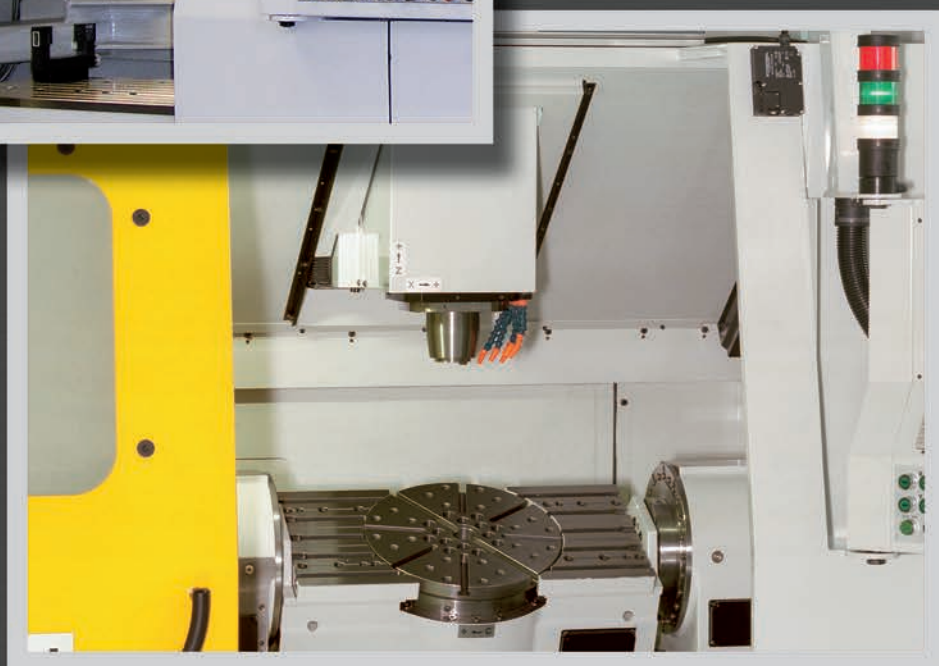


C.B. Ferrari



FRESATRICI - CENTRI DI LAVORO

MILLING MACHINES - MACHINING CENTRES

Serie
M-ML



Fondata nel 1966, **C.B.Ferrari** si è affermata come leader mondiale nella costruzione di Centri di Lavoro ad alta precisione a Controllo Numerico. Attualmente **C.B.Ferrari** produce nei due stabilimenti in Italia, quello originale di Mornago (VA) e quello di Modena. Con oltre 4200 macchine vendute in tutto il mondo e circa 160 dipendenti, **C.B.Ferrari** ha l'esperienza e competenza per affrontare qualsiasi progetto.

*Founded in 1966, **C.B.Ferrari** has established itself as a world leader in high precision CNC Machining Center solutions. Currently **C.B.Ferrari** operates with two manufacturing facilities in Italy, the original in Mornago (VA) and the expansion in Modena.*

*With over 4200 machines worldwide and around 160 employees **C.B.Ferrari** has the experience and expertise to assist with any project.*

C.B.Ferrari progetta e realizza tutte le macchine internamente per assicurare la massima qualità ed efficienza. Gli Elettromandrini, i Divisori, i Magazzini Utensili e la propria divisione CAM, garantiscono ai Clienti il massimo in termini di supporto alla produzione.

Le macchine **C.B.Ferrari**, si rivolgono a tutti i seguenti settori produttivi:

- Stampi e attrezzature
- Aeronautico
- Energetico
- Meccanica di Precisione
- Medica
- Automotive

C.B.Ferrari design and manufactures all machines in house to ensure quality and availability. Electrospindles, Dividing Heads, Tool Magazines and its own CAM division ensure customers with ultimate in manufacturing support. **C.B.Ferrari's** machines are designed to support the following industries:

- Mould and Die
- Aviation
- Power Generation
- Precision Components
- Medical
- Automotive



C.B. Ferrari Qualità e precisione
To attain Quality and Precision

Serie M-ML

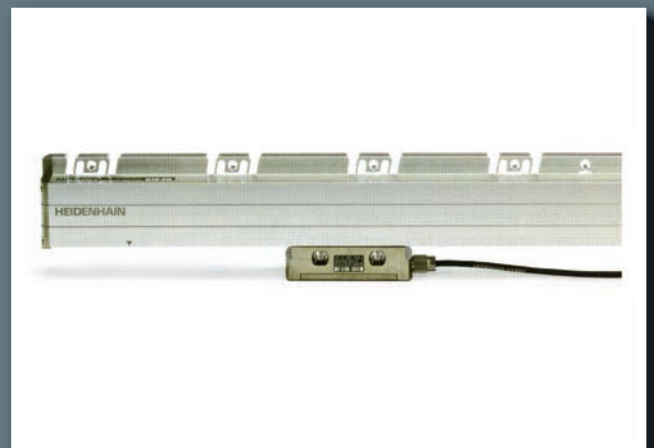
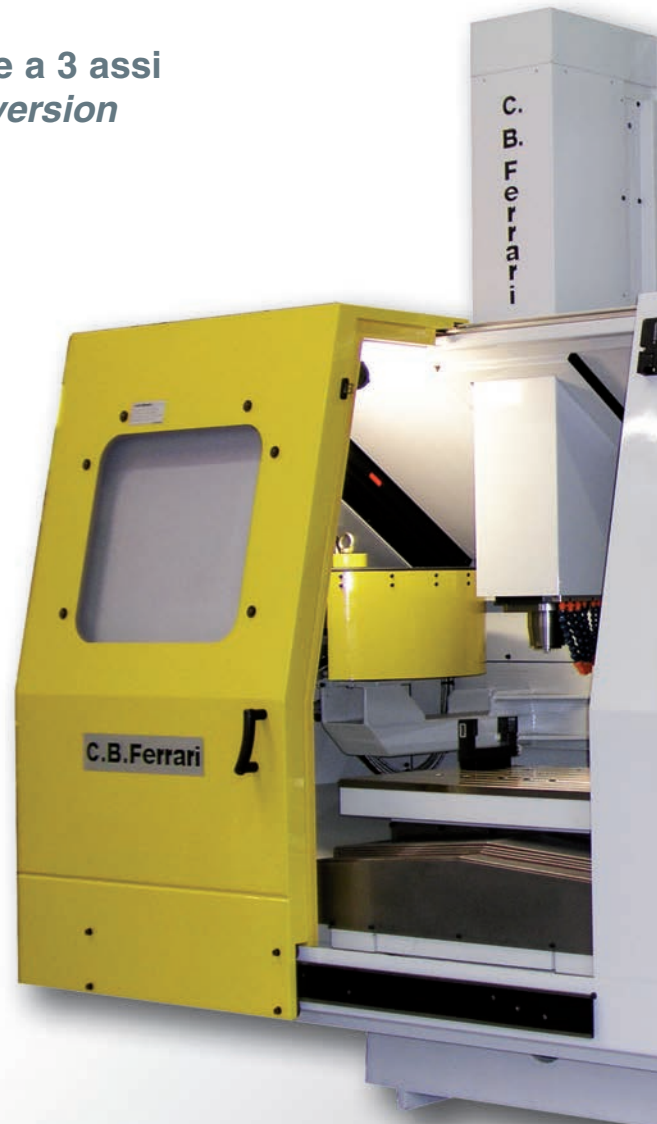
Serie M
con viti e motori
with screws and motors

Serie ML
con motori lineari
with linear motors

Vantaggi tecnici *Design advantages*

- Altissimo livello tecnologico
• *High-tech level*
- Macchina altamente dinamica
• *High dynamic machine*
- Righe ottiche su tutti gli assi per garantire elevate precisioni.
• *Absolute linear scales on all axes to ensure maximal precision*
- Gli elettromandrini sono progettati e costruiti **C.B.Ferrari**
• *The electrospindle are developed and produced by C.B.Ferrari*

Versione a 3 assi
3 axes version





Tutte le macchine sono equipaggiate con righe ottiche
assolute Heidenhain
All machines are equipped with Heidenhain absolute
linear scales.

CNC disponibili Available controls



Siemens 840D sl



Heidenhain ITNC 530



Elexa E580

Serie M-ML

Serie M
con viti e motori
with screws and motors

Serie ML
con motori lineari
with linear motors

Vantaggi tecnici *Design advantages*

- Altissimo livello tecnologico
• *High-tech level*
- Macchina altamente dinamica
• *High dynamic machine*
- Righe ottiche su tutti gli assi per garantire elevate precisioni.
• *Absolute linear scales on all axes to ensure maximal precision*
- Massima flessibilità nella configurazione a 5 assi
• *Maximum flexibility on 5 axes configuration*
- Gli elettromandrini sono progettati e costruiti **C.B.Ferrari**
• *The electrospindle are developed and produced by C.B.Ferrari*

Versione a 5 assi
5 axes version



Tutte le macchine sono equipaggiate con righe ottiche assolute Heidenhain
All machines are equipped with Heidenhain absolute linear scales.



CNC disponibili Available controls



Siemens 840D sl



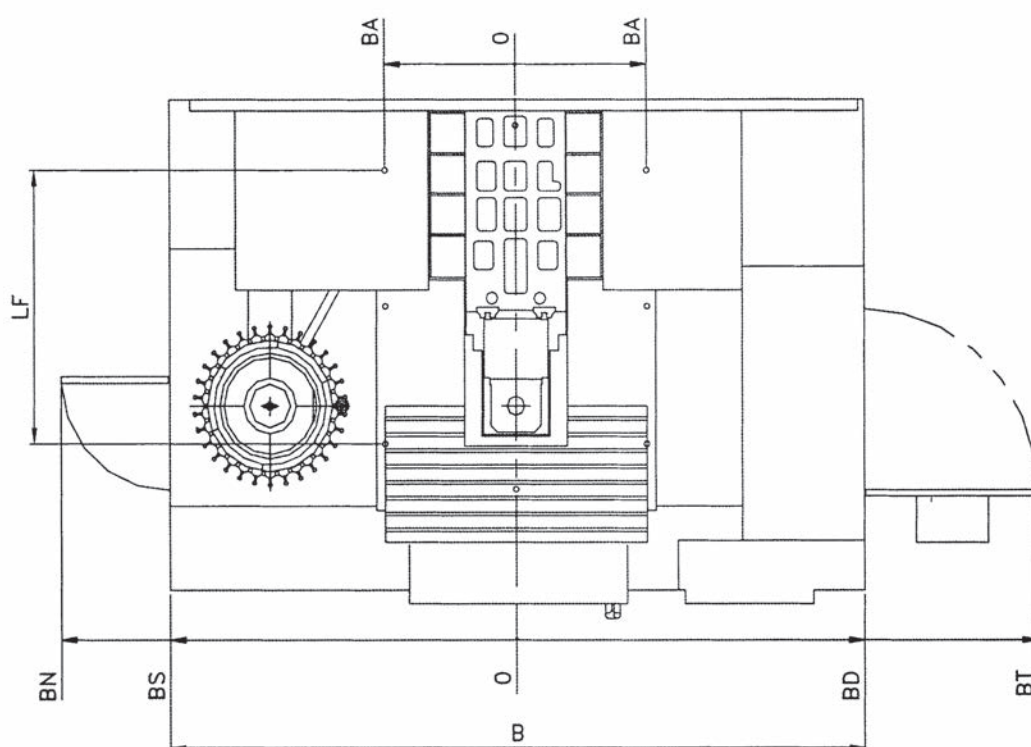
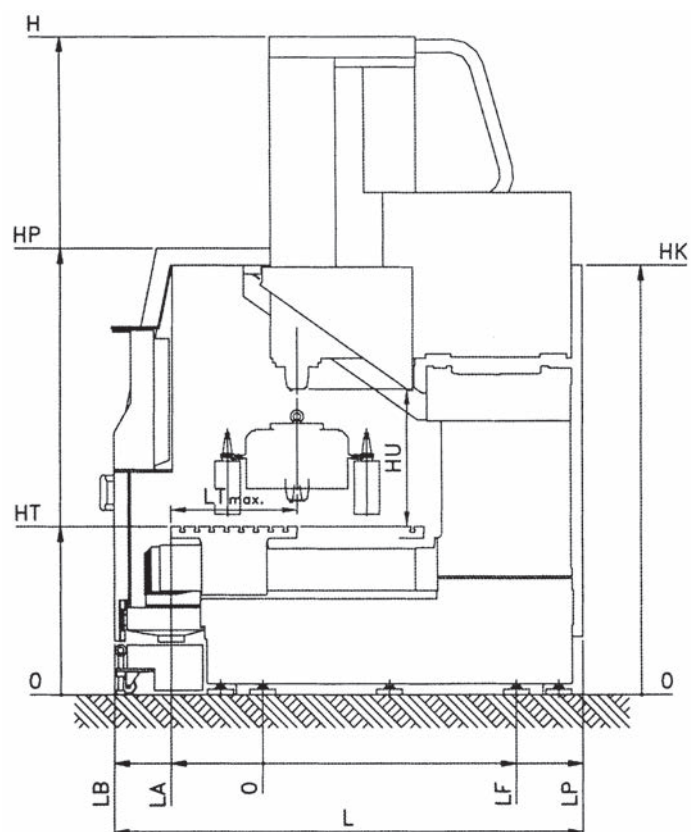
Heidenhain ITNC 530



Elexa E580



Tutti gli assi rotativi sono equipaggiati con encoder assoluti Heidenhain. Risoluzione 0,0001°
All rotary axes are equipped with Heidenhain absolute encoders. Resolution 0,0001°



	HT	HU	HP	HK	H	BA	BB	BD	BS	BN	BT	LA	LB	LF	LP	LT _{max}	L	B
M ML110	785	120-640	2080	2000	3085	600	-	1600	1595	2095	2400	435	705	1200	1520	600	2225	3195
	HT	HU	HP	HK	H	BA	BB	BD	BS	BN	BT	LA	LB	LF	LP	LT _{max}	L	B
M ML85	785	120-640	2080	2000	3085	600	-	1475	1595	2095	2270	435	705	1200	1520	600	2225	3070

CARATTERISTICHE TECNICHE - *TECHNICAL SPECIFICATIONS*

ML110/85 M110/85 LINEAR

CORSE - *SLIDE TRAVELS*

Longitudinale - <i>Longitudinal</i>	X	mm	1100/850	1100/850
Trasversale - <i>Cross</i>	Y	mm	600	600
Verticale - <i>Vertical</i>	Z	mm	520	520

ACCELERAZIONE - *ACCELERATION*

X Y Z	max	1 G	0,5 G
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ASSI - *AXES*

Spostamento rapido - <i>Feed rate</i>		m/Min.	60	40
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Potenza installata - <i>Rating Power</i>		kW	45	30
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DIMENSIONI E PESI - *DIMENSIONS AND WEIGHTS*

Misure di passaggio - <i>Measures for passage</i>	m	3 x 2,2 x 2,6H	3 x 2,2 x 2,6H
Peso netto - <i>Net Weight</i>	Kg	7000	7000

MAGAZZINO ROTANTE - *ROTABLE MAGAZINE*

Per coni ISO: V40 HSKA63 - V30
Capacità: da 30 a 36 utensili
For ISO tapers: V40 HSKA63 - V30
Capacity: 30 to 36 tools

TOLLERANZE DI POSIZIONAMENTO *POSITIONING TOLERANCES VDI/DGQ 3441*

Incertezza posizionale - <i>Positional uncertainty - P</i>	X P/Pa	mm	0,009/0,006	0,009/0,006
Deviazione di posizione - <i>Positional deviation - Pa</i>	Y P/Pa	mm	0,007/0,005	0,007/0,005
	Z P/Pa	mm	0,006/0,004	0,006/0,004

ACCESSORI - ACCESSORIES

C.B. Ferrari progetta e costruisce gli elettromandri che vengono applicati sulle macchine

C.B. Ferrari design and manufactures electrospindles mounted on the machines

TESTE ELETTROMANDRINO - *ELECTRO-SPINDLE HEADS*

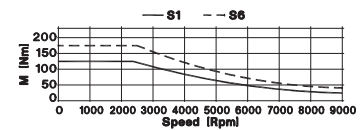
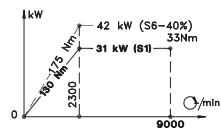
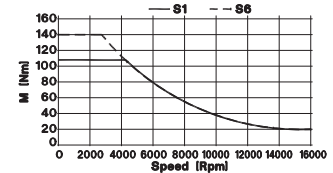
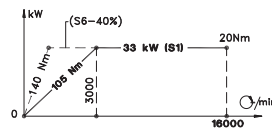
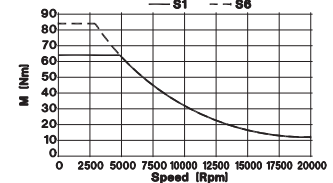
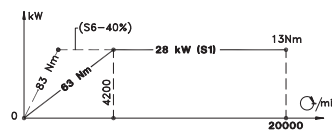
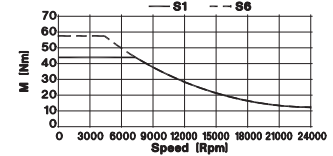
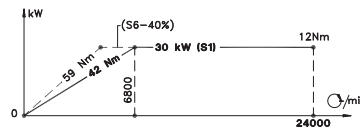
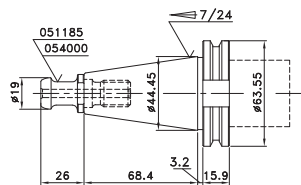
40000 RPM	HSK-E40	10/14 kW	5/7 Nm	Type 051555
32000 RPM	HSK-E40	25.5/32.5 kW	18/23 Nm	Type 051553
30000 RPM	ISO V30	11/15 kW	5/7 Nm	Type 050451
24000 RPM	ISO V40	30 kW	42/59 Nm	Type 050486
24000 RPM	HSK-A63	30 kW	42/59 Nm	Type 050488
20000 RPM	ISO V40	28 kW	68/83 Nm	Type 051556
20000 RPM	HSK-A63	28 kW	68/83 Nm	Type 051557
16000 RPM	ISO V40	33 kW	105/140 Nm	Type 050477
16000 RPM	HSK-A63	33 kW	105/140 Nm	Type 050478
9000 RPM	ISO V40	31/42 kW	130/175 Nm	Type 050498
9000 RPM	HSK-A63	31/42 kW	130/175 Nm	Type 050499



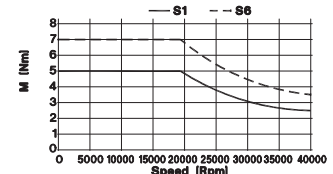
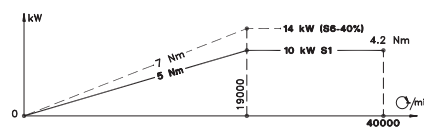
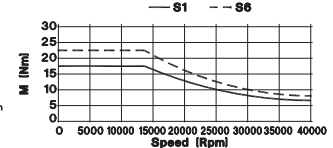
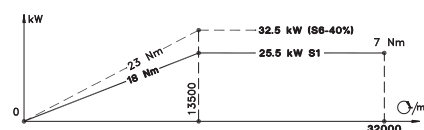
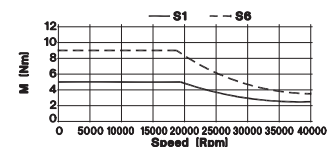
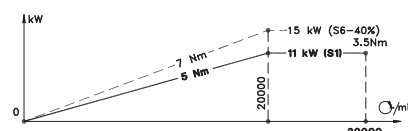
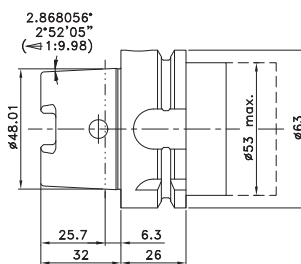
Cuscinetti a sfere ceramiche - *Ceramics ball bearings*
 Motore Sincrono integrato - *Integrated Synchronous Motor*
 Lubrificazione a grasso - *Grease lubrication*
 Funzionamento a bassa temperatura - *Low operating temperature*

Refrigerazione a liquido - *Liquid cooler system*
 Ridottissimi tempi di accelerazione e frenata - *Short acceleration and braking times*
 Compensazione termica automatica (sull'asse utensile) - *Automatic Thermal compensation (on tool axis)*

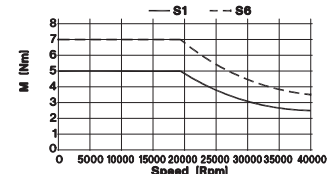
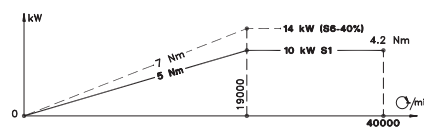
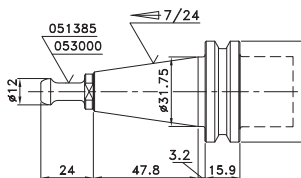
ISOV40 (ISO7388/DIN69871)



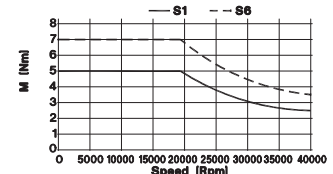
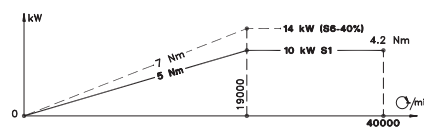
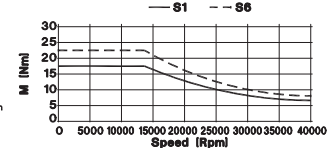
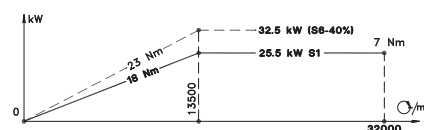
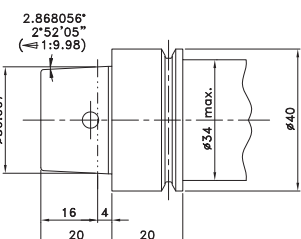
HSK-A63 (ISO12164-1/DIN69893)



ISOV30 (ISO7388/DIN69871)



HSK-E40 (ISO12164-1/DIN69893)

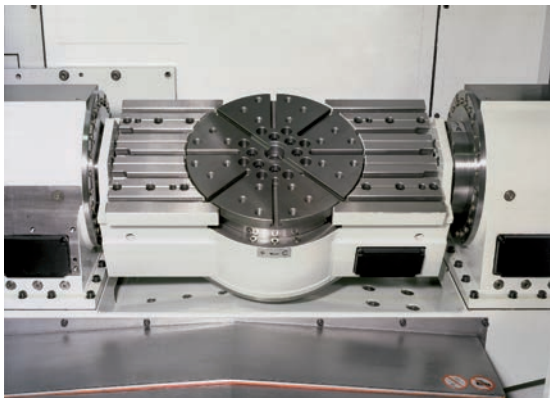
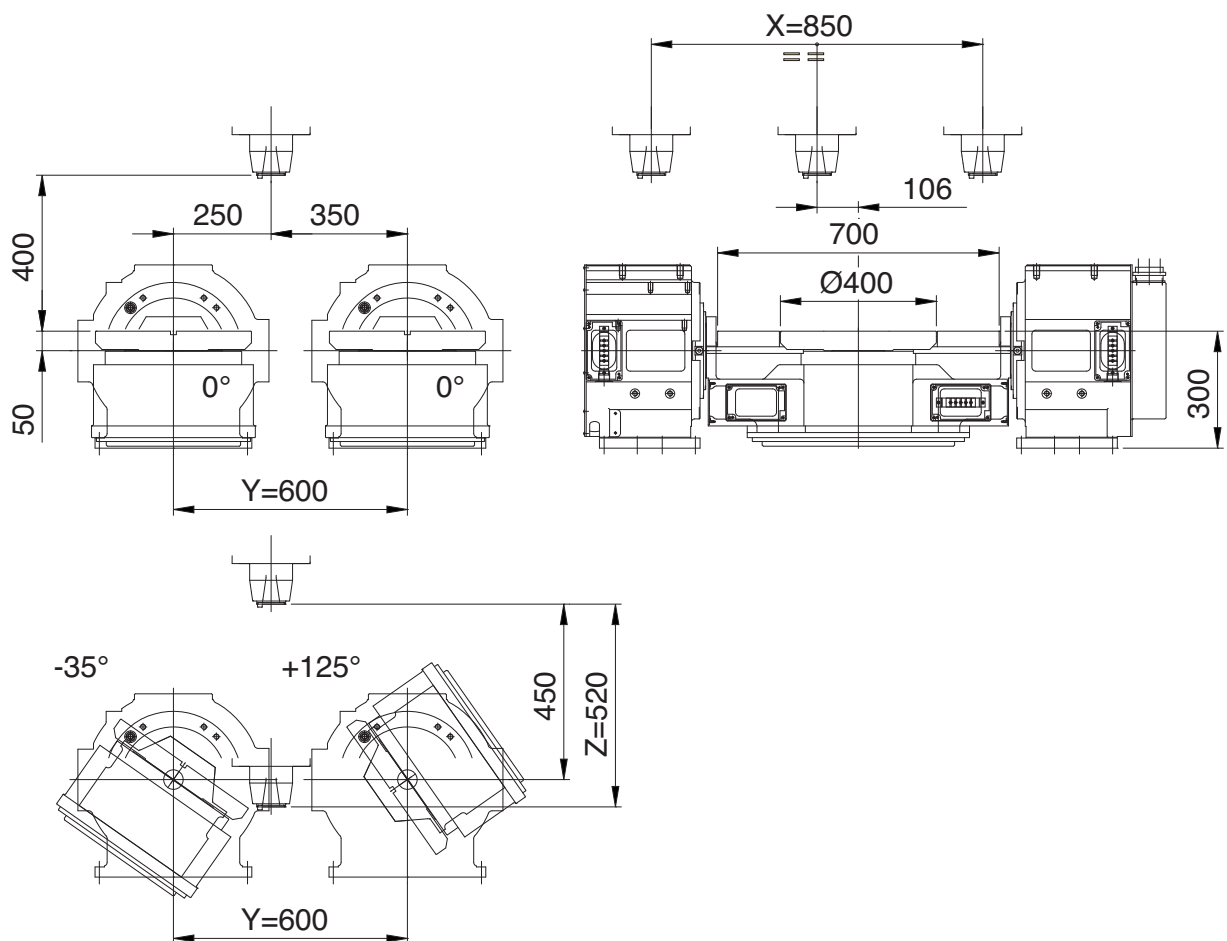


Versione a 3 assi - 3 axes version**ML110/85 M110/85**
LINEAR**TAVOLA - WORKING TABLE**Superficie di fissaggio - *Clamping Area*Scanalature a T - *Width of T-slots*

Carico ammesso sulla tavola

Allowed workpiece-weight on the table

mm	1200x600	1200x600
mm	14x70	14x70
Kg	500	1000

Versione a 5 assi - 5 axes version**TAVOLA BASCULANTE E GIREVOLE**
TILTING AND ROTARY TABLE**Type**
042400Motori coppia - *Torque motors*A = 80 RPM - 900 Nm continuo / *continuous*

B = 80 RPM - 1100 Nm -35° / +125°

PIATTAFORMA / FACEPLATE Ø 500 608901**PIATTAFORMA / FACEPLATE Ø 400 428905**
Con 2 semitavole / *With 2 halftables*Peso Max. pezzo / *Max. workpiece weight* Kg 500

Sede di Mornago (VA)
Site of Mornago

C.B.Ferrari s.r.l.

a socio unico

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Fax +39 0331 903642
cbferrari@cbferrari.com
www.cbferrari.com

Sede di Modena
Site of Modena

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Fax +39 059 280113