2019 KEYHOLE / LOW DIG MEETING

March 20 & 21, 2019 – Des Plaines, Illinois

Colin Donoahue | Ox Equipment Inc.

Ox Equipment & MTS

Ox Equipment Inc. is the exclusive North American distributor for German manufactured **MTS** Dry Suction Excavation Systems, and is a division of **Bartels Group** (Super Sucker Hydrovac Services Inc., Bartels Environmental & Ox Equipment Inc.)

MTS, founded in 1998, manufactures Dry Vacuum Suction Excavators in Germany and has equipment operating in over 35 countries.

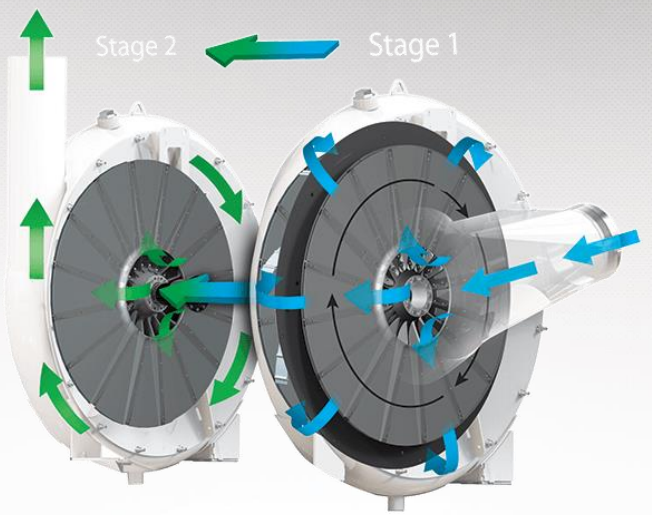
Suction Excavation is the **primary** safe digging vacuum excavation technology utilized throughout Europe.

North American Hydrovac Challenges

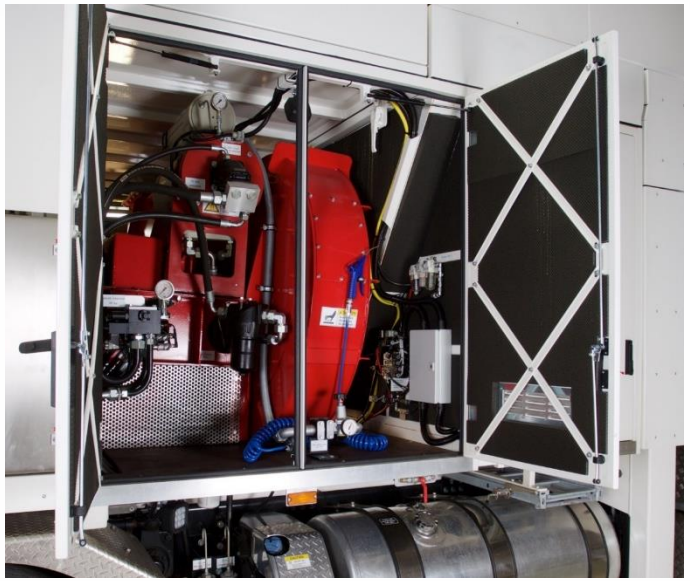
- Overweight when loaded
- Slurry generated / disposal is expensive
- Potential for soil contamination when water added to excavation process
- High pressure water can damage buried infrastructure
- Undermining during hydrovac excavation process
- Equipment must leave site for disposal of slurry & water refilling
- Slurry often considered contaminated / testing / special dump sites required
- Excavated materials can not be reused
- Not a carbon friendly excavation process

with multiple options

Twin Fan Technology

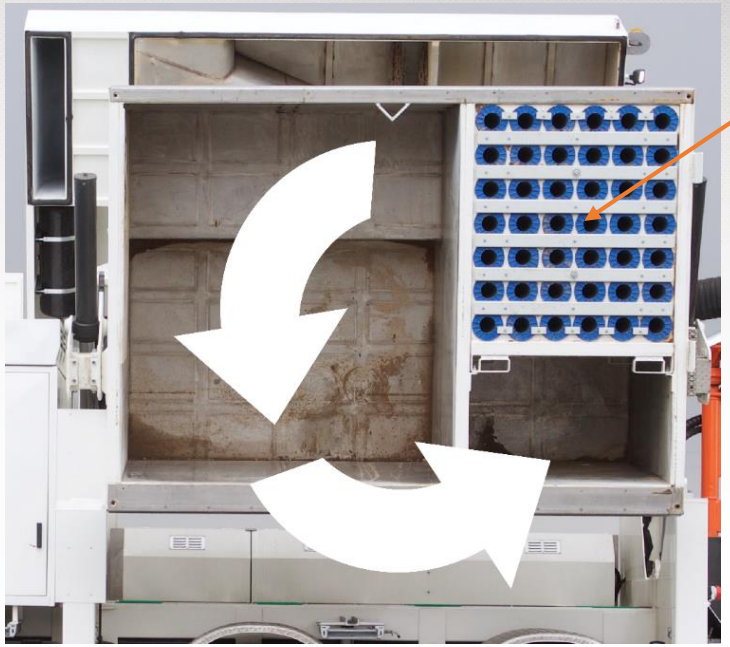


- Twin Fan Technology creates 24,000 CFM of air conveyance
- Proprietary Fan Patented Technology
- Manufactured in-house by MTS
- Built specifically for Dry Suction Excavation / Fan System
- Not a Positive Displacement Blower / PD System



OX EQUIPMENT

Filtration System



3 Stage System

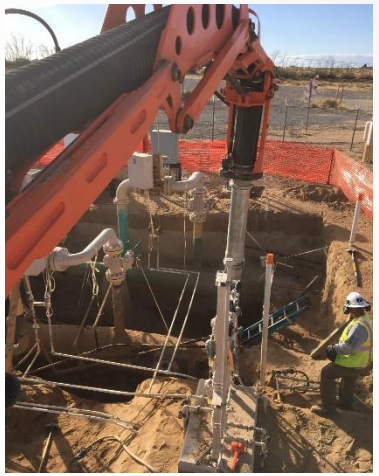
- Automated Filter Cleaning / multi-jet cleaning
- Polyester conical filter cartridge (replaceable)
- Dust falls into lower filter chamber – separates into regular and “fines”
- Self cleaning filters allowing for maximum suction at all times
- Ti-15 Filter / Efficiency: 98%@ 4 microns
- Patented 3 stage system
- Material is gravity separated and falls in to the container before the airflow reaches the filter system

Automatic self-cleaning filter process

OX EQUIPMENT

Power Arm / Mega Arm

- 10” diameter
- 180 degree swivel
- Wireless remote controlled
- Mega Arm / 30 foot dig tube with extension for increased reach
- IKE system / all clear situations only



OX EQUIPMENT

Safe Dig System

- Soft digging Rubber Suction Tube
- 10” diameter allows for high rates of air conveyance
- Flexible rubber will not damage utilities

OX EQUIPMENT

MTS Dino Series

Dino 12

- Twin Fan Technology / 24,000 CFM
- 10” Suction Tube with Power Arm
- 15 Cubic Yard Capacity / Side Tipping
- 320 CFM Dual Compressor

Dino 8

- Twin Fan Technology / 24,000 CFM
- 10” Suction Tube with Power Arm
- 10 Cubic Yard Capacity / Side Tipping
- 320 CFM Dual Compressor

Dino 4.5

- Twin Fan Technology / 24,000 CFM
- 10” Suction Tube with Power Arm
- 6 Cubic Yard Capacity / Side Tipping
- 320 CFM Dual Compressor

City Dino

- Twin Fan Technology / 10,800 CFM
- 8” Suction Tube with Optional Power Arm
- 3.4 Cubic Yard Capacity
- 320 CFM Dual Compressor

OX EQUIPMENT

MTS City Dino

- Twin Fan Technology / 10,800 CFM
- 8” Suction Tube with Power Arm
- 3.4 Cubic Yard Capacity
- 320 CFM Dual Compressors
- Rear tipping into “Bag Bins”
- Hydrostatic Drive System / ground drive

DELIVERY Spring 2019

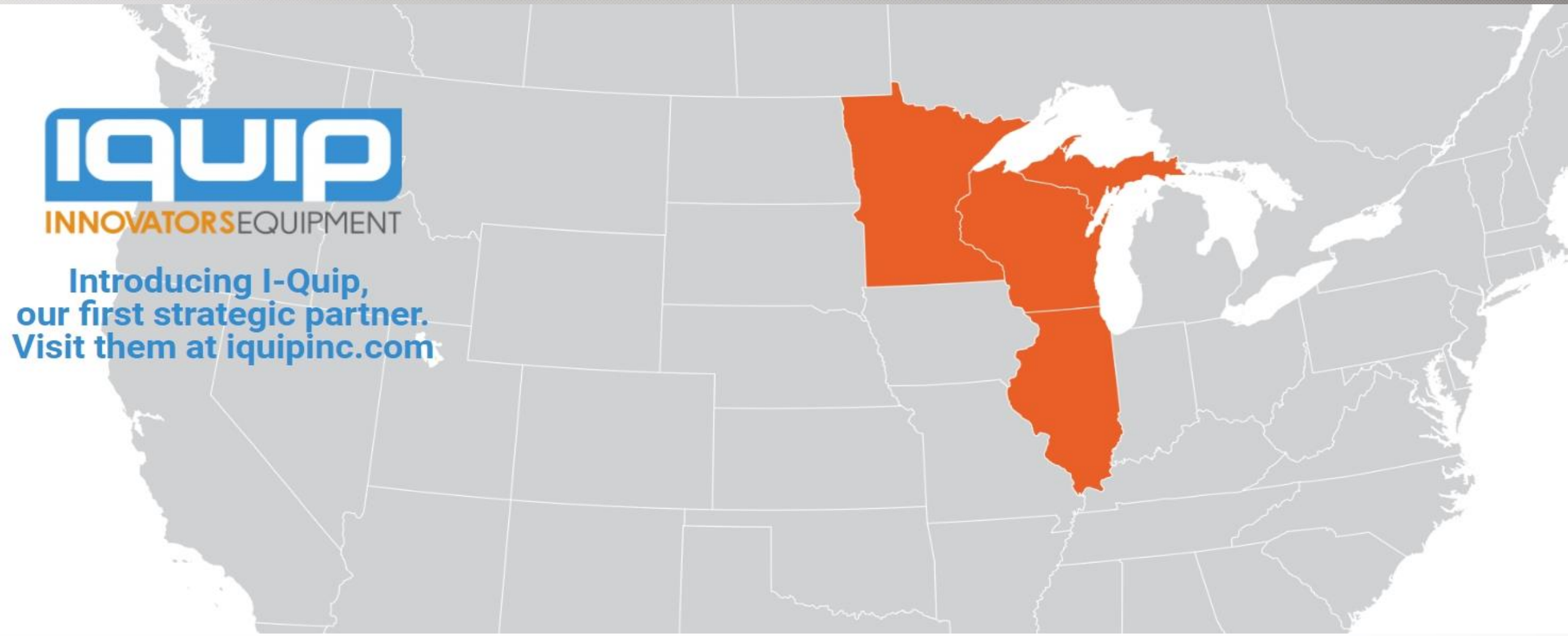
OX EQUIPMENT

Why Dry Suction Excavation Makes Sense

- Eliminates costly wet slurry dumping fees
- Air is safer for excavating around aged or brittle underground plant / high pressure water systems can damaging buried facilities if pressures are not regulated
- Excavated soil can be used as backfill
- Excavated soil is not considered “contaminated”
- When excavating “contaminated” soils, disposal and transfer can be completed using plated trucks, or soils can be left on site
- Eliminates overload / overweight issues
- Never need to refill with air, unlike hydrovac systems which will run out of water
- Operators and excavation area remain clean, safe and dry
- Dump on site / stay on site all day = equipment stays working all day
- Carbon friendly / reduced travel to dump sites

OX EQUIPMENT

Ox Equipment Strategic Partner Program

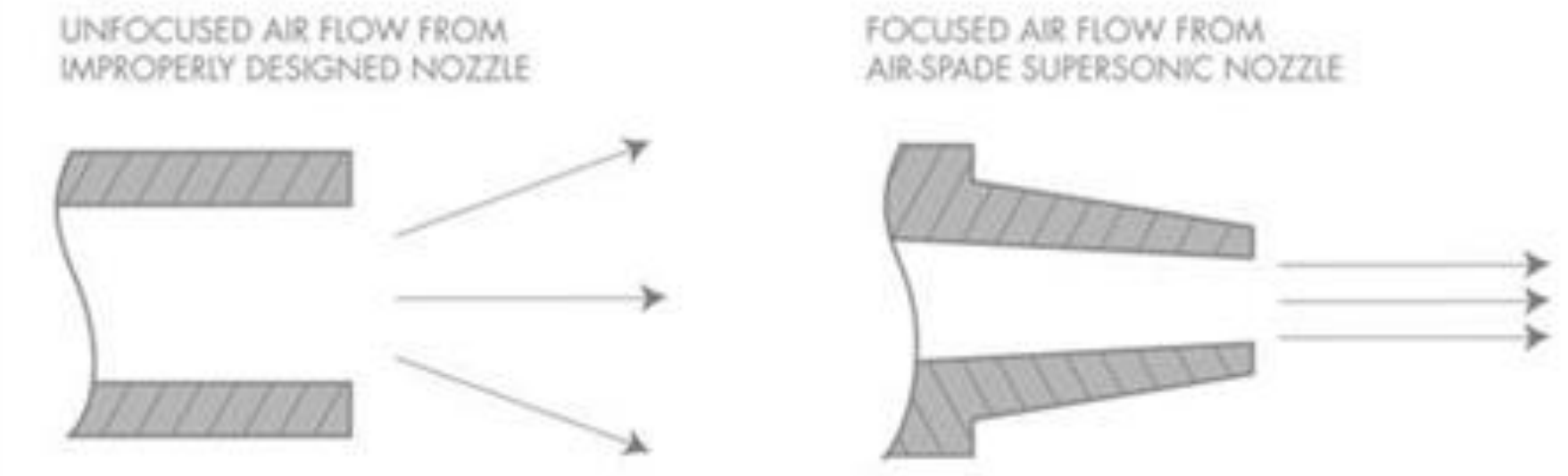


As an industry leader and early adopter of new methodologies **I-quip** will demonstrate and service provide to new clients' MTS Suction Excavation technologies within its territory. With established servicing facilities in place, qualified equipment operators, as well as a forward-thinking management team, Ox Equipment welcomes our newest Strategic Partner to the Ox Team.

Air Spade™ / P.S.I. vs. C.F.M.

Question: When digging with air is it the delivery flow of the air or the pressure which has the largest effect on excavation rates?

- The Air Spade™ nozzle is designed to run within 90-100 PSI zone to create a pin-point airflow to maximize excavation efficiency
- **If** the AirSpade ™ is run below or above the 90-100 PSI range the airflow will be altered creating more of a mist effect which will decrease digging efficiency



Air Excavation Rates / C.F.M.

The greater the CFM (Air Flow) the faster the excavation rate

AirSpade Typical Excavation Rates (cu ft/min)			
Model	Nozzle Size (cfm)	OSHA Cohesive Soil Type A	OSHA Cohesive Soil Type C
AIRSPADE. 2000	25	0.4	0.9
	60	0.7	1.1
	105	0.9	1.5
	150	1.2	1.8
	225	1.7	2.3
AIRSPADE. 3000	330	2.4	3.0

2019 KEYHOLE / LOW DIG MEETING

March 20 & 21, 2019 – Des Plaines, Illinois