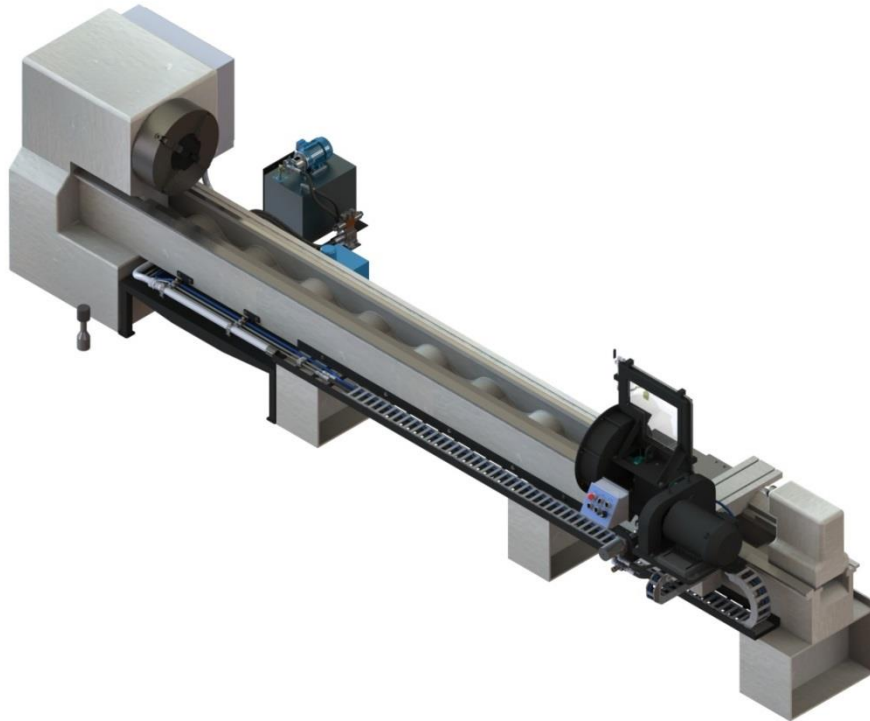


HUB CITY
IRON WORKS

OK City Lathe Grinder

Operation and Maintenance Manual



Hub City Iron Works
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Customer: _____
Location: _____
Serial #: _____
Job#: _____
Local Rep: _____
Rep Phone: _____

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Service

Call: 337.334.6969

Email: servicerequest@hubcityironworks.com

Spare Parts

Call: 337.334.6969

Visit: www.hubcityironworks.com

Sales

Call: 337.334.6969

Email: sales@hubcityironworks.com

Introduction

OK City Lathe Grinder 900-000-032-00

The Hub City Iron Works Lathe Grinder is designed and manufactured for the heavy duty grinding of carbide tools. As the name suggests, the grinder can be mounted to a lathe to facilitate the grinding process. It can be sold individually or in combination with custom fabrication for attachment to existing machines.

Safety

Hub City has provided operating procedures and safety information to ensure the wellbeing of both the operator and the equipment.

In addition to this operation manual, ANSI B7.1 should also be read and understood by all operators.

This operating manual contains important safety information - please read it thoroughly.

Safety Features Include:

- Safety guards
- Equipment safety labels.



Machine Specifications

Standard Features

- 18" x 3" Silicon Carbide grinding stone (1.75" Arbor)
- 7.5 HP 220/480V electric motor (1,750 RPM)
- Wheel speed: Approximately 1,750 RPM (8,000 SFM)

Optional Features

- Hydraulic powered feed for increased control
- Protective Way Bellow
- ID Grinding Adapter
- Coolant System

Specifications

- 12.5" Max OD of work piece
- Dimensions
 - Length 21'-0"
 - Width 6'-0"
 - Height 5'-9"

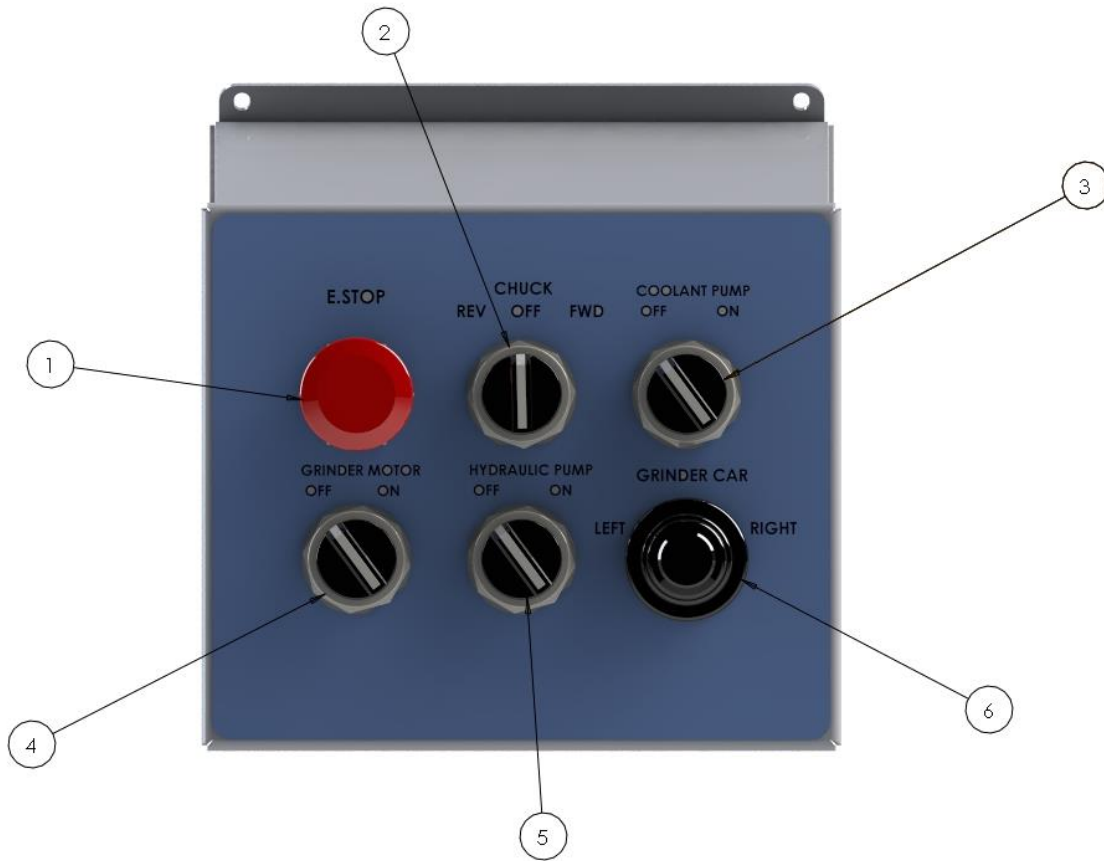
Plant Requirements

- 220/480V, 3 Phase, 60 Hz
- Adequate ventilation for carbide grinding process
- Respirators for operators and personnel nearby

Machine Setup

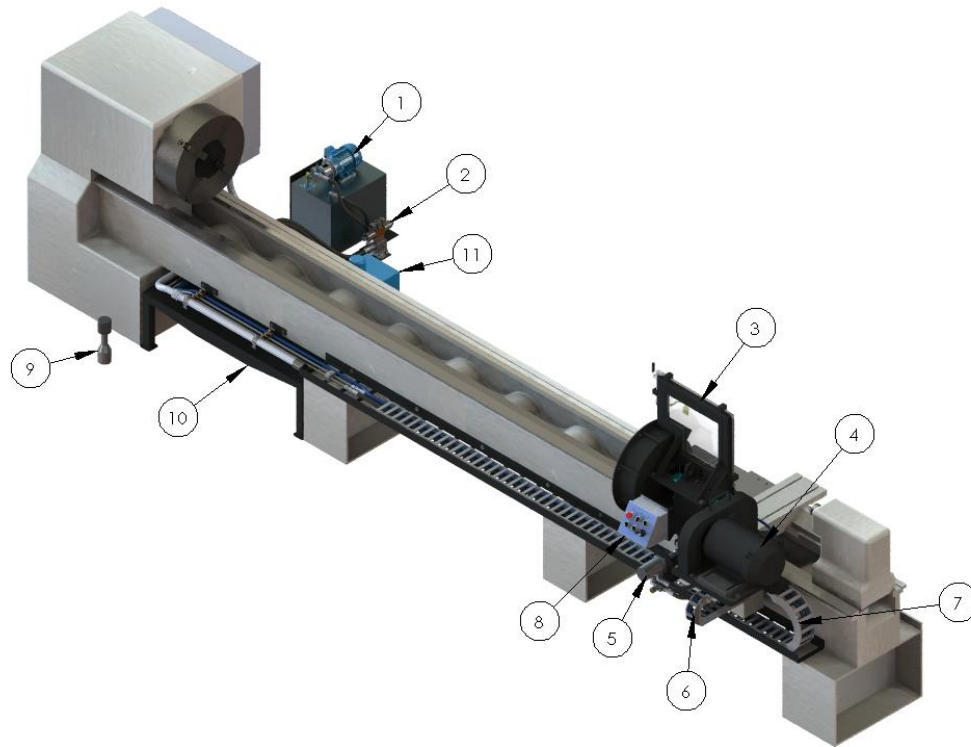
1. Machine to be installed on concrete level surface and leveled to within $\pm 0.125''$
2. Anchor machine securely to concrete

Controls



	<u>Function</u>	<u>Description</u>
1	Emergency Stop	Stops all movement of machine
2	Chuck Rotation Switch	Rotates chuck CW or CCW
3	Coolant Pump Switch	Turns coolant pump on and off
4	Grinder Motor Switch	Turns grinder on
5	Hydraulic Pump Switch	Turns hydraulic pump on for feed
6	Grinder Car Joystick	Moves carriage left or right

Equipment



	<u>Function</u>	<u>Description</u>
1	Hydraulic Power Unit	Supplies power to hydraulic motor
2	Valve Stack	Controls flow to hydraulic motor
3	Grinding Assembly	Grinding assembly w/ guards
4	Electric Motor	5HP electric motor powers grinder
5	Hydraulic Motor	Provides power to feed carriage
6	Cross Slide E-Chain	Carries power to electric motor
7	Large E-Chain	Carries power (Electric/Hydraulic)
8	Controls	Operator controls
9	ID Grinding Adapter	Screw on adapter for ID grinding
10	Coolant Pan	Retains coolant and redirects to tank
11	Coolant Pump System	Circulates coolant

Process Setup

1. Verify all hardware components are tightened securely
2. Make sure all supplied guards are in position
3. Ensure stones being used are rated for at least the maximum RPM of the Spindle (2,000 RPM+)
4. Inspect stones for damage (**DO NOT USE STONES IF DAMAGED OR CRACKED**)
5. Ensure work area is clear and everyone has appropriate safety equipment. (Face shield, respirator etc.)
6. Move grinder to appropriate location relative to work piece
7. Turn grinder on and begin to make shallow passes on work piece until desired diameter is reached
8. If ID grinding is to be performed, remove stone guard from machine and screw ID grinding adapter onto spindle. (**ALWAYS APPLY ANTI-SEIZE BEFORE ATTACHING**). Repeat steps 1-6

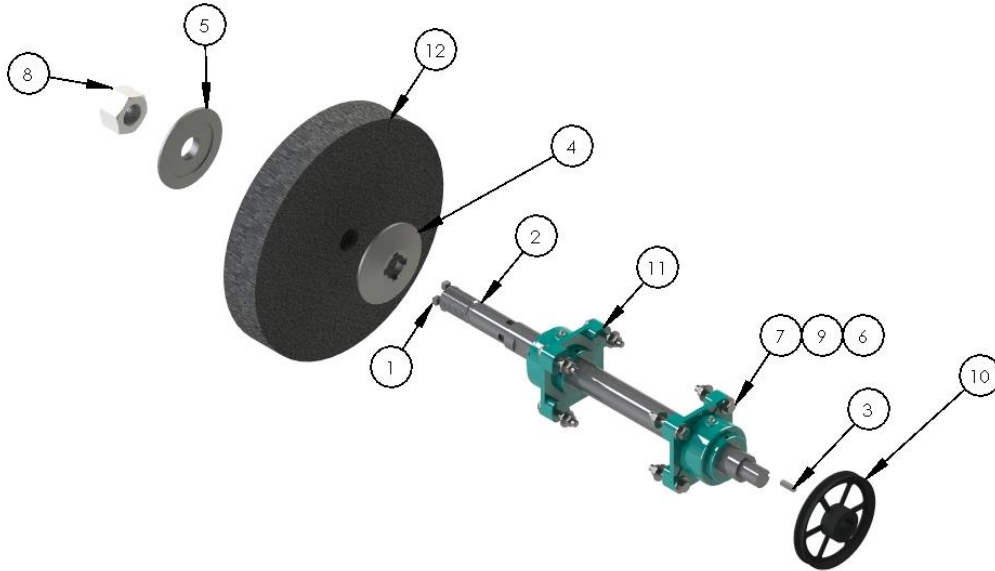
Troubleshooting Guide

Problem	Corrective Action
Grinder/Lathe won't turn on	Verify power is supplied to machine
Grinder Vibrates excessively	<ul style="list-style-type: none">• Balance grinding stone• Remove uneven surfaces w/ dresser
Cross slide is difficult to move	Remove debris from ways
Carriage is difficult to move	<ul style="list-style-type: none">• Remove debris from ways• Realign gibs

Parts List

Bearing/Spindle Assembly

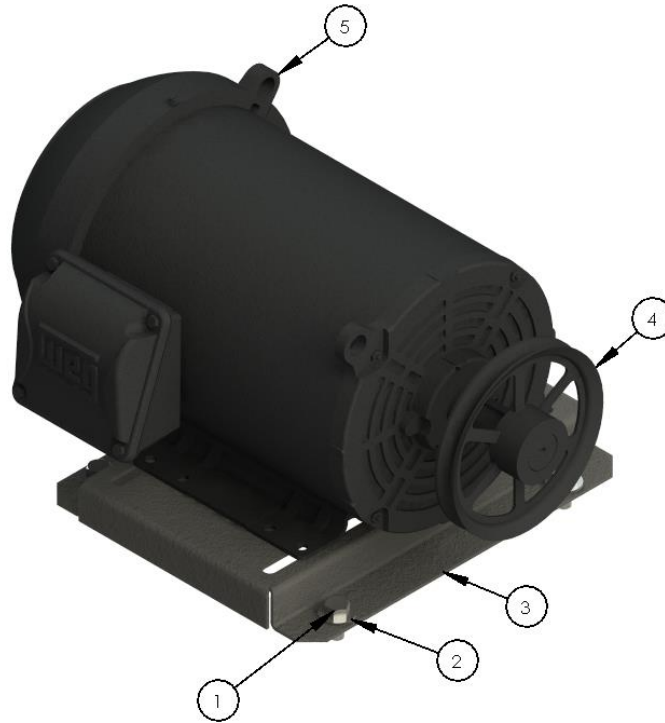
Revision: A



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	900-100-870-XXX	.5" KEY	4
2	900-101-012-012	SHAFT, 18" WHEEL, LEBLOND	1
3	900-101-013-018	5/16" KEY X 1.25"	1
4	900-250-006-018	FIXED FLANGE_18" WHEEL	1
5	900-250-007-018	LOOSE FLANGE_18" WHEEL, 1.75" SPINDLE	1
6	14124	NUT, HEX, .5" NC	8
7	14360	BOLT, HHCS, .50" X 3" NC GR5	8
8	16498	NUT, HEX, 1.75"-8	1
9	17649	WASHER, FLAT, .50"	16
10	45315	PULLEY, 6.95" OD V-BELT (1.375" BORE)	1
11	46053	BEARING, FLANGE	2
12	46817	STONE, GRINDING 20" X 3" X 1.75 1763SW (SILICON CARBIDE)	1

Motor Assembly

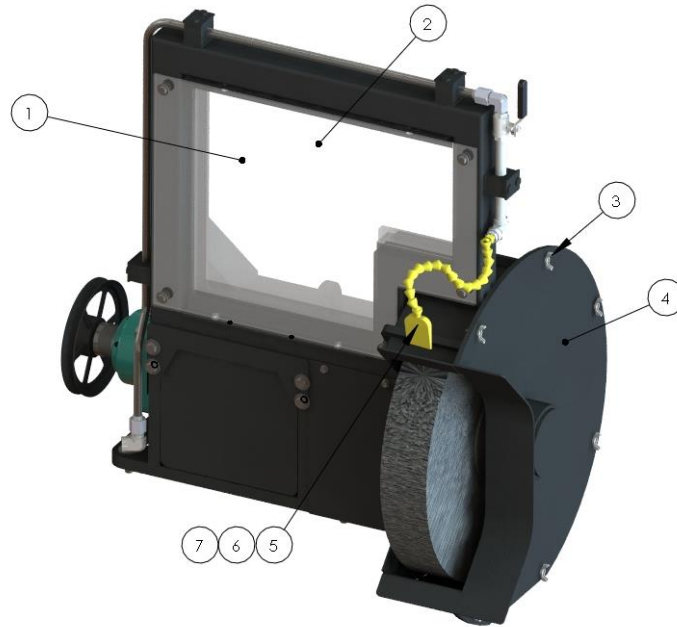
Revision: A



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	14358	BOLT, HHCS, .50" X 1" NC GR5	4
2	17649	WASHER, FLAT, .50"	4
3	28559	215T NEMA BASEPLATE	1
4	45315	PULLEY, 6.95" OD V-BELT (1.375" BORE)	1
5	46813	Motor, 7.5hp 3Ph, 1760	1

Grinding Assembly

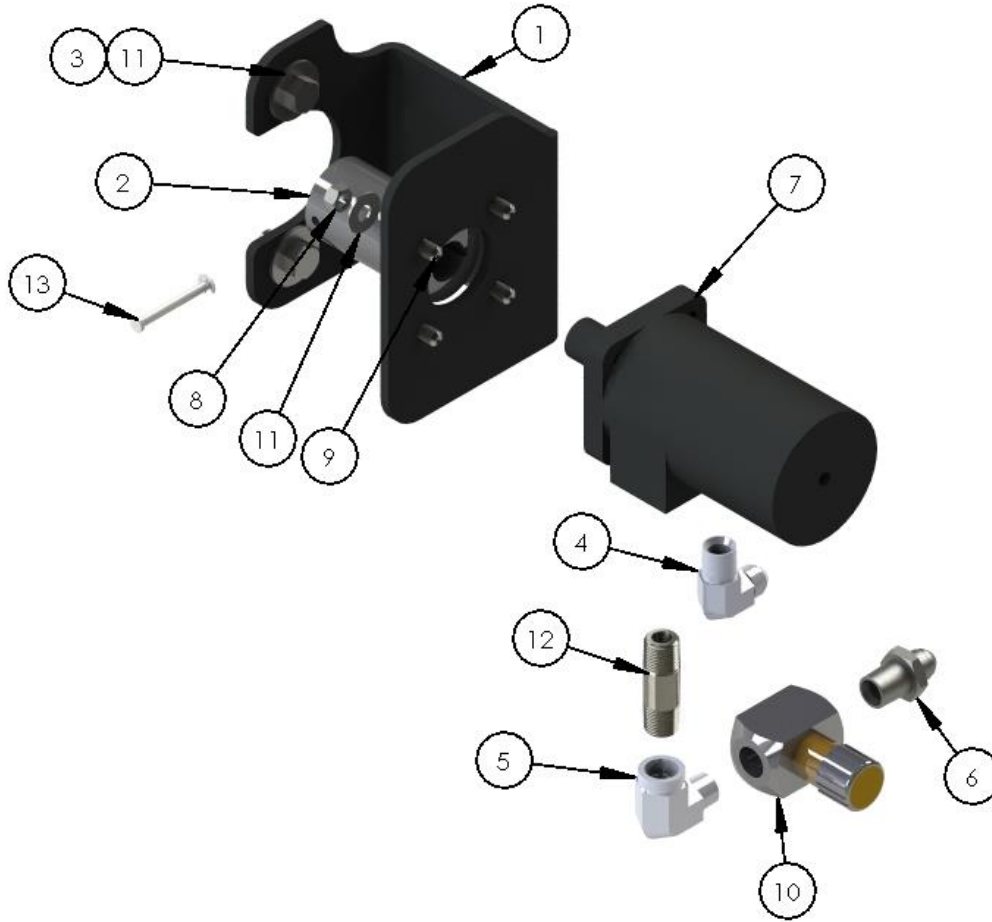
Revision: A



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	900-100-941-XXX	GLASS PROTECTOR	1
2	900-100-927-XXX	BULLET RESISTANT SAFETY SHIELD	1
3	46816	WING BOLT	1
4	900-700-371-00	STONE COVER	1
5	42819	LOCK LINE ADAPTER	1
6	42820	LOCK LINE	1
7	42818	LOCK LINE NOZZLE	1

Hydraulic Motor Asm

Revision: A



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	900-101-027-018	MOTOR BRACKET, LEBLOND	1
2	900-101-028-010	SHAFT COUPLING, LEBLOND	1
3	14358	BOLT, HHCS, .50" X 1" NC GR5	2
4	15583	#8 MNPT X #8 MJIC 90° ELBOW, 2024-8-8, (8-8 CTX-S)	1
5	15622	# 8 FNPT X # 8 MNPT 90° ELBOW, (2089-8-8)	1
6	15648	# 8 MNPT X # 8 MJIC ADAPTOR, (2021-8-8)	1
7	16390	CHARLYNN HYDRAULIC MOTOR P/N - 101-1002-009	1
8	16487	NUT, HEX, .375" NC	4
9	17162	SET SCREW, .375"-16 x 1.25"	4
10	17639	VALVE, HYD, N800S NEEDLE	1
11	17656	WASHER, FLAT, .375"	6
12	41435	NIPPLE, .50" X 2.50" SCH80 3000# PSI 7733K104	1
13	46877	PIN, CLEVIS, .25" X 2.25"	1

Recommended Spare Parts

Level A Items (On site)		
Part #	Description	Qty
46817	18" x 3" Grinding Stone	3
43144	3 X 2 X 5/8-11 ID Plug Wheel	2
900-100-941-XXX	Glass Protector	1
Level B Items (1-3 Day Delivery)		
46053	Spindle Bearing	2
45315	Pulley	1
900-101-012-012	Spindle	1
900-100-960-012	ID Grinding Adapter	1
900-250-006-018	Fixed Flange	1
900-250-007-018	Loose Flange	1
Level C Items (1-120 Day Delivery)		
16390	Hydraulic Motor	1
45592	Hydraulic Power Supply	1
46813	7.5 HP Electric Motor	1

