	high	high	81	82	83	86	87	88
			single unit			single unit		

HMI^{mc}

ONE IDEA ENDLESS POSSIBILITIES

FLEXIBILITY DUE TO MODULARITY



CUSTOM DESIGN

The HMI^{mc} provides you with the possibility to customize the smooth protective surfaces of all components. Once you have chosen the modules for your individual HMI you can freely design them according to your needs. A specially

developed ergonomic film optimally protects the keys of your keypad and display module and the basis of your joystick module. You are free to design the color of all films as well as the shape of your chosen keys.



You can easily apply your own design to the HMI to perfectly adapt it to your individual brand, machine and requirement.

HMI^{mc}

THE NEW MOBA MODULAR CONCEPT

EXAMPLES OF CUSTOMIZED TRIPLE HMIs

TRIPLE

UNITS

Triple unit with one display
two joysticks modules,
emergency stop and railing



01

Triple unit with two joysticks,
one keypad module with 6
keys, emergency
stop, and railing



02

Triple unit with two joysticks,
one keypad module with 16
keys, emergency stop and
railing



03

Triple unit with two joysticks
and one keypad module with
16 keys and emergency stop



04



INNOVATION EXTENDS DURABILITY

The unique **modular concept** facilitates an easy extension of the HMI and a quick and cost-efficient replacement of individual parts. Once you need more or different features you can simply update or even upgrade your **HMI**. This saves you considerable time compared to a replacement of the whole unit. Thanks to a flexible adaption or extension of the **HMI** it is a durable solution for long-term usage. New, even more innovative parts can easily be integrated at all times. If

you need adaptations or changes of your personal **HMI** in the future it is no problem to implement them in a short period.

Create your individual **HMI** and profit from a flexible, durable solution for your personal needs.

Highly robust materials as well as innovative components, such as a wear-free joystick or a special potting technique additionally extend its lifetime immensely.

MOBA SINGLE HMI BASE

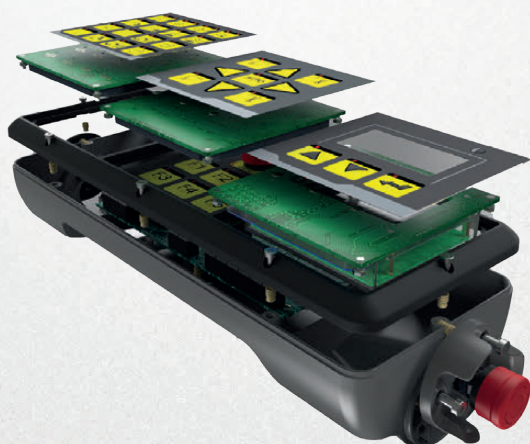
01. ONE MODULE PLAIN WHITE



02. MOBA PRODUCED FOIL



03. CUSTOMIZED FOIL





MOBA

GDC-320

- » Compact graphic display / operating unit
- » 320 x 240 pixel, 16-bit color, 3.5" TFT
- » Connector: 8pin/M12



Voltage range	8 ... 32V DC
Current consumption	8V < 230mA 24V < 100mA 32V < 90mA
Size (L x W x H)	141mm x 141mm x 91mm
Weight	Approx. 800g
Protocol	CANopen



MOBA

GDC-800

- » High-end graphic display /operating unit
- » Robust die-cast housing
- » 800 x 400 pixel, 7" TFT
- » Connector: 8pin/M12



Voltage range	8 ... 35V DC
Current consumption	200mA @ 24V DC
Size (L x W x H)	261mm x 182mm x 64mm
Weight	Approx. 1,25kg
Protocol	CANopen

THE NEW MCP

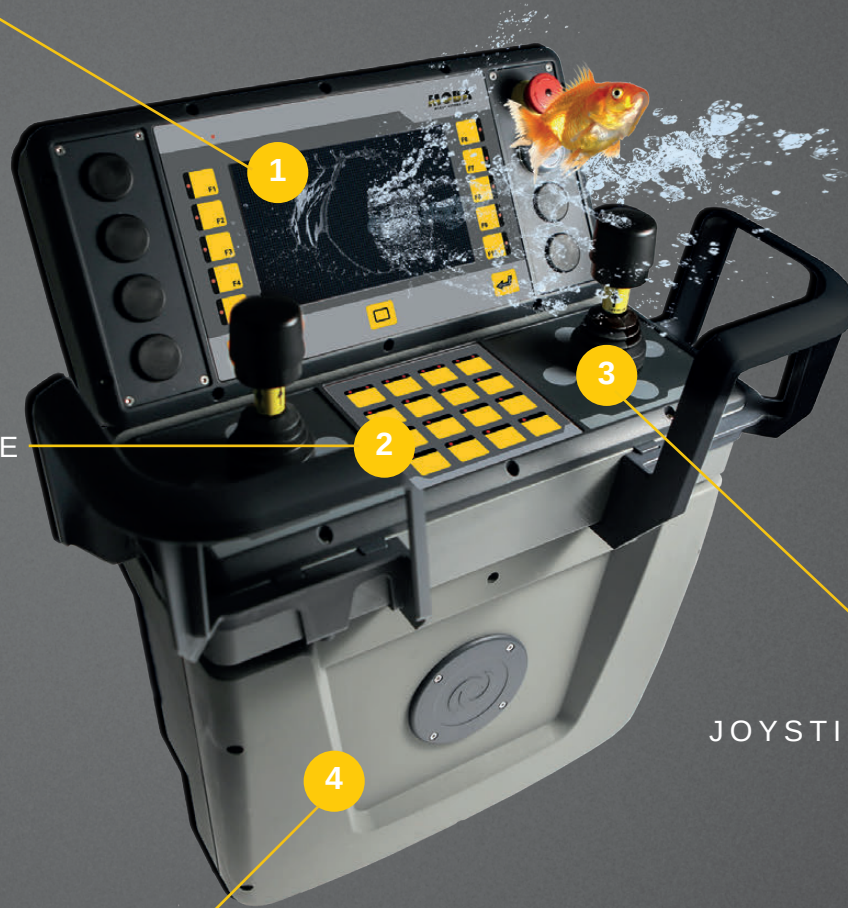
 NEXT STEP
AHEAD

HIGH-END 7" COLOUR DISPLAY

KEYPAD MODULE

JOYSTICK MODULE

CONTROLLER UNIT



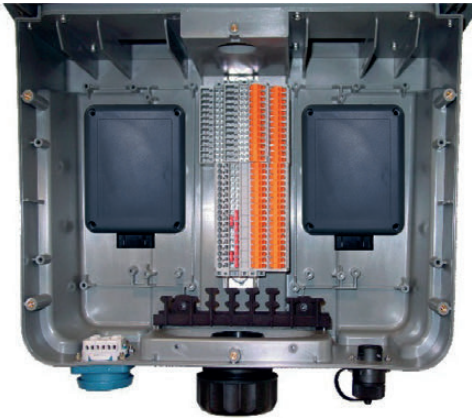


VARIATIONS:

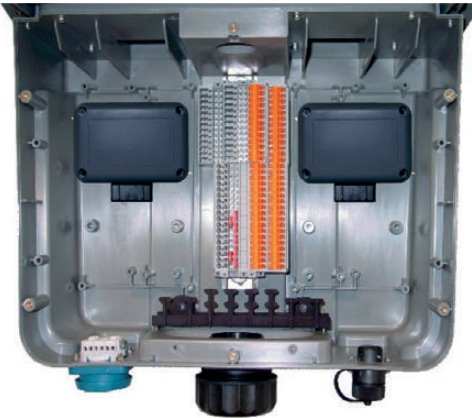


HUMAN MACHINE INTERFACES

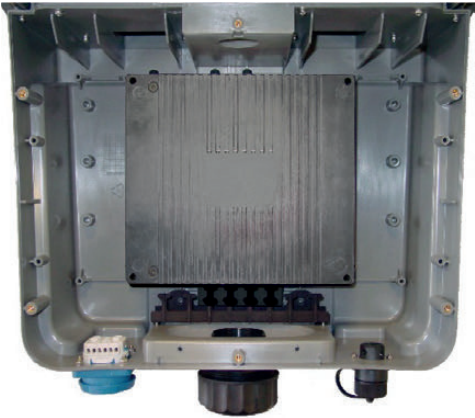
MCP - TECHNICAL DETAILS
ONE HOUSING FITS FOR ALL CONTROLLERS
GET RID OF YOUR ADDITIONAL SWITCH CABINET



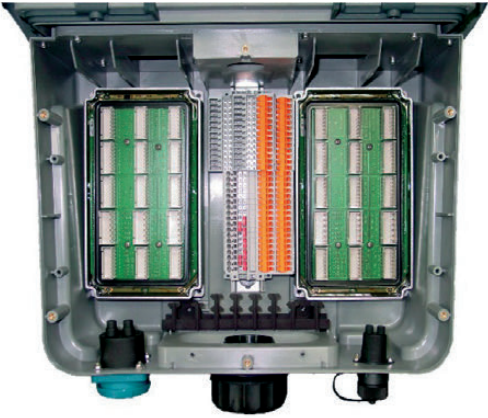
TWO MPC-113 CONTROLLER



TWO MSC-113 CONTROLLER



ONE MPC-330 CONTROLLER



TWO CONTROLLER MODULES

ONE GROUP - ONE RESPONSIBILITY



◆ HEADQUARTERS ● SUBSIDIARIES ● DEALER

MOBA GROUP

The MOBA GROUP is a leading global player in the world of mobile automation. Close collaborations between the headquarter in Limburg an der Lahn and subsidiaries all over Europe, Asia, North and South America create new perspectives for recent and future developments.

Superior technical know-how and more than 40 years of experience combined with an international dealer network guarantee a premium support – worldwide. INSPIRING MOBILE AUTOMATION – this is what the MOBA GROUP stands for.

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