

# YS5165CNC YS5180CNC YS51100CNC YS51125CNC 数控插齿机

CNC GEAR SHAPING MACHINE MODEL YS5165CNC & YS5180CNC & YS51100CNC & YS51125CNC



## 主要特点

- ◆ 本机床系全新设计的五轴三联动数控插齿机,五轴分别是:径向进给 X 轴、工作台圆周进给 C2 轴、刀具旋转 C1 轴、工位调整 Z 轴和主轴变频调速。机床整机刚性好、精度高、功能齐全、操作调整方便,适合于插削直径在 1000mm 内的各种大型内、外圆柱齿轮。
- ◆ 机床刀架采用静压轴与静压导轨,让刀结构为双凸轮形式,主传动采用了一种新型结构,保证刀具主轴冲程长度长、切削力大,并在冲程长度范围内可自动调整到任意位置进行切削加工。
- ◆ 本机床由西门子 802D 数控系统实现各数控轴的精确数字控制,重复定位精度高,具有故障自诊断的功能。控制系统中设有安全联锁保护、切削参数及操作界面保护等。在机床发生故障或因误操作时,能自动停机或无法启动,报警系统警示的同时给出故障类型提示。机床实现参数化编程,操作简单方便。



## 主要技术参数 Main technical specifications

最大工件直径：外齿	Max. workpiece dia. External gear	mm	650	800	1000	1250
内齿	internal gear	mm	300+d刀	400+d刀	500+d刀	1350
最大模数	Max. module	mm	12	12	12	16
最大冲程长度	Max. stroke length	mm	230	230	230	305
最大加工齿宽	Max. face width	mm	200	200	200	280
主轴端面至工作台台面的距离	Distance from cutter spindle nose to worktable face	mm	130-360	130-360	130-360	130-360
刀具中心线至工作台中心线的距离	Distance from cutter center to worktable center	mm	0-650	0-650	0-650	0-650
工作台直径	Dia. of worktable	mm	680	850	1000	1190
工作台主轴孔径	Dia. of worktable hole	mm	200	200	200	280
主轴最高位置的径向让刀量	Cutter spindle back-off at its upmost position	mm	>0.7	>0.7	>0.7	>0.7
主轴偏移量（斜向让刀）	Column offset for oblique cutter relieving	mm	±25	±25	±25	±25
工作台径向进给速度（无极调速）	Worktable radial feed(infinitely variable)	mm/str	0.001-0.02	0.001-0.02	0.001-0.02	0.001-0.02
刀具主轴冲程数（无极）	Stroke rate of cutter spindle(infinitely variable)	str/min	30~300	30~300	30~300	30-180
刀具圆周进给速度	Circular feed rate of cutter	可无级调速，粗精切可预选自动变速				
最大转速	Max. speed	rpm	8.3	8.3	8.3	8.3
工作台径向快速移动速度	Max. worktable rotation speed	mm/min	2000	2000	2000	2000
工作台最大转速	Max. rapid travel of worktable per minute	rpm	6.3	5.8	5.3	4
工位调整速度	Max. of station adjustment speed	mm/min	500	500	500	500
主电机 功率	Main drive motor power	kw	18.5	18.5	18.5	22
转速	speed	rpm	3000	3000	3000	1000
机床主机外形尺寸（长X宽X高）	Overall dimensions(LxWxH)	mm	3600x1700x2900	3600x1700x2900	3600x1700x2900	3600x1700x2900
机床净重	Net weight	kg	15000	15800	16500	18000

规格、参数若有改变，恕不另行通知，客户如有特殊要求，敬请垂询。

All the specifications are subject to revision without notice in advance. Please contact the manufacturer for special request on the machine.

## MAIN FEATURES

The model YS5165CNC & YS5180CNC & YS51100CNC & YS51125CNC is a 5-axis CNC gear shaping machine with 3 of the 5 axes working under gang control. The 5 axes are: Radial feed motion (X axis), Worktable rotation motion (C2 axis), Indexing motion (C1 axis), Station adjustment motion (Z axis), and Cutter spindle rotation controlled by frequency motor. The machine have high rigidity, high precision, perfect fuction, and easy adjustment. The machine is suitable to cut the internal and external gears the diameter below 650mm.

The machine adopt the hydrostatic guideway and hydrostatic bearings on the cutter head and the two-cam cutter relieving. The cutter spindle use a new struction to be sure the long stroke length and large cutting force. The cutter spindle can automatic adjust at discretion in the stoke length.

Equipped with the simense 802D, the machine has a nice resetting accuracy and self-diagnosis ability for troubles. The CNC system have the safety interlock protect fuction, cut parameter and operation interface protect fuction. The machine operate by parameterization program and easy to operate.