

## Remote Controls

We could not meet our customer's requests, for remote controls, by purchasing them outside so we decided to design our own.

MHW remote controls are available in two- three and four-button versions and are designed especially for each customer according to their needs.

The marking on the push buttons can be wording or symbols so that the understanding is clear to the operator.

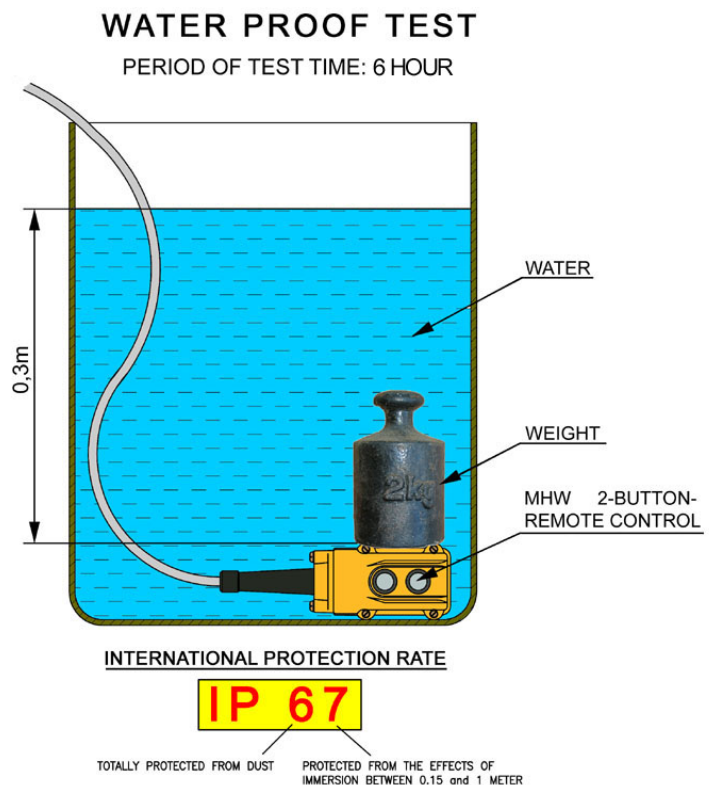
The housing is good looking and stable. It can survive the over rolling of a pallet jack.



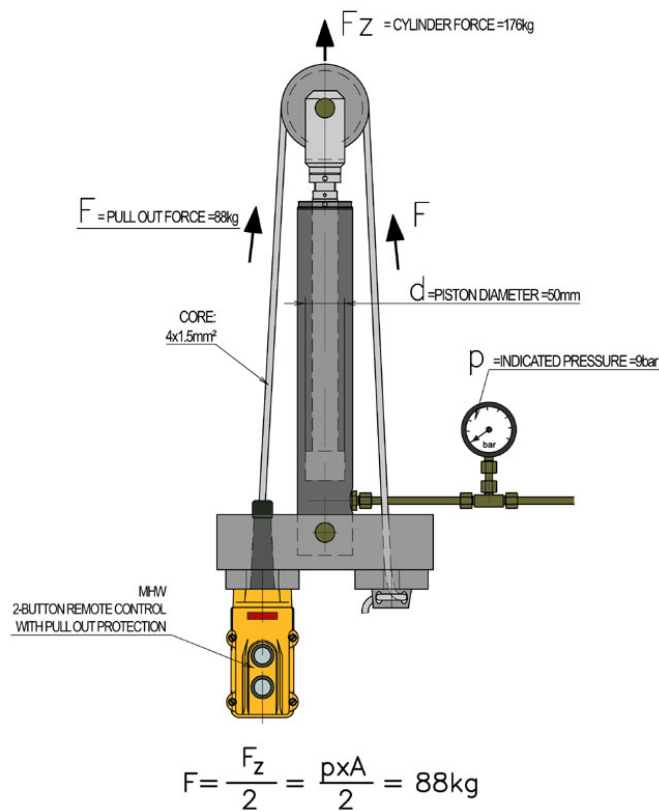
Our remote control has been granted and certified an IP 67.

The control has been checked for six hours in 30 cm deep water. After these tests, the remote control worked perfectly.

In a duration test with five Amps, the control has made more than one million cycles without a malfunction.



## CABLE PULL OUT TEST



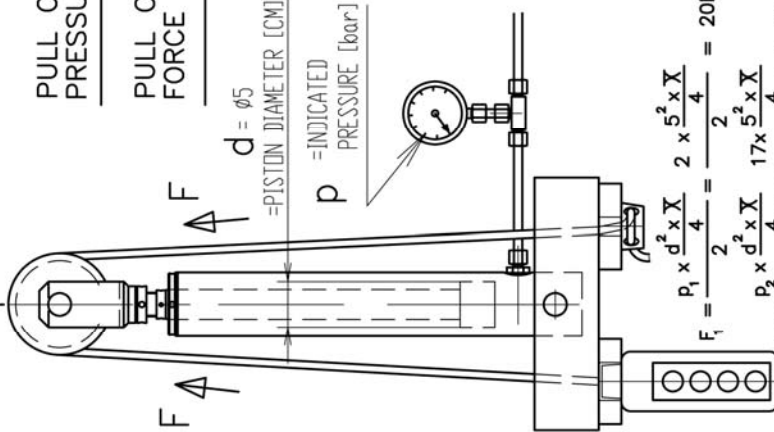
A specially designed "Pull-Out-Protection" eliminates contacts from being torn out, causing electrical shorts.



The remote plug is recessed into the power pack box or at a convenient spot on the vehicle body.

# CABLE PULL OUT TEST

Fz = CYLINDER FORCE [kg]

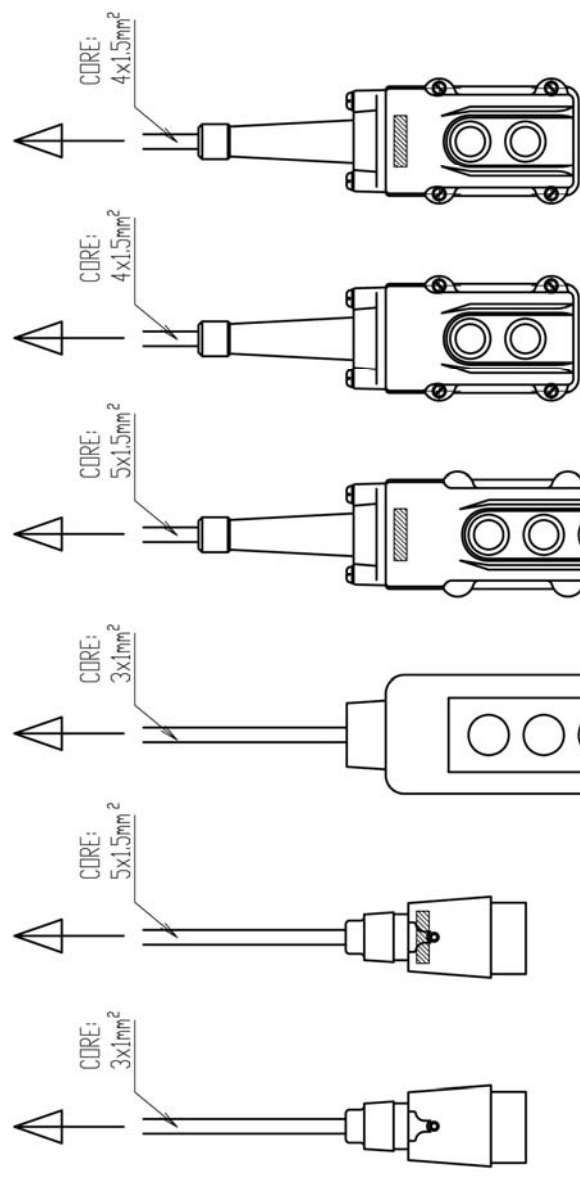


PULL OUT PRESSURE

PULL OUT FORCE

$P_1 = 2\text{bar}$     $P_2 = 17\text{bar}$     $P_3 = 4\text{bar}$     $P_4 = 12\text{bar}$     $P_5 = 4\text{bar}$     $P_6 = 9\text{bar}$

$F_1 = 20\text{kg}$     $F_2 = 167\text{kg}$     $F_3 = 39\text{kg}$     $F_4 = 118\text{kg}$     $F_5 = 39\text{kg}$     $F_6 = 88\text{kg}$



$$F_1 = \frac{P_1 \times \frac{d^2 \times X}{4}}{2} = \frac{2 \times \frac{5^2 \times X}{4}}{2} = 20\text{kg}$$

$$F_2 = \frac{P_2 \times \frac{d^2 \times X}{4}}{2} = \frac{17 \times \frac{5^2 \times X}{4}}{2} = 167\text{kg}$$

$$F_3 = \frac{P_3 \times \frac{d^2 \times X}{4}}{2} = \frac{4 \times \frac{5^2 \times X}{4}}{2} = 39\text{kg}$$

$$F_4 = \frac{P_4 \times \frac{d^2 \times X}{4}}{2} = \frac{12 \times \frac{5^2 \times X}{4}}{2} = 118\text{kg}$$

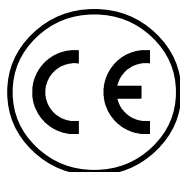
$$F_5 = \frac{P_5 \times \frac{d^2 \times X}{4}}{2} = \frac{4 \times \frac{5^2 \times X}{4}}{2} = 39\text{kg}$$

$$F_6 = \frac{P_6 \times \frac{d^2 \times X}{4}}{2} = \frac{9 \times \frac{5^2 \times X}{4}}{2} = 88\text{kg}$$

PLUG STANDARD  
MHW PLUG WITH PULL OUT PROTECTION  
MAFELLEC REMOTE-CONTROL  
MHW 4-BUTTON REMOTE-CONTROL WITH PULL OUT PROTECTION  
MHW 2-BUTTON REMOTE-CONTROL  
MHW 2-BUTTON REMOTE-CONTROL WITH PULL OUT PROTECTION

16.01.2004  
EZAAL - U-B-DIV  
UNTERNEHMEN  
ZUSAMMENGESETZT





# Compliance Certificate

as per EG guideline 98/37/EG

MHW declares herewith that, the following described remote control;  
Construction:

Design:	<b>2-Button-Control</b>
Type:	<b>MHW-2KO-2002</b>
IP-Rating:	67
Max elec.....:	5 Amps
Fabrication Date :	12/2003

does comply in its existing form and construction with the guidelines specified at;  
- 98/ 37/ EG ( Guidelines for machinery )  
- EN 292 - 1,2

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**Producer:** Modulhydraulik, Weber & Weber GnbR  
Hauptplatz 23, 2474 Gattendorf, Austria / Europe

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**Test and inspection results:**

- tested as per attached drawings and wiring diagram
- risk analyses as per En 1050
- test of IP- rating as per DIN .40050-9.
- test of IP- rating as per AS 1939 - AUSTRALIAN STANDARDS

**Test location :** Modulhydraulik, Weber & Weber GnbR  
Hauptplatz 23, 2474 Gattendorf, Austria / Europe

**Test Engineer:** Ing. Günter Weber

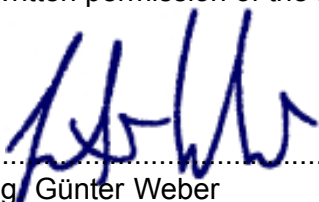
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The manufacturer declares that the remote control can only be used in conjunction with equipment and machinery, which also complies with the guideline set at Machinery guidelines -98/37/EG.

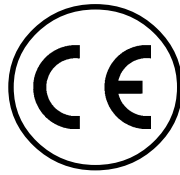
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The Compliance Certificate shall void and will not apply, should the remote control be altered, tempered with, or settings be changed without the written permission of the manufacturer.

Gattendorf, February 5, 2004



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Ing. Günter Weber



# Compliance Certificate

as per EG guideline 98/37/EG

MHW declares herewith that, the following described remote control;  
Construction:

Design:	<b>4-Button-Control</b>
Type:	<b>MHW-4KO-2002</b>
IP-Rating:	67
Max elec.....:	5 Amps
Fabrication Date :	12/2003

does comply in its existing form and construction with the guidelines specified at;  
- 98/ 37/ EG ( Guidelines for machinery )  
- EN 292 - 1,2

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**Producer:** Modulhydraulik, Weber & Weber GnbR  
Hauptplatz 23, 2474 Gattendorf, Austria / Europe

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**Test and inspection results:**

- tested as per attached drawings and wiring diagram
- risk analyses as per En 1050
- test of IP- rating as per DIN .40050-9; EN 60529
- test of IP- rating as per AS 1939 - AUSTRALIAN STANDARDS

**Test location :** Modulhydraulik, Weber & Weber GnbR  
Hauptplatz 23, 2474 Gattendorf, Austria / Europe

**Test Engineer:** Ing. Günter Weber

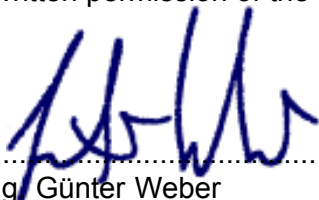
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