TORUS TR-130

3-D Tank and Vessel Cleaning

TOOL TALK

The Torus TR-130 is a powerful and highly adaptable 3-D cleaning tool designed to easily adjust to a wide range of pump capacities, working pressures, and cleaning applications.

Today's cleaning environments demand hands-free automated technology. When the Torus TR-130 is combined with our positioning equipment in chemical and power plants these challenges are met.

COMPETITIVE ADVANTAGES

- Small entry diameter enables access to more tanks and vessels
- If the arms hit an internal obstruction while in operation, the Torus simply stops rotating without damaging the gear mechanism
- Very little pressure loss which provides more power delivery then other tools on the market
- With optional manifolds and couplings the operator can switch from 10k psi (700 bar) pumps to 20k psi (1500 bar) pumps at a fraction of the cost — this offers tremendous utility with less equipment
- Constructed from 3 primary solid stainless steel sections for unsurpassed durability
- Wide range of accessories available, including positioning devices, cage centralizers and extensions help adapt the Torus TR-130 to specific needs

FEATURES	BENEFITS
• Interchangeable couplings and manifolds	• One tool can be adapted to a wide range of pressures and flows, saving the cost of purchasing multiple tools
• External speed control	• If you need to change the speed of rotation while on the job for precise material removal, it is easy to adjust without opening the tool or removing it from the hose
• Easy access high pressure seals and external grease fittings	• Reduced downtime for regular maintenance
• Field repairable	• No need to send to factory means reduced downtime and no freight fees

StoneAge®
ENGINEERING THE POWER OF WATER

TORUS TR-130 TOOL OVERVIEW

QUESTIONS TO ASK THE CUSTOMER

- What size and length of hose are you using?
- What pressure and flow are you operating?
- Are extensions required? See *Nozzles and Extensions* for availability.
- Do you need a pulling ring?
- Do you need a cage centralizer?
- Would you like a protective case?

OTHER INFORMATION

We recommend a service kit be purchased with each new tool —tank cleaning applications are demanding jobs requiring little downtime and quick turnaround. Keeping inexpensive service kits on hand ensures success.

TOOL SPECIFICATIONS

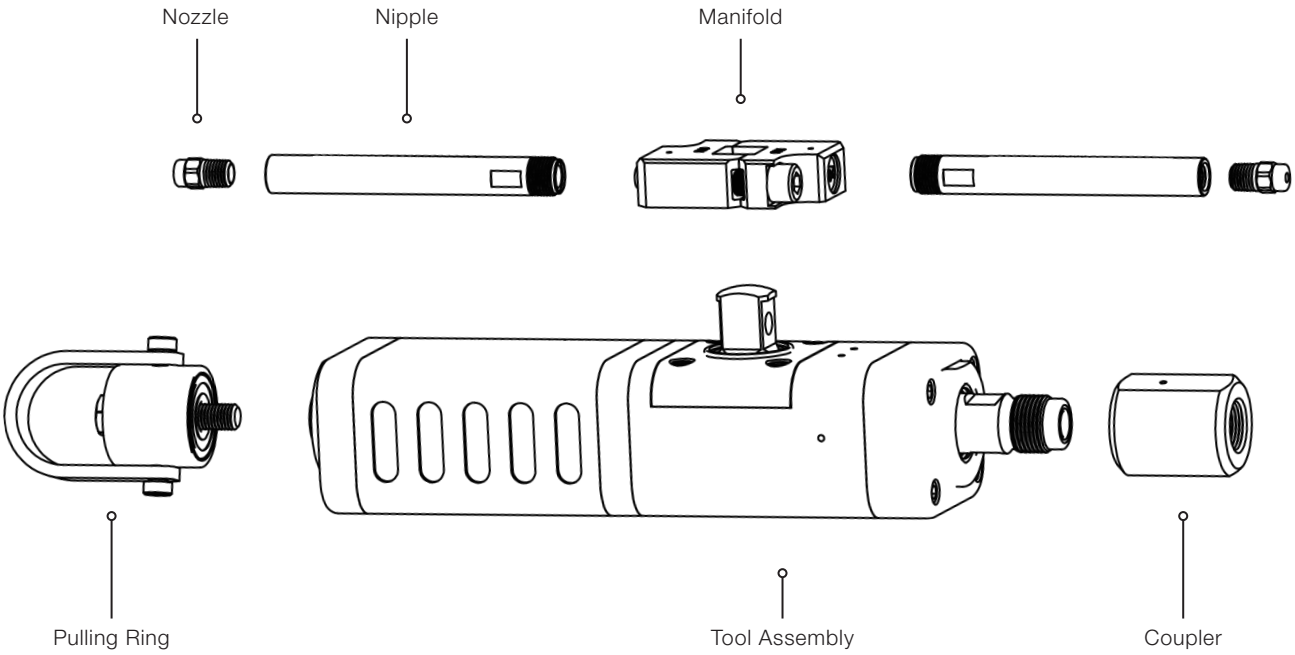
PART ID	TR-130
Pressure Range	2–22k psi 138–1500 bar
Flow Range	10–81 gpm 38–307 l/min
Power Range	30–1000 hp
Cycle Time	4–24 minutes
Rotation Speed	Adjustable
Inlet Connections	3/4 NPT, 1 NPT, 3/4 MP, 1 MP, M24
Manifold Port Size	G12
Port Size	1/4 NPT (P4)
Nozzle Type	OCV Carbide
Diameter	5.12 in. 130 mm
Length	17 in. 432 mm
Weight*	35 lbs 16 kg
Maximum Water Temperature	160 °F 70 °C

*Includes manifold, 6-inch nipples and pulling ring

Visit our website for tool resources including operation and maintenance videos:

WWW.STONEAGETOOLS.COM

TORUS TR-130 TOOL CONFIGURATION



A complete Torus TR-130 tool configuration requires the following components:

1. Torus TR-130 tool, supplied wih 2 x 6-inch nipples
2. 2 x OCV nozzles
3. Manifold suitable for the pressure and flow being used
4. Appropriate hose coupler

The following items may also be required:

- Suitable hose adapter

To configure a Torus TR-130 tool, the following information should be obtained:

- Pump pressure and flow
- Hose length and ID
- Hose end fitting

TORUS TR-130 TOOL CONFIGURATION

ORDERING A STANDARD PACKAGE

StoneAge offers standardized Torus TR-130 tool packages for the most commonly used configurations. All Torus TR-130 tool packages come fully assembled and include: 1. Torus TR-130 tool with 6-inch nipples, 2. Manifold suitable for pressure and flow being used, 3. Carbide nozzles appropriate for specified jetting, 4. Coupling to required hose connection.

PLEASE NOTE: An additional hose adapter will be required for Metric packages. See Fittings and Adapters for options.

The following table shows the configurations of standard Torus TR-130 tool packages:

MAXIMUM PRESSURE	PACKAGE CONTENTS	PACKAGE PART ID
22k psi 1500 bar	1 x TR-130 tool with 2 x 6-in. nipples 1 x Manifold assembly 2 x OCV carbide nozzles 1 x Hose coupler	**TR-130-PKG**
	1 x TR-130 tool with 2 x 6-in. nipples 1 x Manifold assembly 2 x OCV carbide nozzles 1 x TR 230-M24 coupler	**TR-130-MET-PKG**

When ordering a standard Torus TR-130 package, you should specify:

1. Package Part ID
2. Pump pressure and flow
3. Hose length and ID
4. Hose end connection

FOR EXAMPLE:

QTY	PART ID	DESCRIPTION
1	**TR-130-PKG**	15,000 psi 37 gpm, 100 ft 3/4” ID hose, 3/4 NPT Male end

ORDERING BY LINE ITEM

Complete tools can be configured by following the steps outlined below.
Contact StoneAge Customer Service for questions about specific applications.

STEP 1 TOOL SELECTION

MAXIMUM PRESSURE	MAXIMUM FLOW	TOOL PART ID
22k psi 1500 bar	80 gpm 303 l/min	**TR-130**

STEP 2 MANIFOLD AND NOZZLE SELECTION

The table below shows manifold and nozzle size selection guidelines for common jetting scenarios:

PRESSURE & FLOW	OCV CARBIDE NOZZLE SIZE																
	Nozzle Size	**.036**	**.039**	**.043**	**.047**	**.055**	**.062**	**.067**	**.073**	**.078**	**.089**	**.093**	**.106**	**.125**	**.140**	**.156**	
	2k psi 140 bar														48 182 **R150**	58 220 **R150**	gpm l/min **Manifold**
	5k psi 350 bar								20 76 **R150**	24 91 **R150**	30 114 **R90**	35 133 **R90**	44 167 **R90**	58 220 **R90**			gpm l/min **Manifold**
	10k psi 700 bar				12 45 **R150**	16 61 **R150**	20 76 **R150**	24 91 **R90**	28 106 **R90**	32 121 **R90**	42 159 **R50**	46 174 **R50**	60 230 **R50**	66 250 **R30**			gpm l/min **Manifold**
	15k psi 1000 bar		10 38 **R150**	11 42 **R150**	13 49 **R150**	19 72 **R90**	23 87 **R90**	30 114 **R50**	33 125 **R50**	37 140 **R50**	48 182 **R50**	58 220 **R30**	70 265 **R30**				gpm l/min **Manifold**
	20k psi 1400 bar	11 42 **R150**	12 45 **R150**	14 53 **R150**	17 64 **R90**	24 91 **R90**	30 129 **R50**	34 114 **R50**	40 151 **R50**	46 174 **R50**	60 227 **R30**	66 250 **R30**					gpm l/min **Manifold**

The Torus TR-130 requires two OCV nozzles, sized as indicated. The complete Manifold Part ID is **TR130 240-XXX**, where XXX is the R-value specified above.

FOR EXAMPLE:
A pump with 15k psi and 37 gpm would require a **TR130 240-R50** manifold and 2 x **OCV 078** carbide nozzles.

AP4 nozzles can also be used with the Torus TR-130. For most accurate manifold and nozzle size selection, use the StoneAge Jetting App: **JETTING.STONEAGETOOLS.COM**

TORUS TR-130 TOOL CONFIGURATION

STEP 3 COUPLER SELECTION

Select the correct coupler based on the maximum working pressure and inlet connection required.

MAXIMUM PRESSURE	INLET CONNECTION	COUPLER PART ID
10k psi 700 Bar	1 NPT Female	**TR 230-P16**
15k psi 1000 Bar	3/4 NPT Female	**TR 230-P12**
22k psi 1500 bar	3/4 MP Female	**TR 230-MP12**
	1 MP Female	**TR 230-MP16**
	M24 Female	**TR 230-M24x1.5***

*The TR 230-M24x1.5 coupler will require an additional hose adapter, ordered as a separate part. See *Fittings and Adapters* for available options.

STEP 4 EXTENSION NIPPLES

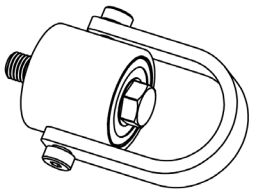
The Torus TR-130 is supplied two standard 6-inch (152 mm) nipples. Longer extension nipples can be supplied up to a maximum length of 39 inches (991 mm). See *Nozzles and Extensions* for standard lengths available. Custom lengths are available on request.

NIPPLE LENGTH	PART ID
2 in. 51 mm	**TR 577-2-0**
6 in. 152 mm	**TR 577-6-0**
8 in. 203 mm	**TR 577-8-0**

STEP 5 PULLING RING

A pulling ring is available for the Torus TR-130. It is fitted on the opposite end of the tool from the hose inlet.

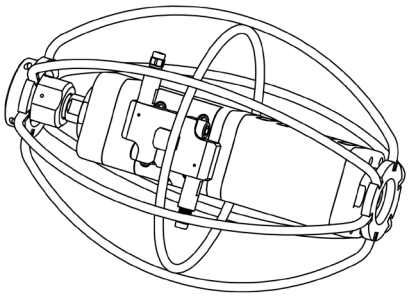
DESCRIPTION	PART ID	WEIGHT
Pulling ring for Torus TR-130	**HC 090**	2.0 lb 0.9 kg



STEP 6 CAGE CENTRALIZER

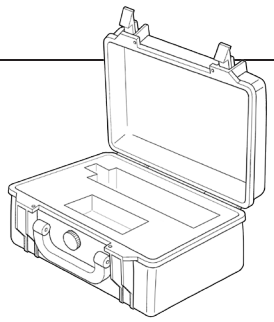
The Torus TR-130 can be fitted with a cage-style centralizer. This is ideal for applications where debris or internal structures may interfere with the cleaning operation. Shorter nipples 2 inches (51 mm) in length must be used with the cage centralizer.

DESCRIPTION	PART ID	WEIGHT
Cage Centralizer, 11.75 in. (300 mm) OD	**TR130 408-SS**	8.0 lb 3.6 kg
Nipple with Flow Straightener & O-ring – 2 in.	2 x **TR 577-2-0**	2.0 lb 0.9 kg



STEP 7 ACCESSORIES

A Pelican™ brand protection/carrying case with custom cut foam insert is available for Torus TR-130 tool models.



EXTERIOR DIMENSIONS (L X W X D)	INTERIOR DIMENSIONS (L X W X D)	COLOR	CASE PART ID
24.4 x 19.4 x 8.8 in. 61.9 x 49.2 x 22.3 cm	21.5 x 16.5 x 8.0 in. 54.6 x 42 x 20.3 cm	Black	**TR130 080**

STEP 8 MAINTENANCE RESOURCES

TOOL	SERVICE KIT	SEAL KIT	OVERHAUL KIT	MANUAL
TR-130	**TR130 600**	**TR 602**	**TR130 610**	**PL 556**

Kit components and tool maintenance/assembly videos are available on our website:
WWW.STONEAGETOOLS.COM

For questions or help with a specific application, configuration or tool repairs, please contact StoneAge Customer Service.

When ordering a Torus TR-130 tool by line item, you should specify:

1. Tool Part ID
2. Manifold Part ID
3. Nozzle Part IDs
4. Coupler Part ID
5. Part IDs for any hose adapters, accessories or maintenance items

FOR EXAMPLE:
Torus TR-130 for 1000 bar 80 l/min for hose with M24 end. Pulling ring, cage centralizer and service kit.

QTY	PART ID	DESCRIPTION
1	**TR-130**	Torus TR-130 Tool Assembly w/ 6” Nipples, 22k psi
1	**TR130 240-R90**	Manifold assy
2	**OCV 055**	Carbide nozzle 0.055
1	**TR 230-M24x1.5**	Coupler, M24 Female
1	**GP 255-M240M24C**	M24 Male hose adapter
1	**HC 090**	Pulling ring
1	**TR 130 408-SS**	Cage Centralizer
1	**TR130 600**	Service Kit