VAN NORMAN

A Division of Kwik-Way Products Inc.

Established 1888

FG5000 & FG10000 Flywheel Grinders

The INDUSTRY LEADER *in Flywheel Grinders!*

The First — and Still the Best — Flywheel Grinders

- The best return on your investment — earn more per hour of use
- Fast set up and easy to operate
- Achieve precision results every time
- Exclusive solid cast table support means no deflection
- Direct drive table — no belts or chains
- Most productive and rugged flywheel grinders available

Equipment specifications, options and accessories subject to change without notice

An FG grinder could be the most profitable machine you ever own!

Three models available:

- **Standard Machine** (FG5000) with Manual Downfeed
- **PowerHead** (FG5000 and FG10000) with PowerHead Up/Down to Flywheel and Manual Downfeed
- **PowerHead with AutoGrind**™ (FG5000 and FG10000) with PowerHead Up/Down to Flywheel and Automatic Grind to Pre-set Depth

If you're currently sending flywheels out, or machining them on a brake lathe…
you need a FG5000 or FG10000 Flywheel Grinder!

Standard FG5000 with Manual Downfeed (shown)

PowerHead FG10000 with AutoGrind™ (shown)

Electrical Components are recessed behind the side panel (above) and protected from the shop elements.

Standard 9.5 Gallon Internal Coolant Tank is easily accessible. It completely slides out the front door for easy emptying. The coolant pump is removable for easy cleaning.

Call for a Distributor near you at 1-800-553-5953

FG5000 & FG10000 features

- Exclusive, rugged column-base casting with cast-in table support.
- Unlimited grinding pressure is possible — *with no table deflection.*
- Oil reservoir with Optomatic Oiler gives constant column/table support lubrication. Thrust bearings or anti-friction material (which require field service) are *not* used.
- Direct Table Drive — *No chains or belts to adjust or replace. Consistent torque to table.*
- AutoGrind™ — Easy to set, easy to use, increases productivity…*and is reliable.*
- Double Cam Head Swivel Lock for positive head lock — *lubricated for ease in swiveling.*

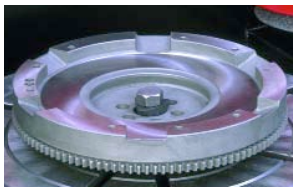
Our Flywheel Grinders are made larger, stronger, heavier, longer lasting — *and they have more features.*

FG5000 & FG10000 benefits

- Grind your own flywheels…Finish the job fast… *Minimize idle racktime - MAXIMIZE PROFITS!*
- Set-up is extremely fast and accurate. It is the easiest machine to operate in your shop.
- Grind most automotive and light truck flywheels floor to floor in 5–10 minutes (slightly longer for the heavy duty stepped flywheels).

The most versatile grinder on the market!

Automotive Stepped Flywheel



Import Stepped Flywheel

Racing Clutch Components

Center Plate

Truck Flat Flywheel

Heavy Duty Truck Stepped Flywheel

- The FG's cost just a few dollars per day to own, take up very little floor space and will last for many years. *The FG's are an excellent investment!*
- Supply costs are minimal and labor costs are low because a skilled machinist is *not* needed to operate the Van Norman flywheel grinders.

Exclusive FG10000 design

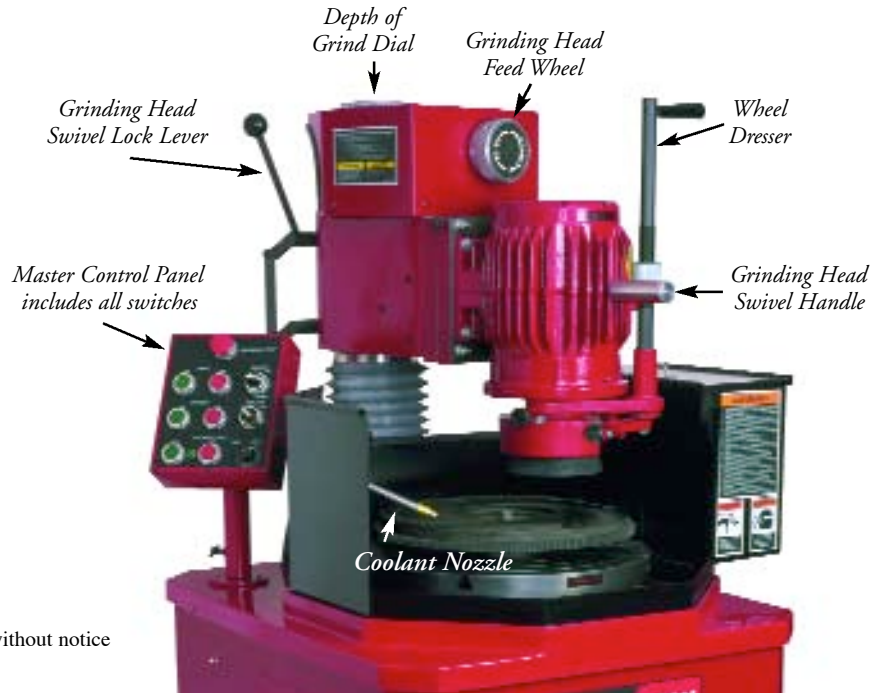
The FG10000 was designed specifically for a 10 horsepower application — *NOT a 10 hp motor hung on a 5 hp machine!*

FG10000 features:

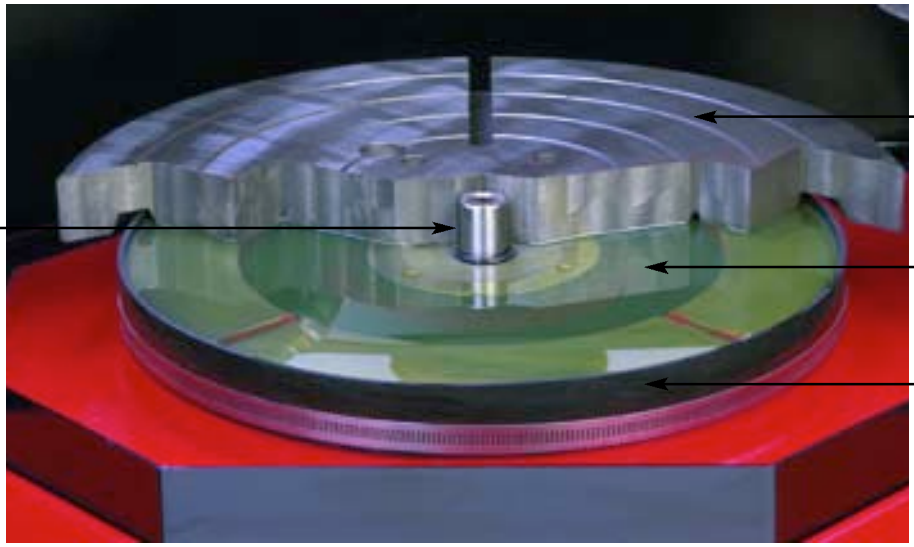
- Larger column flange
- Larger 5.5" diameter column, with massive thick wall
- Larger motor flange
- Increased vertical head travel/clearance to 10.5" — the most clearance in the industry!
- Increased machine weight — 200 lbs heavier

Designed for ease of operation and the convenience to the operator:

FG10000 with Powerhead and AutoGrind™



Equipment specifications, options and accessories subject to change without notice

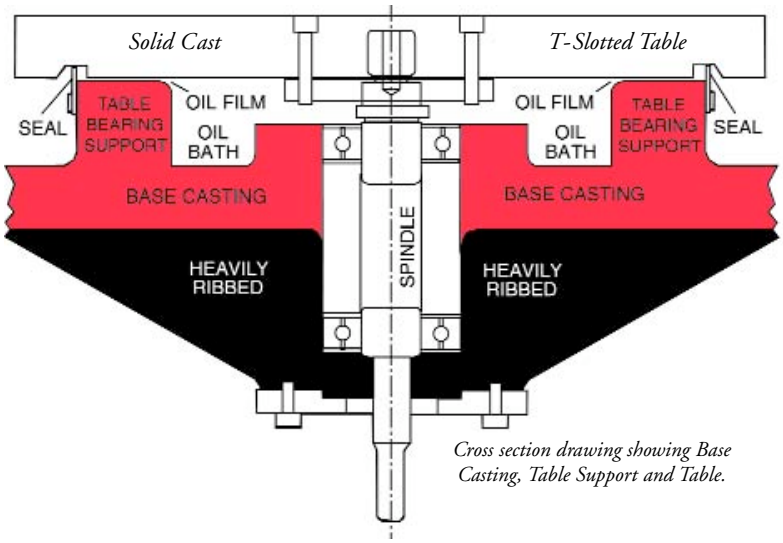


The unique design of the FG's ensures ease-of-use and longevity.

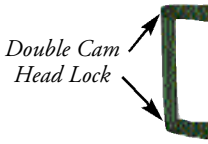
Rugged Cast Bearing supports 18" table

- Solid Cast Table (cut-a-way photo above) shows the Oil Reservoir, the Oil Film and the Table Bearing Support. *The table rotates on the cast bearing support that prevents deflection regardless of the flywheel size and weight, or grinding pressure.*
- The oil level is set 1/16" above the Table Bearing Support for constant lubrication. The oil level is maintained at all times by the Optomatic Constant Oiler.
- There is absolutely no downward or sideward pressure on the spindle or spindle bearings — they merely "drive & guide" the table. *If the table was only supported by the spindle and spindle bearings, they would be "wiped out" by the downward pressure required for grinding* (see cross section illustration below).

- No costly thrust bearings used for support
- Unlimited grinding pressure
- No anti-friction material required
- Grind within closer tolerances



Cross section drawing showing Base Casting, Table Support and Table.



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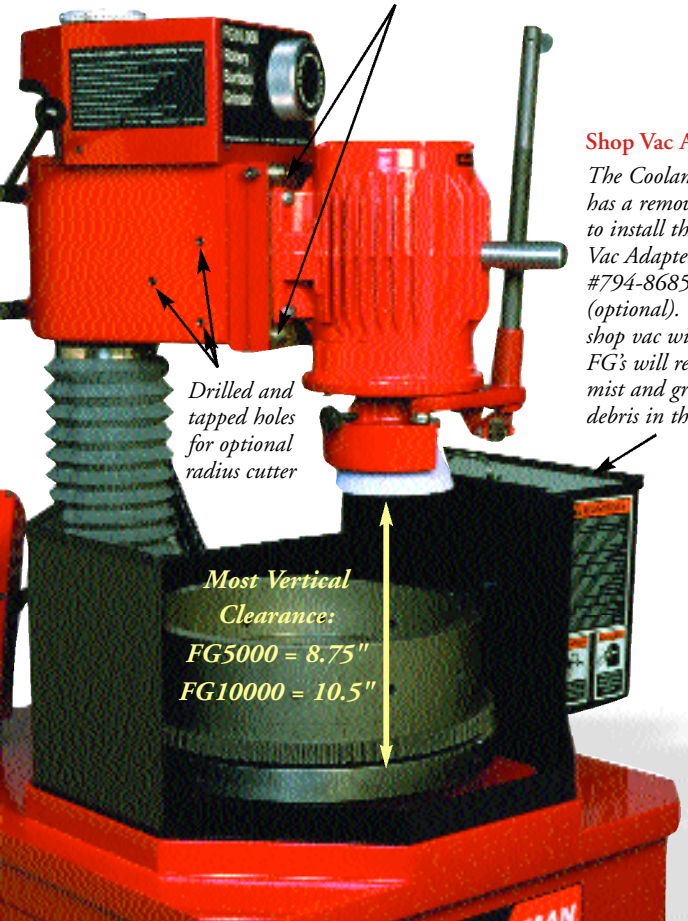
The FG's plunge grind fast & accurately. Hard spots and heat checks are NOT a problem!

Hard spots? Heat checks? No problem. The entire friction surface is ground at once, assuring fast, accurate results every time. Plunge grinding produces a "swirl finish", or a "cross hatch finish", if preferred. Also, the operator has total control over the surface finish—the longer the sparkout, the smoother the finish.

Grinding head tilt can be adjusted for precision results

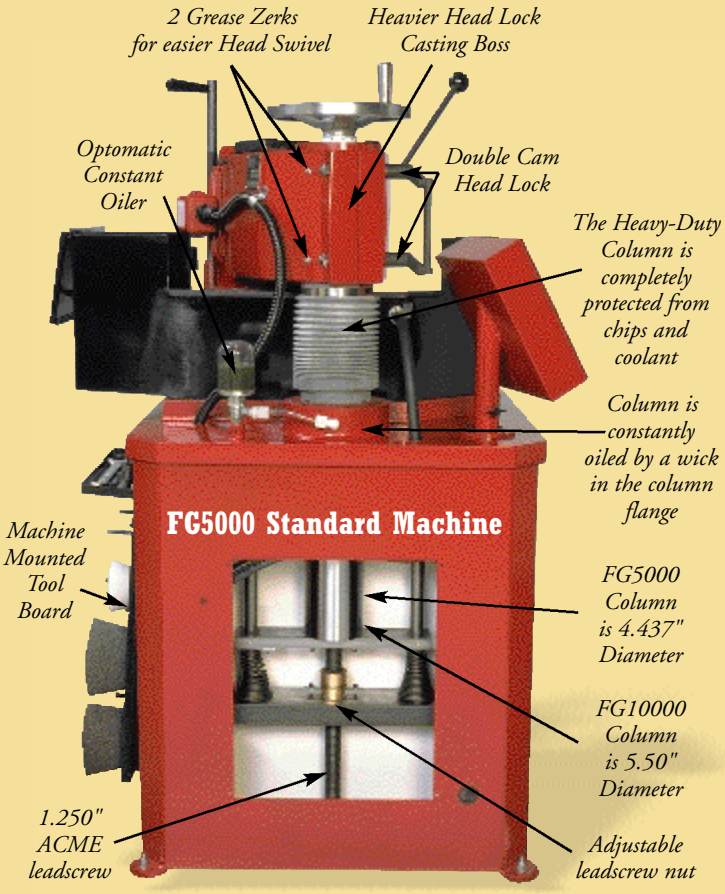
The grinding head assembly is set at the factory with a .023" rear tilt of the grinding wheel and the side to side setting of .000" for the fastest grinding and the best surface finish. The head tilt can be set flatter for even greater grinding precision.



Shop Vac Adapter

The Coolant Shroud has a removable cap to install the Shop Vac Adapter, part #794-8685-54 (optional). Using a shop vac with the FG's will reduce the mist and grinding debris in the shop.

The FG's from Van Norman have more features in the back than most grinders have altogether… making them easier to operate and maintain.



Heavy-Duty Column Assembly

The FG column diameters are the largest in the industry—the FG5000 is 4.437" and the FG10000 is 5.50". Both are chromed and precision ground and are constantly lubricated by a felt wick installed within the column mounting flange. The columns are totally protected from grinding debris and coolant by a rubber boot.

The 1.250" ACME Lead Screw on the FG's are the largest on any flywheel grinder. The Heavy Duty Bronze Lead Screw Nut is adjustable to take up any "play" that may occur throughout the life of the machine.

KWIK-WAY® A Tradition of Automotive Precision Since 1920

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1-800-553-5953

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sales@kwik-way.com • (outside US: international@kwik-way.com)
www.van-norman.com

The FG's are built solid for rugged strength, precision and reliability.

One-Piece 480 lb. Base Casting

- Heaviest and most rugged in the industry
- Cast-in column mounting flange supported by heavy gussets
- All machining of base casting with one set up for maximum accuracy and perfect perpendicularity

Exclusive Direct Drive Gear Reduction Unit

- Rugged, Industrial Design
- Heavy Duty 1/3 H.P. Motor
- Delivers consistent torque to the table
- Requires no maintenance
- Has no chains or belts to lubricate, adjust or replace

Column Mounting Flange

- Cast integrally for more strength, stability and perfect alignment
- Increased diameter to properly support the massive columns
- Column is constantly lubricated by internal wick

Exclusive Cast-In Table Support — No Deflection, Ever

- 94 square inch Table Bearing Support - Prevents table deflection
- Cast in oil reservoir
- Faster, more accurate grinding—superior finish
- Rugged, life-time design

Fast, simple, accurate set-up…in less than one minute!

1. *Select the flange adapter and place it on the rotary table*

2. *Lay the flywheel on the adapter*

3. *Install the centering cone, hold down the bolt, and tighten*

That's the entire set-up!
The flywheel sits on a precision ground flange adapter ring assuring parallelism to the crankshaft flange. No indicating, no guessing, no scratch tests. Precision results—*every time.*

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Optional Accessories for FG Flywheel Grinders

Optional 32 Gallon Coolant Tank (794-8688-34)

- 3-1/2 times the coolant capacity of a standard tank.
- Has two baffles and three settling compartments assuring clean coolant to the nozzle.
- Coolant Tank has handle with 2 wheels— roll away for easy disposal.
- 1/15H.P., 12GPM pump is removable for easy cleaning.
- Stainless steel pump shaft provides high torsional strength and is corrosion resistant.

Note: Requires 2-3/4" drain hole in base cabinet— order optional coolant tank with Flywheel Grinder.

Optional Radius Cutter (794-8625-27)

The Radius Cutter quickly removes the slight radius left by the grinding wheel on stepped flywheels. In certain applications, the radius interferes with pressure plate mounting. The rugged cutter removes the radius and produces a square corner. This heavy duty assembly bolts to the grinding head casting. The holes for mounting are already drilled and tapped.

ATP5000 Kit—Transmission Pump & Cover Rebuilding (794-8633-33)

Rebuild parts to close tolerances fast. The FG5000/FG10000 grinds bodies and covers from the GM THM700-4R and THM200-R4 transmissions. Tooling is precise, yet very easy to use. *Save time and money by rebuilding these parts in-house!*

Racing Tooling Kit (794-8687-04)

All the tooling necessary to grind clutch discs, pressure plate and racing-style flywheels. Optional Hold-Down Tooling available to grind floater plats (794-8684-93).

Equipment specifications, options and accessories subject to change without notice

Control Panels for all three models are easy to use and simple to understand.

Standard Machine (FG5000)

Manual adjustment of the column up/down to flywheel with manual downfeed to grind

- Raising and lowering the grinding head is easy with the assistance of heavy tapered coil springs
- Clearly marked and accessible for the operator
- Increases production

PowerHead (FG5000 & FG10000)

Powers column up/down to flywheel with manual downfeed to grind

- PowerHead— ideal feature for grinding deep stepped flywheels
- Speeds up production
- Reduces operator fatigue

Electronic AutoGrind™ (FG5000 & FG10000)

Powers column up/down to flywheel and automatically grinds to a pre-set depth.

- Variable controlled auto-grind feed
- Reliable electronics
- Will sense overload & reduce feed rate
- Frees up the operator
- Increases productivity

Ordering Information

FG5000 FLYWHEEL GRINDER

FG5000 Standard Machine

794-8690-00 .....208/230V, 60 Hz, 3 Ph
794-8690-01 .....208/230V, 60 Hz, 1 Ph
794-8690-02 .....460V, 60 Hz, 3 Ph
794-8690-03 .....380V, 50 Hz, 3 Ph
794-8690-04 .....575V, 60 Hz, 3 Ph
794-8690-07 .....230V, 50 Hz, 1 Ph
794-8690-06 .....415V, 50 Hz, 3 Ph

FG5000 with PowerHead

794-8688-40 .....208/230V, 60 Hz, 3 Ph
794-8688-41 .....208/230V, 60 Hz, 1 Ph
794-8688-42 .....380V, 50 Hz, 3 Ph
794-8688-43 .....460V, 60 Hz, 3 Ph
794-8690-16 .....415V, 50 Hz, 3 Ph

FG5000 with PowerHead & AutoGrind™

794-8688-50 .....208/230V, 60 Hz, 3 Ph
794-8688-51 .....208/230V, 60 Hz, 1 Ph
794-8688-52 .....380V, 50 Hz, 3 Ph
794-8688-53 .....460V, 60 Hz, 3 Ph
794-8690-26 .....415V, 50 Hz, 3 Ph

FG10000 ROTARY SURFACE (FLYWHEEL) GRINDER

FG10000 with PowerHead

794-8688-22 .....208/230V, 60 Hz, 3 Ph
794-8688-36 .....460V, 60 Hz, 3 Ph
794-8688-35 .....380V, 50 Hz, 3 Ph

FG10000 with PowerHead & AutoGrind™

794-8688-06 .....208/230V, 60 Hz, 3 Ph
794-8688-38 .....460V, 60 Hz, 3 Ph
794-8688-37 .....380V, 50 Hz, 3 Ph

FG5000 & FG10000 STANDARD EQUIPMENT

794-8010-64 .....Centering Cone Bolt 1.875" (47.6 mm)
794-8010-65 .....Centering Cone Bolt 2.625" (66.7 mm)
794-8010-66 .....Centering Cone Bolt 3.375" (87.8 mm)
794-8010-72 .....Centering Cone 1" - 1.75" (25.4 - 44.5 mm)
794-8010-74 .....Centering Cone 1.312" - 2" (33.3 - 50.8 mm)
794-8010-76 .....Centering Cone 1.75" - 2.5" (44.5 - 63.5 mm)
794-8017-93 .....Centering Cone 2" - 2.625" (50.8 - 66.7 mm)
794-8010-78 .....Centering Cone 2.25" - 3" (57.2 - 76.2 mm)
794-8010-80 .....Centering Cone 2.75" - 3.5" (69.9 - 88.9 mm)
794-8010-90 .....Flange Adapter 3" (76.2 mm)
794-8010-92 .....Flange Adapter 4" (101.6 mm)
794-8010-94 .....Flange Adapter 5" (127 mm)
794-8010-97 .....Flange Adapter 5.875" (149.2 mm)
794-8124-71 .....Wheel Spacer 1.5" (38.1mm)
000-0170-60 .....Wheel Mounting Bolt, 2.75"
000-0170-55 .....Wheel Mounting Bolt, 2.5"
000-0170-35 .....Wheel Mounting Bolt, 1.25"
000-0170-27 .....Wheel Mounting Bolt, 1.00"
794-8011-88 .....4" & 6" Wheel Mounting Flange
794-8011-12 .....Grinding Wheel 6" Flared Cup (FG5000)
794-8011-30 .....Grinding Wheel 6" Flared Cup (FG5000 & FG10000)
794-8011-28 .....Grinding Wheel 4" Flared Cup (FG5000 & FG10000)
794-8686-22 .....Grinding Wheel 6" Flared Cup, Ceramic Oxide (FG10000)
794-8017-44 .....E-Z Lok Insert (2)
794-8637-45 .....E-Z Lok Insert Extractor
794-8013-12 .....O-Ring
794-8013-73 .....Oil Level Gauge
794-8011-70 .....Star Dresser
794-8011-52 .....Leadscrew Lubricant
794-8621-76 .....Coolant Pump
794-8011-40 .....Coolant Additive, 1 Qt (.946 liter)
794-8011-55 .....Table Lubricant, Qt (2)(.946 liter)
794-8030-58 .....Leveling Pads (4)
000-0114-10 .....Leveling Bolts (4)
000-1035-35 .....Leveling Lock Nuts (4)
794-8017-32 .....T-Handle Hex Wrench
794-8017-37 .....Wrench Set

SPECIFICATIONS

	FG5000	FG10000
Work Piece Capacity	24" (600 mm)	24" (600 mm)
Table Diameter	18" (450 mm)	18" (450 mm)
T Slots in Table	6	6
Table Support Diameter	15" (381 mm)	15" (381 mm)
Column Diameter	4.44" (111.8)	5.5" (139.7)
Vertical Head Travel	8.75" (222.3 mm)	10.5" (266.7 mm)
Max Height Table/Wheel	8.75" (222.3 mm)	10.5" (266.7 mm)
Grinding Motor @ 3500 RPM	5 Hp (3.5 kw)	10 Hp (7 kw)
Table Motor @ 16 RPM	1/3 Hp (.248 kw)	1/3 Hp (.248 kw)
Coolant Capacity, Standard	9.5 Gal. (36 liters)	9.5 Gal. (36 liters)
Coolant Capacity, Optional	32 Gal. (121.1 liters)	32 Gal. (121.1 liters)
Height (Overall)	69" (1752 mm)	69" (1752 mm)
Height (To table)	34.6" (878 mm)	34.6" (878 mm)
Width	34.5" (876 mm)	34.5" (876 mm)
Depth	36" (914.4 mm)	36" (914.4 mm)
Net Wt	1350 Lbs. (612.4 kg)	1550 Lbs. (703.1 kg)
Ship Wt	1500 Lbs. (680.4 kg)	1700 Lbs. (771.1 kg)

OPTIONAL ACCESSORIES

000-0600-18 .....Hex Wrench 3/8" AL
000-0601-00 .....Hex Wrench 1/4"
794-8107-90 .....Small Bore Centering Cone Set
794-8684-78 .....Flywheel Dowel Pin Puller Kit - Automotive & Import
794-8685-49 .....VW/Universal Flywheel Kit
794-8685-32 .....Head Tilt Setting Kit
794-8627-83 .....Dial Indicator/Indicator Bar Set (includes 794-8685-32)
794-8625-27 .....Radius Cutter Assembly
794-8107-88 .....Heavy Duty Universal Centering Cone & Spacer Set
794-8680-18 .....Heavy Duty Centering Adapter Set
794-8684-77 .....0" - 4" Depth Micrometer
794-8688-34 .....32 Gal. External Coolant Tank w/Baffles & Coolant Pump - 230/60/1
794-8690-84 .....Rinse Nozzle Kit
794-8689-53 .....Diamond Dresser Arm w/Diamond
794-8010-67 .....Centering Cone Bolt 3.5"
794-8677-99 .....Centering Cone Bolt 4.25"
794-8010-40 .....Clutch Tooling
794-8633-33 .....ATP Automatic Transmission Rebuilding Kit
794-8687-04 .....Racing Tooling Kit
794-8684-93 .....Optional Hold-Down Tooling for Floater Plates

GRINDING WHEELS & SUPPLIES

794-8011-16 .....Grinding Wheel 6" Flared Cup
794-8011-32 .....Grinding Wheel 6" Straight Sided
794-8011-34 .....Grinding Wheel 6" Flared Cup
794-8011-36 .....Grinding Wheel 6" Flared Cup
794-8633-32 .....Grinding Wheel 4" Straight Sided
794-8687-01 .....Grinding Wheel 3" Flared Cup (Requires 794-8686-97 Mounting Flange)
794-8686-97 .....3" Wheel Mounting Flange (for ATP Kit)
794-8030-00 .....3" CBN (Formula X) Grinding Wheel
794-8040-00 .....4" CBN (Formula X) Grinding Wheel
794-8060-00 .....6" CBN (Formula X) Grinding Wheel
794-8011-12 .....Grinding Wheel 6" Flared Cup (FG5000)
794-8011-30 .....Grinding Wheel 6" Flared Cup (FG5000 & FG10000)
794-8011-28 .....Grinding Wheel 4" Flared Cup (FG5000 & FG10000)
794-8686-22 .....Grinding Wheel 6" Flared Cup, Ceramic Oxide (FG10000)
794-8011-41 .....Coolant Additive, 1 Gal (3.8 liter)
794-8011-42 .....Coolant Additive, 5 Gal (18.9 liter)

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