

# TECHSOUTH POWER POINT TUNGSTEN GRINDER

## Operating Instructions & Parts List

Standard Grinder



Adjustable Grinder



DCS Grinder



Cordless Grinder



Bench Grinder



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# **WARNING:**

## **Please Read All Of These Cautions Prior To Use**

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- ***Any use of this product, other than those described in the instruction book, could lead to injury.***
- ***When grinding, cutting, or flattening, an ANSI approved dust mask should be used.***
- ***Any ANSI approved safety glasses should always be used when grinding, cutting and/or flattening tungsten.***
- ***Gloves should always be worn when grinding, cutting and /or flattening tungsten.***
- ***Dispose of the tungsten dust on a regular basis at an approved location.***
- ***The grinder is for grinding tungsten only. ( Other objects will tend to gum up the diamond wheel.)***
- ***Do not plug into an electrical outlet if the cord is worn or frayed.***
- ***Never use the grinder where water is present - electrical shock could result in injury.***
- ***Do not attempt to unscrew or adjust the head when in operation.***
- ***Remove power plug from outlet when changing the diamond wheel or cleaning the grinder.***
- ***Use only Power Point authorized parts and diamond wheels.***

# Grinder Types



**Standard Grinder**



**Adjustable Grinder**



**Dust Collection Grinder**



**Cordless Grinder**

\*Available in both standard and adjustable

# OPERATING INSTRUCTIONS



When you receive the grinder, check to be sure there is no damage to the motor or electrical lead. The diamond wheel is designed for tungsten only, any other materials tend to clog or gum up the wheel, thereby, reducing grinding effectiveness and contaminating the tungsten. Prior to grinding, check the collets to ensure that the proper one is installed for the diameter of tungsten that is being ground. There are two collets stored in the top of the head for different diameters.



## GRINDING THE ANGLE

Your grinder is set with the 3/32 collet preset to grind on the outermost diameter of the wheel. Insert the tungsten into the correct collet located on the collect disc. Spin the tungsten one revolution with light pressure. Release the tungsten and re-grip it to spin it for another revolution. Continue the grinding procedure until a point is applied to the tip of the tungsten. Let the diamond wheel do the grinding. Do not apply too much pressure because you will create excessive heat on the wheel and reduce it's life. Remember, it is best to spin one revolution with slight pressure, release, grip again, and spin with slight pressure. This allows the wheel to cool and extends the life of the diamond wheel.







When the wheel is worn to the point it will not grind anymore, loosen the disc screw (007) and rotate the collet disc (008) to shift the tungsten to another part of the diamond wheel with fresh diamond. This is accomplished by viewing the location through the slot in the side of the lower housing. When the location has been set, tighten the collet disc screw to lock the collet disc in place. When the top surface of the wheel has been used, the upper housing can be removed and the diamond wheel flips over for complete usage of the wheel.

To flip the wheel, *make sure the unit is unplugged from the outlet* flip the black tab on the motor to lock the rotation. Unscrew the two lower housing screws (004) and lift the upper housing off of the lower housing. Remove the screw from the center of the diamond wheel and turn the wheel over (wheel replacement is done with this procedure, also) and tighten the screw to the mandrel, replace the upper housing, be sure to flip the black tab on the motor back to the original position so the motor will rotate.

When you change the diameter of the tungsten that is being ground, insert the correct collet; (different diameters are located in the top housing), into the collet disc and place the one being changed into the upper housing for storage.

It is recommended that any tungsten that has been contaminated be cut prior to grinding to eliminate the risk of contaminating the wheel.



## CUTTING THE TUNGSTEN

The grinder is equipped with a slot for cutting the tungsten to length or for removing the contaminated end. To cut the tungsten, place it in the slot so the desired portion of the tungsten to be cut (cut line) lines up with the edge of the diamond wheel. Gently, press and rotate the tungsten to cut it. If you want to extend the cutting edge life, score a groove approximately one-half the thickness of the tungsten and snap the tungsten into two pieces. This should not produce any splintering and will extend the cutting edge life.

*Always wear eye protection when cutting and never bind the tungsten between the wheel and the lower housing.*



## FLATTENING THE TUNGSTEN

When a flat is required, either for orbital welding or to make the tungsten square after cutting, the head is equipped with four holes in the top housing to put a flat on the tip of the tungsten.

The flat is accomplished by inserting the tungsten into the correct hole in the top of the upper housing, press lightly and rotate to generate the flat surface.



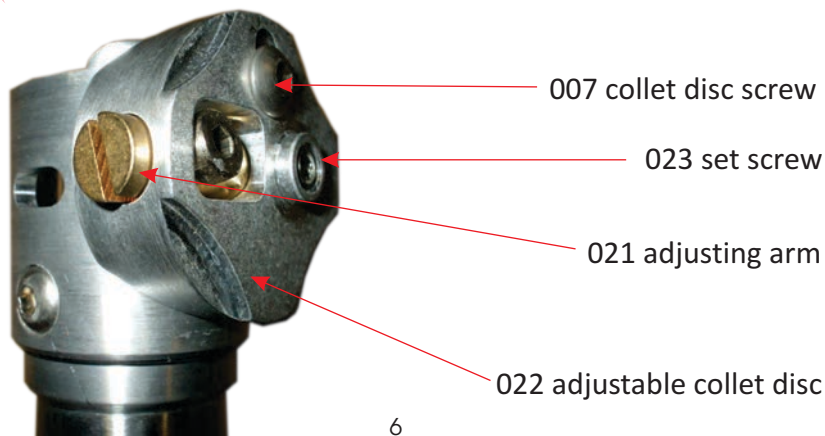
## ADJUSTABLE COLLET INSTRUCTIONS

The adjustable collet allows a variety of angles for various tig welding situations. The angle is adjusted by loosening set screw (023) which will allow the brass collet holder to pivot for different tip angles. You will need to set the collet holder and grind a piece of tungsten to determine the angle you desire. If the desired angle is not correct, repeat the procedure until you achieve the proper angle.

If you like a long point, you may have to loosen the collet disc screw (007) and lower the collect disc (022) so the point of entry of the tungsten is closer to the diamond wheel. The lower the disc the longer the point, and conversely, the higher the disc, the shorter the angle.













The longer angle points will require the tungsten to set on the outer most diameter of the wheel - because the longer point requires more contact with the grinding surface.

To move the collet to another part of the wheel, when wear occurs, loosen set screw (023) and turn the brass screw (021) to advance the collet towards the center of the wheel. (You will have to reset your angle when you relocate to a new part of the wheel.)



















## Standard Grinder TS-PPE Parts List

	PPE-001-120	120 VOLT MOTOR
	PPE-002	STD DIAMOND WHEEL
	PPE-002B	PREMIUM DIAMOND WHEEL
	PPE-006	UPPER HOUSING
	PPE-007	COLLET DISC SCREW
	PPE-008	COLLET DISC
	PPE-009-020	.020 COLLET
	PPE-009-040	.040/1MM COLLET
	PPE-009-062	( 1/16 ) .062/1.6MM COLLET
	PPE-009-093	( 3/32 ) .093/2.4MM COLLET
	PPE-009-125	( 1/8 ) .125/3.2MM COLLET
	PPE-010	ALLEN WRENCH
	PPE-011	TOOL BOX



# Adjustable Grinder TS-PPEADJ Parts List

	PPE-001-120	120 VOLT MOTOR
	PPE-020	UPPER HOUSING ADJUSTABLE COLLET
	PPE-021	ADJUSTABLE ARM
	PPE-022	ADJUSTABLE COLLET DISC
	PPE-023	SET SCREW
	PPE-002	STD DIAMOND WHEEL
	PPE-002B	PREMIUM DIAMOND WHEEL
	PPE-007	COLLET DISC SCREW
	PPE-009-020	.020 COLLET
	PPE-009-040	.040/1MM COLLET
	PPE-009-062	( 1/16 ) .062/1.6MM COLLET
	PPE-009-093	( 3/32 ) .093/2.4MM COLLET
	PPE-009-125	( 1/8 ) .125/3.2MM COLLET
	PPE-010	ALLEN WRENCH
	PPE-011	TOOL BOX



















## DCS Grinder TS-PPE-DCS Parts List

	PPE-001-120	120 VOLT MOTOR
	DCS-012	FRONT HOUSING
	DCS-001	TOP HOUSING
	DCS-014	BRASS COLLET HOLDER
	DCS-011	NYLON WASHER
	DCS-013	SIDE SET SCREW
	DCS-015	SHOULDER SCREW
	DCS-002	DUST CHAMBER O RING
	DCS-003	DUST CHAMBER TUBE
	DCS-004	TOP HOUSING INSERT
	DCS-016	ALLEN WRENCH
	DCS-005	HOUSING O RING
	DCS-006	HOUSING SCREW (2)
	PPE-011	TOOL BOX







## 220 volt Standard Grinder TS-PPE 220 Parts List

	PPE-001-220	220 VOLT MOTOR
	PPE-020	UPPER HOUSING ADJUSTABLE COLLET
	PPE-005-220	LOWER HOUSING
	PPE-021	ADJUSTABLE ARM
	PPE-022	ADJUSTABLE COLLET DISC
	PPE-023	SET SCREW
	PPE-002	STD DIAMOND WHEEL
	PPE-002B	PREMIUM DIAMOND WHEEL
	PPE-003	WHEEL MANDREL
	PPE-004	LOWER HOUSING SCREWS
	PPE-007	COLLET DISC SCREW
	PPE-009-020	.020 COLLET
	PPE-009-040	.040/1MM COLLET
	PPE-009-062	(1/16) .062/1.6MM COLLET
	PPE-009-093	(3/32) .093/2.4MM COLLET
	PPE-009-125	( 1/8) .125/3.2MM COLLET
	PPE-010	ALLEN WRENCH

(See pages 7, 8, and 9 for additional grinder parts.)



# **Cordless Grinder TS-PPE-BAT Parts List** Available in both standard and adjustable

	<div>PPE-Battery</div> <div>BATTERY</div>
	<div>PPE-Charger</div> <div>BATTERY CHARGER</div>
	<p>The cordless grinder uses the same parts as the following grinders see pages:                      Standard Grinder - Page 7                      Adjustable Grinder - Page 8                      DCS Grinder Grinder - Page 9</p>





# Power Point Bench Mount Tungsten Grinder Operating Instructions



## **WARNING**

Always wear ANSI approved Dust Mask, Eye and Hand protection for grinding tungsten welding electrodes. Also, read and understand Dayton operating instruction and parts manual.

1. For ease of removing the dust collector, it is best to mount the grinder on the side of your bench or pedestal. Fig1. (See next page for pictures)
2. Remove the appropriate collet from the collet holder, using the collet wrench. Fig. 2.
3. Install collet and tighten. Fig. 3.
4. Insert the tungsten electrode into the installed collet, loosen the locking lever and remove the electrode. Fig. 4.
5. Turn the grinder on and carefully insert the electrode and rotate the electrode at least 360 degrees making contact with the grinding wheel, repeat until the desired point is achieved. Fig. 5.
6. If flattening the electrode is desired, carefully insert the electrode into the flattening holes and rotate. Fig 6.
7. Periodically check and properly dispose of the grinding dust. Fig.1



Fig. 1



Fig. 2



Fig. 3

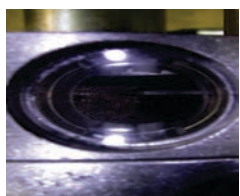


Fig. 4



Fig. 5



Fig. 6



Fig. 7



Fig. 8



Fig. 9

## Optional Precision Cut-Off



1. Making sure the power is off to the grinder, measure the desired length from the left side of the cut-off wheel and adjust the electrode stop, tighten the locking screw. Fig. 7.

2 Press down on the electrode hold down lever and insert the electrode until it touches the stop, start the grinder and carefully lift up on the hold down lever while rotating the electrode (Cut the electrode about half way thru) push down on the lever and remove the electrode. Fig 8.

3. Insert the electrode into the hole on hold down lever and break off the electrode at the notch. Fig 9.



## Bench Grinder Parts List



PPB-1 Motor



PPB-2 Grinding wheel



PPB-3 Back mount



PPB-3 Grinding body



PPB-4 Dust collector



PPB-5 Collector knob



PPB-6 Locking lever



PPB-7 Collet knob



PPB-8 Sight window



PPB-9 Wheel spacer



PPB-9 Wrench holder



PPB-11 Wrench holder



PPB-12 10-24 screw



Collet PPB-1/16  
PPB-3/32  
PPB-1/8  
PPB-5/32

## Cut-off option



PPBC-1 Block



PPBC-2 Cutting wheel



PPBC-3 Cutting guard



PPBC-4 Shoulder bolt



PPBC-5 Mounting arm



PPBC-6 Busing



PPBC-7 Tungsten stop



PPBC-8 Stop rod



PPBC-9 Locking screw



PPBC-10 Hold down lever



PPBC-11 Hold down spring

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