

**Sykes V152 is 2 Axis CNC controlled**

**CNC version is based on existing V152 machine.**

**Sykes V152 has been operating worldwide since 1964**



# Sykes Sykes V152 is 2 Axis CNC controlled

The Sykes Model V152 fine pitch vertical gear generator is a versatile machine developed specifically for the high speed production of all types of precision fine pitch gears, racks and segments up to a maximum of 12 to 14 D.P. (Approx.2 mod).

The specification of the Model V152 is based on Sykes wide experience and research into the design of machines for the production of fine pitch gears. Built on unit construction principles, the Model V152 machine offer the most modern techniques and up to date design features to the manufacturer of fine pitch gears.



## **Applications**

For all types of spur and helical gears, both internal and external and a wide range of other forms such as are often found in precision instruments and mechanisms. With suitable attachments spur and helical racks can be produced, together with all types of segment gears.

A robust construction, simple operation and fully automatic infeed ensure high output rates which can be maintained continuously without loss of accuracy or quality. Small batch production can be economically carried out by reason of the extremely simple setting up procedure. A wide range of accessories extends the versatility of the basic machine and the Sykes Model V 152 is ideally suited to long production runs as well as for short batch production.

## **Design and Construction**

The Model V152 Machine is manufactured from the highest quality materials and components to ensure that it will retain its initial precision and output over a long period of service.

Particular attention has been given to rigidity and stability at the high speed necessary for the machine of this type : all bearings throughout the kinematic train are of the anti-friction type.

The Machine is CE Certified and safe operation. Mechanical and electrical controls and change gear settings are identified by instruction plates with easily understood symbol markings.

Relief is applied to the cutter head unit by means of a double acting cam and rollers which give a positive action in both directions and a precise dead-stop to the cutting position. This feature insures stable and consistent relief even at the highest speed of operation.

The work saddle unit runs on precision slide ways on a separate intermediate saddle base casting. The one piece work table is mounted on a matched pair of large diameter precision taper roller bearings. The whole of the table drive unit is contained in a sealed oil-filled enclosure. A built-in pump circulates oil to the table bearings and also provides an automatic metered supply to the saddle slide ways.

## CAPACITY

<b>Max pitch</b>	<b>Steel</b>	<b>14 D.P. (1.8 Mod)</b>
	<b>Non-ferrous</b>	<b>12 D.P. (2.1 Mod)</b>
<b>Min. pitch</b>		<b>100 D.P. (0.2 Mod)</b>
<b>External Gears: Max P.C.D</b>		<b>6 in (152mm)</b>
<b>Internal Gears: Max P.C.D</b>		<b>6 in (152 mm)</b>
<b>Stroke</b>		<b>0-1 in (0-25.4mm)</b>
<b>Face width. Max.</b>		<b>7/8 in (22.2 mm)</b>
<b>Helix angle, max.</b>	<b>430-480 (dependent on cutter diameter)</b>	
<b>Work Table:</b>		
<b>Bore:</b>		<b>2 in (57 mm)</b>
<b>Diameter</b>		<b>6 in (152 mm)</b>
<b>Rack Cutting attachment:</b>		
<b>Length of Rack, Max.</b>		<b>20 in (508mm)</b>
<b>Width face, Max</b>		<b>7/8 in (22.2mm)</b>

**Pitches finer than 100 D.P. (0.2Mod.) are dependent on the cutter to be used and should be subject of special enquiry**

**Optional Extras**

**Rack cutting attachment**

**Tailstock**

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## Specification:

### **Standard Machine:**

**Supplied complete with main drive and Coolant pump Motors together with all Switchgear, limit Switches and Controls.**

**Automatic one/two cut infeed cycle and standard dropoff mechanism.**

**Manually operated feed reverseclutch.**

**Set of six change gears for radial feed and a set of four change gears for infeed.**

**Swarf tray and all necessary spanners and operating handles. Standard machine includes a set of 63 Index change gears and main drive pulleys.**

**Main Motor : 1 1/2H.P.(One & Half HP)**

**Spindle Motor : M3 415 V, 1.5Kw, 3.7A , 1400rpm with brake (Through AC VFD )**

**Coolant pump motor :M1 415V, 0.75kw,1.8A, 1390 rpm**

**Lubrication Motor M2 415v ,0.18KW ,0.61A, 1365 rpm**

**X axis ( Radial feed) M4 servo motor 6Nm, 2000rpm**

**C Axis (Circular feed) of cutter rotation M5 , 11Nm , 2000 rpm**

**Cutting speed range:**

**Strokes per min.: 200-1200**

**Maximum 60M/min**

**Radial feed 1 1/2 in.dia.cutter 0.005mm-0.5mm**

**Infeed rates per stroke0.005mm-0.025m**

**Infeed travel: 0 5mm**

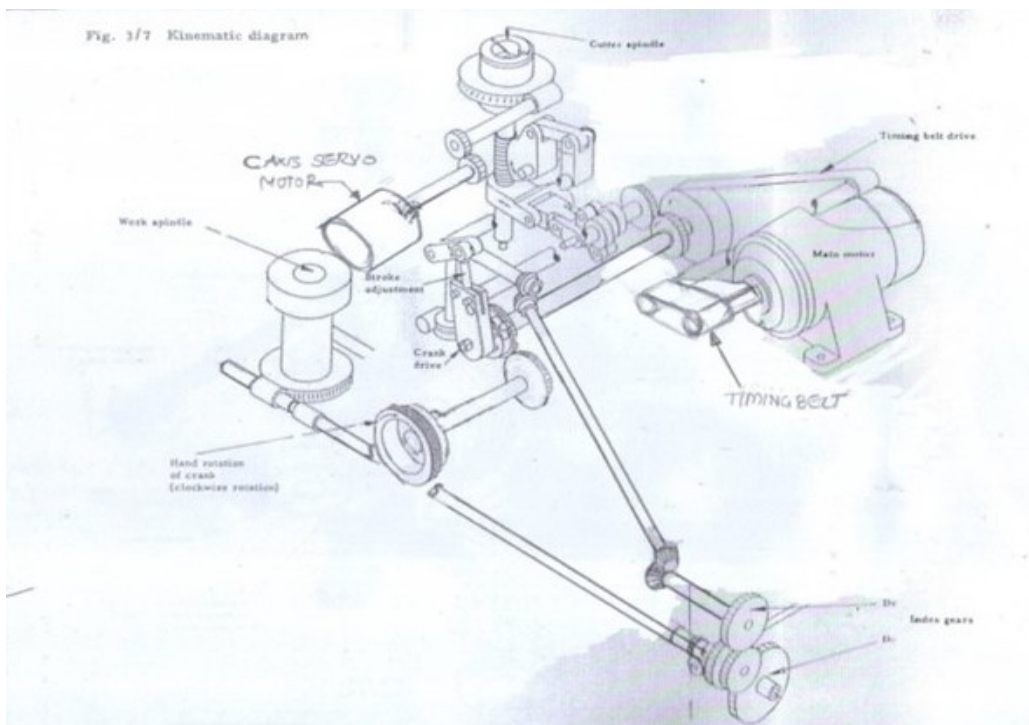
**Cutter spindle:**

**Diameter: 31.7mm, Cutter Location: 15.8mm, Standard Cutter: 38.1mm**

**Overall Dimensions: 965mmx1372mmx1473mm**



## KINEMATIC DRAWING



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