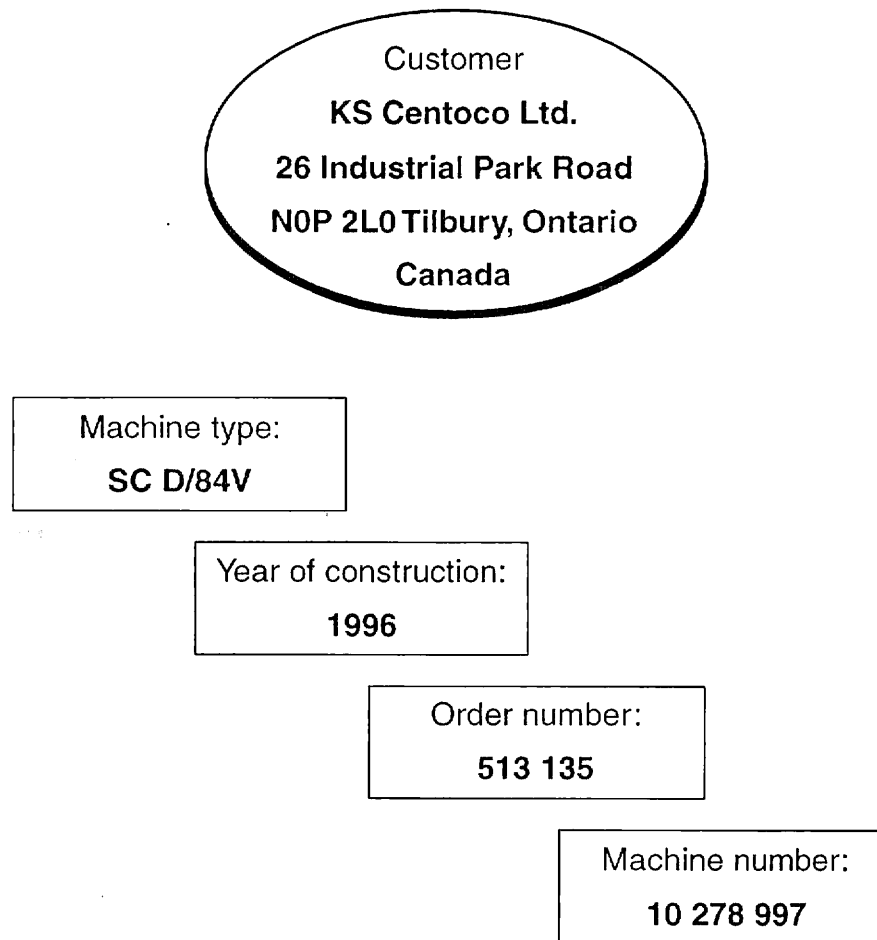
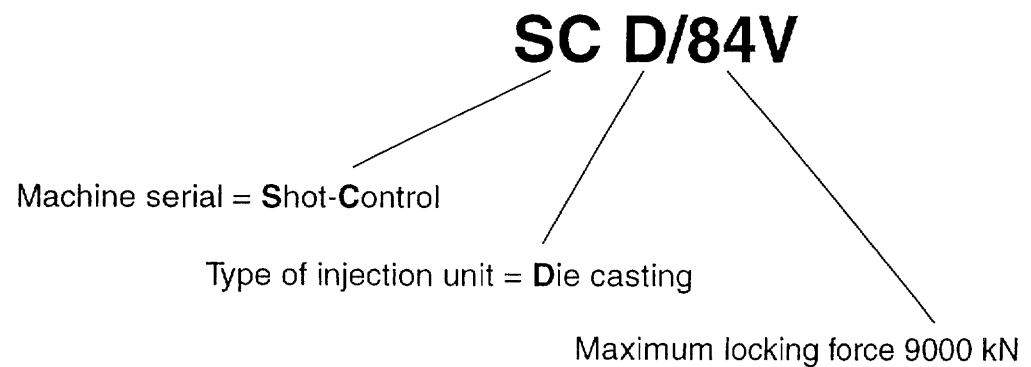


## 2.1 Identification data



## 2.2 Machine type designation



## 2.3 Directed use

Buhler horizontal die-casting machines are designed exclusively for the pressure die-casting of aluminium, magnesium, zinc and copper alloys. Any use beyond this scope is regarded as non-directed.

The manufacturer can **not** be made liable for any damages that are a result of non-directed use. The user is the sole bearer of the risk for such damage

The observance of the conditions for installation, start-up, operation and maintenance as instructed by the manufacturer are inherent with the directed use.

## 2.4 Ambience

In order to determine a suitable location for the DCM or DCI a number of important aspects will have to be taken into account.

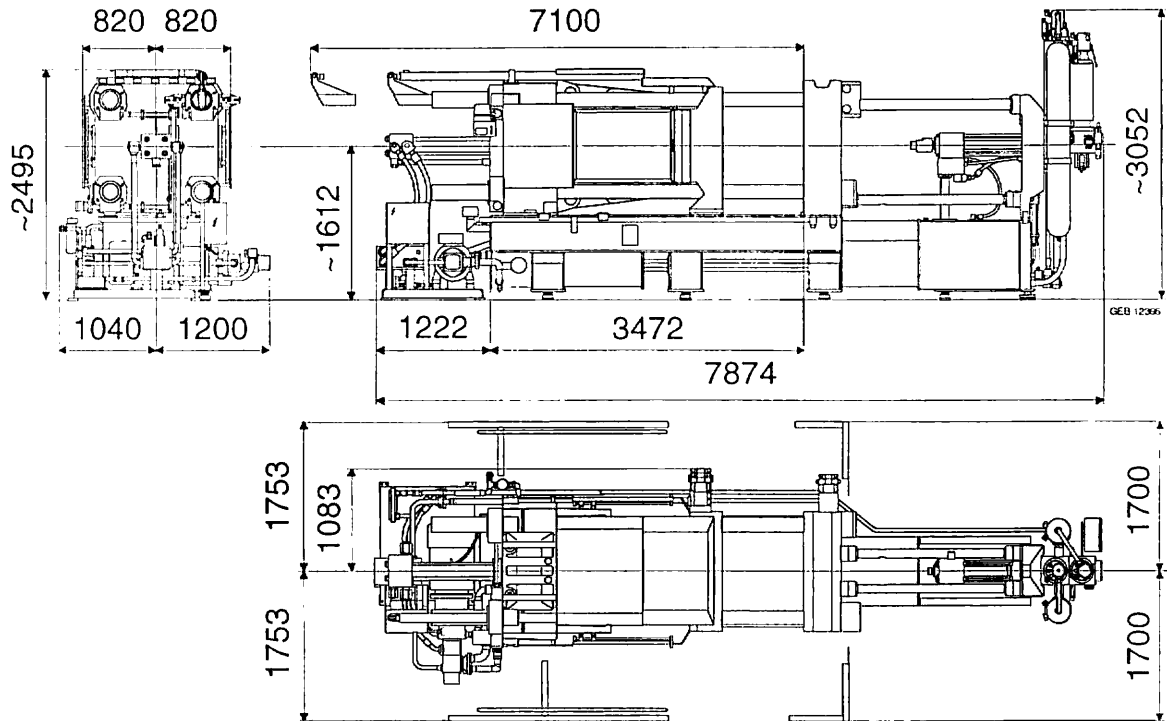
See chapter „Preparing the site of installation“.

## 2.5 Electrical connections

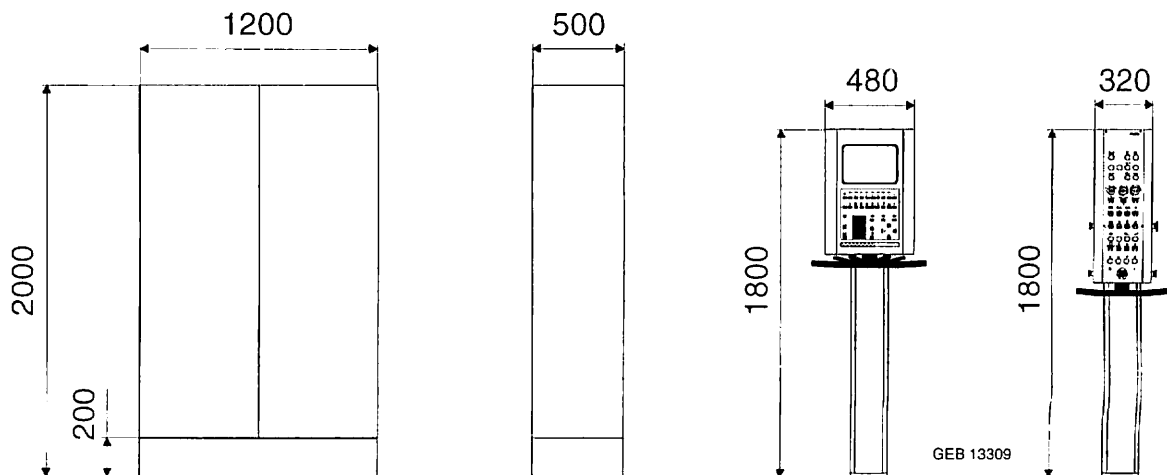
- Nominal voltage: .....575 V
- Voltage fluctuation: ..... maximum  $\pm 10$  % of the nominal voltage
- Frequency: ..... 60 Hz
- Installed load (main motor included): ..... 57 kW
- Installed load main motor: ..... 52 kW
- Type of wiring: ..... 3 phase, 1 protective conductor
- Protection class: ..... IP 55 (Din 40050)
- Earthing:..... earthed system (transition resistance  $> 20$  M $\Omega$ )

## 2.6 Dimension / Weight

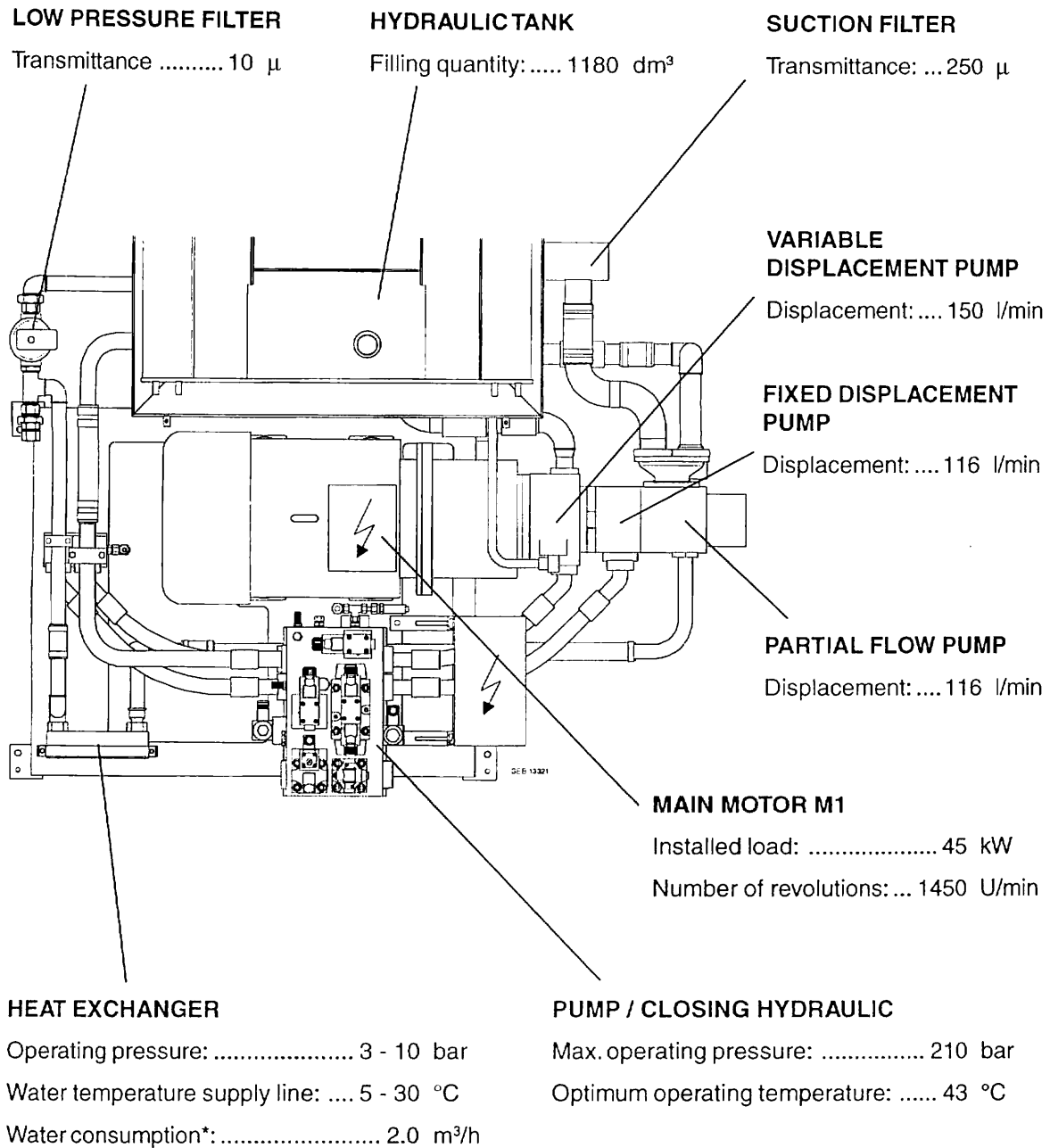
Machine ready for production ..... 38'000 kg



Weight of the control cabinet ..... 275 kg



## 2.7 Driving unit / Hydraulics



\* Water consumption with a supply line temperature of 30°C

## 2.8 Closing unit

### CENTRAL LUBRICATION

Filling quantity: .... 2.7 dm<sup>3</sup>

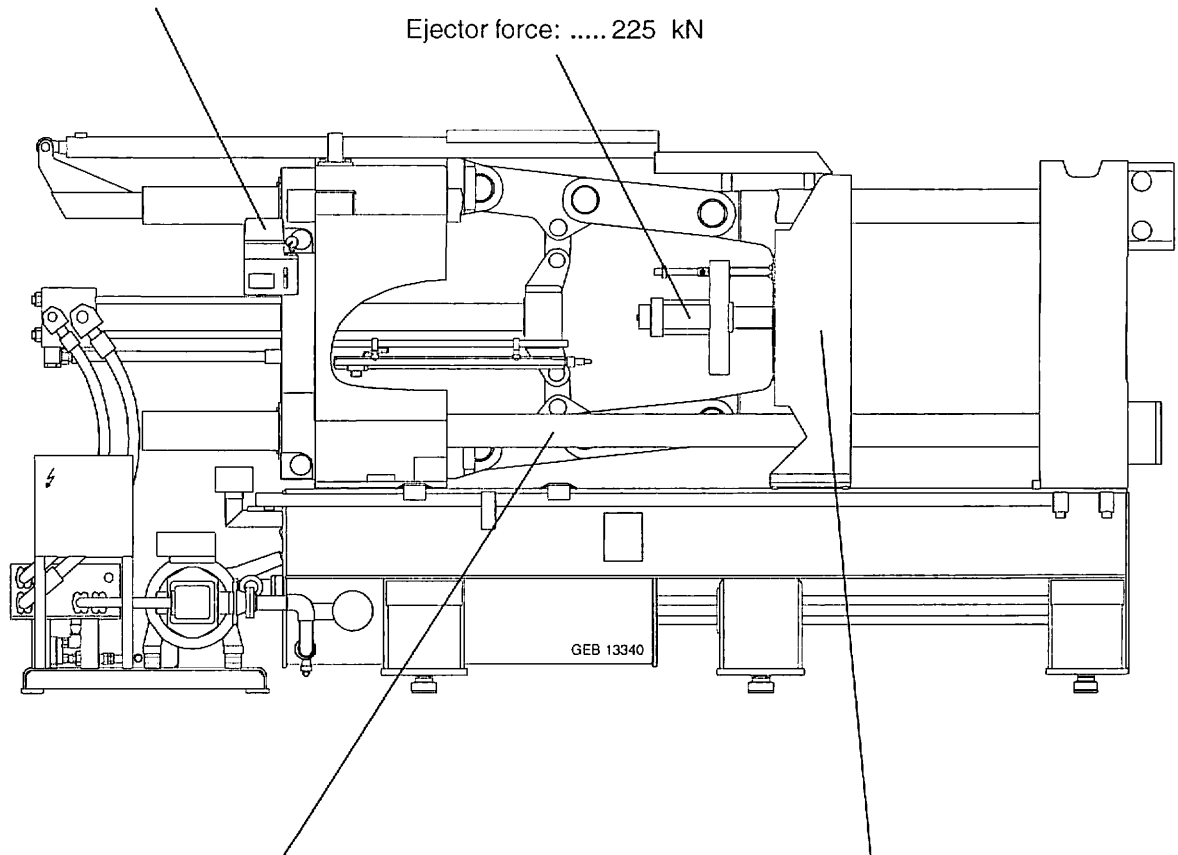
### EJECTOR

Ejector stroke: .... 175 mm

Ejector force: .... 225 kN

### LOCKING FORCE

Max. locking force: ..... 9000 kN



### TIE BARS

Tie bar spacing: ..... 900 x 900 mm

Tie bar diameter: ..... 170 mm

Tie bar pulling (from 0-line): .... 7100 mm

Tie bar removal (from 0-line): .. 7100 mm

### DIE

Die height: ..... 400 - 1000 mm

Die opening stroke: ..... 800 mm

Max. permissible surface pressure: ..... 100 N/mm<sup>2</sup>

Min. permissible die dimensions: .. 720 x 720 mm

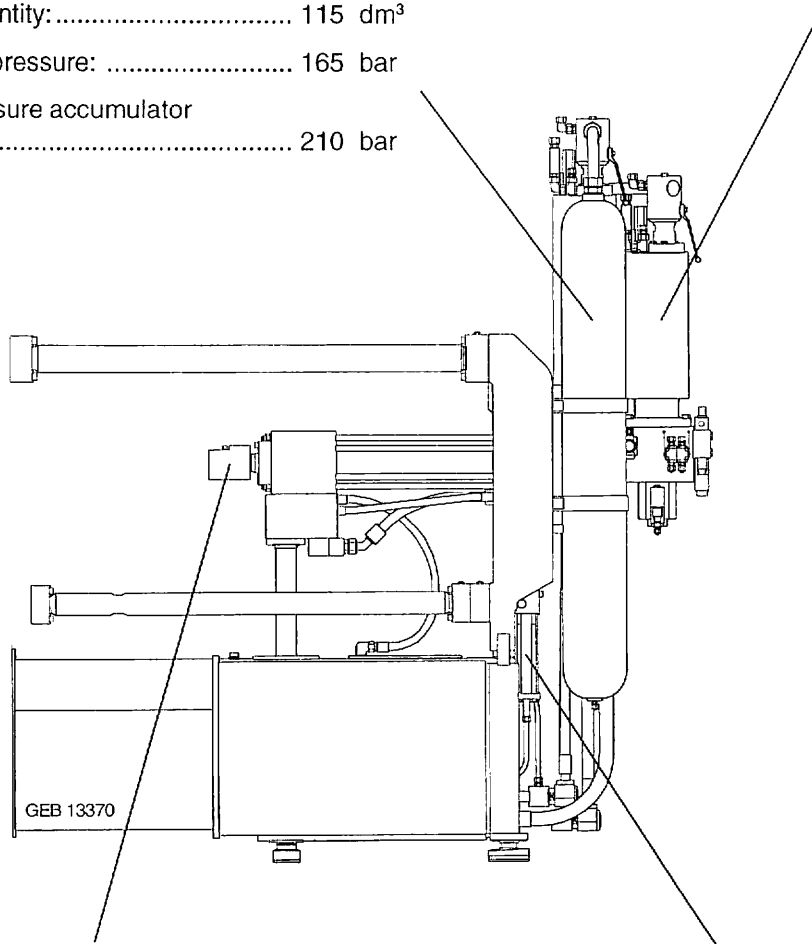
## 2.9 Shot unit

### NITROGEN SYSTEM ACCUMULATOR

Filling quantity: ..... 115 dm<sup>3</sup>  
Max. idle pressure: ..... 165 bar  
Max. pressure accumulator  
charged: ..... 210 bar

### NITROGEN SYSTEM INTENSIFIER

Filling quantity: ..... 38 dm<sup>3</sup>  
Max. idle pressure: ..... 185 bar  
Area ratio: ..... 1 : 2.25  
Stroke: ..... 115 mm



### PLUNGER

Injection force dynamic: ..... 290 kN  
Injection force intensified: ..... 700 kN  
Plunger stroke: ..... 600 mm  
Plunger diameter: ..... 70 - 110 mm

### CASTING POSITION ADJUSTMENT

Casting position: ..... 0 / - 300 mm

### PLUNGER LUBRICATION

Filling quantity: ..... 10 dm<sup>3</sup>

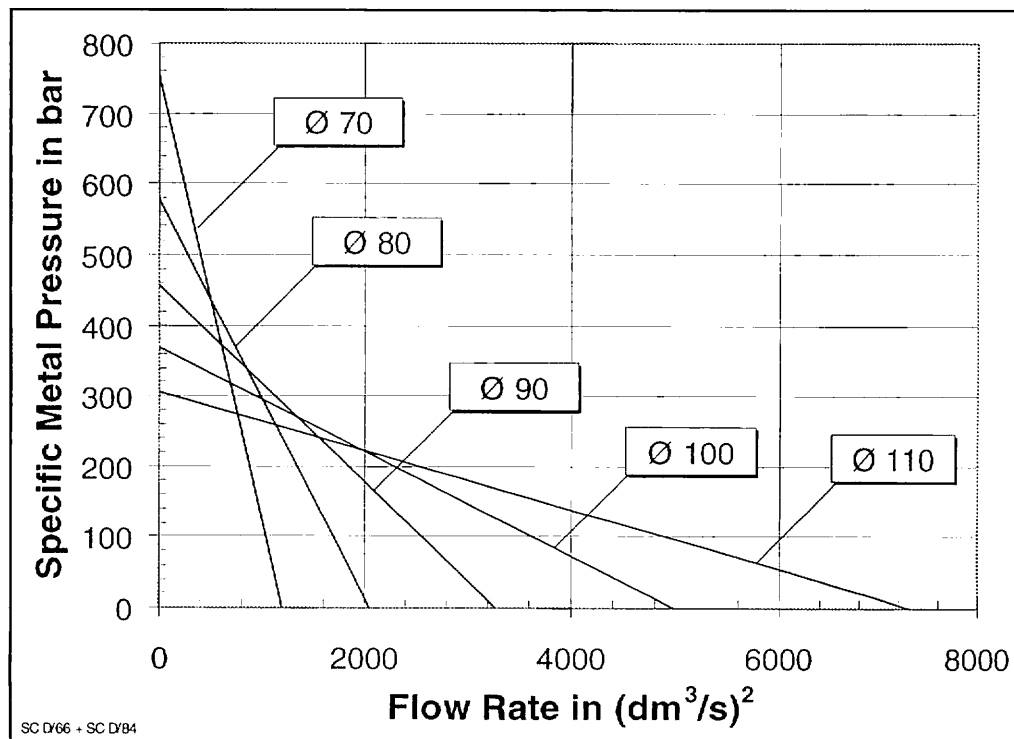
## 2.10 Production data

Plunger Diameter	mm	70	80	90	100	110
Maximum Casting Volume	cm <sup>3</sup>	1539	2010	2543	3140	3799
Maximum Casting Weight Al	kg	3.85	5.02	6.36	7.85	9.50
Maximum Metal Pressure	bar	1827	1399	1105	895	740
Maximum Projected Area	cm <sup>2</sup>	510	660	840	1040	1260

SC D/84V

- The maximum casting weight is calculated according to DIN 24480:  
 $\frac{2}{3} \times \text{Plunger stroke} \times \text{Plunger surface} \times \text{Density (Al 2,5 kg/dm}^3\text{)}$

## 2.11 p/Q<sup>2</sup>-Diagram



## 2.12 Noise level of the DCM

### Sound

Sources:

- the drive unit.
- during the casting process.

Depends on: machine load during operation.

Regulations: observe the local regulations.



#### **WARNING!**

**If the noise emission is higher than the permissible values the personnel must wear appropriate ear protectors!**

### Measuring setup

- Casting process without metal (plastic plug). When casting with metal smaller pulse coefficients DLI eq (ca. 3dB) must be expected.
- Data are related exclusively to the DCM (without peripheral units).
- Measurements carried out according to DIN 45635 Section 1.
- Variations from the given values Leq and DLI eq are contingent to the operating conditions tCyc, vl and vl Br.

### Results

Leq A-rating equivalent continuous sound level pressure at the working place including the pulse coefficient ..... 79 dB(A)

DLI eq pulse coefficient ..... 5 dB

### Operating conditions

tCyc cycling time ..... 30 s

vl plunger speed ..... 5.0 m/s

vl Br braking velocity ..... 1.0 m/s