

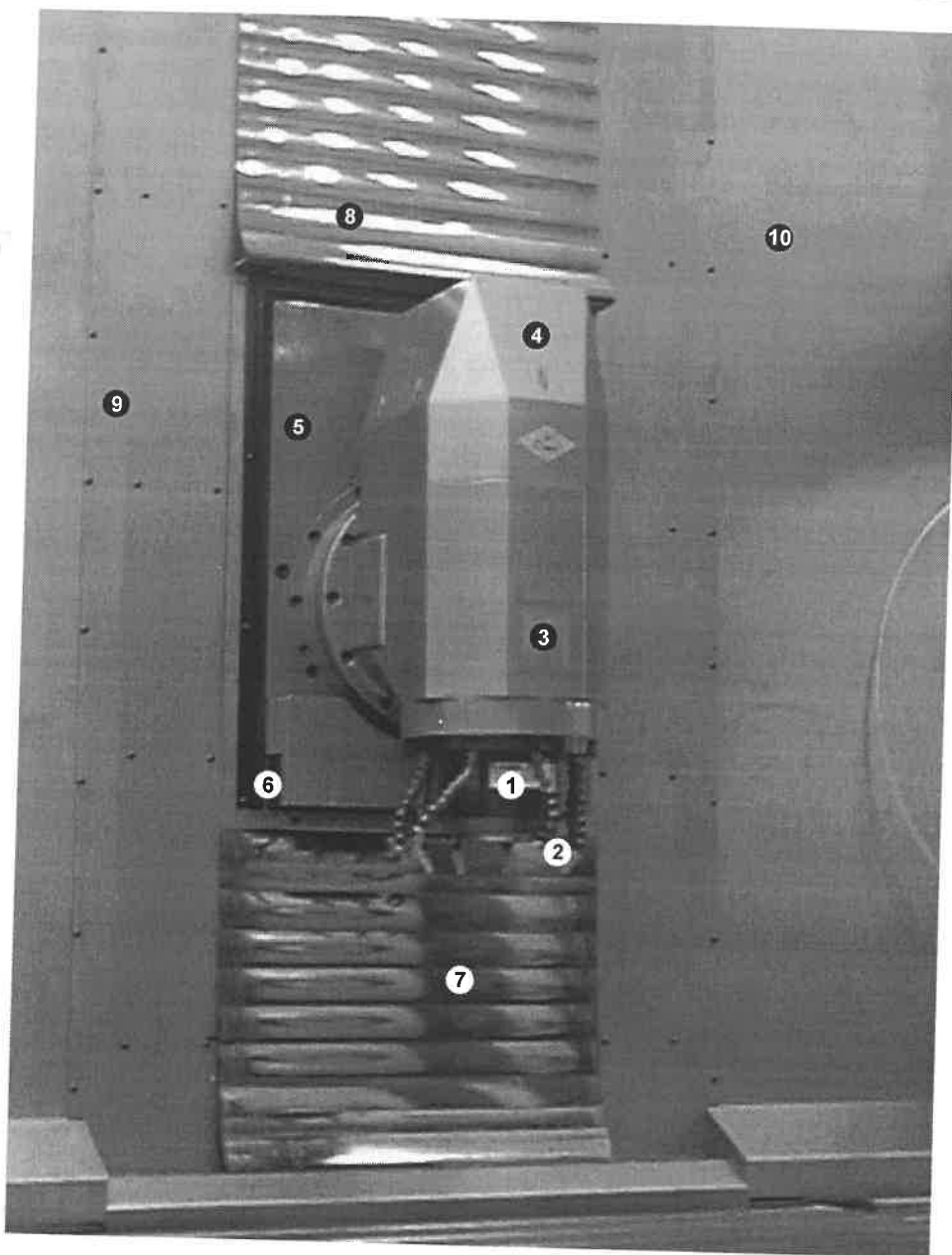


4 - USE AND MAINTENANCE

MAV-412

4.2 - MILLING HEAD

23



- 1 - SPINDLE ISO-40 / DIN-69871 Cod. *****
- 2 - COOLANT OUTFLOW Cod. *****
- 3 - REFERENCE PLAN FOR HEAD MEASURE Cod. *****
- 4 - INSPECTION COVER Cod. *****
- 5 - MILLING HEAD SWIVEL Cod. *****
- 6 - PROTECTION BELLOWS FOR CROSS SLIDES Cod. **See at Page 27**
- 7 - PROTECTION BELLOWS FOR VERTICAL SLIDES Cod. SO/BPV-06-015
- 8 - VERTICAL CLOSING BELLOWS Cod. SO/BPV-03-024
- 9 - LEFT TELESCOPIC PROTECTION Cod. SO/BPV-03-024
- 10 - RIGHT TELESCOPIC PROTECTION Cod. SO/BPV-03-026



MILLING HEAD = MOBIL type DTE 21



ELECTROSPINDLE = MOBIL type DTE LIGHT



4 - USE AND MAINTENANCE

MAV-412

4.3 - ELECTROSPINDLE

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OPERATIONAL NORMS - GENERAL NOTES AND INSPECTIONS

If you want to use the electrospindle in a correct way you have to comply with the following operational instructions concerning the installation, the operational temperature, pressure values and cleaning procedure.

- 1 - **Check the rotation direction at low speed.**
- 2 - Before machining start the electrospindle in idle running for 10÷15 minutes at minimum speed in order to reach the optimal temperature value.
- 3 - **When the electrospindle is cold, don't accelerate or decelerate too much.**
- 4 - Before you start running electrospindles with bearings, cooled by oil, be careful that the oil has reached the lubrication points and follow carefully the instructions, indicated in FAEMAT handbook, concerning the necessary oil quantity to be filled up.
TOO MUCH OIL COULD CAUSE OVERHEATING OR DAMAGE TO ELECTROSPINDLE BEARINGS.
- 5 - Check the connection cables. They should not be worn up, washed up by coolant or water. Therefore you shall never run the machine with inspection cover (**Page 25 Point 12**) opened.
- 6 - Tools to be fitted in the spindle should not be too long, as they could cause vibrations being dangerous during machining. These vibrations can be very dangerous for the electrospindles and spindles as they alter the shaft position and therefore the position of the rotor as well. Vibrations are considered dangerous (with tool fitted into the spindle) when they are higher than **1,2 mm/s per grinding** and **5 mm/s per milling**.

SECURITY NORMS

Before machining with the electrospindle, it's good thing to read carefully the security rules indicated in the FAEMAT handbook in order to avoid unpleasant crashes or situations.

TOOLS and TOOLHOLDERS

- ◆ Tools must be balanced and centered.
- ◆ Don't use added tool shafts.
- ◆ Clamp tools as short as possible.
- ◆ Check that toolholders and pull studs are according to the international norms as far as dimensions and used material are concerned.

We want to remind you that vibrations could arise if you have too long tools in the spindle, which can be dangerous for precision during machining, and for the life and good order of the electrospindle.

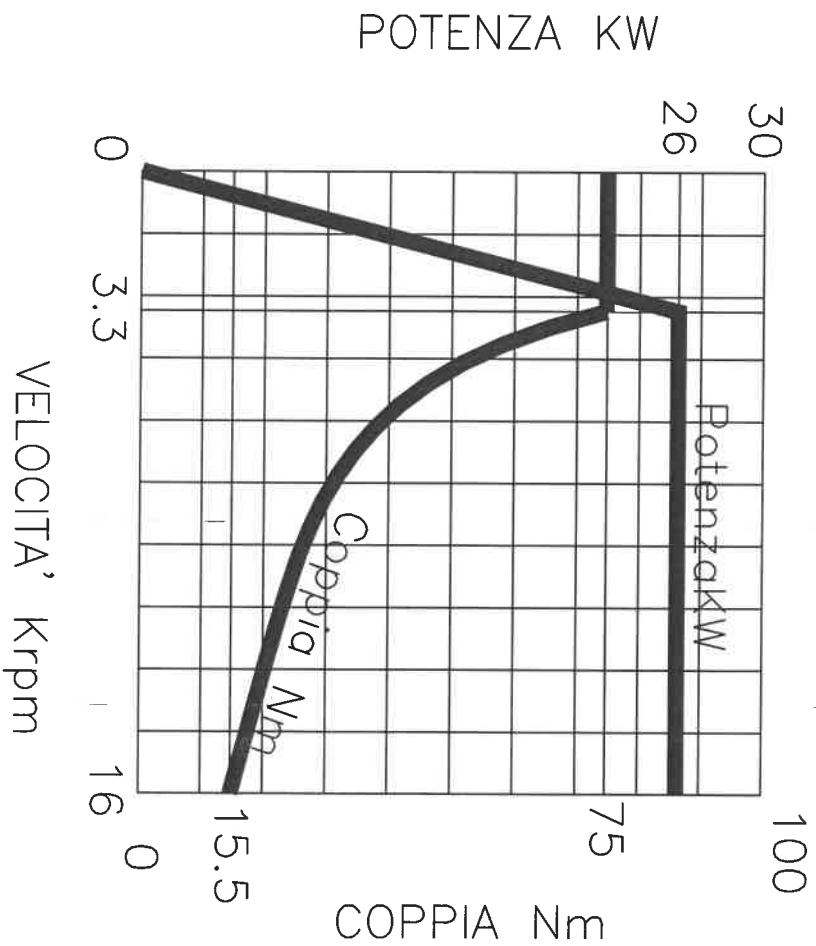
NOT COMPLYING WITH THE ABOVE MENTIONED RULES CAN CAUSE DAMAGES TO PEOPLE AS WELL.



WE RECCOMEND YOU TO REFER TO THE ENCLOSED "FAEMAT" HANDBOOK, IF YOU WANT A MORE DETAILED DESCRIPTION.

VELOCITA' RPM	3300	16000
FREQUENZA Hz	110	533
POTENZA (S1) KW	26	26
COPPIA Nm	75	15.5

SYNCHRONOUS MOTOR
Model 1FE 1093-4WH11-1BA0




 FAERMAT LIVORNO FERRARIS (VC)	Oggetto: FAI 270X350X720 - HSK A 63		
	Cliente:		
Dato: 09/04/01	N° ORDINE:	CODICE: A0133	DEF.N°1405-00
			FOGGIO:3/3

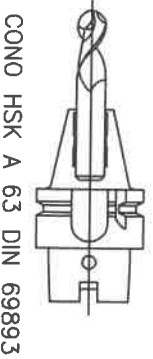
Figura 1.7



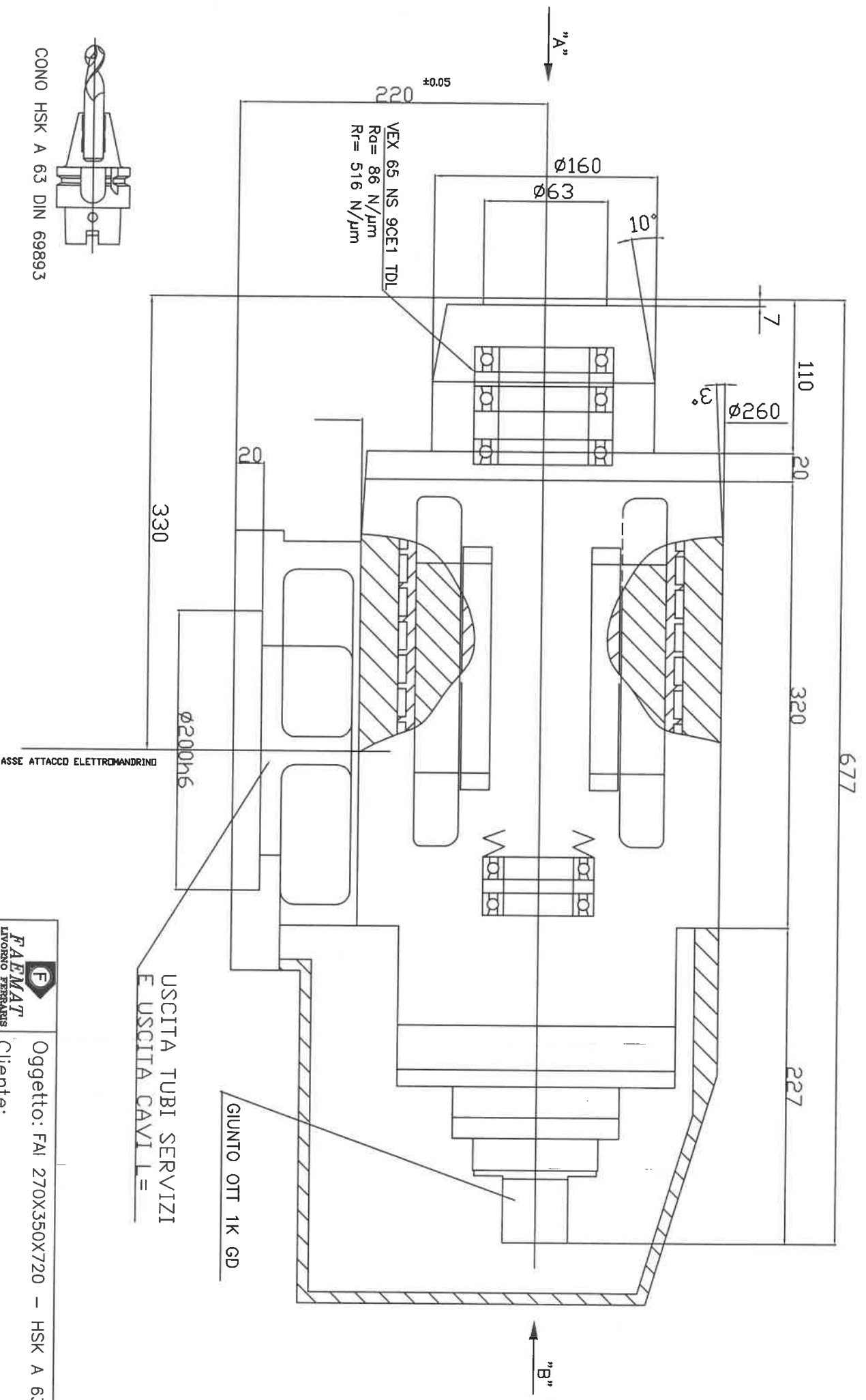
Elettromandrino tipo	FA° 270x350x720
Matricola	000815
Convertitore	/ / /
Matricola	/ / /
Cliente	OMV
Data	10-08-2000

Collaudo ruota fonica	
Tipo ruota fonica	HEIDENHAIN ERM 180 Ø 80
Tipo di segnale	ONDA SINUSOIDALE
Matricola	ID/NR 316803-02 S/NR 8403206 A
Interfacciato a	SIEMENS
Alimentazione	+ 5 VOLT
Strumenti usati	OSCILOSCOPIO LE CROY SCATOLA SIEMENS
Segnale A+	D000 : SOMMA DEI SEGNALI A
Segnale B+	D001 : " " " B
Segnale A-	D002 : " " " R
Segnale B-	D003 : A e B / R
Segnale N+	D004 : OFFSET A e B TRACIA A
Segnale N-	D005 : " " TRACIA B
Varie.	PROVAIO AL MASSIMO DEI GIR°
Tempo totale:	30 minuti

Tecnico: Andrea Dele

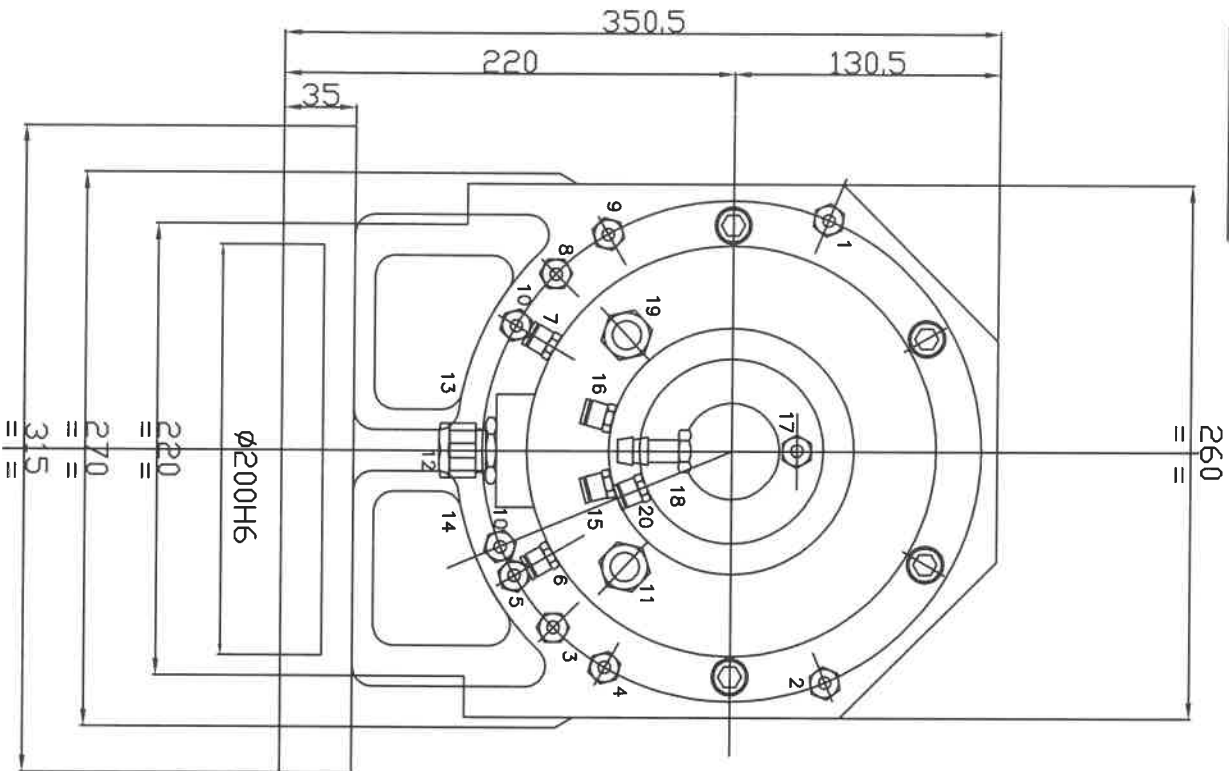


CONO HSK A 63 DIN 69893



 FAEMAT LAVORNO FERRARIS (YC)		Oggetto: FAI 270X350X720 - HSK A 63 Cliente:
Data: 09/02/01	N° ORDINE: CODICE: AD133	DEF. N° 1405/A-00 FOGLIO: 1/3

VISTA DA "B"



- 1 - Uscita liquido refrigerante
- 2 - Ingresso liquido refrigerante
- 3 - Ingresso continuo aria filtrata (0.5 um) per pressurizzazione (1-1.5 bar MAX)
- 4 - Ingresso aria-olio cuscinetto anteriore 1
- 5 - Ingresso aria-olio cuscinetto anteriore 2
- 6 - Ingresso aria-olio cuscinetto posteriore 1
- 7 - Ingresso aria-olio cuscinetto posteriore 2
- 8 - Ingresso aria-olio cuscinetto anteriore 3
- 9 - Recupero aria-olio cuscinetti
- 10 - Ingresso liquido refrigerante utensile esterno
- 11 - Uscita cavi ruota fonica
- 12 - Connettore motore

*Fasi motore

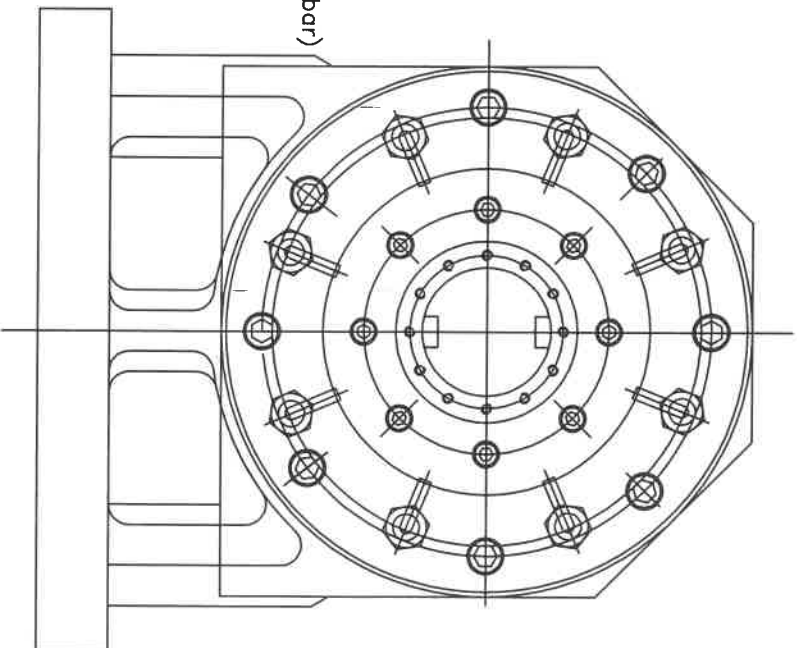
*Terra

*Sonda termica

- 13 - Uscita cavi sonda cuscinetti
- 14 - Uscita cavi sensore di vibrazioni
- 15 - Ingresso olio cambio utensile (60min-80max bar) (utilizzare solo a elettromandrino fermo)
- 16 - Ingresso olio ritorno pistone
- 17 - Scarico eventuali perdite giunto
- 18 - Ingresso aria pulizia cono (6 bar) (da utilizzare solo ed esclusivamente con utensile sganciato e pistone in pressione a mandrino fermo)
- 19 - Ingresso lubro-refrigerante utensile (a mandrino in rotazione)
- 20 - Uscita cavi Prossimiti (PX1-PX2)
PX1 = Cono utensile agganciato.
PX2 = Pistone in pressione pronto a ricevere il cono utensile.
L'elettromandrino non può lavorare.
PX4 = Cono utensile non agganciato.
L'elettromandrino non può lavorare.

20 - Ingresso continuo aria filtrata (0.5 um) per pressurizzazione giunto (1-1.5 bar MAX)

VISTA DA "A"



Oggetto: FAI 270X350X720 - HSK A 63

Cliente:

N° ORDINE:

Data: 09/04/01

q00E: A0133

DEF: N°1405-00

FOGLIO: 2/3