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**The Finest
Solution**

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**UNIVERSAL CYLINDRICAL
GRINDER G25P/G32P/G38P**

| DESCRIPTION | MODEL | UNIT | G25P-50M/NC | G32P/G38P(M&NC) | | | |
|-------------------|--------------------------------------|------------|---|-----------------------------------|----------------------------|----------------------------|----------------------------|
| | | | | 60M / NC | 100M / 100NC | 150M / 150NC | 200M / 200NC |
| GENERAL CAPACITY | Distance between centers | mm(in) | 500(20") | 600(24") | 1000(40") | 1500(60") | 2000(80") |
| | Swing over table | mm(in) | Ø260(Ø 10.2") | 320 /380 (12.6"/15") | | | |
| | Max. grinding diameter | mm(in) | Ø250(Ø 10") | 300 /360 (12"/14") | | | |
| | Max. Load held between centers | kg(lb) | 80(176) | 150 (330) | | | |
| WHEELHEAD | Swivelling angle (R&L) | degree | ±30° | ±30° | | | |
| | Infeed travel | mm(in) | 135(5.3") | 245 (9.6") | | | |
| | Hand feed travel | mm(in) | 90(3.5") | 200 (7.8") | | | |
| | Top slide travel | mm(in) | | 180 (7") | | | |
| | Automatic rapid travel | mm(in) | | 45 (1-3/4") | | | |
| | Auto increment infeed (CII models) | mm(in) | | Ø0.001~Ø0.999 (Ø0.0001~ Ø0.0999") | | | |
| | Handwheel per graduation | mm(in) | | Ø0.004(Ø0.0002) | | | |
| GRINDING WHEEL | Diameter × Width × Bore | mm(in) | Ø355x38xØ127 (Ø14x1-1/2xØ5) | Ø405X50X Ø127(Ø16"X2"XØ5") | | | |
| | Wheel speed | rpm | 1960 | 1650 | | | |
| TABLE | Swivelling angle (R&L) | degree | ±8° | ±9° | ±7° | ±5° | ±3° |
| | Traverse speed (infinitely variable) | mm(in/min) | 30~7000 (1-1/5"~275") | | | | |
| | Handwheel per revolution | mm(in) | 10(4") | | | | |
| WORKHEAD | Swivelling angle (R&L) | degree | ±45° | 90° | | | |
| | Center taper | MT | MT3 | MT4 (option MT5, 5C) | | | |
| | Spindle speed (infinitely variable) | rpm | 150/264/356/480 | 30~350 | | | |
| TAILSTOCK | Center taper | MT | MT3 | MT4 (option MT5) | | | |
| | Quill Travel | mm(in) | 25(1") | | | | |
| INTERNAL GRINDING | Spindle speed | rpm | 12000/18000 or 25000 | | | | |
| | Max.grinding bore | mm(in) | 30~100(1.18"-3.94") or 20-50(0.79"-1.97") | | | | |
| | Max. grinding length | mm(in) | 110 (4.33") or 55 (2.17") | | | | |
| | Max. chucking length | mm(in) | 315 (12-2/5") | | | | |
| | Max. chucking diameter | mm(in) | 150(6") | | | | |
| MOTOR | Wheel spindle motor | HP | 5 | 7½ | | | |
| | Workhead motor | HP | 1/2 | 2 | | | |
| | Hydraulic pump | HP | 2 | 2 | | | |
| | Coolant pump | HP | 1/8 | 1/4 | | | |
| | Internal grinding motor | HP | 2 | | | | |
| MACHINE | Net weight (approx) | kg(lb) | 2050(4510) | 3800(8580) | 4700(10340) | 5300(11660) | 5700(12540) |
| | Gross weight (approx) | kg(lb) | 2550(5610) | 4300(9460) | 5200(11440) | 5800(12760) | 6600(14520) |
| | Packing dimension (L × W × H) | mm(in) | 2250x1650x1900 (89x65x75) | 302x230x200 (119"x90"x79") | 302x230x200 (119"x90"x79") | 430x230x200 (170"x90"x79") | 515x230x200 (203"x90"x79") |

All specifications and features are subject to change without notice

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UNIVERSAL CYLINDRICAL GRINDER G25P/G32P/G38P

The **SUPERTEC** cylindrical grinder has been developed for between-center and chucking applications. Available in manual infeed (M models) or automatic infeed (NC models), this series of grinders offers a 10", 12.6" or 15" swing and a choice of 20", 24", 40", 60", or 80" center distance for various grinding applications. The application is further extended when the optional swing down internal grinding attachment is supplied for internal grinding capability.

All machines feature a Meehanite box-type base, hydrostatic table ways, swiveling workhead and table, variable speed workhead, separate hydraulic system, 5 or 7½ HP Spindle motor w/cartridge type spindle, and automatic lubrication for unsurpassed precision and productivity. Models with automatic infeed capability use a Mitsubishi PLC control with a menu-driven LCD touch screen that is easy to learn and easy to set. Operators need only to fill in the blanks to set total grinding amount, rough increment, fine increment, spark-out passes, feeding direction, parking position, wheelhead retract distance then press cycle start to complete the automatic grinding cycle. An optional overhead parallel dresser with automatic compensation system helps to reduce cycle time and obtain better surface finish. These grinders are sure to provide many years of peak performance and accuracy.



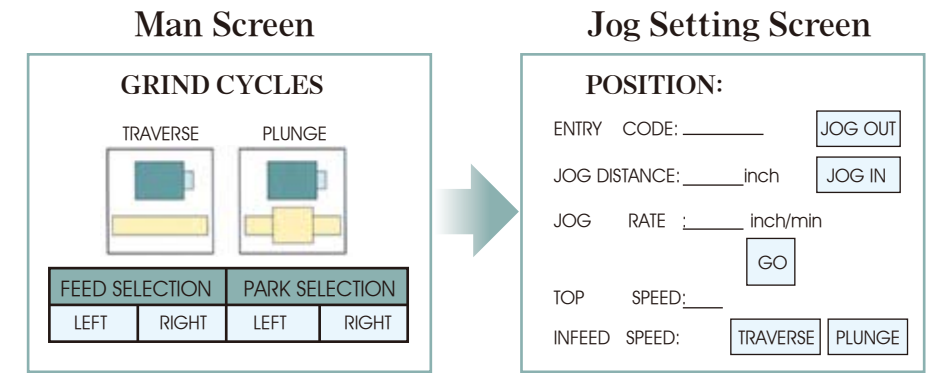
G32P-60NC

Note: Machine shown with optional accessories.

Mitsubishi PLC control uses a menu-driven LCD touch screen technology for simple operation. (NC Models only)

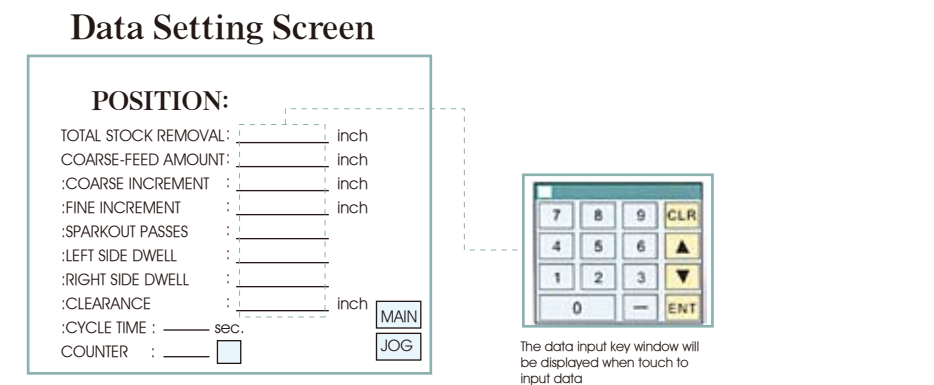
Step 1

Choose the following functions:
Grinding Mode Selection Infeed Selection Table Parking Selection Jog Setting or Next Screen

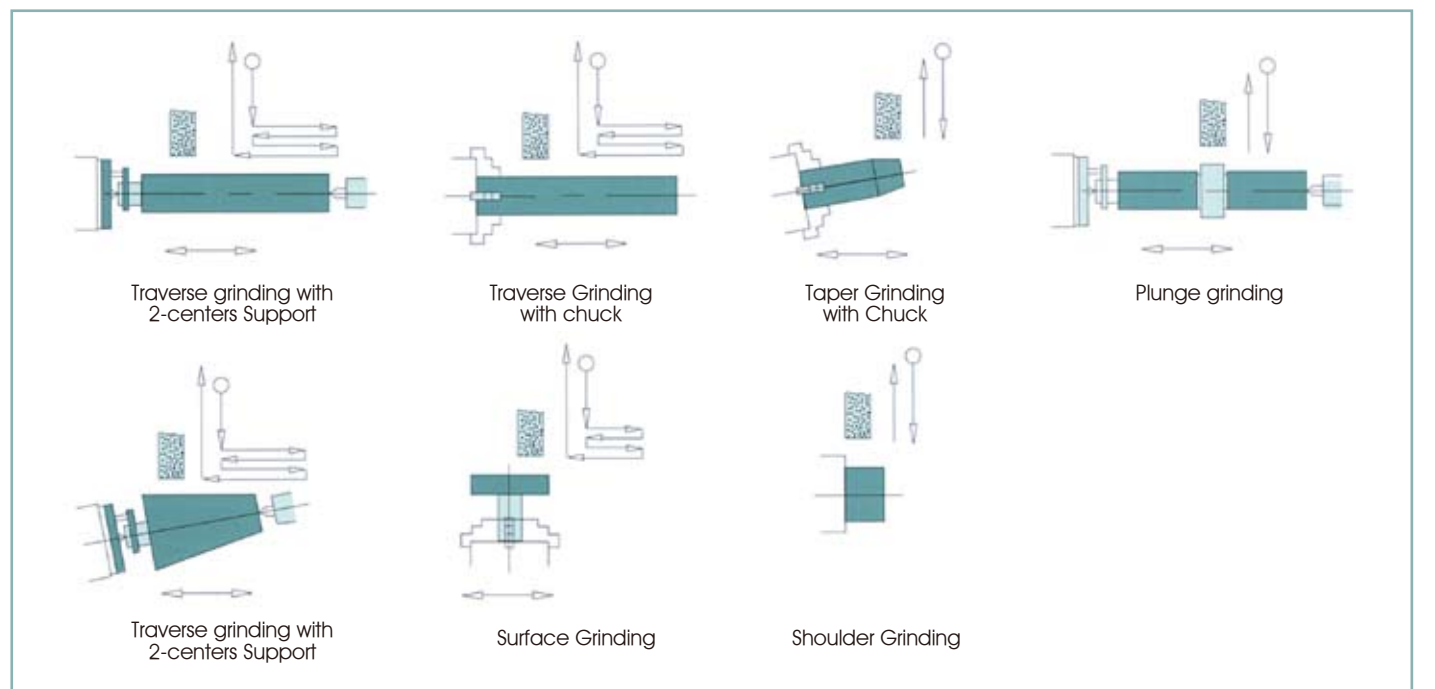


Step 2

Fill in the blanks to set total stock removal, total fine grinding amount, rough increment, fine increment, spark-out passes, and reset distance, then press cycle start to complete the automatic grinding cycle.

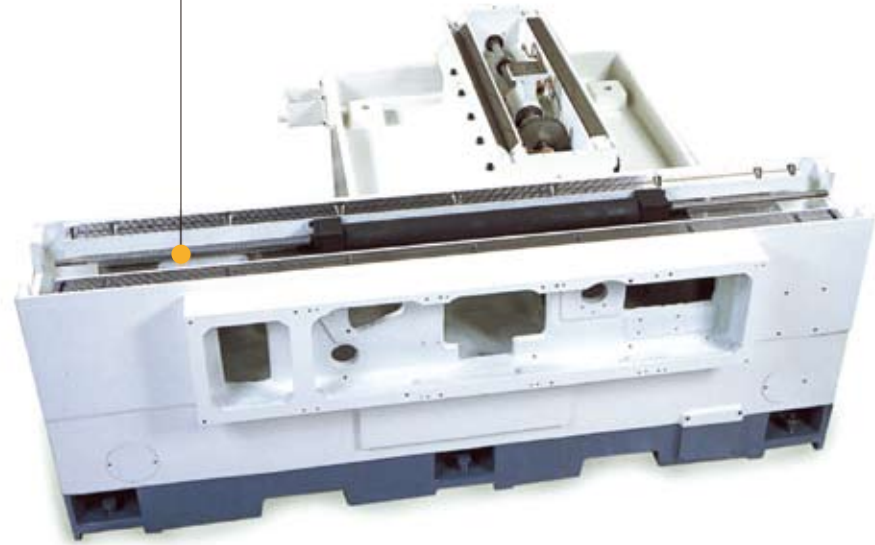


Grinding Application



Machine Base

The heavily ribbed box-type base is made of meehanite castings, ensuring machine stability. Optimal distance between guideways offers excellent table support to increase Z axis positioning accuracy and repeatability.



The Finest Solution

Workhead

The sturdy rigid-designed workhead equipped with precision bearing is electronically controlled giving variable spindle speeds. Workhead swivel 90° counterclockwise to 30° clockwise for various grinding operations. A combination live and dead-type spindle allows for quick changeover from center to chuck operation or vice versa. A dual oil seal and cover prevents coolant seepage into the workhead



Tailstock

The design of the tailstock is both rigid and robust. Housed in a cast body, the hardened nitralloy steel sleeve is designed to carry a MT3/MT4 center or optional MT5 center. An optional hydraulic tailstock with foot pedal is available for easy loading and unloading of parts.

The Finest Solution

Wheelhead

The one V and one flat guideways are Turcite coated and utilize a hydro static oil lube system. The wheelhead is driven via A.C. servo motor and precision ballscrew for greater accuracy and reliability, as well as ensuring repeatability of $\pm 0.000040"$. The machines control can be programmed to increments as fine as $0.000010"$.



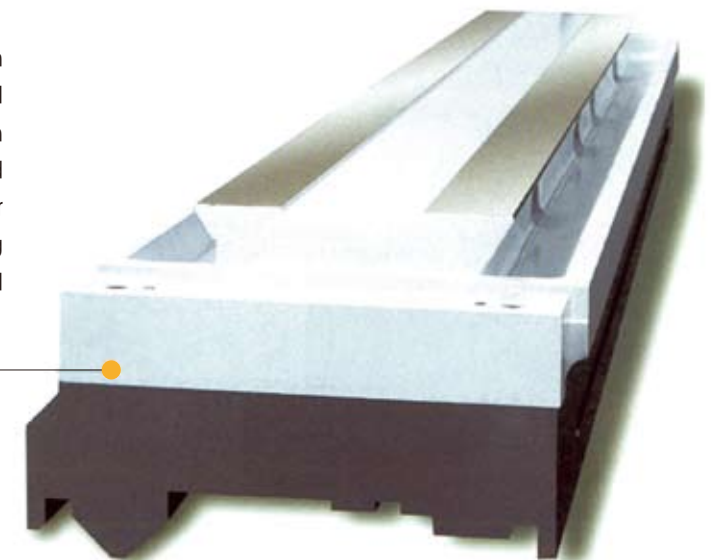
Wheel Spindle

Cartridge type wheel spindle is permanently lubricated and equipped with four super precision angular contact class 7 (ABEC) bearings incorporated with 5/7½ HP spindle motor ensure high accuracy.



Work table

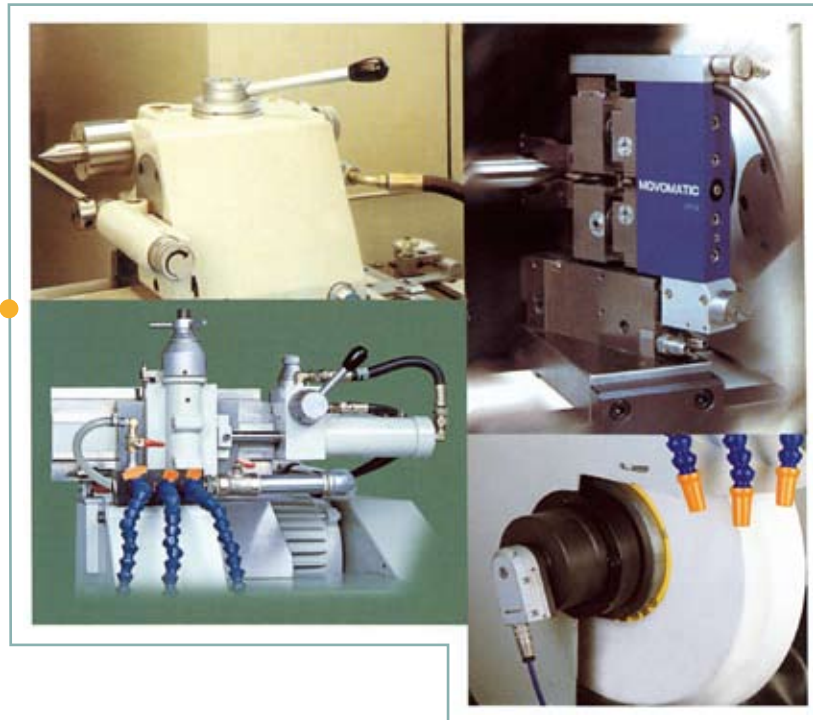
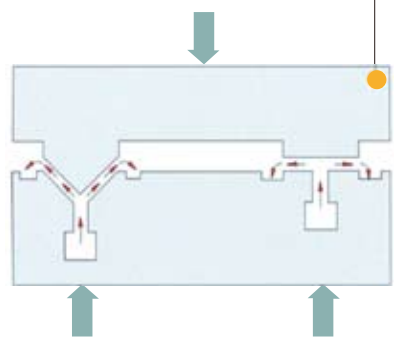
The rigid table with box-type construction travels on hydro-static ways with a cushion of oil allowing no metal to metal contact. The automatic force lube system operates continuously to ensure smooth movement and consistent accuracy. A Swiveling table dial indicator enables rapid cylindrical correction and taper grinding applications. The table is fully supported in the full travel to avoid overhang.



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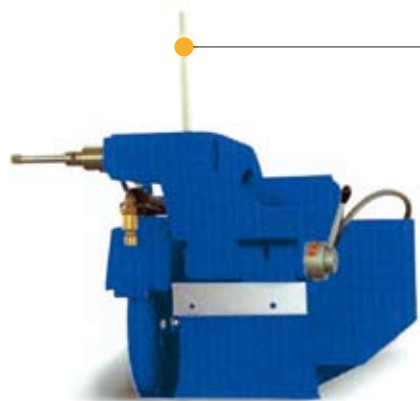
Automatic Lubrication System

Slideways and leadscrew are continuously lubricated by an auto-lube system to ensure long service life and maintain maximum accuracy. Hydraulics, lubrication systems are separated from machine to eliminate vibration and dissipate heat.



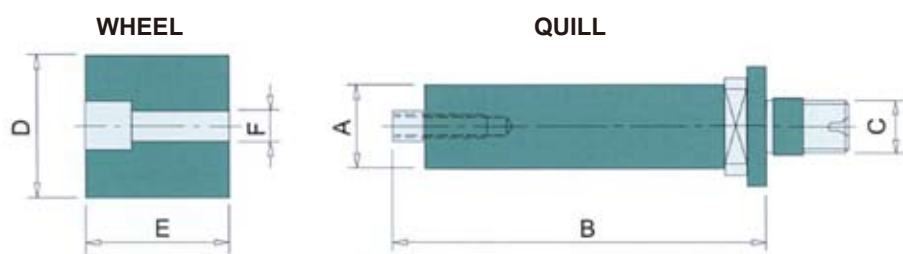
Systems for Automation

A highly-automated grinding system can be customized with a wide selection of optional equipment...including an automatic OD sizing device,hydraulic tailstock with foot pedal, overhead dresser with automatic compensation, tailstock-mounted micro wheel dresser & dynamic wheel balance system...etc.



Optional Internal Grinding Attachment

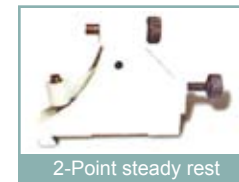
The hinged, swing-down internal grinding attachment swings down into working position easily and quickly. A patented locking device adds safety as it prevents the ID attachment from swinging down abruptly. This unit can grind diameters from 0.79"(20mm) to 3.94"(100mm) to a maximum depth of 4.33"(110mm). It offers wheel spindle capability of 12,000/15,000 or 25,000 rpm.



unit:mm(in)

| SPINDLE RPM | QUILL | | | WHEEL SIZE | | | WORKPIECE | |
|-------------|-------|----|---------|------------|----|---|---------------------|---------------------|
| | A | B | C | D | E | F | DIAMETER | DEPTH |
| 12000/18000 | 16 | 51 | M14×1.5 | 25 | 25 | 8 | 30-80(1.18"-3.15") | 25-60(0.98"-2.36") |
| | 20 | 73 | M14×1.5 | 32 | 32 | 8 | 40-80(1.57"-3.15) | 32-90(1.26"-3.54") |
| | 24 | 91 | M14×1.5 | 38 | 38 | 8 | 50-100(1.97"-3.94") | 38-110(1.50"-4.33") |
| | 10 | 32 | M10×1.5 | 16 | 16 | 6 | 20-50(0.79"-1.97") | 16-30(0.63"-1.18") |
| 25000 | 12 | 38 | M10×1.5 | 19 | 19 | 6 | 25-50(0.98"-1.97") | 19-40(0.75"-1.57") |
| | 16 | 48 | M10×1.5 | 22 | 25 | 6 | 30-50(1.18"-1.97") | 25-55(0.98"-2.17") |

Optional Accessories



2-Point steady rest



3-Point steady rest



Radius dressing attachment



Angle dressing attachment

| | |
|--|--|
| 3 Jaw scroll chuck | 4" / 5" / 6" / 8" |
| 4 Jaw independent chuck | 6" / 8" |
| Fixed back plate | 4" / 5" / 6" / 8" |
| Adjustable back plate | 6" / 8" |
| 5C collet closer | manual / air |
| 5C collets | 3/64"-1 1/8 (4-20mm) |
| Radius dressing attachment | |
| Angle dressing attachment | |
| Internal grinding attachment | 12000/18000rpm or 25000rpm |
| 2-Point steady rest | 2.8 (70mm)/4.8" (120mm) |
| 3-Point steady rest | 1.6"-4" (40-100mm) /3.2"-5.5" (80-140mm) |
| Digital readout | one axis / two axis |
| Balancing stand | straight / toller type |
| Spare grinding wheel | 14"x11 1/2"x5" /16" x2"x5" |
| Spare wheel flange | 5" bore |
| Micro wheel dresser | |
| Overgead parallel dressing attachment | |
| Overhead dresser w/auto compensation system | |
| Hydraulic tailstock w/foot pedal | |
| MT5 taper on workhead & tailstock | G32/38P only |
| SBS Dynamic wheel balance system | |
| Coolant system w/magnetic separator & paper filter | 60L/min, 140L |
| Coolant system w/magnetic separator & paper filter | 40L/min, 120L |
| Coolant system w/paper filter | 60L/min, 140L |
| Coolant system w/paper filter | 40L/min, 120L |
| Variable speeds | wheelhead / ID attachment |



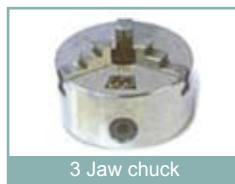
Fixed back plate



Micro wheel dresser



Coolant system w/mag. sep & paper filter



3 Jaw chuck

Standard Accessories

| | |
|----------------------------------|--------------------------|
| Balancing arbor | Dial gauge |
| Wheel extractor | Splash guard |
| Grinding wheel w/flange | Coolant system |
| Tool box w/adjusting tools | Auto lube system |
| Diamond dresser (fixed on table) | Carbide tip centers |
| Operation manual with parts list | Leveling screws w/blocks |
| Variable speeds workhead | Halogen Light |

Dimensional Drawings

unit: mm (in)

| | A | B | C | D | E | F | G | H | I | J | K | L | M |
|---------------|---------------|----------------|------------------|-------------------|-------------------|-----------------|-----------------|-------------------|-------------------|------------------|------------------|------------------|---------------|
| G25P-50M/NC | 500 | 130 | 1075 | 1270 | 1450 | N/A | N/A | 1950 | 2400 | N/A | N/A | 920 | 1560 |
| G32P-60H/CII | 600 (24") | 162 (6.38") | 1090 (42.91") | 2600 (102.36") | 1960 (77.17") | 390 (15.35") | 405 (15.94") | 2755 (108.46") | 3420 (134.65") | 386 (15.20") | 279 (10.98") | 1220 (48.03") | 1397 (55") |
| G32P-100H/CII | 1000 (40") | 162 (6.38") | 1090 (42.91") | 2600 (102.36") | 2630 (103.54") | 570 (22.44") | 585 (23.03") | 3785 (149.02") | 4855 (191.14") | 561 (22.09") | 509 (20.04") | 1220 (48.03") | 1397 (55") |
| G32P-150H/CII | 1500 (60") | 162 (6.38") | 1090 (42.91") | 2600 (102.36") | 3690 (145.28") | 475 (18.70") | 500 (19.69") | 4665 (183.66") | 6265 (246.65") | 796 (31.34") | 804 (31.65") | 1220 (48.03") | 1397 (55") |
| G32P-200H/CII | 2000 (80") | 162 (6.38") | 1090 (42.91") | 2600 (102.36") | 4890 (192.52") | 456 (17.95") | 479 (18.86") | 5825 (229.33") | 7937 (314.84") | 1066 (42.76") | 1066 (42.76") | 1220 (48.03") | 1397 (55") |

