SUB: Tech Specs for Single Spindle Gun Drilling Machine with PLC Controls (Model GVN08C/1-1000)

Sr.No	Machine Details	Qty
1	Single Spindle Gun Drilling Machine with PLC Controls (GVN 08 C / 1-1000)	1
2	Electrical System with PLC Controls	1
3	Hydraulic System	1
4	Automatic Oil Lubrication System	1
5	Coolant System includes Coolant Settling Tank, Low Pressure Pump along with Chip Tray	1
6	High Pressure Coolant Delivery System	1
7	Tooling Accessories (please refer our note)	1
8	High Pressure Cartridge Filter Assembly	1
9	Machine Manual	2 Set
10	Chilling Unit Dip Type (Capacity – 6,000 kcals/hr)	1
11	Bag type Filter Assembly (Fine)	1
12	Component Support Assembly (Hydraulically Operated)	2
13	Basic Collet Clamping Arrangement for Components at Both Ends (OD 8 to OD 26mm, ER Collets)	1

TECHNICAL SPECIFICATIONS

Single Spindle Gun Drilling Machine with PLC Controls

(Model: GVN 08C/1-1000)

Machine Operation: Gun Drilling

Component Details: Various Shafts (Ejector Pins)

Material: Tool Steel & Alloy Steel Etc.

Machine Specifications

Operation	Gun Drilling
Mode of Operation	Tool Rotating & feeding with Component Counter - Rotating
Gun Drilling range	Φ 2 to Φ 8 mm **Up to Φ 10 mm as a Contingency & not in Production environment with reduced cutting parameters.**
L/D Ratio	100 - 120
No. of Tool Head Spindles	One
Range of Component OD (At either end)	Φ 8 to Φ 75 mm
Maximum Component OD	Φ 75 mm
Max Component Length	1,000 mm
Component Loading & Unloading	Manual
Maximum Drilling Depth	1,000 mm
Maximum Weight of the Component	35 kg

Machine Base

Construction	Heavily Ribbed Box Type Welded steel fabrication – stress relieved – shot peened – finish machined
Linear Guiding System	LM Guide Ways mounted directly on machine base

Work Head Assembly

Work Head Spindle Motor Power	0.55 kw AC Induction Motor
Work Head Spindle RPM	420 RPM
Component Clamping Arrangement (OD 8 to 26 mm)	In ER Collet (ER40) at Both Ends (Work Head & Bush Box)
Component Clamping Arrangement (for Hole Φ 2.0 to Φ 3.5 mm)	In ER Collet (ER40) at Work Head & Cone at Bush Box OD Chamfer must be 30˚ (Included 60˚)

Component Clamping Arrangement (OD 26 to 76 mm)	In Cones at Both Ends (Work Head & Bush Box)
Work Head Slide Positioning Arrangement	Lead screw & Nut Assembly on LM Guide Ways operated manually during setup changeover

Component Support Assembly

Type of Component Support	Roller Type with Self-Centering Action
No. of Support Assemblies	Two
Roller	Bearing Supported
Component Support Assembly Movement	Manual, during Setup Change Over
Component Support Assembly Clamping / Unclamping	Automatic, Hydraulically Operated

Bush Box Assembly

Bush Box Mounting	Mounted on Machine Base
Guide Bush	Alloy Steel duly Hardened and Ground
Gun Drill Support	Whip Guide supported in bearings
Chip Disposal (Optional)	Coolant & Chips directly fall on a Chip Tray

Tool Head Spindle

Tool Head Spindle RPM range	2,000 to 10,000 RPM
Tool Head Spindle Motor power	1.1 kW (AC Induction Motor) with VFD
Tool Head Slide Arrangement	LM Rails
LM Block Lubrication	Automatic Oil Lubrication
Tool Head slide Linear Motion	Ball screw & Nut Mechanism, Ball Screw driven by Servo Motor
Ball Screw Lubrication	Automatic Oil Lubrication
Tool Head Slide Feed range	5 - 1000 mm/min
Tool Head Slide Rapid rate	8,000 mm/min
Gun Drill Holding	Collet Clamping

Moving Whip Guide Assembly

Whip Guide	Whip guide in anti-friction Bearing (rotating)
Whip Guide Assemblies	Four
Whip Guide Assembly	Mounted on LM Block and guided on LM Rails
Actuating System	Automatic, with Chain Withdrawal

Hydraulic System

System pressure (Max)	40 kg/cm^2
Tank capacity	30 liters
Type of oil	Mineral oil

Coolant System

Coolant Tank	Integrated with Machine Base
Total Coolant tank capacity	600 liters
Flow Rate (Max)	18 LPM (for Drilling Φ 8 mm)
Coolant Pressure	95 kg / cm^2 (for Drilling Φ 2 mm)
Type of coolant	Straight Cutting oil
Filtration system	Bag type Pressure Filter Assembly
Coolant Filtration level	10 µm level of purity
Chilling Unit (Optional)	6,000 kcals/hr (Dip Type, Tank mounted)
Chip disposal system	Chip Tray

Lubrication System

Type	Single Shot Type Centralized Automatic Lubrication System
System pressure	15 kg/cm^2
Tank capacity	3 liters
Oil type	Mineral based oil
Oil Level Sensing	Whenever low level indicator is triggered on machine controls

Electrical System

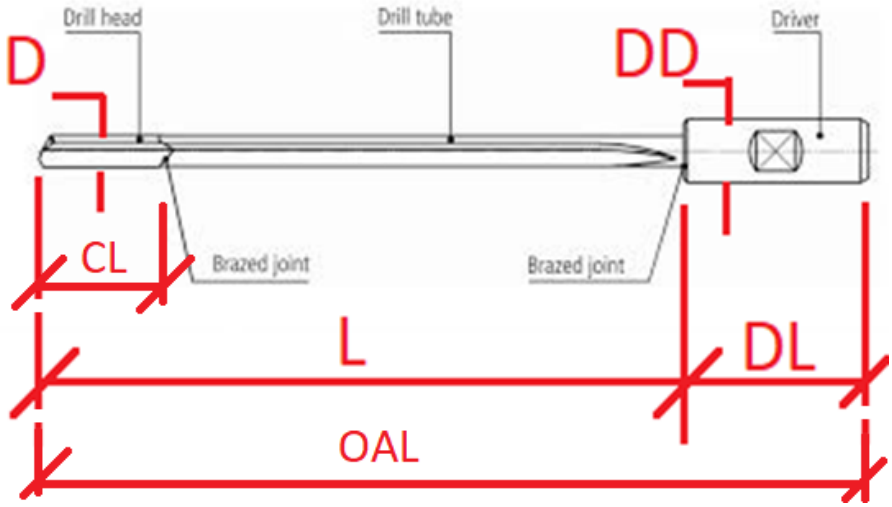
Servo and PLC System	Mitsubishi
Operating Console	Touch screen color HMI
Control cabinet	Machine mounted
Incoming Power Supply	From bottom of cabinet
Air Circulation	Exhaust Fan
Supply Voltage	3 Phase 415 V, 50 Hz
Incoming Power Quality	Voltage and Frequency fluctuation to be within ± 5%
Total connected power (Approx.)	18 kVA

Machine Footprint

Floor Area (Approx.)	4,400 length x 2,950 width x 2,100 height mm
Component Center Drilling Height From Ground level	1,000 mm ± 50 mm
Machine Weight (Approx.)	4,300 Kgs
Color	Dark Grey (RAL 7016) for Machine Base Light Grey (RAL 7035) for Machine Guard

Tooling & Accessories Available

Drill Size	Gun Drills Available	Guide Bush Sleeve	Guide Bush	Coolant Repeller	Whip Guide	Locking Cap	Bearing Clamp Block	Make
2	-	1	1	15	15	1	1	TBT
2.5	4	1	1	15	15	1	1	TBT
3	4	1	1	15	15	1	1	TBT
3.5	3	1	1	15	15	1	1	TBT
4	4	1	1	10	10	1	1	TBT
4.5	3	1	1	-	-	-	-	TBT
5	2	1	1	10	10	1	1	Precihole
6	2	1	1	10	10	1	1	Precihole
8	1	1	1	10	10	1	1	Precihole
10	2	1	1	10	10	1	1	Precihole



Sr. No.	Drill Dia "D"	Carbide Head Length "CL"	Carbide Grade	Drilling Length "L"	Driver Dia "DD"	Driver Length "DL"	OAL (Original Length)	Available Qty	Make
1	2	30	S20	900	16	90	990	-	TBT
2	2.5	40	S20	900	16	90	990	4	TBT
3	3	40	S20	1000	16	90	1090	4	TBT
4	3.5	40	S20	1000	16	90	1090	3	TBT
5	4	50	S20	1000	16	90	1090	4	TBT
6	4.5	50	S20	1000	16	90	1090	3	TBT

Cones			
Range of Component OD (mm)	Component OD Chamfer Angle	Cone (Bush Box)	Cone (End But)
		Qty (Nos.)	Qty (Nos.)
25.1 to 30.0	30° (Included Angle 60°)	1	1
41.1 to 45.0		1	1
55.1 to 60.0		1	1
65.1 to 70.0		1	1