

2003  
ING-TED

Hydraulic  
power pack

hydraulikaggregat

# MK2

 hydr-app®

# MK 2



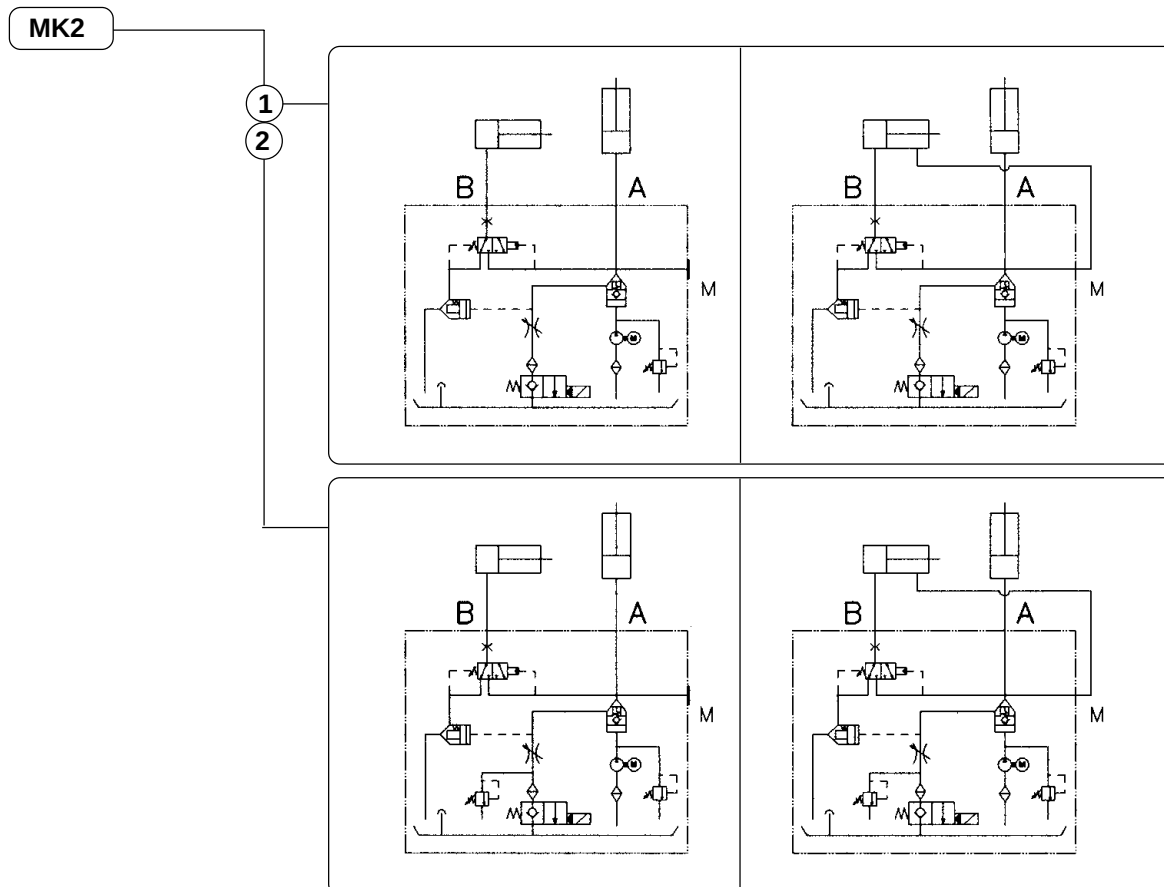
The **MK** series power unit provides application driven solutions for any kind of dock levellers. The hydraulic manifold systems are designed to provide the most versatile and efficient sequence of functions with a wide range of different working pressures and flow ratings. Pressure balanced gear pumps provide constant efficiency and low noise performance. The modular construction offers a wide availability of different components, NEMA and UNEL-IEC AC electric motors, pump displacements and tanks. Please contact us for your own custom designed solution.

Die Hydraulik-Kompaktaggregate der Baureihe **MK** wurden speziell für die Anforderungen der Hersteller von hydraulischen Überladebrücken entwickelt. Die integrierte hydraulische Folgesteuerung ermöglicht einen automatischen Ablauf der einzelnen Funktionen. Die Druckeinstellungen können den jeweiligen Last und Einsatzfällen angepaßt werden. Darüberhinaus stehen durch den modularen Aufbau eine große Auswahl an Zahnradpumpen, Tanks und Wechselstrommotoren zur Verfügung.



## HYDRAULIC DIAGRAMS

### HYDRAULIKSCHALTSCHEMA

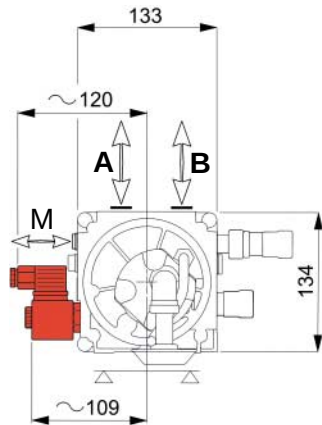


## ELECTROVALVES ELEKTROMAGNETVENTILE

|   | VOLTAGE<br>NENNSPANNUNG | SYMBOL |
|---|-------------------------|--------|
| A | 12 Volt DC              |        |
| B | 24 Volt DC              |        |
| C | 24 Volt AC 50 Hz        |        |
| D | 110 Volt AC 50 Hz       |        |
| E | 220 Volt AC 50 Hz       |        |
| P | 12 Volt DC              |        |
| Q | 24 Volt DC              |        |
| R | 24 Volt AC 50 Hz        |        |
| S | 110 Volt AC 50 Hz       |        |
| T | 220 Volt AC 50 Hz       |        |

A e B = G3/8  
UNI ISO 228/1 (BSP)

M = G1/8  
UNI ISO 228/1 (BSP)

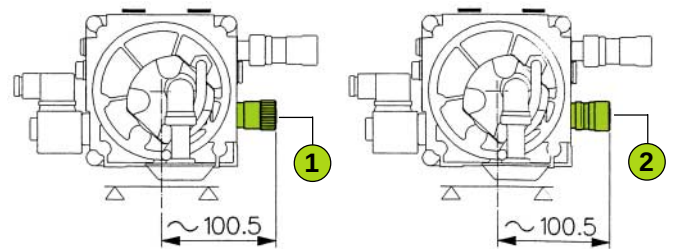


## RELIEF VALVES DRUCKBEGRENZUNGSVENTIL

|   | PRESSURE RANGE<br>EINSTELLBEREICH | STANDARD SETTING<br>STANDARD EINSTELLUNG |
|---|-----------------------------------|------------------------------------------|
| A | 35 - 90 bar                       | 50 bar                                   |
| B | 75 - 190 bar                      | 150 bar                                  |
| C | 160 - 290 bar                     | 180 bar                                  |

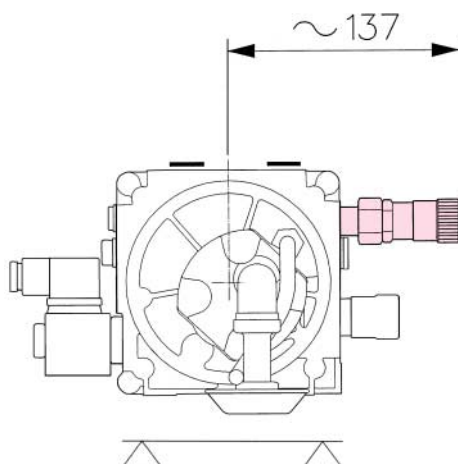
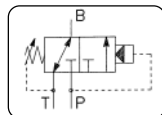
1 With protection cap  
Mit Schutzkappe

2 With sealed cap  
Mit Sicherungskappe



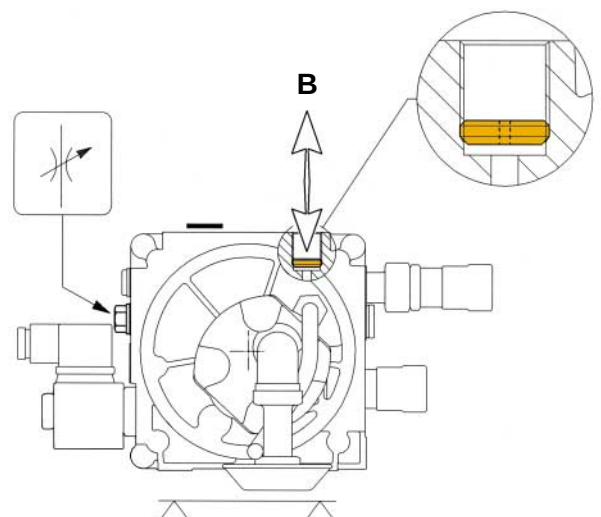
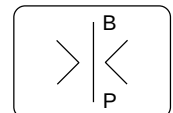
## PILOTED 3 - WAY SPOOL VALVES VORGESTEUERTE WEGEVENTILE

|   | PRESSURE RANGE<br>EINSTELLBEREICH |
|---|-----------------------------------|
| C | 30 - 105 bar                      |
| D | 50 - 160 bar                      |



## FLOW RESTRICTOR DROSSEL

|   | ORIFICE DRILL THRU<br>DIAMETER (mm)<br>DROSSEL<br>DURCHMESSER |
|---|---------------------------------------------------------------|
| A | 1.1                                                           |
| B | 2.2                                                           |
| C | 1.3                                                           |

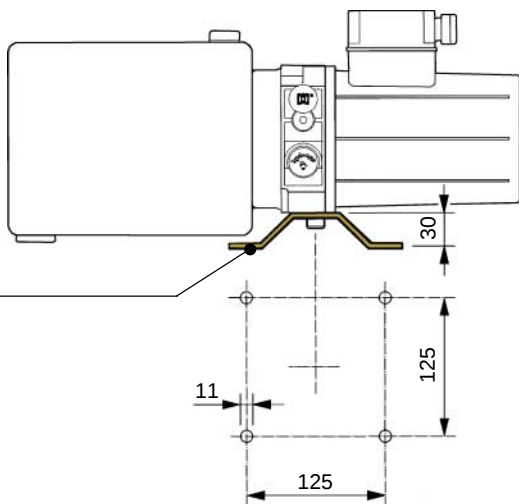


## OPTIONS OPTIONEN

R

7

Mounting foot - Befestigungsfuß



## PUMPS DISPLACEMENT PUMPENGRÖßEN

P

|   | NOMINAL<br>DISPLACEMENT CC/REV<br>FÖRDERVOLUMEN<br>NOMINAL cm. 3/U | PUMP GROUP<br>BAUGRÖßE |
|---|--------------------------------------------------------------------|------------------------|
| A | 0,25                                                               | 0,5                    |
| B | 0,45                                                               |                        |
| C | 0,56                                                               |                        |
| D | 0,75                                                               |                        |
| J | 0,92                                                               |                        |
| E | 1,2                                                                | 1                      |
| F | 1,7                                                                |                        |
| G | 2,2                                                                |                        |
| L | 2,6                                                                |                        |
| M | 3,2                                                                |                        |
| N | 3,8                                                                |                        |
| P | 4,3                                                                |                        |
| T | 6,0                                                                |                        |
| R | 7,8                                                                |                        |
| S | 9,8                                                                |                        |

## A.C. MOTORS ELEKTROMOTORE A.C.

### INTEGRAL BODY - DIRECT MOUNTING E-MOTOR DIREKTANGEFLANSCHT

ZA

4 POLES 1HP

ZB

2 POLES 1 HP

ZC

2 POLES 1.5 HP

M

0

5

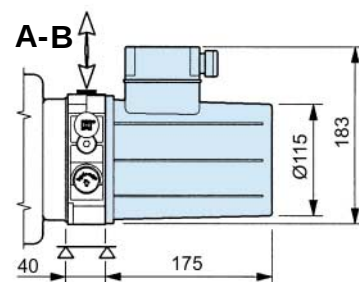
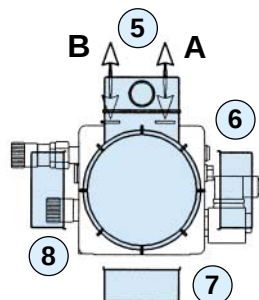
6

7

8

MOUNTING POSITION - MONTAGESCHLÜSSEL

WITHOUT MOTOR - OHNE MOTOR



R

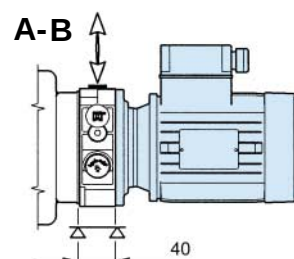
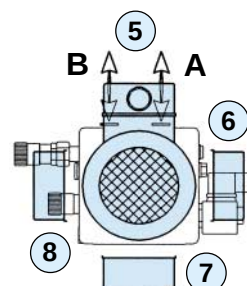
L

M

N

P

| SIZE<br>BAUGRÖßE | 2 POLES   | 4 POLES   | 6 POLES   | FRAME<br>BAUFORM        |
|------------------|-----------|-----------|-----------|-------------------------|
|                  | kW        | kW        | kW        |                         |
| 63               | 0,18-0,25 | 0,12-0,18 | 0,09-0,12 | B14<br>UNEL<br>13118-71 |
| 71               | 0,35-0,55 | 0,25-0,37 | 0,18-0,25 |                         |
| 80               | 0,75-1,1  | 0,55-0,75 | 0,37-0,55 |                         |
| 90               | 1,5-2,2   | 1,1-1,5   | 0,75-0,55 |                         |
| 100/112          | 3-5,5     | 2,2-4     | 1,5-2,2   |                         |

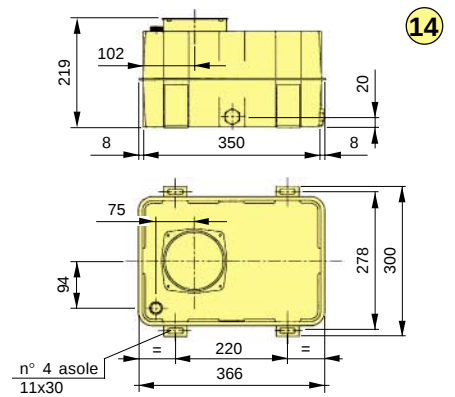
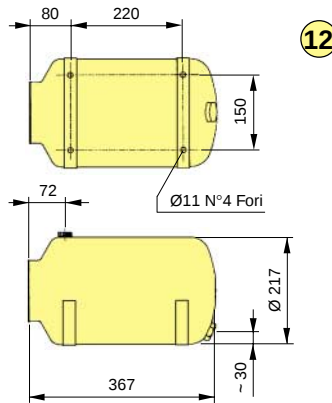
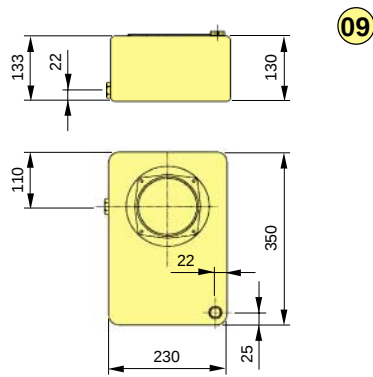
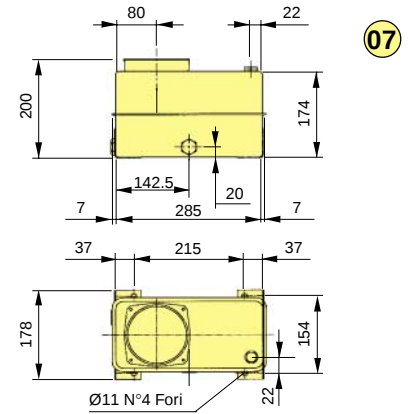
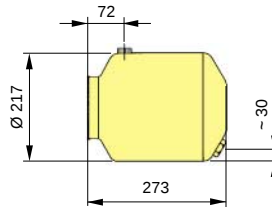
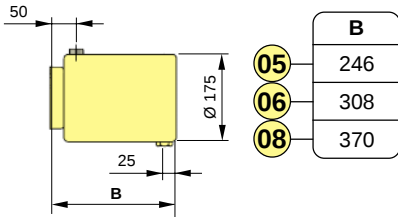


# TANKS BEHÄLTER

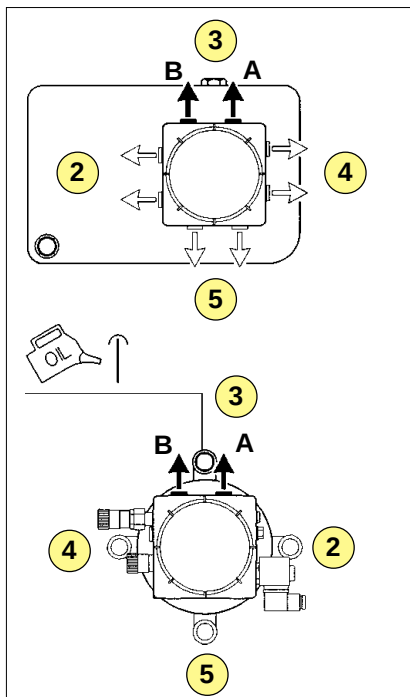
| T                               | 01 | 02 | 03 | 05 | 06 | 07 | 08 | 09 | 10 | 12 | 14 | 25 |
|---------------------------------|----|----|----|----|----|----|----|----|----|----|----|----|
| NOMINAL CAPACITY<br>NENNVOLUMEN | 1  | 2  | 3  | 5  | 6  | 7  | 8  | 9  | 10 | 12 | 14 | 25 |

SPECIAL SIZES ON  
REQUEST  
SONDERGRÖßEN AUF  
ANFRAGE

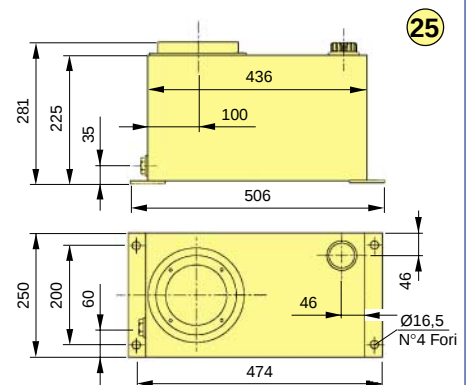
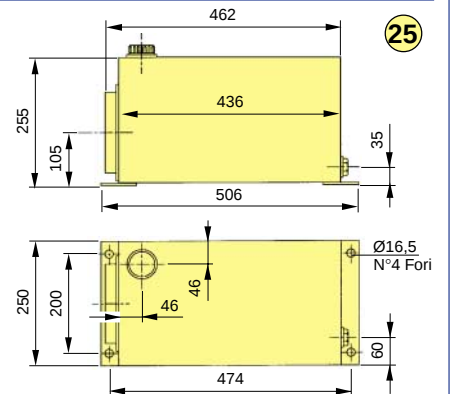
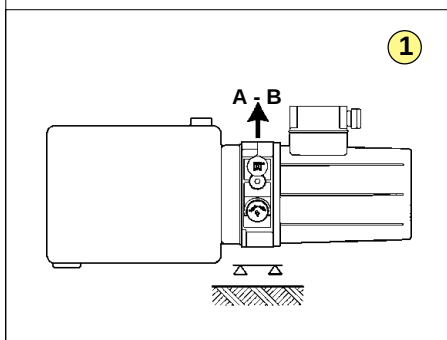
| A   | 01  | 02  | 03  |
|-----|-----|-----|-----|
| 141 | 141 | 200 | 330 |



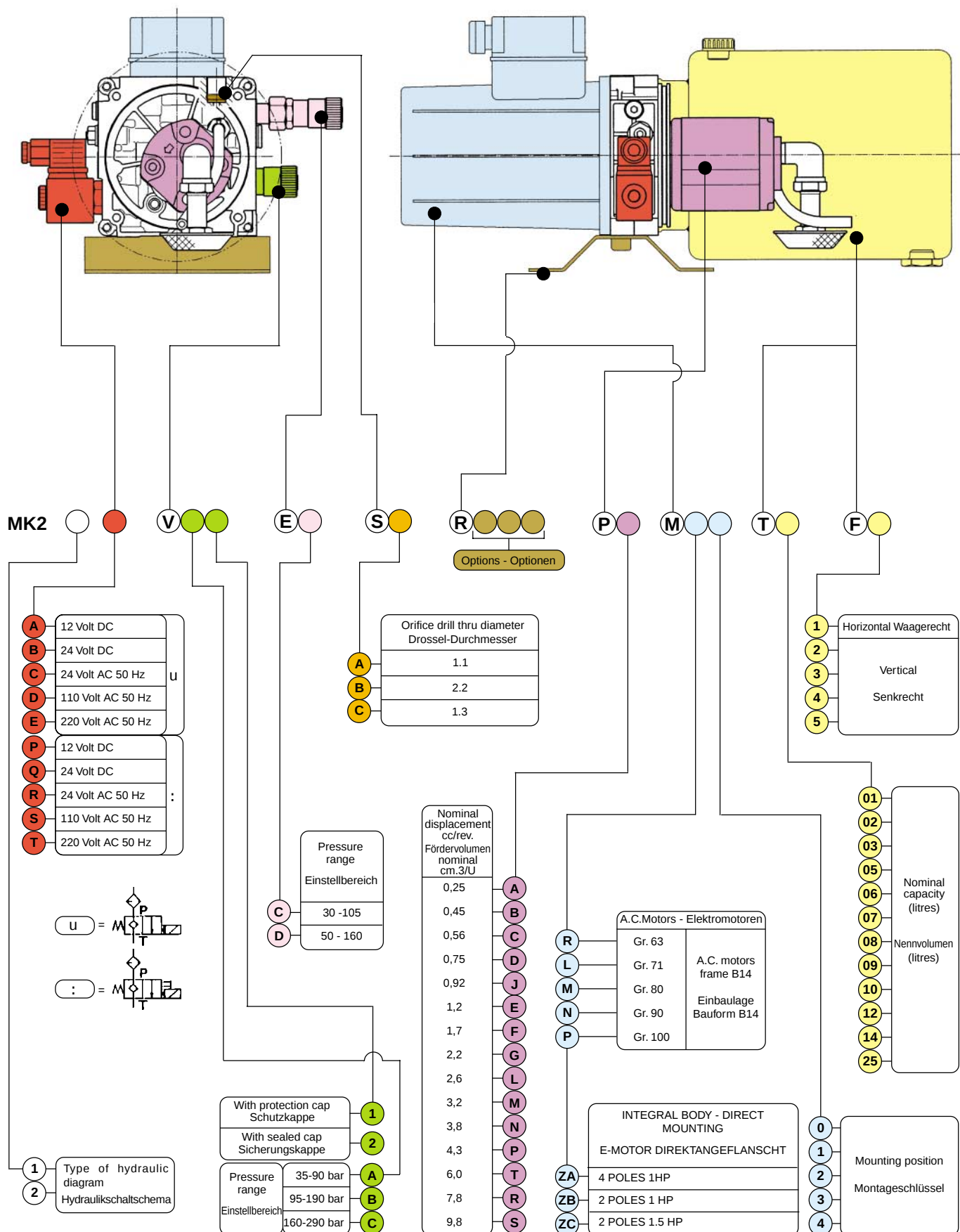
## MOUNTING POSITION MONTAGESCHLÜSSEL



| F | 1 | HORIZONTAL | WAAGERECHT |
|---|---|------------|------------|
| 2 | 3 | VERTICAL   | SENKRECHT  |
| 4 | 5 |            |            |



# ORDERING CODE BESTELLSCHLÜSSEL



ING-TED

2001

MKCC0401.E01



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