



2.5 TECHNICAL DATA (subject to modification without notice)

Horizontal Cold-Chamber Die Casting Machine H-630B

Locking force (strain gauge tested).....	kN	7250
Injection force, consolidation phase (adjustable).....	kN	650 x 265
Plunger stroke.....	mm	580
Shot positions (standard).....	mm	0, -50, -300, -350
Ejection force.....	kN	340
Ejector stroke (adjustable).....	mm	175
Dimensions of fixed die platen (H x V).....	mm	1210 x 1410
Dimensions of moving die platen (H x V).....	mm	1210 x 1210
Clearance between the tie bars.....	mm	780 x 780
Diameter of tie bars.....	mm	150
Die height min. ....	mm	300
Die height max. ....	mm	950
Stroke of moving die platen.....	mm	780
Rated installed power.....	kW	45
Machine area L x W (incl. safety gate).....	m	9.0 x 2.9
Machine height.....	m	3.2
Machine weight, ready for production.....	kg	27200
INTERCIRC control cabinet L x W x H.....	m	1.4 x 0.4 x 1.65
DATACESS control cabinet L x W x H (Standard).....	m	1.2 x 0.5 x 2.23
and DATACESS power cabinet L x W x H (Extended).....	m	0.8 x 0.5 x 1.8

Production data

Plunger diameter	mm	60	70	80	90	100	110	120
Theoretical shot volume (DIN 24480)	cm3	1093	1488	1944	2460	3035	3674	4373
Max. shot weight for Al*	kg	3.0	4.2	5.5	6.9	8.5	10.3	12.3
Max. specific injection pressure	bar	2300	1690	1293	1021	828	684	574
Max. projected area**	cm2	315	429	560	710	875	1060	1263

\* The max. shot weight is calculated as follows:  
plunger stroke x plunger area x 0.75 x density

Density of	Al	Zn	Mg	Cu
g/cm3	2.5	6.25	1.63	8.0

\*\* Max. theoretical projected area at max. specific injection pressure, without consideration of core locking and dynamic part of injection process.

## 2.6 OPERATING DATA (subject to modification)

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### 10 Die mounting platens



- Smallest permissible die mounting dimensions    mm    620 x 620
- Maximum permissible surface pressure..... N/mm<sup>2</sup>    100

11    Effective plunger stroke ..... mm    555

### 12 Electrical data

- Total connected load of die-casting machine  
with control system ..... kW    45
- Voltage fluctuation max. .... %     $\pm 10$
- Protection class (DIN 40050) ..... IP    55
- Maximum permissible ambient temperature for  
control cabinet with cooler ..... °C    55

Note: The lower the temperature is in the control cabinet, the smaller the probability of failure of electronic components.

### 20 Hydraulic system

21    Maximum system pressure ..... bar    160

22    Hydraulic fluid according to  
GEA-95633 (HFC-Hydraulic fluid) or  
GEA-95632 (HLP-Mineral oil)  
Filling quantity ..... dm<sup>3</sup>    1240

### 30 Pneumatic system

31    Maximum operating pressure ..... bar    5

32    Data for a pneumatically actuated safety gate:

- Maximum compressed air requirement ..... Nl/min    43
- Adjusted operating pressure ..... bar    4

33    Maximum compressed air requirement  
for mechanical die scotch ..... Nl/min    1.06

34    Lubricating oil acc. to GEA-95623. Contents of tank for  
each pneumatically actuated safety gate approx... dm<sup>3</sup>    0.5

Fig. 2.1.1

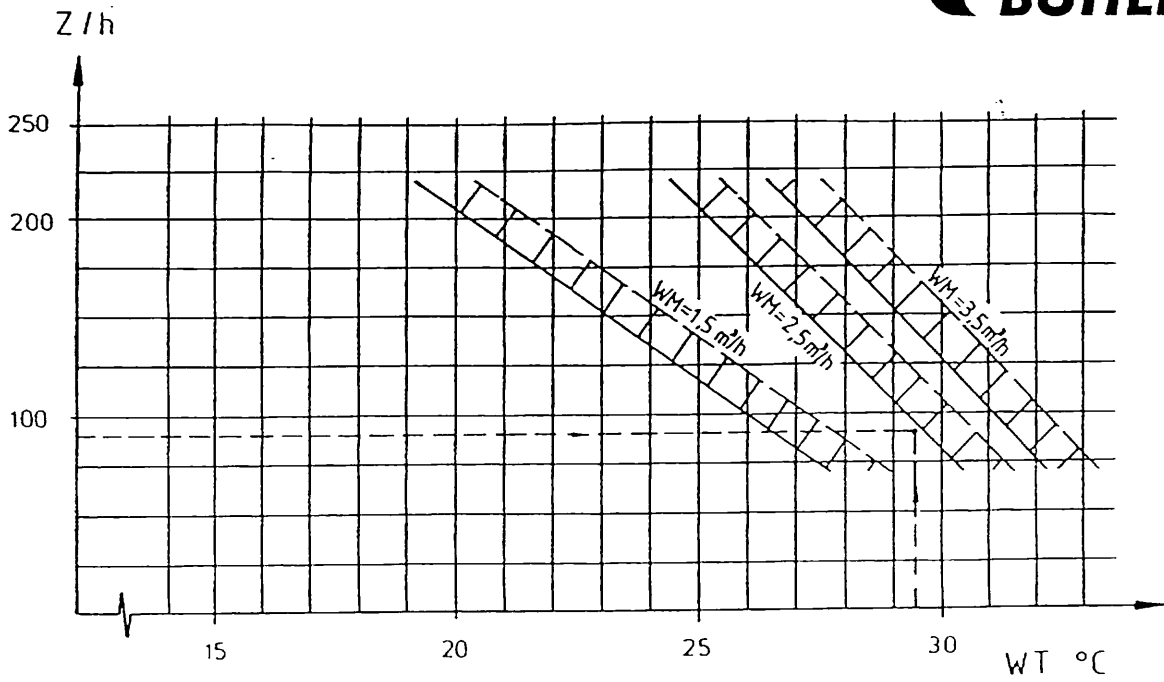
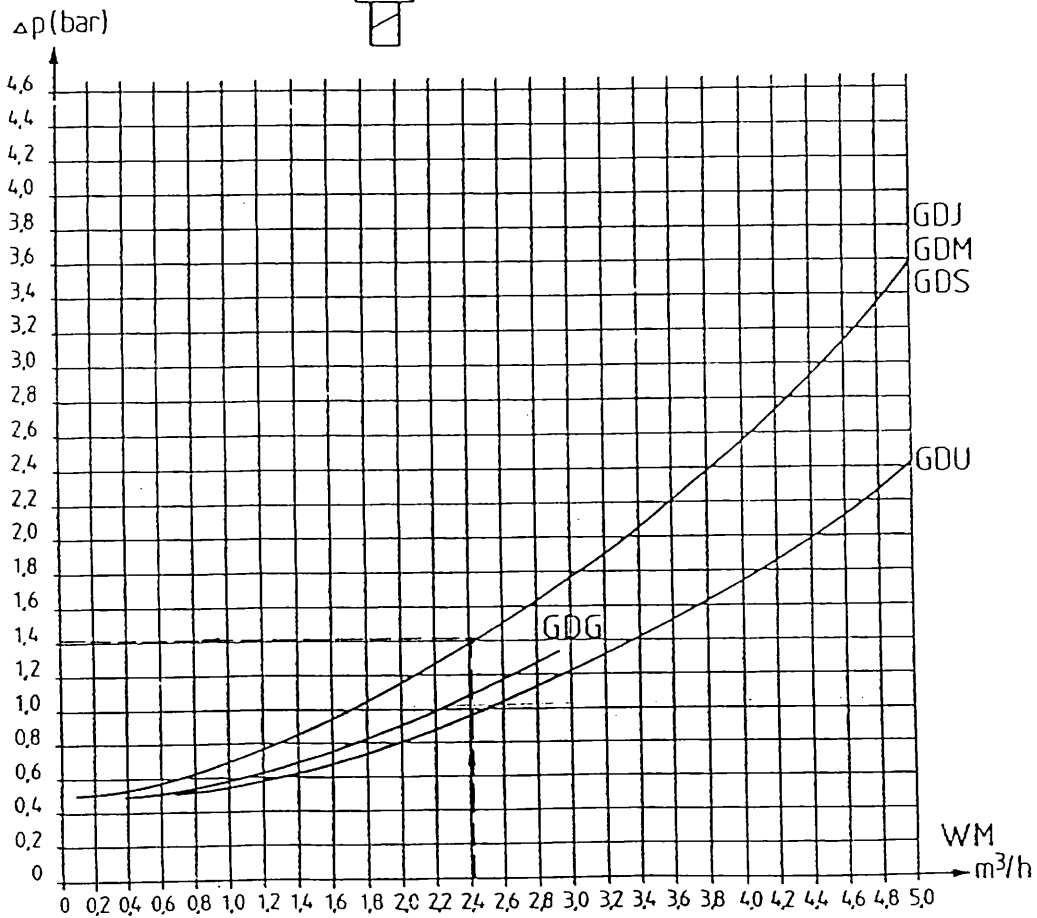
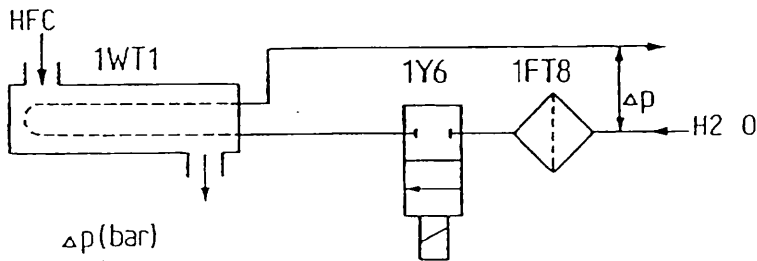


Fig. 2.1.2



- 40 Cooling water consumption  
41 Cooling water consumption of the heat exchanger

Legend to Fig. 2.1.1 and Fig. 2.1.2

1FT8	strainer
1WT1	heat exchanger
1Y6	solenoid valve
delta p	pressure drop
H <sub>2</sub> O	cooling water
HFC	less inflammable hydraulic fluid HOUGHTO-SAFE 620 at an operating temperature of 42°C in the hydraulic tank
WM	water quantity
WT	water inlet temperature
Z/h	machine cycles / h

Cooling water consumption to be determined with the aid of Fig. 2.1.1.

Example for reading

Water inlet temperature (WT) = 29.5°C  
Machine cycles / h (Z/h) = 90  
required quantity of water = approx. 2.4 m<sup>3</sup>/h

Determine pressure loss (delta p) with the aid of Fig. 2.1.2

Check if the available water pressure is higher than delta p and thus if the required quantity of water is obtained.

- 42 Cooling water consumption of die and shot sleeve

As the wall thickness of castings varies, it is practically impossible to determine the cooling water consumption for the dies accurately.

According to a rough rule of the thumb the die and the shot sleeve require four times as much cooling water as the heat exchanger.

50	<u>Nitrogen system (shot end)</u>		
51	Maximum filling pressure .....	bar	135
52	Capacity of pressure accumulator total .....	l	175
	<u>Use only pure nitrogen (N<sub>2</sub> more than 99.99 vol. %).</u>		
	Required nitrogen volume for filling the empty system to maximum filling pressure		
	4 storage bottles containing each .....	l	45
	Filling pressure .....	bar	200
60	<u>Central lubrication</u>		
	Central lubrication oil according to GEA-95649		
	Tank capacity .....	dm3	2.7
70	<u>Automatic Buhler plunger lubrication</u>		
	Lubricant according to GEA-95725		
	Tank capacity .....	dm3	5