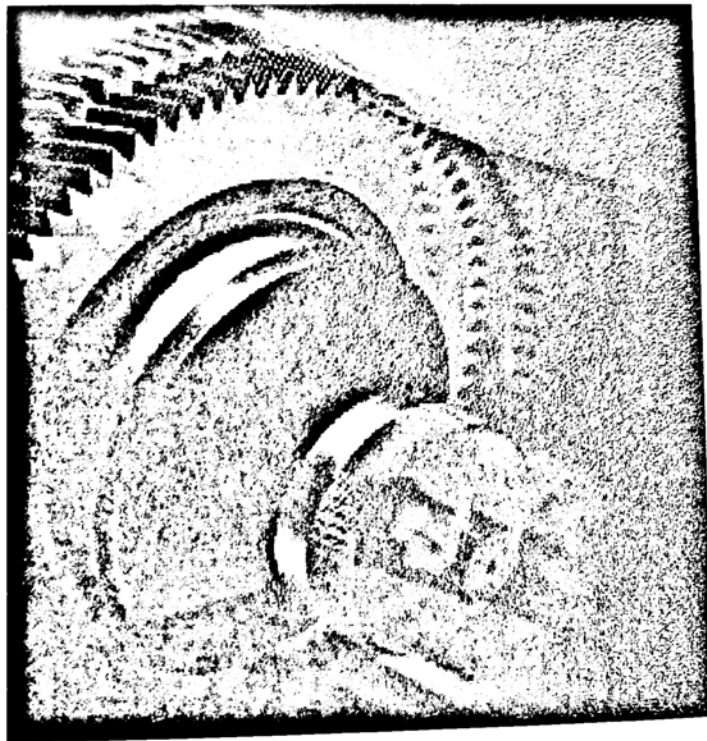


Gleason-HURTH

Shaving cutter grinding machine

SRS 410

Maintenance instructions



Customer:

Order No.:

Machine No.:

Hyundai

45128404

B0101

0 General Explanations

0.1 General safety remarks

The machine **SRS 410** was designed and built on the basis of a risk analysis and under consideration of all relevant harmonised standards as well as further national standards and technical specifications. The machine thus conforms to the current level of technology and guarantees the highest possible degree of safety.

This level of safety can only be achieved in practice if all necessary measures are observed in dealing with the machine. It is therefore part of the duty of care of the machine's operator to plan these measures and check that they are executed correctly.

In particular the operator must ensure that:

- the machine is used only as prescribed (cf. chapter "Product description")
- the machine is operated only in a fault-free, operational condition and in particular the safety devices are regularly checked to ensure that they function as stipulated
- any necessary protective equipment or apparel for the operating, maintenance and repair personnel is available and is used
- the operating manual is always legible and is available in full at the machine's location
- the machine is operated, maintained and repaired only by sufficiently qualified and authorised personnel
- these personnel are regularly instructed in all matters relating to occupational safety and environmental protection and are familiar with the operating manual and in particular the safety instructions it contains
- all safety instructions and warnings on the machine are visible and legible and are not removed.

Working on electrical equipment:

- All work on the machine's electrical equipment must be carried out by trained electrical specialists only.
- Electrical equipment must be checked regularly: Loose connections must be made secure, damaged wires or cables must be replaced immediately.
- The switchgear cabinet / all electrical supply units must always be kept locked. Access is only permitted for authorised persons with a key or special tool.
- With all work on live machine parts or cables, a second person must be present who can deactivate the master switch in an emergency.
- Never clean electrical apparatus with water or similar liquids.

Before performing the servicing work, you must observe the following:

- Switch off the central power supply with the master switch, lock the master switch and put up a warning sign prohibiting switching it on again
- Make sure that all machine parts have cooled down to room temperature
- Make sure that suitable lifting gear and weight-carrying equipment is available for replacing large machine parts
- Block off access to the operating area of the machine
- Replace all defective machine parts immediately
- Use only original replacement parts.
- Make sure that suitable containers for all media endangering ground water (such as oil, coolants, etc.) are directly accessible and used.

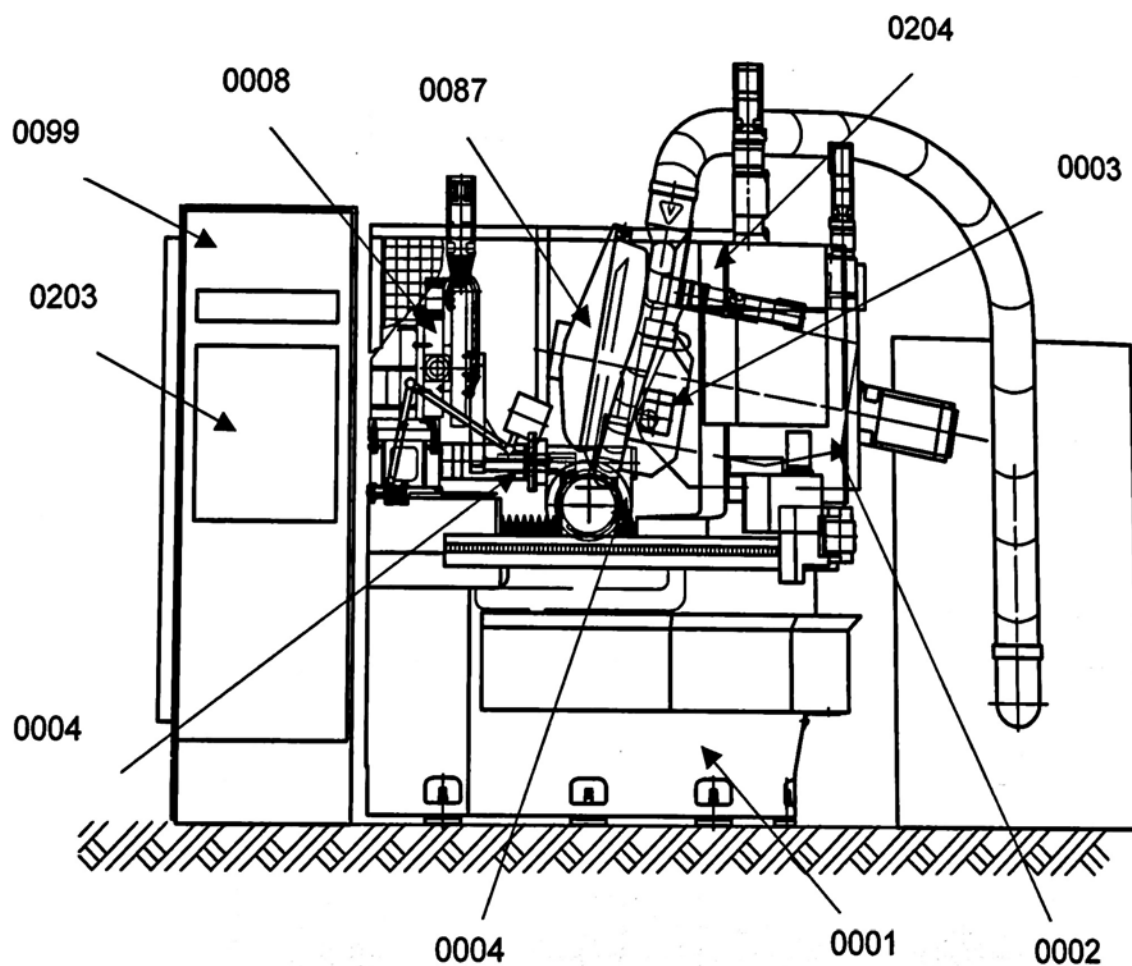
After completing the servicing work and before starting the machine, you must observe the following points:

- Double-check all previously loosened screws to make sure they are tightly secured
- Check that all previously removed protective devices, covers, container lids, screens, filters, have been replaced correctly
- Make sure that all previously used tools, materials and other equipment are removed from the operating area
- Clean the operating area and remove any liquids or similar substances which may have leaked out
- Make sure that all the machine's safety devices are functioning properly again.

Working on hydraulic and pneumatic equipment:


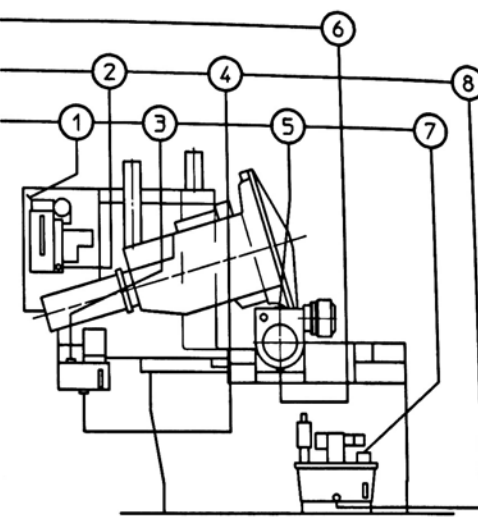





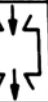
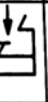
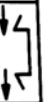
- All work on the machine's hydraulic and pneumatic equipment must be carried out by suitably trained specialists only.
- Before starting work, depressurise all hydraulic and pneumatic installations/installation parts.
- During preventive servicing during repair work, the hose pipes should always be exchanged also - even if there is no noticeable damage yet. See also the instructions of the hose manufacturers.


1 General view



- 0001 Machine bed
- 0002 Grinding headstock
- 0003 Dressing unit
- 0004 Work slide
- 0007 Generating indexing unit
- 0008 Measuring unit
- 0087 Protective cover for grinding wheel
- 0099 Control cabinet
- 0203 Control panel for CNC and machine control systems
- 0204 Additional control panel

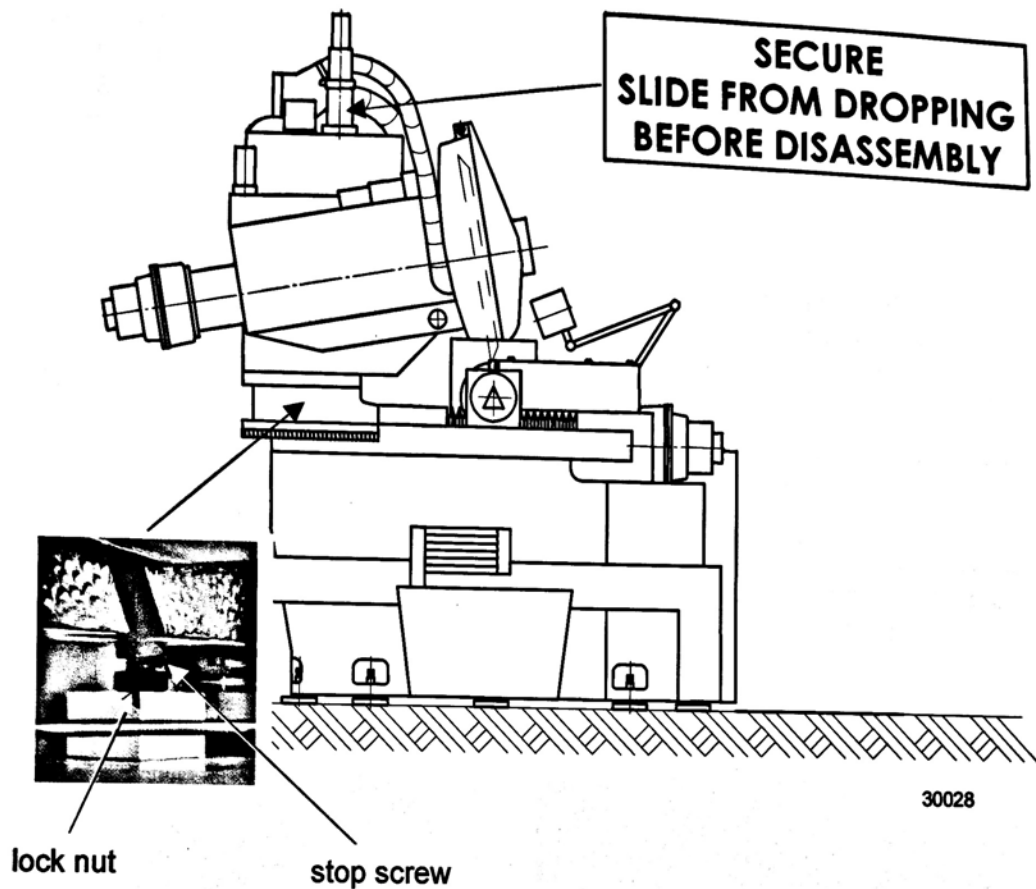
1.2 Lubrication plate

Schabrad schleifmaschine Shaving cutter grinding machine Affûteuse pour couteaux de rasage		Hersteller: Gleason-HURTH Manufacturer: Fabricant:		TYPE: SRS 405					
 Betriebsstunden Hours of operation Heures de service	5000	2000	50						
									
Achtung! Vor der Schmierung alle Eingriffstellen reinigen Important! Clean all points of intervention before lubrication! Attention! Avant le graissage, nettoyer tous les points d'intervention!									
Maschinenteile		Hydr. Klemmung	Zentralschmierung	Schraubtrieb	Hydrostatik				
Machine parts		Hydr. Clamping	Centralized lubrication	Worm drive	Hydrostatic				
Éléments de machine		Blockage hydrauliques	Lubrification centralisée	Engr. avis sans fin	Hydrostatique				
Nr. der Eingriffstelle		1	2	3	4	5	6	7	8
No. of intervention point									
N° du point d'intervention									
Art des Eingriffes	Bildzeichen des Eingriffes								
Intervention	Symbol of intervention								
Nature de l'intervention	Symbole de l'intervention								
Prüfen und eventuell nachfüllen (h)		50		50		50		50	
Check and replenish if req'd (h)									
Vérifier et le cas échéant refaire le plein (h)									
Austauschen (h)			2000		2000		5000		2000
Renew (h)									
Echanger (h)									
Schmierstoff nach	ISO 3498	HM46 (HLP46)		G220 (CGLP220)		CC150/CC220 (CLP220)		HM46 (HLP46)	
Lubrication to	DIN 51502								
Lubrifiant selon									
Behälterkapazität (l)		4		2.7		3.75		30	
Capacity of reservoir (l)									
Contenance (l)									

 Altöl	Make sure that service products and lubricants are disposed of in an environmentally friendly manner in accordance with the regulations for correct recycling or disposal of waste.
----------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

3.4 Securing the grinding headstock 0002

SRS 410



Before transport, dismantling or repairing the brake for the vertical adjustment of the grinding headstock 0002 safe the slide with the grinding headstock against sinking.

Procedure:

- Loosen lock nut
- Twist stop screw upwards until firmly in contact with slide.
- Tighten lock nut



Before switching on the machine, it is absolutely essential to twist the stop screw back down: otherwise risk of collision!

3.4.1 Transport securing measuring slide (Measuring unit optional)

Mounting the transport securing

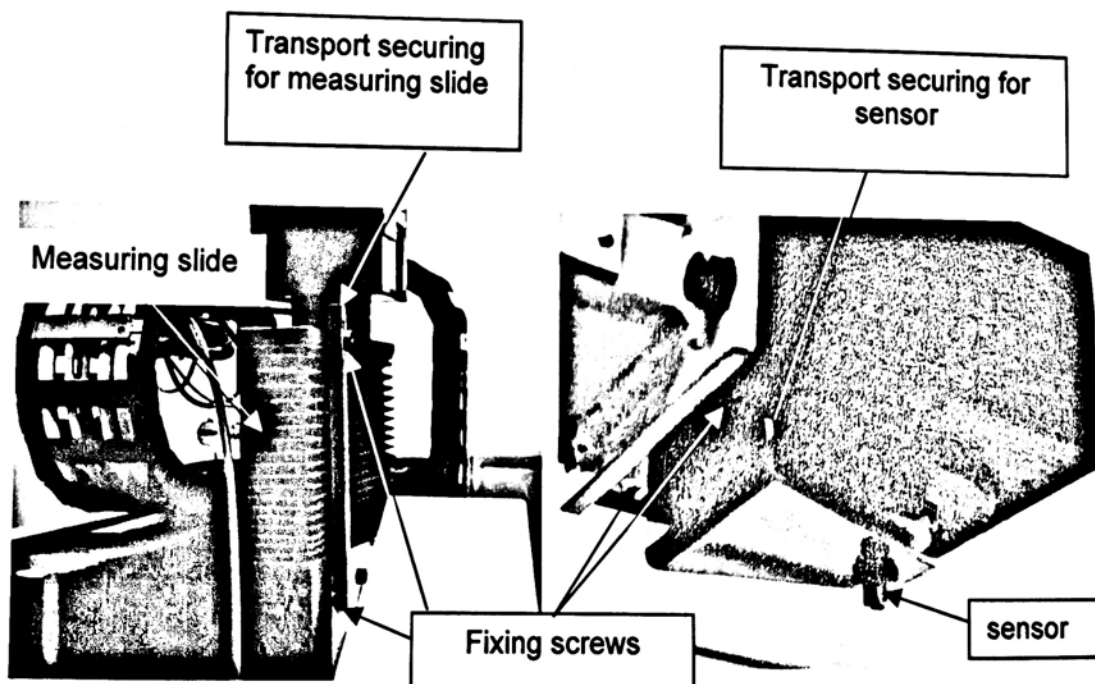


For transport of the machine mount the transport securing for measuring slide and sensor

The securing serves for fixing the measuring slide during the transport.

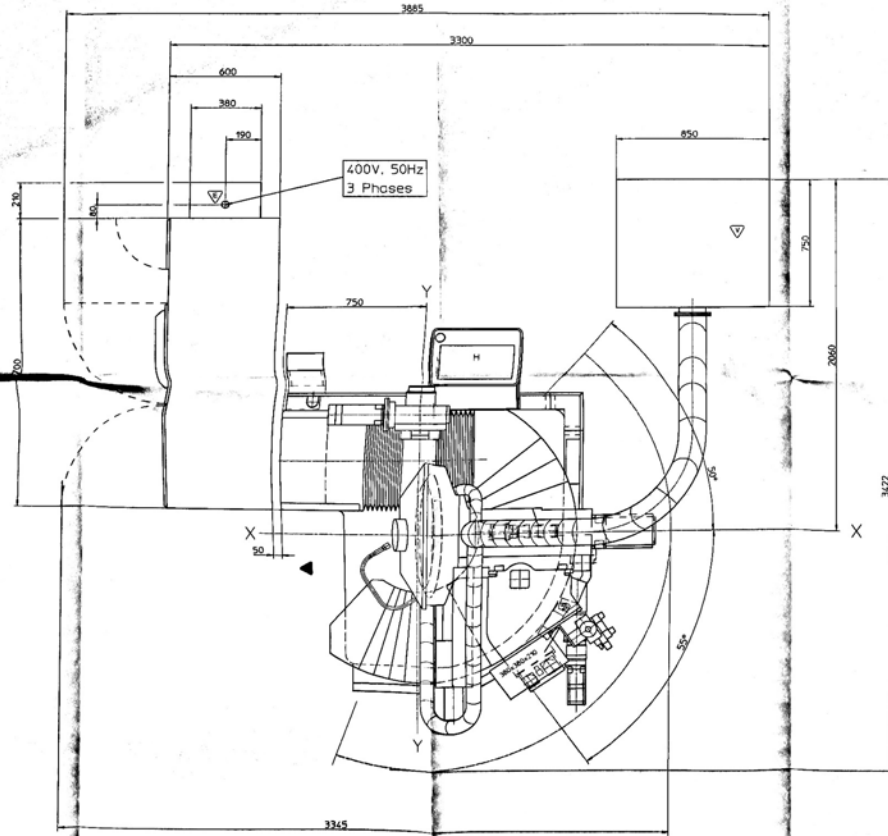
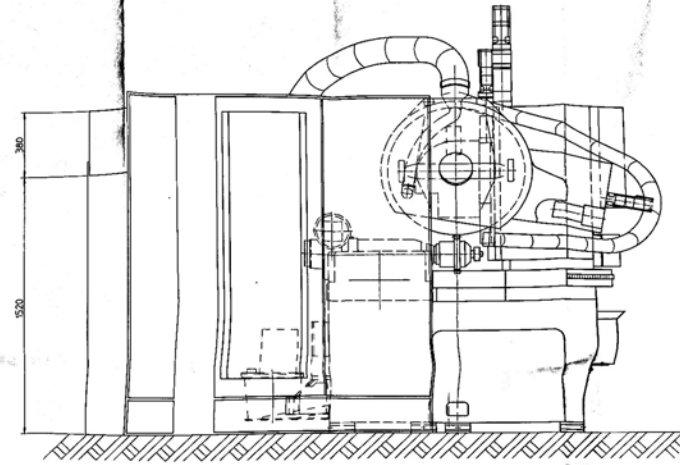
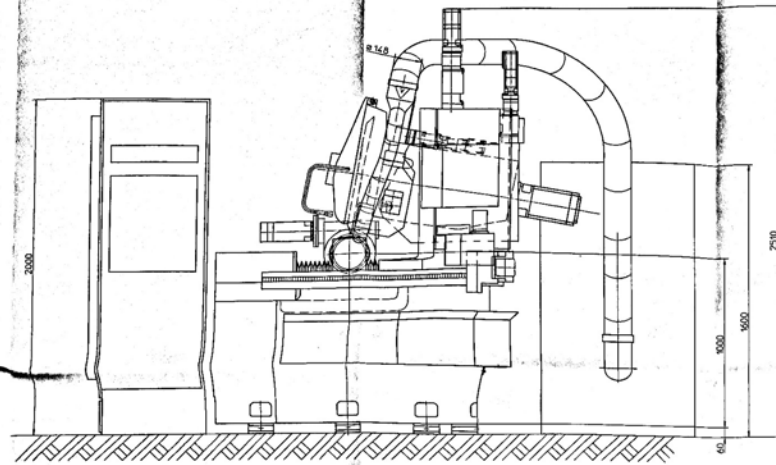


Sensor is secured in X/Y and Z-direction by an overload signal. It is not allowed to actuate the sensor in horizontal or vertical direction. Danger of damaging the measuring unit occurs. It is not permitted to open the device!

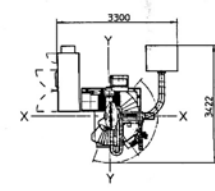


Don't switch on a machine with mounted transport security!

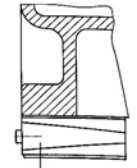
Before switching on the machine, it is absolutely essential to dismounting the transport securing otherwise risk of collision!



PLAN VIEW 1:50
FLOORYS

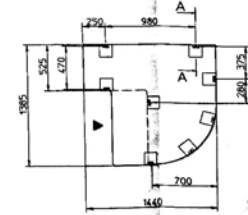


PART SECTION A-A
REZ A-A
M 1:2.5



LEVELLING SHOES
STAVEDI BOTKA
(140x140x60)

FOUNDATION PLAN 1:20
PLAN ZAKLADU



- EXPLANATION OF SYMBOLS
SYMBOLS (KODY)
- ▽ OPERATOR'S POSITION, GENERAL (MESTO OBLADATELE VEŠICE)
 - ▽ OPERATOR'S POSITION, MAIN (MESTO OBLADATELE HLAVNÍ)
 - ▽ ELECTRIC POWER CONNECTION (MESTO PŘIPOJENÍ ELEKTŘINY)
 - ▽ HYDRAULIC OIL CONNECTION (MESTO PŘIPOJENÍ HYDRAULICKÉHO OLEJE)
 - ▽ COMPRESSED-AIR CONNECTION (MESTO PŘIPOJENÍ PNEUMATICKY STLAČENÉHO VZDUCHU)
 - ▽ COOLANT CONNECTION (MESTO PŘIPOJENÍ CHLAZIVA)
 - ▽ CHIPS (OPROSKY)
 - ▽ CHIPS WITH COOLANT (OPROSKY S CHLAZIVOU)
 - ▽ OIL DRAIN (ODVODNĚNÍ OLEJE)
 - ▽ COOLANT TANK (CHLAZIVOVÝ NÁDOB)
 - ▽ HYDRAULIC UNIT (HYDRAULICKÝ NÁDOB)
 - ▽ ELECTRIC CABINET (ELEKTŘINOVÝ SKŘÍŇ)
 - JACKING WHEEL (ROZDÍLOVÝ KOLÍČEK)
 - LEVELING SHOE (STAVEDI BOTKA)
 - CENTER ZERO POINT (STŘEDNÍ NULA)
 - LEVELING SHOE (STAVEDI BOTKA)
 - LEVELING SHOE (STAVEDI BOTKA)

AMBIENT TEMPERATURE OF LOCATION OF MACHINE SHOULD NEVER EXCEED +4°C.
POKOJOVÁ TEPLOTA MÍSTNOSTI, VE KTERÉ JE MONTOVÁN STROJ, NIKDY NEPŘESÁHNĚ +4°C.

THE PLACE OF INSTALLATION OF THE MACHINE MUST BE COMPLETELY FREE OF VIBRATION.
MÍSTNOST, VE KTERÉ SE MONTUJE STROJ, MUSÍ BÝT ABSOLUTNĚ PROSTĚ VIBRACÍ.

WEIGHT CONNECTED: 1150 kg
PROTÍHŮVĚNÍ: 1150 kg

FOUNDATION: BEAR HORIZONTAL LOAD 20kN PER SQUARE METER.
PLOCHA ZAKLADU (CA 2 T) MŮŽE BÝT POUŽITA PRO VODNÍ VÝSTUPY.

ROOM REQUIRED FOR SWING-OUT DOORS: POTŘEBA MÍSTNOSTI PRO OVLÁDÁNÍ VÝSTUPNÍMI DVEŘAMI.

ROOM REQUIRED FOR OPERATION: POTŘEBA MÍSTNOSTI PRO OVLÁDÁNÍ STROJEM.

ROOM REQUIRED FOR REPAIRS: POTŘEBA MÍSTNOSTI PRO OPRAVY.

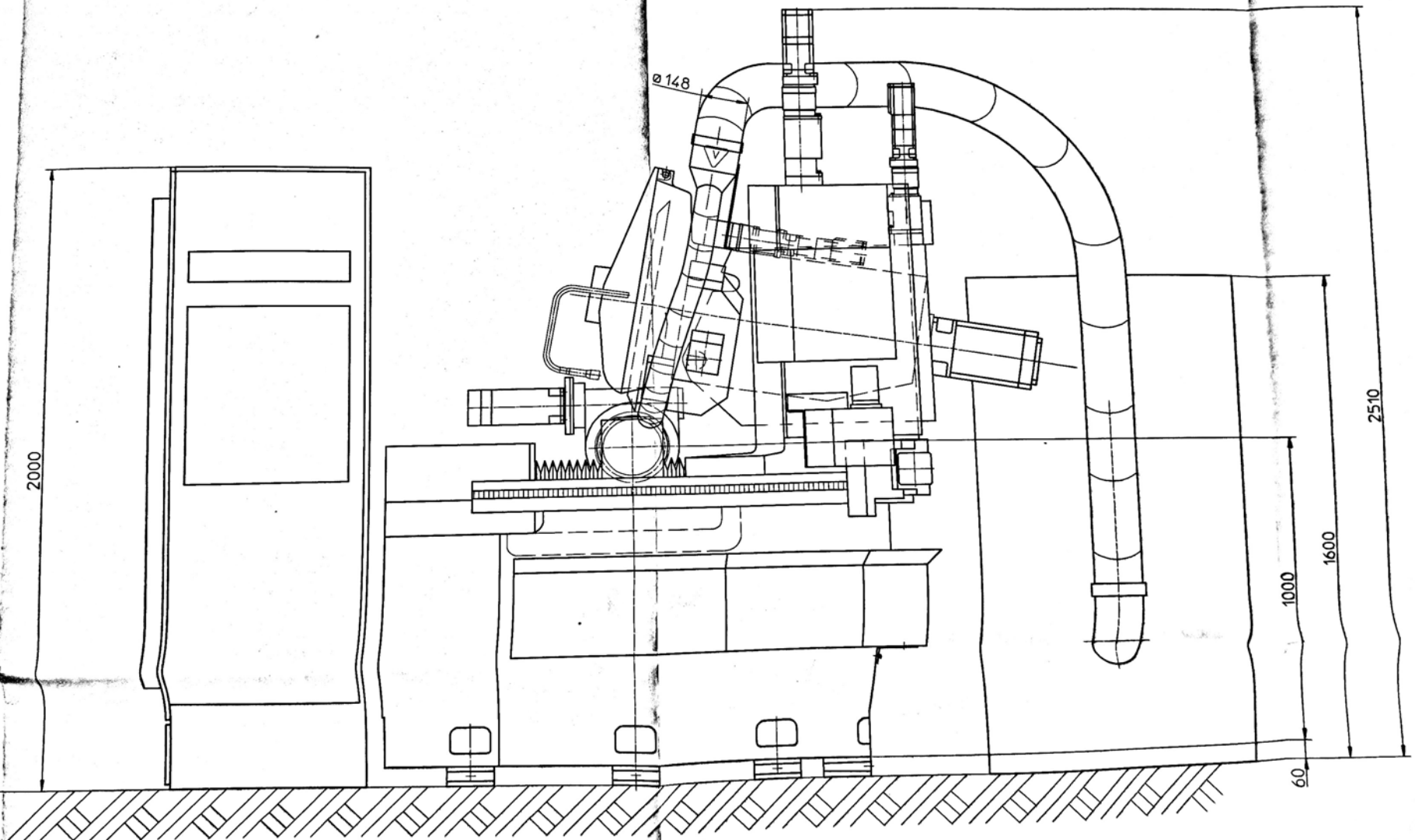
END-POSITIONS OF MACHINE PARTS: KONČOVÉ PŘÍČKY ČÁSTÍ STROJE.

ALL MEASUREMENTS ARE APPROX.
VŠECHNY MĚŘENÍ SÚDÍ PŘibližně.

GD 101 Form (Application of Gleason Drawing & Tolerancing)

Item	Code	Value	Unit	Symbol	Priority
1	1	1	mm	1	1
2	2	0.1	mm	2	2
3	3	0.05	mm	3	3
4	4	0.02	mm	4	4
5	5	0.01	mm	5	5
6	6	0.005	mm	6	6
7	7	0.002	mm	7	7
8	8	0.001	mm	8	8
9	9	0.0005	mm	9	9
10	10	0.0002	mm	10	10

Gleason
 NONTAŽNÍ VÝKRES
 AUFSTELLUNGSPLAN SR5410
 MBO101-ASP



2000

$\varnothing 148$

1000

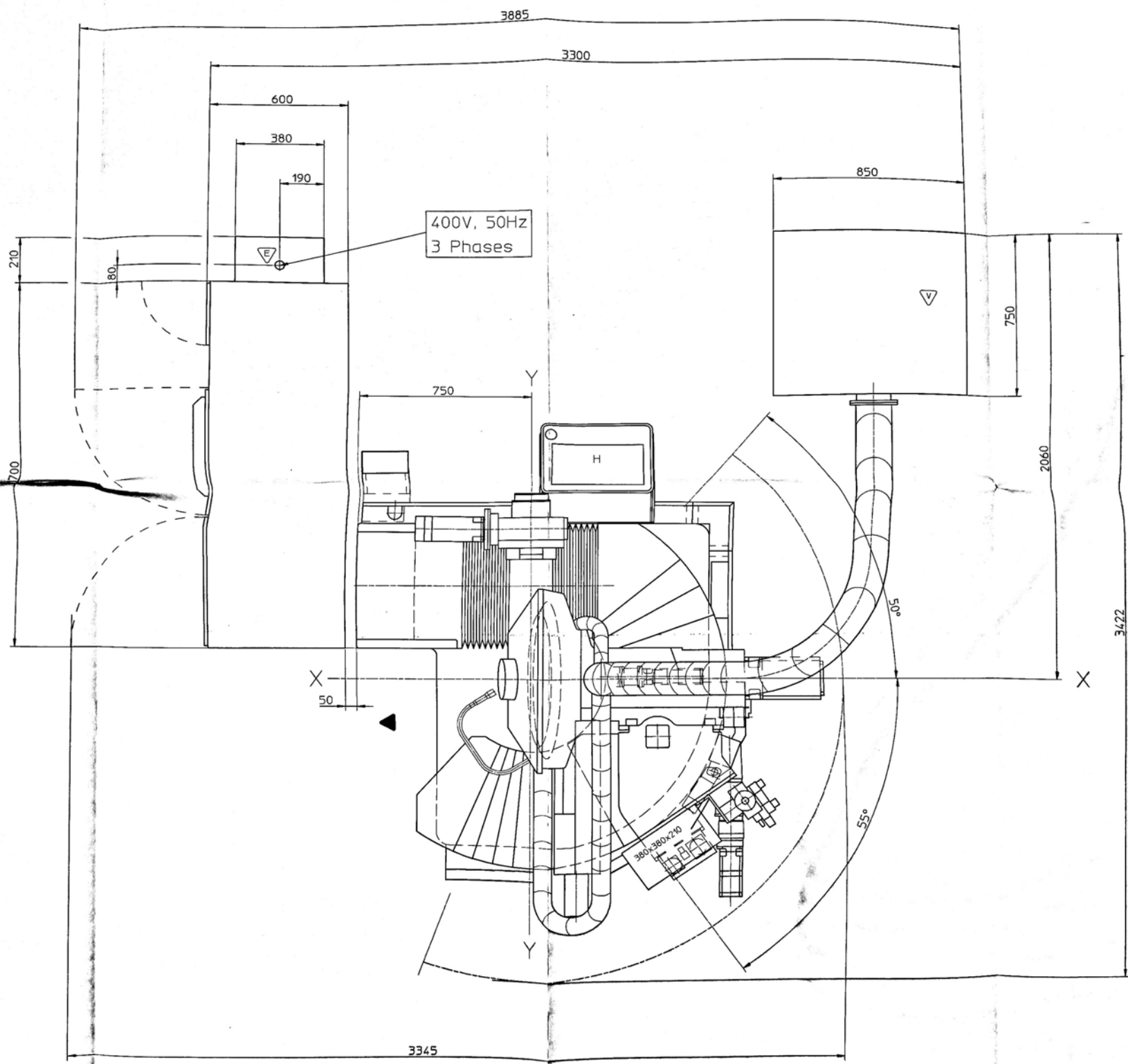
1600

2510

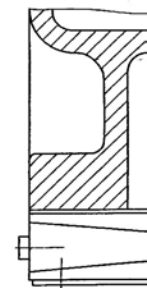
60

3885

3300



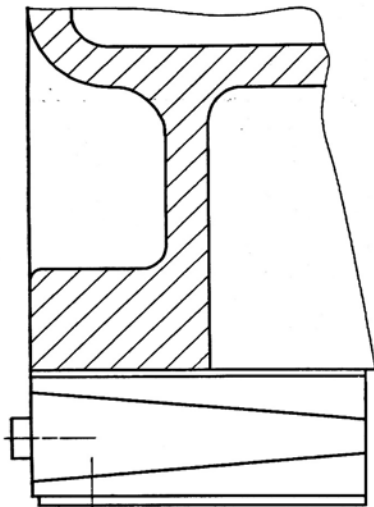
PART SEC
 REZ A-A
 M 1:2.5



LEVELL
 STAVE
 (140x14)

PART SECTION A-A

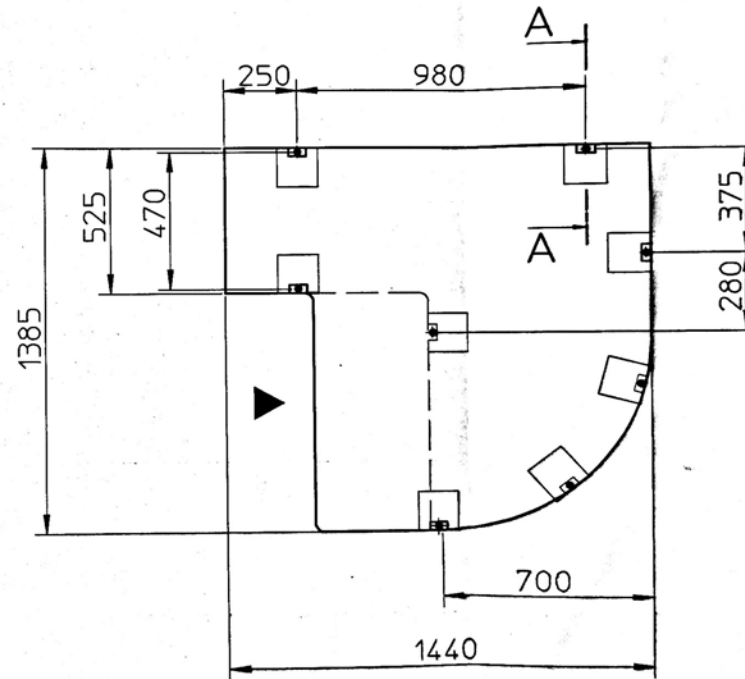
REZ A-A
M 1:2,5







LEVELLING SHOES
STAVECI BOTKA
(140x140x60)

FOUNDATION PLAN 1:20

PLAN ZAKLADU



 KO
 LEV ST.
 CER ST.
 WA VOO

AMBIENT TEMPERATURE OF MACHINE SHOULD NOT EXCEED 40°C



THE PLACE OF THE MACHINE SHOULD BE FREE OF VIBRATIONS

WEIGHT OF THE MACHINE SHOULD BE CONNECTED TO THE FOUNDATION

FOUNDATION REQUIREMENTS
 PLOCHA ZAKLADU
 ROOM REQUIREMENTS
 OBLAST OTROU
 ROOM REQUIREMENTS
 POTREBA MEST
 ROOM REQUIREMENTS
 POTREBA MEST
 END-POSITIONS
 KONCOVA PLOCHA

ALL MEASUREMENTS IN MILLIMETERS
 VSECHNY ROKY V MILIMETROCH

ISO 1101 Form-Lagelozanzen / Geometrische Toleranzen

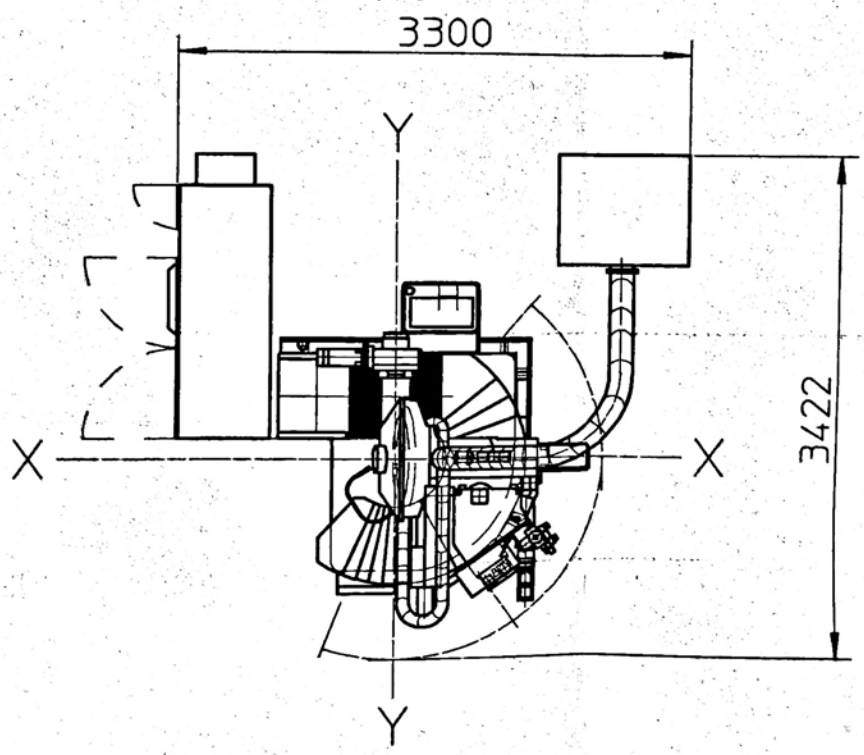
Measure-Mass	0.5-6	6-30	30-120	120
Tolerance-Toleranz	+0.1	+0.2	+0.3	+0.4
 	Length-Laenge		0-10	10
	Tolerance-Toleranz		+1°	+0.1°

Material Werkstoff

Heat Treat-Hardness Waermebehandlung-Haerte

Surface Treatment Oberflaechenbehandlung

PLAN VIEW 1:50
PUDORYS



EXPLANATION
 VYSVETLENIE

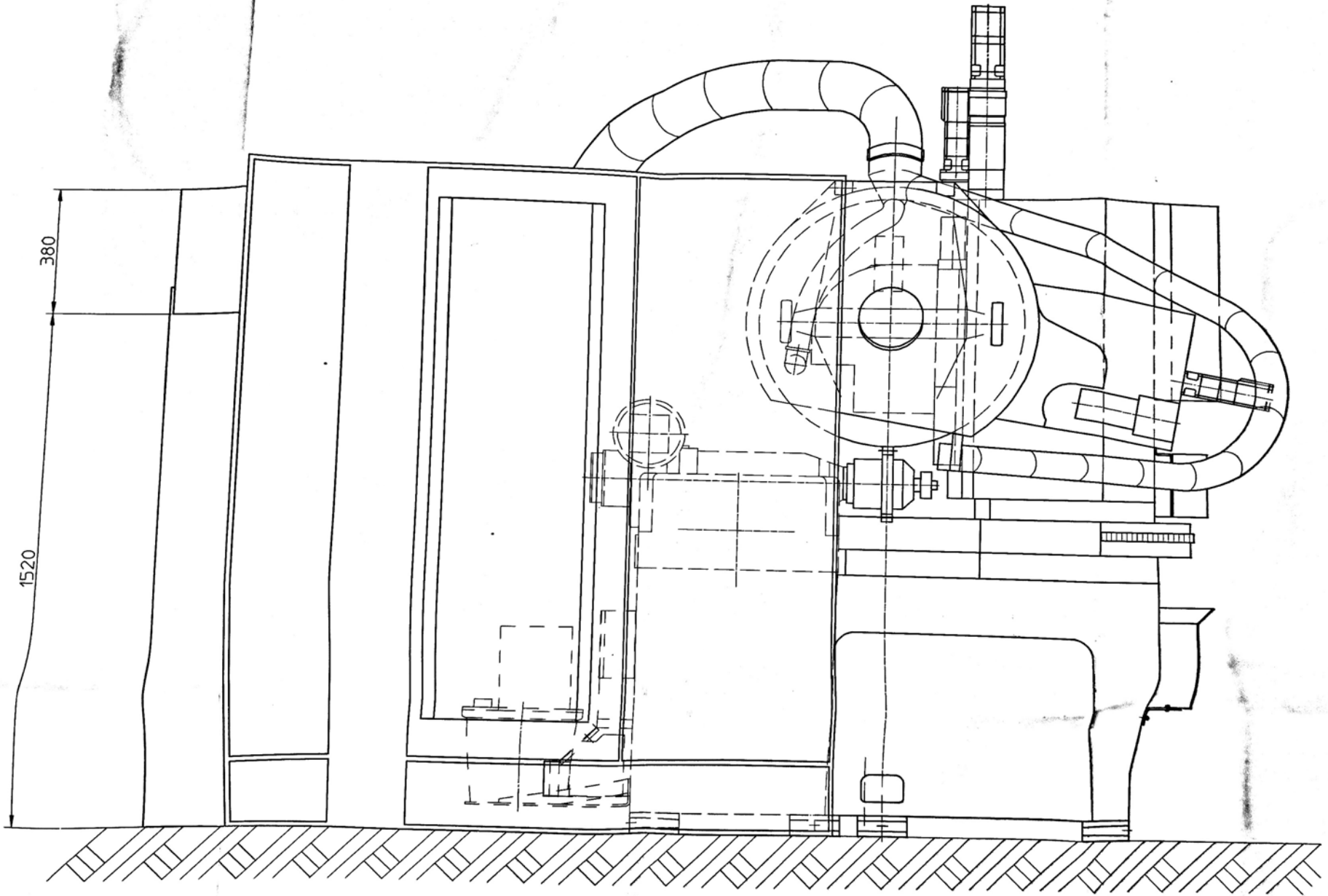
- ▽ OPER. MISTO
- ▼ OPER. MISTO
- ▽E ELEC. MISTO
- ▽H HYDR. MISTO
- ▽P COMP. MISTO
- ▽C COOL. MISTO
- ▽● CHIPS. TRISK.
- ▽●C CHIPS. TRISK.
- ▽V OUTL. ODVA.
- C COOL. CHLA.
- H HYDR. HYDR.
- E ELEC. ELEK.
- O ANCH. KOTEV.
- LEVEL STAVE.
- ◐ CENTE. STRED.
- ▽W WATER VODA

5












6

7

8



EXPLANATION OF SYMBOLS
VYSVETLENI SYMBOLU

-  OPERATOR'S POSITION, GENERAL
MISTO OBSLUHY VSEOBECNE
-  OPERATOR'S POSITION, MAIN
MISTO OBSLUHY HLAVNI
-  ELECTRIC POWER CONNECTION
MISTO PRIPOJENI ELEKTRICKE SILY (ENERGIE)
-  HYDRAULIC OIL CONNECTION
MISTO PRIPOJENI HYDRAULICKEHO OLEJE
-  COMPRESSED-AIR CONNECTION
MISTO PRIPOJENI PNEUMATIKY (STLACENEHO VZDUCHU)
-  COOLANT CONNECTION
MISTO PRIPOJENI CHLADICI A MAZACI KAPALINY
-  CHIPS
TRISKY
-  CHIPS WITH COOLANT
TRISKY S CHLADICI KAPALINOU
-  OUTLET
ODVADENY VZDUCH
- C** COOLANT UNIT
CHLADICI AGREGAT
- H** HYDRAULIC UNIT
HYDRAULICKY AGREGAT
- E** ELÉCTRIC CABINET
ELEKTROSKRIN
- O** ANCHORING HOLE
KOTEVNI OTVOR
- LEVELING SCREW
STAVECI SROUB
-  CENTER, ZERO POINT
STRED, NULOVI BOD
-  WATER
VOVA

HMN10550-CZ
HMN10550-EN

AMBIENT TEMPERATURE OF LOCATION
OF MACHINE +20°C. FLUCTUATIONS
SHOULD NEVER EXCEED ±4°C.

POKOJOVA TEPLOTA STANOVISTE
STROJE +20° C. VYKYVY JE
TREBA OMEZIT NA ±4° C.

THE PLACE OF INSTALLATION OF
THE MACHINE MUST BE COMPLETELY
FREE OF VIBRATION.

STANOVISTE STROJE MUSI
BYT ABSOLUTNE PROSTE
OTRESU A VIBRACI

WEIGHT 6TS
CONNECTED 15kVA

HMOTNOST 6t
ELEKTRICKE PRIPOJNE HODNOTY 15kVA

FOUNDATION AREA (APPROX LOAD 2TONS PER SQUARE METER) _____
 PLOCHA ZAKLADU (CCA 2 T/M2)
 ROOM REQUIRED FOR SWING-OUT DOORS _____
 OBLAST OTVIRANI DVERI _____
 ROOM REQUIRED FOR OPERATION _____
 POTREBA MISTA PRO OBSLUHU _____
 ROOM REQUIRED FOR REPAIRS _____
 POTREBA MISTA PRO OPRAVY _____
 END-POSITION OF MACHINE PARTS _____
 KONCOVA POLOHA STROJNICH DILU _____

ALL MEASUREMENTS ARE APPROX
VSECHNY ROZMERY JSOU CCA ROZMERY

C

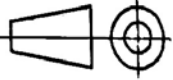
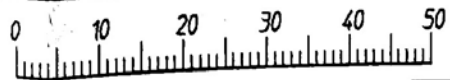
D

E

280
375

ALL MEASUREMENTS ARE APPROX
 VSECHNY ROZMERY JSOU CCA ROZMERY

ISO 1101 Form-Lagetoleranzen / Geometric Dimensioning & Tolerancing

Measure-Mass	0,5-6	6-30	30-120	120-400	400-1000	1000-2000	2000-4000	e ()					
Tolerance-Toleranz	±0,1	±0,2	±0,3	±0,5	±0,8	±1,2	±2,0	d ()					
	Length-Laenge	0-10	10-50	50-120	120-400	400+		c ()					
	Tolerance-Toleranz	±1°	±0°30'	±0°20'	±0°10'	±0°5'		b ()					
Material Werkstoff								a ()					
Heat Treat-Hardness Waermebehandlung-Haerte										28.07.10	Ularu	Ularu	
Surface Treatment Oberflaechenbehandlung								Revision Version	Modification Aenderung	Date Datum	Modification by Geaendert von	Responsible Zustaendig	
Order-Machine no. / Auftrags-Maschinen-Nr. 45127256 / B0095	Similar Part Aehnliches Teil								Plant / Werk Munich	Gleason			
Customer / Kunde	Machine Maschine	SRS410					Designation Benennung	-EN	MONTAZNI VYKRES				
Customer Number / Kundennummer HYUNDAI MOTORS CZECH	Weight - kg Gewicht - kg						Designation Benennung	-DE	AUFSTELLUNGSPLAN SRS410				
Customer Description / Benennung Kunde						Formal	A0	Units Masse in	mm	Scale Massstab	1:10	Sheet Blatt	01 of van 01
							Last Mod. Stand von	Material No./Material-Nr. Drawing No./Zeichnungs-Nr. MB0101-ASP					

7

8