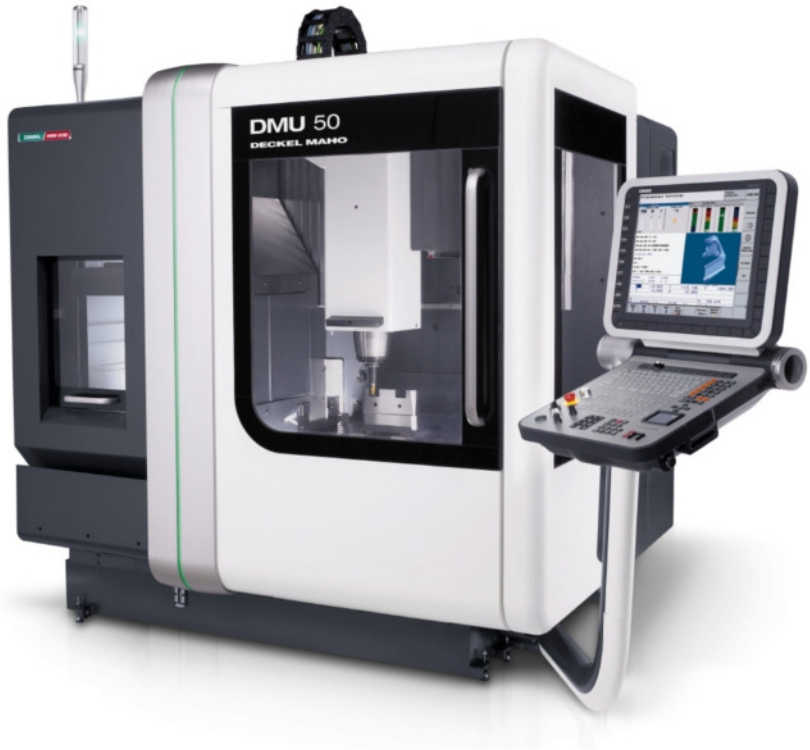
DMG MORI

报价

为

北京清华大学

DMU 50



亮点

_ **NEW DMG Design** , DMG ERGO*line* ® Control, 19" display, DMG LIGHT*line*
_ **Optimum flexibility** – Variable table options from rigid to swivel rotary table with digital drives for automatic 5-axis machining
_ **Optimum space economy** – Excellent accessibility to the work area, good chip disposal and steeply slanted walls, large working area in relation to small machine size
_ **Digital drives and direct measuring systems** (optional) guarantee highest precision and top surfaces
_ **Mounting of tool magazine parallel to production time**
_ **Powerful motor spindle** with up to 18,000 rpm (optional)
_ **3D-control technology** with 19”TFT screen, Siemens 840D solutionline
_ **德马吉全新设计**，DMG ERGO*line*®控制面板，19"显示器，DMG LIGHT*line*
灵活性好 – 工作台选配丰富 – 从固定工作台到数字驱动的回转摆动工作台进行自动化的5轴加工

投资 一览表

	Basic machine / 主机
C-A3073	DMU 50 New DMG Design
C-T3073	package DMU50 Shanghai MT, 包含：
C-C3042	Swivel Rotary Table, simultaneous
C-H3095	Manual control panel
C-L3003	电气柜冷却单元
	Control / 控制系统
C-B3129	3D-control Siemens 840D SL Operate
	Main drive / 主驱动
C-E3059	Spindle speed up to 18,000 rpm SK40
	Automation / Measuring / Monitoring / 自动化/测量/监控
C-K3201	4色信号灯
C-K3331	海德汉刀具测量系统TT140
C-K2532	3D quickSET
C-K3132	X，Y，Z轴直接测量系统
	Cooling media / chip removal / 制冷/排屑
C-N3007	Spray Gun for Swarf Removal
C-K3272	Swarf conveyor
	Screen text language / 屏幕显示语言
C-D-CN	Screen text chinese
	Services machine / 服务-机床
C-P3392	Box DMU50+chip conveyor for domestic transp
	贸易公司服务
922XY2	On-Site Training at Cust. Location in China, LM
922XY1	In-House Training at DMG/MS Academy China, LM
922SP1	Installation & Commissioning

总价(含税、到厂价) **1,554,970.00 RMB**

*详情请见附件

DMG ECOLINE GmbH
DMU 50

Basic machine / 主机

C-A3073*	Universal Milling Machine DMU 50 NEW DMG Design Traverse range X/Y/Z 500/450/400 mm / 19.6/17.7/15.7 in 24 m/min / 78.7 ft/m Rapid Feed Speed range 20 to 10,000 rpm Integrated motorspindle: 13/9 kW / 17.4/12 hp (40/100 % DC) Tool taper ISO40 DIN 69871 Tool magazine 30 places SK40 incl. set up station for tool loading Cabin-guarding 3D Control DMG ERGO*line*® Control 万能铣床DMU 50 德马吉全新设计 行程范围 X/Y/Z轴 500/450/400 mm / 19.6/17.7/15.7 in 24 m/min / 78.7 ft/m快移速度 转速范围 20至10,000 rpm 全集成电主轴： 13/9 kW / 17.4/12 hp (40/100 % DC) 刀柄 ISO40 DIN 69871 30刀位刀库SK40 包括装刀的装卡站 防护罩 3D控制 DMG ERGO*line*®控制面板
C-T3073	package DMU50 Shanghai MT, 包含：
C-C3042*	Swivel Rotary Table for simultaneous machining Clamping surface dia. 630 x 500mm / 24.8 x 19.6 in swivel range -5 to +110°, rotary axis 360° including direct measuring system for B- and C-axis and working plane transformation Not available with NC-Divider!
C-H3095	Electronic handwheel
C-L3003	Active cooling unit for electric cabinet recommended for ambient temperatures above 35 °C up to a maximum of 50 °C

*详情请见附件

Control / 控制系统

C-B3129* 3D-Control Siemens 840D SL Operate
User interface Shop Mill
DMG ERGO*line*® control, 19" display

Main drive / 主驱动

C-E3059* Spindle speed up to 18,000 rpm
tool taper SK40 according to DIN 69871
inclusive active chiller electrical cabinet
cabin roof recommended
(differently from Standard)

Automation / Measuring / Monitoring / 自动化/测量/监控

C-K3201 Signal lamp 4-colour
Red: general error
Yellow: intervention necessary
Green: automatic mode
Blue: set-up mode

四色显示灯

红色– – 错误警示

黄色– – - 需要干涉

绿色– – – 自动模式

蓝色– – – 调试模式

C-K3331 Tool measuring device Heidenhain TT140
Tool length and diameter measurement
with Cleaning air-blast, Calibration Tool

海德汉刀具测量系统TT140
刀具长度和直径测量
带吹气清洁，校准刀

C-K2532 3D quickSET
Tool kit for control and compensation
of the cinematic accuracy of
5 axis machine configurations
(only with option touch probe)

3D quickSET
控制和补偿5轴机床运动特性的工具
（仅限选配测头）

C-K3132 Direct measuring system X, Y, Z
inclusive Air purge for measuring system

X, Y, Z轴直接测量系统
包括测量系统的正压空气

*详情请见附件

Cooling media / chip removal / 制冷/排屑

C-N3007 Spray gun for swarf removal

C-K3272 Swarf conveyor, scraper type

Screen text language / 屏幕显示语言

C-D-CN Screen text chinese

屏显文字中文

Services machine / 服务-机床

C-P3392 Packaging DMU 50 plus chip conveyor
for domestic transport, complete wooden box

贸易公司服务

922XY2 On-Site Training at Customers Location, in China, Local Machine
maximum 4 Participants

Price incl. Travel

Duration: 5.0 Days

922XY1 In-House Training at DMG/MS Academy, in China, Local Machine
The price includes 4 times training in Shanghai within 1 year and 2 days on-site technical
support within 6 month after machine commissioning.
The training date in Shanghai needs to be determined by DMG MORI SEIKI Academy.

Duration. 5.0 Days

922SP1 Installation & Commissioning

*详情请见附件

附件

技术描述

C-A3073
Universal milling machine DMU 50, with compound Guideway construction
NEW DMG Design
DMG ERGO*line*® Control,19" display, DMG LIGHT*line*®

万能铣床DMU 50，复合导轨结构
德马吉全新风格设计
DMG ERGO*line*控制面板，19"显示器，DMG LIGHT*line*®

Operation mode:	Operation mode 2 + 3 activated 2 pieces SMART Key with operation mode 2+3 included
操作模式：	操作模式2 + 3激活 包括2个带操作模式2+3的SMART Key。
Traverse range:	X = 500 mm / 19.6 in Y = 450 mm / 17.72 in Z = 400 mm / 15.74 in
行程范围：	X = 500 mm / 19.6 in Y = 450 mm / 17.72 in Z = 400 mm / 15.74 in
Main drive:	digital AC motor
主驱动：	数字AC电机
Speed range:	20 to 10,000 1/min
转速范围：	20至10,000 1/min
Drive capacity:	13 kW (40% DC) / 17.43 hp 9 kW (100% DC) / 12 hp
驱动功率：	13 kW (40% DC) / 17.43 hp 9 kW (100% DC) / 12 hp
Spindle torque:	83 Nm / 60.48 ft lbs (40% DC) 57 Nm / 42.04 ft lbs (100% DC)
主轴扭矩：	83 Nm / 60.48 ft lbs (40% DC) 57 Nm / 42.04 ft lbs (100% DC)
Cooling:	water cooling
冷却：	水冷
Tool clamping force:	8 kN / 1798 lbs
刀具夹紧力：	8 kN / 1798 lbs
Tool taper: hydraulically/mechanical clamping for Pull-studs Form DIN 69872	SK 40 DIN 69871 part 1

刀柄： 液压/机械夹紧 拉刀螺栓DIN 69872	SK 40 DIN 69871第1部分
Permissible Tool diameter:	130 mm
允许的刀具直径：	130 mm
Permissible Tool length:	300 mm (from spindle nose)
允许的刀具长度：	300 mm（自主轴头）
Permissible Tool weight:	6 kg
允许的刀具重量：	6 kg

Note:
For speed up to 10.000 r.p.m tool mounting fixtures and tools should have a balancing grade of G6,3. At a tool weight higher than 5 kg / 11,02 lbs a balancing grade G2,5 is necessary. The following tool dimensions should be choosen for

注意：
最高转速为10.000 rpm的刀柄和刀具平衡质量必须达到G6.3。 如果刀具重量大于5 kg /11,02 lbs，必须达到平衡质量G2.5。 以下为可选刀具尺寸

up to 8,000 r.p.m	Max. Tool length 300 mm; Max.diameter 130 mm
up to 10,000 r.p.m	Max. Tool length 250 mm; Max.diameter 100 mm
最高转速8,000 rpm	最大刀具长度300 mm；最大刀具直径130 mm
最高转速10,000 rpm	最大刀具长度250 mm；最大刀具直径100 mm
Tool magazine:	30 places SK40
刀库：	30刀位SK40
Version:	Vertical chain with pockets for tool tapers and double gripper unit Program- and cam-controlled tool change to main spindle Tool position in magazine is variable. Tool changer and memory integrated inside cabin of machine mechanical set up station for tool loading
Tool taper:	SK 40 DIN 69871 part 1 for pull-studs DIN 69872 Form A
No. of magazin pockets:	30 places
Permissible Tool diameter:	Diameter 80 mm / 3,14 inch (130 mm / 5,11 inch with free neighbouring pockets)
Permissible Tool length:	300 mm / 11,81 inch (from spindle nose)
Permissible Tool weight:	6 kg / 13,22 lbs
Permissible Load of Magazine:	120 kg / 264 lbs
Tool change time:	1,6 s
Chip to chip time	8 s (acc. VDI 2852)
版本：	垂直刀链，刀柄的刀位和双抓刀器 程序和凸轮控制换刀到主轴中 刀库中刀具位置可变。 换刀器和存储器在机器防护罩内 机械装刀站，用于装刀
刀柄：	SK 40 DIN 69871第1部分

	拉刀螺栓DIN 69872 A型
刀库刀位数：	30刀位
允许的刀具直径：	直径80 mm / 3,14 inch (130 mm / 5,11 inch空相邻刀位）
允许的刀具长度：	300 mm / 11,81 inch（主轴鼻端）
允许的刀具重量：	6 kg / 13,22 lbs
允许的刀库承重：	120 kg / 264 lbs
换刀时间：	1,6 s
屑到屑换刀时间	8s（标准VDI 2852）

Feed Drives:	Digital controlled AC-Motor		
进给驱动：	数字控制AC电机		
Maximum Feed-rate :	X-, Y- and Z-Axes	24,000 mm/min	/ 78.7 ft/m
最大进给速度：	X，Y和Z轴	24,000 mm/min	/ 78.7 ft/m
Rapid Feed-rate:	X-, Y- and Z-Axes	24 m/min	/ 78.7 ft/m
快速进给速度：	X，Y和Z轴	24 m/min	/ 78.7 ft/m

Max. Feed-power:	X- Axis	4.8 kN
	Y- Axis	4.8 kN
	Z- Axis	4.8 kN
最大进给力：	X轴	4.8 kN
	Y轴	4.8 kN
	Z轴	4.8 kN

Guideways:	Roller guideways in all linear axes
导轨：	全部直线轴用滚柱导轨
Linear measuring system:	Indirect
直线测量系统：	间接
Option:	
Direct	resolution 0.01 µm/ 3.94 10^7 in
选配：	
直接	分辨率0.01 µm/ 3.94 10^7 in

Positioning accuracy:	Pmax = 20 µm / 0.00078 in (VDI / DGQ 3441) Indirect
Option:	Pmax = 8 µm / 0.00031 in (VDI / DGQ 3441) Direct
定位精度：	Pmax = 20 µm / 0.00078 in（VDI / DGQ 3441）间接
选配：	Pmax = 8 µm / 0.00031 in（VDI / DGQ 3441）直接

Temp. compensation Z-Axis:	An electronic temperature sensor (including evaluating unit) compensates for geometric changes occurring due to heat increase at the milling spindle. Permanent monitoring and control by machine control. The solid and intelligent construction of the

	machine elements helps to reduce heat build-up to a minimum and ensures that influence of heat is efficiently removed.
Z轴温度补偿：	电子温度传感器（包括信号处理单元）可对由于铣削主轴温度升高导致的几何尺寸进行补偿。 由机床数控系统持续进行监测和控制。 实心和智能化机床部件使机床有效散热，确保有效避免受热影响。

Accuracy depends to a large extent upon external thermal influences. The greatest accuracy is achieved in the temperature range of 20 ° Centigrade +/- 2 ° Centigrade. Direct sunlight, strong draughts, vibrations from other machines and build-up of heat are to be avoided.

精度在很大程度上受外部温度影响。
为达到最高精度，温度必须控制在20摄氏度的+/-2摄氏度范围内。 必须避免阳光直射，强风，其他机器的振动以及散热不良。

Central lubrication:	automatic minimum lubrication for roller guideways and recirculating ballscrew
中央润滑：	自动微量润滑滚柱导轨和循环滚珠丝杠
Cooling of Electrical cabinet:	with heat exchanger
电气柜冷却：	用热交换器
Note:	for ambient temperatures above 35 ° Centigrade an additional cooling unit is required
注意：	如果环境温度超过35°C，需增加一个冷却系统
Cabin, swarf tray:	Half cabin in new DMG Design with sliding door Enlarged windows for better view into the working room, DMG LIGHT*line*® provides optimal visibility of the machine status
防护罩，切屑槽：	半封闭，德马吉全新设计，滑动门 大型观察窗，加工区视线好， DMG LIGHT*line*®直观显示机床状态
Option:	Additional Door on the right-hand side
选配：	右侧附加机床门
Protection and operator device:	According to EU guidelines steel covers for the longitudinal guide-way, inclined surfaces arranged to give optimal swarf removal
防护和操作设备：	符合EU法规要求，纵向轴导轨钢盖，大斜面结构，落屑好
Coolant supply:	3 Nozzles Coolant supply: approx. 17 l/min at 1.2 bar Tank capacity: approx. 80 litre/ 21.13 US gallons
冷却系统：	3个喷嘴 冷却系统： 约17 l/min，1.2 bar时 冷却液容量： 约80 l / 21.13 US gallons

Note:	Only use coolant according to the manufacturer's machine-specific recommendations! For an oil content > 15% in the emulsion there is a risk of evaporation or explosion;additional safety package necessary on request).The ignition point of the coolant must be greater than 140° Centigrade.
注意：	必须使用机床制造商推荐用于相应机床的冷却液！ 如果乳化液中含油量超过15%，可能气化或爆炸；如果需要附加安全套件，请联系。 冷却液闪点必须高于140°C。
Machine lamp:	"Planon Light", 24V DC, rated power 65W
Working hour recording:	on the electrical cabinet for ”control voltage on” and ”programme run-time”
Paint:	
machine foot (polymeric concrete):	RAL 7016 anthrazit grey
机床灯：	Planon灯，24V DC，额定功率65W
工作小时数记录：	电气柜的“控制电源接通时间”和“程序运行时间”
涂装：	
床身（人造大理石）：	RAL 7016深黑色
iron cast parts:	titan grey (DMG-specific special colour)
side Panels:	titan grey
electrical cabinet:	titan grey
machine door:	calcit white (DMG-specific special colour)
铸铁零件：	钛灰色（DMG专色）
侧视图：	钛灰色
电气柜：	钛灰色
机床门：	钙白色（DMG专色）
Installation dimensions and weight: required space for machine (incl. space for maintenance and operation) D x W x H	Base machine approx. 4,150 x 3,980 x 2,750 mm 13.62 x 13.62 x 9.02 ft
Base machine weight without accessories:	approx. 4,480 kg/ 9,876 lbs
安装尺寸和重量： 空间要求	机床本机
机床（包括维护和操作空间）D x W x H	约4,150 x 3,980 x 2,750 mm 13.62 x 13.62 x 9.02 ft
无附件机床本机重量：	约4,480 kg/9,876 lbs
Connection values:	
供电数据：	
Required air pressure:	6 bar / 87.02 psi
压缩空气压力要求：	6 bar / 87.02 psi
Average compressed air	machine without air tool cooling (base machine):

consumption:	approx. 35 m³/h / 9,250 gal/h machine with option air tool cooling (continuous operation): approx. 60 m³/h / 15,850 gal/h
压缩空气消耗平均：	机床，无刀具空气冷却（机床主机）： 约35 m³/h / 9,250 gal/h 机床，带选配刀具空气冷却（连续工作）： 约60 m³/h / 15,850 gal/h
power input:	20kVA (spindle 10,000 rpm),23kVA (10,000 rpm and ICS) 25kVA (spindle 14,000 rpm),28kVA (14,000 rpm and ICS) 31kVA (spindle 18,000 rpm), 34kVA (18,000 rpm and ICS)
输入功率：	20kVA（主轴10,000 rpm），23kVA（10,000 rpm和ICS） 25kVA（主轴14,000 rpm），28kVA（14,000 rpm和ICS） 31kVA（主轴18,000 rpm），34kVA（18,000 rpm和ICS）
In max:	33A (spindle 10,000 rpm),40A (10,000 rpm and ICS), 40A (spindle 14,000 rpm),47A (14,000 rpm and ICS) 48A (spindle 18,000 rpm), 55A (18,000 rpm and ICS)
Pre-fuse:	50A at 400 V (spindle 10,000/14,000 rpm) 63A at 400 V (spindle 18,000 rpm)
最大：	33A（主轴10,000 rpm），40A（10,000 rpm和ICS）， 40A（主轴14,000 rpm），47A（14,000 rpm和ICS） 48A（主轴18,000 rpm），55A（18,000 rpm和ICS）
保险丝前：	50A，400 V（主轴10,000/14,000 rpm） 63A，400 V（主轴18,000 rpm）
Operating voltage:	3 / N / PE / 400 V / 230 V 50 Hz max. permissible deviation: + 6% / - 10%
工作电压：	3 / N / PE / 400 V / 230 V 50 Hz 最大允许偏差： + 6% / - 10%
Note:	Load-carrying neutral conductor N (zero conductor) or special transformer necessary
注意：	带载中性线N（零线）或需特殊变压器
Electrical connection:	For electrical installation please ensure that EN 60 204, part 1, point 6.3.3 "protection for automatic switch off of power supply" is adhered to. See also IEC 364-4-41 (DIN 57 100, VDE 0100, part 410).
电气连接：	有关电气安装，必须确保遵守EN 60 204第1部分6.3.3条“电源自动关断防护”的要求。 参见IEC 364-4-41（DIN 57 100，VDE 0100，第410部分）。
	The machine must not be connected to a line circuit with FI protective switch. See EN 50 178, point 5.3.2.3 (old VDE 0160, extract 5.5.3.4.2)

机床不允许连接有FI保护电路的电网中。
参见EN 50,178，5.3.2.3条。
（老版本VDE 0160，5.5.3.4.2节选）

Due to the measures for electromagnetic compatibility, the machine has leakage currents higher than 3.5 mA and must therefore be connected firmly. EN 50178, point 5.3.2.1 (old VDE 0160, extract 5.5.3.4.1 and 6.5.2.1)
Apart from that, one of the following measures has to be taken:
a) Protective conductor profile at least 10 mm2 Cu (copper)
b) Control of the protective conductor by means of a device which makes sure that in case of an error the machine is switched off
c) Laying of a second conductor, electrically parallel with the protective conductor, over separate clamps. This conductor alone must meet the requirements acc. part 543 of harmonisation documents (hd) 384.5.54 S1 (old DIN VDE 0558, part 540) for protective conductors.

由于电磁兼容性措施，机床漏电电流大于3.5 mA，必须连接牢固。 参见EN 50178，5.3.2.1条
（老版本VDE 0160，5.5.3.4.1和6.5.2.1节选）
此外，还需采取以下措施之一：
a} 防护导线为截面不小于10 mm^2的铜线
b) 用设备控制防护导线，以确保出现故障时，机床自动切断电源
c) 安装第二根导线，与防护导线并联连接，用单独线卡。这个导线本身必须满足“协调文档”（hd）384.5.54 S1的第543部分中有关防护导线的要求（老版本DIN VDE 0558，第540部分）。

Noise meassuring:	max. 78 dB (A) acc. to DIN 45635 - 16 Cl. 2
噪音值：	最高78 dB (A)，基于标准DIN 45635 - 16 Cl. 2
Machine transport:	Crane (using lifting gear) or suitable Fork-Lift equipment
Lifting equipment:	Available as an Option (Contact Factory)
机床运输：	天车（用吊装齿轮）或适当叉车设备
吊装设备：	可为选配（联系工厂）
Machine installation:	4 Levelling pads (height adjustable)
机床安装：	4个调平垫（高度可调）

Technical description
This machine is based upon a compound guideway construction in a well thought-out robust cast construction. Generous webbing and ribs in all main parts and the thermo-symmetrical concept (in connection with the balanced construction) are prerequisites for high rigidity and torsional strength, thermal stability and guideway accuracy.

A special feature is the wide distance between the guideways.

技术说明
该机床采用复合导轨结构，结构合理和坚固。 所有主要零件全部有大量筋板和加强筋，热对称结构（以及平衡的机床结构）使刚性好，抗扭强度高，热稳定性好和导轨精度高。

大间距导轨是一项突出特点。

The conscious basis for the machine concept:
- compact unit (small space requirement, inherent rigidity, precision, long life, simple installation etc)
- no special foundation required (space requirements see installation manual)
- short installation and commissioning times
- integration of all aggregates into the basic machine (conveniently arranged) and easy operation and maintenance.

机床的主要结构特点：
- 结构紧凑（占地少，自身刚性好，精度高，使用寿命长，安装简单等）
- 无需特殊地基（空间要求，参见安装手册）
- 安装速度快和调试时间短
- 机床主机配置齐全（方便组合）和易于操作和维护。

Guideway system in the linear Axes
Recirculating ballscrews in the linear axes transmit the feed force via robust bearings and components. The roller guideways are especially known for low heat production, low friction, no stick-slip effect, permanent accuracy (low wear) and extremely low lubrication requirement.

直线轴导轨系统
直线轴的循环滚珠丝杠通过坚固的轴承等部件传递进给力。 滚柱导轨的特点是发热少，摩擦小，无粘滑作用，持久精度高（摩擦小）和所需润滑很少。

Measuring systems

The basic machine is equipped with encoders within the axes motors (option direct linear measuring systemavailable). The measuring system has protective covers ensuring protection against chips and coolant and therefore high reliability.

测量系统
标配机床采用电机内编码器（选配直接直线测量系统）。 测量系统用保护盖隔离切屑和冷却液，因此可靠性好，还可以增加正压空气，因此可靠性高。

Feed drives
Digital AC drives for high dynamics and less maintenance. Quick response times between Drives and Control ensure high acceleration and accuracy together with the Linear roller guideways resulting in high surface quality and contour accuracy of the work-piece.

进给驱动
数字AC驱动动态性能好，维护工作量小。 驱动与数控系统间响应速度快，因此加速度大和精度高，加上滚柱导轨可确保工件表面质量高和轮廓精度高。

Vertical spindle
Integrated motor-spindle with water cooling and digitally controlled three-phase motor direct drive. The solid working motor-spindle is of a robust design and equipped with precision bearings which are permanently greased. The robust construction and the special bearing guarantee high cutting performance.

立式主轴
水冷电主轴和数字控制三相电机直接驱动。 实心工作主轴结构坚固，用高精度持续润滑轴承。 结构坚固和特殊轴承是高性能切削的保证。

Central lubrication
The lubrication system for the roller guideways and the recirculating ballscrews is based on a minimal lubrication supply.

中央润滑
滚柱导轨和循环滚珠丝杠的润滑系统用微量润滑方法。

Tool clamping
Clamping by mechanical disc-spring assembly. Release cylinder is operated hydraulically.

夹刀
刀具用碟形弹簧夹刀。 松刀油缸用液力。

Coolant unit
Wet machining is possible with large amounts of coolant. The large sealed tank, an efficient pump, short supply pipes and the location
of multiple jets guarantee a plentiful coolant supply. Coolant/air blast via M-Function offered as an option.

冷却单元
湿式加工允许使用大量冷却液。 大型全密封冷却液箱，高效冷却液泵和冷却液管长度短以及多个喷嘴能提供充足冷却液。 用M功能控制的冷却液/吹气为选配。

Machine enclosure/machining area
The machine is equipped with a compact half cabin with a sliding door. Optimum access to the machining area, easy cleaning and good access for the maintenance of machine assemblies are
Outstanding features of this version. An side access door is available as an option.

机床防护罩/加工区
机床配紧凑型半封闭防护罩带滑动门。 加工区接近性能好，易于清洁和机床维护部位易于接近是该机型的突出特点。 可选配侧机床门。

Documentation
Documentation available in: German, English, Chinese
E-Plan only available in German, English,

文档
文档语言为: 德语，英语，中文
电子版文件有 德语，英语，

Delivery quality
During manufacture, the machine undergoes several intermediate tests and a stringent final examination. A test certificate for this final examination is given to the customer on delivery.

交货质量
机床在生产中进行多次中间和严格的最终检测。 交货时，为用户提供最终检测证书。

C-C3042
Swivel rotary table for simultaneous machining

Swivel range	- 5° to +110°
Rotating range	360°
Speed B- and C-axis	20 rpm, axis permanent in position control
Clamping Area	Dia. 630 x 500mm / 24.8 x 19.6 in
Number of T-Slots	7
Distance between T-Slots	63 mm / 2.4 in
T-Slot width	14 mm / 0.55 in, 1 x alignment slot 14H7
Centre bore	Dia. 30 H6
Permissible table load (table centre)	300kg
Positioning uncertainty B-Axis	Pmax = 18arc sec (according VDI/DGQ 3441)
Positioning uncertainty C-Axis	Pmax = 18arc sec (according VDI/DGQ 3441)
Direct measuring system B- and C-axis	Included
Working Plane transformation	Included
NC-Divider	not available

C-B3129
3D Control Siemens 840D solutionline OPERATE

Sinumerik MDynamics	With innovative path control Advanced Surface
Control panel:	ERGO*line*®
Hardware:	32-bit multi-processor system decentralized bus concept (MPI, industrial Ethernet, Profibus, ASI bus) NCU 720.3: 9 MB SRAM, option 15MB PLC: AS 319-2DP with Profibus
block processing time:	0,6 ms
Safety concept:	Safety Integrated
Screen:	19" TFT flat screen Resolution 1280 x 1024 pixels
Keyboard:	Full CNC keyboard, Gildemeister operating panel
DMG SOFT*keys:*	Programmable direct keys for frequently used Screen menus or operating sequences

DMG SMART*key*	transponder system for administration of operation mode
Look-ahead function:	Changes of direction are checked by the control in advance in up to 150 NC blocks (parameterizable). The feed speed is automatically adapted to the machine dynamics
No. of axes rigid table:	3 axes interpolating
No. of axes Swivel Rotary Table – powered (B&C):	3 axes interpolating, 2 table axes positioning
No. of axes Swivel Rotary Table – simultaneous:	5 of 5 linear-interpolating, digital (export: 4 of 5) 2 circular-interpolating, helix interpolation
No. of programs/ Workpieces in the ram	750
No. of tools/cutting edge	200 / 1800; maximum 9 edges per tool
Data memory:	CF-card with minimal 2GB free space for the user
Programming capability Operator interface:	ShopMill: with graphical interactive programming and alternatively G code programming (DIN/ISO),
Easy Operate:	Setting-up and setting of reference point in menu mode
Programming tools:	Graphical support of programming: graphic-supported dialogues
Program structure:	Sub-programs, program part repetition, conditional jumps to labels, program structuring
Machining cycles:	Drilling and milling cycles, geometry calculations, tapping with /without compensation chuck, reaming, boring, bore patterns, milling of slots, rectangular and circular pockets, line-by-line milling of plane surfaces through ShopMill, OEM cycles (special machining cycles designed by the manufacturer) can be integrated, extensive measuring cycles (for manual and automatic mode)
Parameter programming:	Mathematical functions: =,+,-,*, /, sin α, cos α logical connections: (=,<>,>,>=,<,<=) parenthesis functions, tan a, arcus sin, arcus cos, arcus tan, a^n, e^n, In, log, absolute value of a number, constant Pi , negation, numbers before / after decimal point, calculation parameters, Global User Parameters (GUDs), Local User Parameters (LUDs)

Coordinate system:	Cartesian, polar
Coordinate Transformations:	Shifting, scaling, mirroring, rotation
Swiveling of machining plane:	Standard in machines with NC swivel rotary table
Position details:	Desired/actual value, residual value for straight lines and circles in rectangular coordinates, absolute measures, display and input in mm or inches
Contour approach and departure:	through straight line, tangential or vertical through circle, through helical lines
Constant path speed:	referring to tool center path referring to cutting edge
Tool retraction:	After an emergency stop or power failure with the swiveled axis, tools can be retracted from bore holes, etc. (except for tapping and programming without function swiveling of working plane).
TRAORI:	The off-set of the swivel axes is so corrected that the position of the tool tip in relation to the contour will be maintained (tool is repositioned in X/Y/Z). Function demands the Swivel Rotary Table for simultaneous machining.
Free contour programming:	Contour drawing programming
Re-entry into program:	Advance to any block in the program and approach calculated desired position to continue machining, interrupt program, leave contour, and re-approach.
Manuel operation:	Easy input and running of cycles with transfer of position
Parallel operation:	Generating a program while another program is being run
Point table:	programing with points from memory (max. number of points up to max. NC-Memory)
Programming graphics:	The entered NC blocks are drawn (2D line graphics) during contour programming.
Test graphics:	Graphic simulation of the machining process: top view, representation in 3 planes, 3D representation, selective enlargement
Machining graphics:	Synchronous graphics during machining
Machining time:	Display of the current machining time in the simulation mode
Zero point tables:	Tables with 99 zero points
Administration of pallets:	standard at machines with pallet changer
3D machining:	Reduction of feed when approaching, jerk reduction, 3D tool correction through surface normal vectors.

Function demands the Swivel Rotary Table
for simultaneous machining

CompCad: Unclear path specification from CAM-System getting optimized by CompCad relating surface quality and speed.
Smoothing of surface transition

Rotary table machining: Interpolation of outer surface of cylinder TRACYL

DMG AUTOshutdown (Standard): Intelligent Standby-control for avoidance of unnecessary absorption of energy by time controlled switch-off of not used aggregates. The times and switch-off conditions can be adjusted individual per machine with a easy to use NC-screen by the customer for his production.

DMG GREENmode : Intelligent adaptive feed control for reduction of the piece time with concurrent energy saving.

DMG MACHINEcheck (Standard): Application with maintenance reminder function.
Optionally: Maintenance training to your DMG machine.
Optionally: DMG Service Agent with the functions Notification,instruction and support for spare part ordering

Service support: DMG Netservice – client in standard
Will installed on external PC

Ethernet interface: Ethernet Interface in the electrical cabinet
Fast Ethernet 10/100 BaseT (100 MBit/s)
TCP/IP network protocol
USB interfaces at the control panel: USB 2.0
Data transfer: The control communicates with external PCs similar to known Windows networks by enabling the access structure.

Compatibility: Disparties in the user interface, volume of cycles and programming, as well as no secured program compatibility with the previous Siemens 840D solutionline up to SW 1.5

Options:

3D machining: Reduction of feed when approaching, jerk reduction,
3D tool correction through surface normal vectors.

Additional Options: on request

C-E3059

Spindle speed up to 18,000 rpm SK40
inclusive active chiller for electrical cabinet

AC-Motor spindle vertical, digital controlled

Speed range: 20 - 18,000 rpm
Tool taper: SK40 DIN 69871 Part 1
hydro-mechanical clamping
for Pull-Studs DIN 69872 form A or B

Drive power (40% / 100% DC): 35 / 25 kW 46.9 / 33.5 hp

Torque (40% / 100% DC):	130 / 87 Nm 95.88 / 64.16 ft lbs
Tool clamping force:	9 kN / 2,023 lbs
Lubrication:	oil-air lubrication
Spindle cooling	circulating water cooling / heat exchanger

cabin roof recommended

Note:
For speed up to 18,000 rpm tool mounting fixtures and tools should have a balancing grade of G6.3 (up to 5kg / 11.02 lbs) and G2.5 (>5kg / 11.02 lbs).

The following tool dimensions should be choosen

up to 8,000 r.p.m	max.tool length 300 mm / 11,81 inch; max.tool diameter 130 mm / 5,12 inch
up to 10,000 r.p.m	max.tool length 250 mm / 9,84 inch; max.tool diameter 100 mm / 5,12 inch
up to 14,000 r.p.m	max.tool length 200 mm / 7,87 inch; max.tool diameter 65 mm / 2,56 inch
up to 18,000 r.p.m	max.tool length 200 mm / 7,87 inch; max.tool diameter 50 mm / 1,97 inch