

MEMORANDUM

TO: Jarrod Cabral; Ad Hoc Building Committee; Town of Truro

FROM: Della Donahue

MEETING DATE: March 13, 2025

DATE ISSUED: March 24, 2025

SUBJECT: Truro Public Works Facility; Sustainable Design Goals

The following document includes project background and information gathered at the March 13th Sustainable Design Workshop for the Truro Public Works Facility project, held in-person and virtually via the Ad Hoc Building Committee zoom link. The meeting was conducted to review sustainable design principles and identify potential project goals.

General Project Background Information:

- The project is in the early stages of schematic design. A draft pricing package is currently scheduled to be submitted to an independent cost estimator by May 2nd and a final schematic design package is anticipated to be submitted to Truro by May 30th.
- The project will work in conjunction with PFAS capping efforts in the northeast corner of the parcel as well as a new water main connection to a new potable water source on a remote site adjacent to Snow's Field. The PFAS capping, water main and well projects are all required regardless of the new Public Works Facility project.
- The approved conceptual site plan features a single, consolidated facility with a supplementary storage canopy and salt shed.
- At this time, the new facility will be about 23,800 square feet, consisting of administrative office space, Public Works employee facilities (i.e. locker rooms), workshop space, fleet maintenance, a wash bay, and fleet storage garage.
- The current facility has reported issues/concerns with ventilation in the vehicle service areas, heating/cooling inefficiencies, insufficient storage provisions for fleet assets, and inadequate sleeping arrangements for extreme events (some staff are on-call 24/7 during snowstorms).
- The design is currently targeting a pre-engineered metal building (PEMB) with insulated metal panels and a masonry knee-wall for durability.
- Truro is a Specialized Opt-In Code community regarding the Project's energy code requirements
- The project will be put to Town vote for construction funding approval next Spring 2026

Workshop Discussion Items:

1. Meeting Purpose:

- a. Discuss potential sustainable design goals for Truro's new Public Works Facility.
- b. Align the various values/visions for this project and agree upon a set of goals to implement into design going forward.
 - i. Solving specific issues was not the focus for the meeting, but rather clarifying the various stakeholders' values and interests.
- c. Introduce third-party incentives, potential tax credits, and grant funding opportunities
- d. Introduce potential certification program opportunities to gauge interest
 - i. International Living Future Institute:
 - 1. Zero Carbon Certification: focused on carbon emissions (embodied and operational)
 - 2. Zero Energy Certification: providing 100% of the building's energy needs with on-site renewable energy
- e. Address how the strategies vary in terms of cost-benefit analysis
 - i. Who / what experiences the benefits / co-benefits
 - ii. Immediate vs. long-term cost savings
 - iii. Within scope vs. additional design fee requirements
 - iv. Negligible vs. high up-front cost implications

2. What will make this project successful regarding sustainability?

- a. Balancing the various visions/values of taxpayers
 - i. Being mindful of goals for both capital cost reductions and long-term cost savings through operational efficiencies. These goals occasionally compete with each other, but a balance must be struck for the project to be supported and approved at town meeting
 - ii. Given budget constraints, implementing "low-hanging fruit" sustainable design strategies (little-to-negligible capital cost increases)
- b. Referencing recent Decarbonization Roadmap Reports prepared by RISE Engineering and Cape Light Compact, completed November 2024 (document links included on page "iii" of the Sustainable Design Catalog; Section 04 of the Pre-Meeting Package).
- c. Referencing the Truro Municipal Decarbonization Roadmap prepared by the Town, the Department of Energy Resources (DOER), RISE Engineering, and ICF (document link included on page "iii" of the Sustainable Design Catalog; Section 04 of the Pre-Meeting Package).
- d. Implementing design strategies that reflect and support the risk areas as identified in the RMAT Climate Assessment (Section 01 in the Pre-Meeting Package) and maximizing the longevity of building/site materials and systems to reduce repair and replacement costs.
 - i. The project site is at high risk for extreme precipitation/stormwater flooding and extreme heat

- e. Ensuring employees have safe and comfortable working conditions
- f. Achieving energy efficiency through building envelope thermal performance, passive design strategies, and mechanical systems selection.
- g. Leveraging various sources of funding whether it be from utility incentives, IRA tax credits, grants, etc.

3. Sustainable design considerations at Site Scale:

- a. Nature-based solutions for stormwater management and heat island mitigation desirable
 - i. Rain gardens and green space to manage stormwater
 - ii. Vegetative shading
 - 1. May be more effective than roof overhangs/shading devices for managing solar heat gain during sunrise/sunset given the building's orientation during; coordinate with glazing design
 - 2. Tree selection important with consideration for maintenance needs
 - a. Native species; USDA Hardiness Zone 6b
- b. It is worth noting that new stormwater drainage, a contained vehicle wash area, and fleet storage provisions will also improve stormwater management and water quality
- c. Rainwater collection is not a priority
 - i. Use for fire suppression unrealistic; wouldn't be commissioned
 - ii. Maintenance issues (microbial)
 - iii. Could be used to support some vehicle wash operations, but given project budget constraints, the initiative is not desirable due to associated capital cost and design fee increases
- d. Light-colored pavement options to be explored and applied where appropriate
- e. Parking Provisions; EV-ready parking for 20% of spaces provided per energy code
- f. Potential interest in standalone solar canopy depending on energy goals, feasibility on site, and costs
- g. Potential interest in designing and installing an educational kiosk at the Town Hall site to describe sustainable design efforts as an educational initiative
 - i. Could be an effort pursued at a later date, not necessarily as part of this project
 - ii. Could be spearheaded by municipal committees, students, etc.

4. Sustainable design considerations at Building Scale:

- a. Roof solar for renewable energy production
 - i. Prioritize the main building for potential extents of PV; the standalone canopy in the north may not be a great candidate
 - ii. TBD to what extent on-site renewable energy is desired; offset a percentage of the facility's energy use? Net-zero?
 - 1. Preliminary PV Analysis of roof solar will be conducted as part of the schematic design phase to help inform the Town's decision
 - iii. If pursued, the Town would have to decide whether they'd like to own or lease the system

- iv. Interest in a roof PV system's ability to be retrofitted if battery storage was added later; yes, this is possible
- b. Cool roof; application suggested where spaces receive air conditioning
 - i. The offices & employee facilities block is a good candidate
 - ii. The cost is encumbered within the base design already estimated; just a color selection initiative to meet a Solar Reflectance Index (SRI) metric
- c. Building orientation, massing and façade design to strike a balance between operational efficiencies, project costs, and passive design strategies
 - i. Optimizing daylighting and solar heat gain
- d. Building envelope thermal performance for energy efficiency
 - i. Exterior wall assemblies to meet maximum code-required U-Values or better
 - ii. Triple-glazed windows and curtain walls to meet maximum code-required U-Values or better
 - iii. If radiant floor heating is requested, slab insulation to meet maximum code-required F-factors or better

5. Sustainable design considerations at Occupant/Interior Scale:

- a. Daylighting a priority; design implementation through clerestories, translucent panels, and windows
- b. Occupant health, safety & comfort; achievable through material selection and application as well as adequate employee facilities (i.e. both male and female locker rooms for social equity).
 - i. Can help to attract and retain employment
 - ii. Good for productivity and morale
- c. Low embodied carbon framing systems and building materials
 - i. Specifying materials must follow Massachusetts' public project bidding & procurement requirements (specify performance criteria and provide three examples that meet the criteria > General Contractor to choose from one of the three or equal)
 - 1. There is an option for the town to request a proprietary product by holding an open meeting and taking a Select Board and/or committee vote
 - ii. Timber framing is of interest where large clear spans are not a priority (i.e. the administrative office space and employee facilities block)
 - 1. Clarification needed to better understand if the Town envisions this design approach in terms of conventional wood framing (instead of metal studs) or a more intensive framing system like Cross-Laminated Timber (CLT) or Glulam
 - a. Depending on the direction, it may come with increased design fee and capital costs compared to a PEMB
 - iii. Life cycle assessment may be of interest
 - 1. Clarification needed to better understand to what extent this is desired

- a. Weston & Sampson to provide a scope and fee write-up for what that process looks like and associated fees
- d. Building mechanical systems to optimize energy efficiency
 - i. Natural gas is not available in this area of Cape Cod.
 - ii. Geothermal Wells are of interest, but also met with cost concerns
 - 1. Subsurface environmental investigations / a test well would be recommended to best understand the feasibility of a geothermal system, informing well quantity (i.e. soil quality and conductivity)
 - a. The sizing of this system is based on the proposed building's energy usage portfolio from energy modeling efforts
 - 2. If pursued, the Town would like to see this system coupled with radiant floor heating as they tend to operate efficiently together
 - iii. A Life Cycle Cost Analysis (LCCA) is of interest to help inform the Town what energy source and building systems they may like to implement in the project. The LCCA looks at first (capital) costs, operating costs, maintenance costs, and replacement costs of building system options. It can also include analysis for associated on-site carbon emissions
 - 1. The project team will need current utility rate information, confirmation if they're stable rates or not, and any interest rates on borrowed money associated with the project. Information to be requested from Finance Committee.
 - 2. The Town and Weston & Sampson will work together to identify 2-3 building systems to analyze.
 - 3. Based on the resulting LCCA, the Town must decide on their preferred mechanical system by mid-April so the Engineers can correctly capture the basis of design in their Narratives for cost estimating and to stay on schedule.
- e. Building Management System to manage intensive plug loads associated with industrial equipment use for fleet maintenance
 - i. Question: Can equipment use/maintenance tasks be staggered/scheduled to balance the peak load?
 - ii. Answer: Perhaps a portion of typical operations, though some operations may be beyond DPW's control as an emergency responder
 - 1. Routine maintenance optimization would be a workforce/administrative initiative to tackle operationally

6. Additional notes relating to third-party funding:

- a. Take into consideration the potential utility incentives discussed at the Energy Incentives Introduction Meeting with Cape Light on Wednesday, 3/13
 - i. Energy modeling will be a requirement of utility incentives; already captured within the contract

- b. Take into consideration the potential IRA tax credits that renewable energy and energy efficiency projects are eligible to receive.
- c. Take into consideration the potential grant funding opportunities that renewable energy and energy efficiency projects are eligible to receive.
 - i. This project may also be eligible for Environmental Justice (EJ) grant programs due to the identified EJ community within the Town

7. Additional considerations relating to Construction & Facility Operations

- a. Commissioning per energy code
- b. Commissioning requirements for the Mass Save incentive program, as well.
- c. Energy metering requirements per energy code and Mass Save incentives, too

Next Steps?

1. Truro: Confirm if and to what extent an embodied carbon LCA is desired
2. Truro / WSE: confirm to what extent the Town would like to offset the building's energy use through photovoltaic systems at the roof level. Also, confirm how this initiative will be integrated into the project – if added scope & fee during the Design Development phase, or if pursued later and delegated post-construction
3. Truro / WSE: confirm what building systems to compare in the LCCA
4. Truro: confirm preferred building system to capture in basis of design narratives (by mid-April)

END OF DOCUMENT

The meeting notes from the Sustainable Design Workshop are recorded as understood by Della Donahue, WSE, who should be notified of any omissions or corrections. Unless notified otherwise, this document is presumed correct.



Commercial New Construction or Major Renovation Program Overview



Choose Your Path to Generate Energy Savings and Reduce Carbon

The Sponsors of Mass Save can help make your new construction or major renovation project a high performing, energy efficient and low carbon building. We have technical experts and financial incentives to help bring your project to the next level of energy efficiency. Whether your goal is to design an all-electric Net Zero building, or, to simply incorporate more efficient systems into the design of your building, we have a pathway for you.

The earlier you engage, the deeper the energy savings potential

Connect with the Sponsors of Mass Save early in your project's design timeline to unlock opportunities for cost savings, technical support and optimal energy efficiency. Building owner incentives are available to help cover the incremental construction and design service costs associated with including energy efficient equipment and systems in your project.

By starting with us in your project's feasibility or conceptual design phase, your project team can achieve deep energy savings, and even net zero status, minimizing future energy use and carbon. We can also help you set an energy use intensity (EUI) target – which is much like a “miles per gallon” metric. It helps keep the project on an energy budget and can be used to evaluate your building's actual or predicted performance over time or compared to other, similar buildings.

There is a pathway for every project

Mass Save Sponsors offer the highest incentives for projects with the lowest EUIs and greatest levels of decarbonization.

Path 1. Net Zero and Low EUI Buildings (10,000 sf or greater)

Receive expert net zero building technical assistance and the highest new construction/major renovation project incentives available. Set an ultra-low EUI and save. We provide support through a post occupancy period to help you make sure the building performs at the level you expect.

Path 2. Whole Building Energy Use Intensity (EUI) Reduction Approach (50,000 sf or greater)

In this path for larger, complex building projects, your incentives will be greater with the lowest design EUIs. We offer technical support and energy modeling services to help you succeed.

Path 3: High Performance Buildings

For whole building projects of any size where customers do not wish to set and pursue an EUI target, projects that are not whole buildings (e.g., tenant fit outs, open air parking garages), projects that are process-load heavy buildings (e.g., cannabis, industrial), and projects where customers are only interested in one-off measures.

Receive technical assistance and financial incentives for implementing energy efficient technology and equipment.

About Mass Save:

Mass Save® is a collaborative of Massachusetts' natural gas and electric utilities and energy efficiency service providers including Berkshire Gas, Blackstone Gas, Cape Light Compact, Columbia Gas, Eversource, Liberty Utilities, National Grid, and Unitil. We empower residents, businesses, and communities to make energy efficient upgrades by offering a wide range of services, rebates, incentives, trainings, and information.

WE ARE MASS SAVE®:



EVERSOURCE



nationalgrid



SUMMARY OF PATH INCENTIVES

PATH 1: NET ZERO/LOW EUI BUILDINGS

Customer Incentives

Construction Incentive	up to \$2.00/sf
Post Occupancy Incentive	\$1.50/sf
Space Heating Heat Pump Adder*	
• Air Source Heat Pumps:	\$800/ton
• Variable Refrigerant Flow (VRF):	\$1,200/ton
• Ground Source Heat Pumps:	\$4,500/ton
ZNE Or PH Certification Incentive	\$3,000
Technical Assistance For Net Zero Expert Consultant Services	50% of fee up to \$10,000
Verification Incentive	50% of fee up to \$10,000

PATH 2: WHOLE BUILDING EUI REDUCTION APPROACH

Customer Incentives

Incentive rate range (based on EUI % reduction)	\$0.35/sf - \$1.25/sf
Space Heating Heat Pump Adder*	
• Air Source Heat Pumps:	\$800/ton
• Variable Refrigerant Flow (VRF):	\$1,200/ton
• Ground Source Heat Pumps:	\$4,500/ton
Technical Assistance	up to 75% cost share (capped at \$20,000 per Sponsor)
Verification Incentive	50% of fee up to \$10,000

PATH 3: HIGH PERFORMANCE BUILDINGS

Customer Incentives

Custom: Envelope, lighting controls, unitary HVAC (RTU, AC), high efficiency chillers, energy recovery, demand control ventilation, variable flow kitchen hoods, DHW heaters, low flow water fixtures and other custom measures	\$0.35/kWh \$2.00/therm
Prescriptive: variable frequency drives	Current program rate
Space Heating Heat Pump*	
• Air Source Heat Pumps:	\$800/ton
• Variable Refrigerant Flow (VRF):	\$1,200/ton
• Ground Source Heat Pumps:	\$4,500/ton

*Refers to nominal heating capacity (btu/h) at AHRI conditions divided by 12,000. The heat pump adder is available for equipment that transfers heat from a source outside of the building (i.e., outside air or a ground loop) for space heating purposes. For ground source heat pump projects, the capacity of the ground loop is used instead of the capacity of the heat pump. Equipment must be used as a primary heating source to qualify.

Go to masssave.com/en/business/programs-and-services/new-construction-and-major-renovations to learn more about the pathways.

Click on the [Our Sponsors](#) link at the top of the page to enter your zip code and identify your Mass Save Sponsors.

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WE ARE MASS SAVE®:



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Truro DPW - Cost-Benefit Analysis
Including Mass Save Incentives & Federal Tax Credit

Option	System	Gross Capital Investment	MassSave Heat Pump Adder Incentive	30% IRA Federal Tax Credit	Net Investment	Annual Elec. Cons. (kWh)	Annual Electric Cost	Combined Utility Cost	Annual Utility \$/s.f.	Annual kBTU/s.f. (EUI)	Annual Maint. Cost	Annual Expense	Total Life-Cycle Costs	GHG Emissions (lb CO2)
1	ASHP base	\$ 3,000,000			\$ 3,000,000	86,730	\$ 25,152	\$ 25,152	\$ 1.07	12.5	\$ 15,000	\$ 40,152	\$ 7,703,863	46,591
1a	ASHP with incentives	\$ 3,000,000	\$ 80,000		\$ 2,920,000	86,730	\$ 25,152	\$ 25,152	\$ 1.07	12.5	\$ 15,000	\$ 40,152	\$ 7,573,189	46,591
1b	ASHP with solar	\$ 3,850,000	\$ 80,000		\$ 3,770,000	(113,270)	\$ (22,654)	\$ (22,654)	\$ (0.96)	(16.4)	\$ 20,000	\$ (2,654)	\$ 6,483,337	(60,849)
1c	ASHPs, Solar, and ASHP incentives & Solar tax credits	\$ 3,850,000	\$ 80,000	\$ 255,000	\$ 3,515,000	(113,270)	\$ (22,654)	\$ (22,654)	\$ (0.96)	(16.4)	\$ 20,000	\$ (2,654)	\$ 6,066,814	(60,849)
2	GSHP base	\$ 4,250,000			\$ 4,250,000	73,460	\$ 21,303	\$ 21,303	\$ 0.90	10.6	\$ 18,000	\$ 39,303	\$ 9,182,237	39,463
2a	GSHP with incentives	\$ 4,250,000	\$ 135,000		\$ 4,115,000	73,460	\$ 21,303	\$ 21,303	\$ 0.90	10.6	\$ 18,000	\$ 39,303	\$ 8,961,725	39,463
2b	GSHP with Solar	\$ 5,100,000	\$ 135,000		\$ 4,965,000	(126,540)	\$ (25,308)	\$ (25,308)	\$ (1.07)	(18.3)	\$ 23,000	\$ (2,308)	\$ 7,948,012	(67,977)
2c	GSHPs, Solar and GSHP incentives & GSHP & Solar tax credits	\$ 5,100,000	\$ 135,000	\$ 1,530,000	\$ 3,435,000	(126,540)	\$ (25,308)	\$ (25,308)	\$ (1.07)	(18.3)	\$ 23,000	\$ (2,308)	\$ 5,448,876	(67,977)

Notes:

Cost estimates based on similar project costs and Truro's SD cost estimate.

Incentives based on 2024 prescriptive heat pump incentives per Mass Save's New Construction Incentives Program

Solar energy production will vary depending on weather, maintenance quality, etc.

Assume solar net metering benefits of \$0.20/kWh.

Bid alt for Solar estimated to cost \$850,000.

Federal tax credit based on existing 2022 IRA direct pay tax credit. Not guaranteed in 2026.

<https://www.energy.gov/eere/geothermal/tax-credits-incentives-and-technical-assistance-geothermal-heat-pumps>.

Estimated current utility costs based on \$0.29/kWh for electricity.

Assumed 4% escalation rate for utility costs.

Estimated annual maintenance for solar to cost \$5,000.

Assumed 4% escalation rate for maintenance and replacement costs.


Values based on energy model performed for HVAC System Life Cycle Cost Analysis purposes. A 30% safety factor should be applied for budgeting purposes to account for potential variances to the actual operation of the building. Per ASHRAE Standard 90.1:



Neither the proposed building performance nor the baseline building performance are predictions of actual energy consumption or costs for the proposed design after construction. Actual experience will differ from these calculations due to variations such as occupancy, building operation and maintenance, weather, energy use not covered by this procedure, changes in energy rates between design of the building and occupancy, and the precision of the calculation tool.

SECTION VII



Industrial Equipment Documents


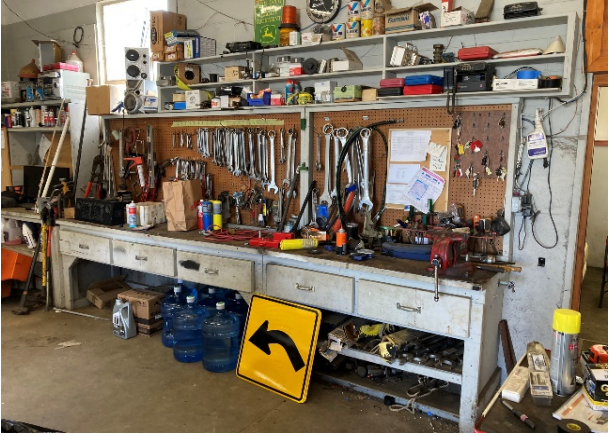
EXISTING EQUIPMENT INVENTORY

MB-1	2-Post Inground Lift		Replace
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<p>MH-8</p>	<p>Fluids Shelving</p>		<p>Replace (same model as parts storage)</p>
<p>MC-1</p>	<p>Spill Pallet</p>		<p>Reuse</p>

MC-3	Oil Trolley		Reuse
MC-4	Grease Cart		Reuse

<p>MC-5</p>	<p>120-Gallon 0W-20 Bulk Tank</p>		<p>Replace w/ Compartment Tank</p>
<p>MC-5</p>	<p>15W-40 Bulk Tank</p>		<p>Replace w/ Compartment Tank</p>



MD-1	Metal Worktop		Reuse
MD-3	Workbench		Replace

MD-3

Workbench



Replace

<p>ME-1</p>	<p>Hose Clamp Rack (Wall-Mounted)</p>		<p>Reuse</p>
<p>ME-1</p>	<p>Hose Clamp Rack (Wall-Mounted)</p>		<p>Reuse</p>

ME-2

Hydraulic Hose Bins



Reuse

ME-3

Mikita Chop Saw



Reuse

ME-4

Coll-O-Crimp



Reuse

ME-5

Hydraulic Hose
Workbench





Replace



ME-6



Hose Reels





Store on Hose
Reel Rack

<p>MF-1</p>	<p>Torch Cart</p>		<p>Reuse</p>
<p>MF-2</p>	<p>Lincoln AC225 Arc Welder</p>		<p>Reuse</p>

MF-3	Millermatic 252		Reuse
MF-4	Metabo HPT Hammer Cart		Reuse

MF-5	Thermal Dyncamics Welder		Reuse
MF-6	Lincoln Welden Power		Reuse



MF-7	Lincoln SP-170T Arc Welder	 A photograph of a Lincoln SP-170T Arc Welder. The welder is a red and black unit with a large yellow roll of protective material (likely a tarp or cover) leaning against it. The yellow material has a repeating pattern of the Lincoln logo and the word "CAUTION". The welder is situated in a workshop or storage area with various tools and equipment visible in the background.	Reuse
MF-8	Drill Press	 A photograph of a drill press. The drill press has a black motor housing with the word "JET" in white letters. It is mounted on a metal base. On the table of the drill press, there is a white cardboard box labeled "PXW9042", a blue container, and some other tools. The drill press is located in a workshop or storage area.	Reuse

MF-9



Manual Shop Press



Reuse



MG-1	Tire Changer		Reuse
MG-2	Wheel Balancer		Reuse



<p>MG-3</p>	<p>Tire Storage</p>		<p>Replace</p>
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MH-1	Snap-on Classic 96 Red Tool Box	 A red Snap-on Classic 96 Red Tool Box is shown in a workshop setting. The toolbox is on wheels and has multiple drawers. A yellow high-visibility vest is draped over the top of the toolbox. Various tools and equipment are visible in the background.	Reuse
MH-2	MAC Tools Blue Cart	 A blue MAC Tools Blue Cart is shown in a workshop setting. The cart has multiple drawers and is on wheels. It is positioned next to a large white barrel and a green trash can. Various tools and equipment are visible in the background.	Reuse


<p>MH-3</p>	<p>Wooden Cabinet (Glass Window)</p>		<p>Reuse</p>
<p>MH-4</p>	<p>Windshield Wiper Blade Rack</p>		<p>Reuse</p>

<p>MH-5</p>	<p>Nuts and Bolts Storage</p>		<p>Reuse</p>
<p>MH-6</p>	<p>Flammable Cabinet 60-Gallons</p>		<p>Reuse</p>



MH-7	Wooden Cabinet (Automobile Parts)		Replace w/ Metal Cabinet
MH-8	Shelving		Replace



MH-8	Shelving		Replace
MH-9	Small Sliding Drawers		Place on new parts shelving



MH-10	Plow Blade Storage		Place on new cantilever rack
MH-11	Hanging Storage		Replace



MH-11	Hanging Storage		Replace
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MM-1	Tall Jack Stand		Reuse
MM-2	Small Jack Stands		Reuse



MM-3	Floor Jack		Reuse
MM-4	Chop Saw on Cart		Reuse



MM-5	Snap-on Battery Charger		Reuse
MM-6	Stihl Chain Sharpener		Reuse

MM-7	Mytee Lite II Heated Carpet Extractor	 A blue and black carpet extractor machine with a red handle and a yellow bag of debris attached to the side. The machine is sitting on a concrete floor.	Reuse
MM-8	Parts Washer	 A parts washer setup consisting of a blue Valvoline oil drum with a spray gun attached, sitting on a wooden workbench. A black battery charger is also on the workbench.	Replace

MM-9	Pedestal Grinder		Replace
MM-9	Pedestal Grinder		Replace

<p>SM-1</p>	<p>Vinyl Express Printer</p>		<p>Reuse</p>
<p>SD-1</p>	<p>Drafting Table</p>		<p>Reuse</p>

<p>SH-1</p>	<p>Hanging Tube Storage</p>		<p>Reuse</p>
<p>SH-2</p>	<p>Wood Shelving Closet</p>		<p>Replace w/ parts shelving</p>



<p>CD-1</p>	<p>Wood Workbench with Casters</p>		<p>Reuse</p>
<p>CD-2</p>	<p>Wood Workbench</p>		<p>Replace</p>

CD-3

Charging Table



Replace



<p>CH-1</p>	<p>Carpentry Tool Drawer</p>		<p>Reuse</p>
<p>CH-2</p>	<p>Flammable Cabinet 60-Gallons</p>		<p>Reuse</p>

CH-3

Flammable Cabinet
45-Gallons

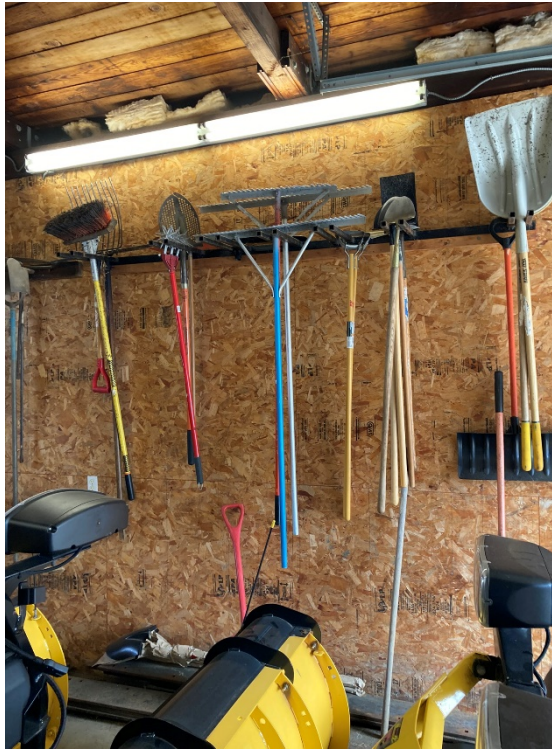


Reuse



CH-4	Shelving		Replace
MH-11	Hanging Storage		Replace



MH-11

Hanging Storage



Replace

CM-1	Miter Saw		Reuse
CM-2	Sawhorse		Reuse

CM-3	Pallet Jack	 A red and black manual pallet jack is positioned in a workshop. The jack is facing towards the right side of the frame. In the background, there is a workbench with various tools and equipment, including a green hand truck and a red pallet jack.	Reuse
CM-4	Portable Table Saw	 A portable table saw is mounted on a green hand truck. The saw is positioned in a workshop, and the hand truck is facing towards the left side of the frame. The saw's table is silver, and the hand truck has black wheels. Various tools and equipment are visible in the background.	Reuse

Record of Meeting

Project: *Truro, MA DPW*

Date: *April 24, 2025 (1:00pm to 3:00pm)*

Meeting Location: *Virtual via Microsoft Teams*

Prepared By: *Nicholas Hung*

Participants:

1. Zachary Wallin (Weston & Sampson)
2. Nicholas Hung (Weston & Sampson)
3. Margaret Schmaling (Weston & Sampson)
4. Della Donahue (Weston & Sampson)
5. Jarrod Cabral (Truro DPW)
6. Tim King (Highway Foreman)
7. Kyle Halverson (Carpentry Shop)

General Discussion

- Jarrod Cabral was present for the beginning of the call to introduce Tim King as the representative for the Town in matters related to industrial equipment and overall workspace planning.
- Tim expressed the Town's need for sufficient storage of mechanical parts, fluids, and equipment.
- The group discussed the general need and spatial layout of the shop office adjacent to the Carpentry shop; it was agreed that further coordination will be required.

(A) Cranes

- Tim expressed satisfaction with the proposed 5-ton capacity of the bridge crane.
- Tim also stated that increasing the crane's width to 25 feet (from 20 feet) would be beneficial and is preferred.

(B) Vehicle Lifts

MB-1 (Heavy Duty Maintenance Bay)

- Tim expressed a preference for mobile column lifts rather than drive-on lifts due to flexibility and reduced tripping hazards, especially when unloading sanders from trucks.
- It was discussed that six mobile column lifts would be sufficient for current needs.
- Tim indicated that keeping the bay open between fleet maintenance and the fleet storage garage would be ideal, thus the preference for mobile lifts.
- It was noted that while drive-on lifts may be considered in the future, mobile column lifts should be included in the layout for pricing at this stage.

MB-2 (Light Duty Bay)

- Tim expressed approval for the 2-post lift currently shown on plans and recommended a 20,000 lb capacity.
- It was discussed that although they currently use an in-ground lift, the new facility's space will allow for better use of aboveground lifts.
- Tim confirmed that Rotary is the preferred brand for both lift types.

(C) Fluid Storage

- Tim shared that the shop currently keeps around ten 55-gallon drums and a large number of 5-gallon buckets for various vehicle-specific fluids.
- It was discussed that reels and bulk storage are needed for 0W-20, 0W-30, and 15W-40; plans to show an additional 120-gallon tank compartment for 0W-30.
- Tim confirmed that the location of the fluid storage room is acceptable for waste oil removal by their contractor. The service truck can also reverse into the bay if needed.
- It was discussed that expanding fluid storage may involve repurposing/moving the existing adjacent shop office space.
- Tim agreed that 400 gallons of waste oil storage is adequate and that waste antifreeze storage is unnecessary. He emphasized the preference for waste oil to be pumped directly from caddies, as is current practice. Existing caddies and grease carts (MC-5,6) can be reused. An air outlet will need to be provided by the waste oil tank for this purpose. Pumpout system components can be removed from plan.
- Tim highlighted that space for drum and jug storage remains a top priority.
- Fluid reel bank to include 0W-20, 15W-40, 0W-30, air, and duplex electric outlet.

(D) Workbenches

- Tim stressed the importance of having at least one mobile workbench between the two lifts, as currently shown. An additional workbench will be provided along the same column line.
- Tim requested that the workbench shown against the wall along column line 8 be upgraded to a heavier-duty version with a thicker top, and equipped with both a vise and chainsaw sharpener.
- It was noted that the existing MD-3 metal worktop can be reused as a dedicated welding bench.

(E) Hydraulic Hose Station

- It was agreed that the existing wooden hydraulic hose bench should be replaced with a standard-duty workbench with similar dimensions.
- Tim agreed that the entire hydraulic hose operation could be relocated to the mezzanine.
- It was discussed that two hose reel racks and one reel storage cabinet should be added to support this setup. Other equipment in this area can be reused as-is.

(F) Welding Fabrication

- It was discussed that dedicated space will be needed for the storage of oxygen, acetylene, and argon cylinders.
- Tim pointed out that the MF-1 torch cart, currently shown as to be replaced, can be reused.
- It was confirmed that equipment items MF-2 through MF-9 can also be reused.
- Tim stated that he does not anticipate needing a portable weld fume extractor or welding screens at this time. These can be labeled "Not in Contract" (NIC) for future consideration.

(G) Tires

- Tim confirmed that the existing tire changer and balancer will be reused.
- It was noted that the inflation cage is not needed.
- Tim explained that obsolete large tires will be removed from the site, though the department still stores tires for the police department.
- Tim approved of the TENNSCO wall-mounted tire rack shown and requested an additional unit for a total of 2 in the tire shop.

(H) Storage

- It was agreed that:
 - MH-1 wood cabinet and MH-4 tool drawer can be replaced with shelving.
 - MH-5 tool cart can be removed entirely.
- Tim requested that MH-6 wood cabinet be moved to the area near the welding equipment.
- It was discussed that MH-8 small drawers can be reused but should be placed on shelving (minimum two shelves) for better organization, which the Town will manage upon moving to the new facility.
- Tim emphasized the need for separate storage for chainsaws, weed wackers, and gas-powered tools, including their mixed gasoline containers. The fleet storage garage could serve as a possible solution for these tools.
- An additional two MH-10 nuts and bolts cabinets to be shown on the next equipment layout iteration and retained in the parts storage room.
- It was agreed that MH-12 metal drawers should be replaced with a generic metal cabinet.
- Tim requested a total of four pallet racks for hanging tool storage: two on the mezzanine and two on the ground floor dedicated to gas-powered tools.
- Tim approved relocating the MH-14 cantilever rack to the fleet storage garage, with one unit being sufficient.

(M) Miscellaneous Equipment

- It was discussed that the MM-2 chop saw cart should be moved closer to other fabrication tools.
- Tim expressed the need to replace the MM-4 parts washer with a mobile version on casters, such as the Safety-Kleen 16/30 with the underside drum, and approved of its current location.
- Tim stated that the MM-5 pedestal grinders should also be replaced, and emphasized a preference for pedestal mounts over bench versions.

(V) Vehicle Wash Bay

- The standard system design for the wash bay was reviewed and found to be sufficient for the Town's needs, according to Tim.
- Tim mentioned the water heater for the pressure wash system would not be necessary.

Carpentry/Sign Shop

- Kyle Halverson took over the call from Tim from this point forward to discuss Carpentry and Sign Shop needs.
- Kyle confirmed that the CD-1 long workbench can be reused, and an additional new unit should be added. He noted that casters are not required.
- It was discussed that one of the CD-2 steel workbenches should be a heavy-duty version with a ¼" steel top and a mounted vise.
- Only two workbenches are needed in total; space saved can be repurposed for shelving.

- It was agreed that CH-1 tool drawer can be removed and potentially replaced with a generic metal cabinet, if space allows.
- Kyle requested one additional CH-4 shelving unit. It was suggested that CH-5 hanging storage be removed from the mezzanine; tools can be simply placed on shelving.
- Kyle requires placing the CM-1 miter saw against a wall with 5 feet of clearance on either side, though these units can be pulled slightly out from the wall as needed to accomplish extra space. CM-4 table saw should also be placed against a wall.
- Kyle approved of the Grizzly 1HP portable dust collector model shown.
- It was discussed that the SM-1 vinyl cutter should be placed next to a desktop setup, ideally on a small standing desk with a computer and keyboard.

TRURO, MA DPW

NEW EQUIPMENT CUTSHEETS

Bookmark Summary

CD-2 Steel Workbench
CD-3,MD-2 Electric Charging Workbench
CD-4 Long Wood Workbench
CD-5,MD-4 Heavy Duty Thick Top Workbench
CH-4,MH-8,MH-9,SH-2 Parts Shelving 6'
CM-5 Portable Cyclone Dust Collector
CM-6,MM-10 Bench Vise
MA-1 5-Ton Bridge Crane
MB-1 18K Mobile Column Lift (Rotary)
MB-2 20k Two Post Lift (Rotary)
MC-5,6 Compartment Tanks
MC-7 Fluid Pump
MC-8 Fluid Reel Bank
MC-9 Sump Alarm
MD-3,ME-5 Steel Workbench on Casters
ME-6 Hydraulic Hose Reel Rack
ME-7 Hose Reel and Fittings Storage
MF-12 Oxygen Acetylene Cage
MG-3 Tire Storage Rack
MH-7 Metal Storage Cabinet
MH-10 Cantilever Rack
MH-11 Pallet Rack Hanging Tool Storage
MM-8 Parts Washer
MM-9 Pedestal Grinder
SD-2 Computer Desk
V-1,2 Manual Wash System
V-3 Festoon System
V-4 Manual WashOnOff Controls
V-4 Undercarriage Wash Status Light
V-5,6 Automated Undercarriage Wash System
V-7to11 Undercarriage Wash (Wheel Blasters, Guide Rails, Photo Eyes, & Trenches)
V-12 Undercarriage OnOff Controls
V-13 Pre-Treatment Tank - 1,500 Gallon
V-14 Mobile Platform
V-16 Undercarriage Wash Traffic Light

TENNSCO Workbench: Fixed Ht, Steel, 72 in x 30 in,
1,800 lb Overall Load Capacity, Gray

Item 39FL39 Mfr. Model EB-2-3072S



Web Price *i*
\$716.03 / each AS OF MARCH 2024



Product Details

Catalog Page [1276](#)

Brand	TENNSCO
Portability	Stationary
Height Adjustability	Fixed Height
Top Surface Material	Steel
Overall Load Capacity	1,800 lb
Overall Width	72 in
Overall Depth	30 in
Overall Height	33-1/2 in
Height to Surface Top	33-7/8 in
Included Components	Stringer Riser Power Strip
Top Gauge	12 ga
Frame Material	Steel
Frame Gauge	13 ga
Frame Material Finish	Powder Coated
Color	Gray

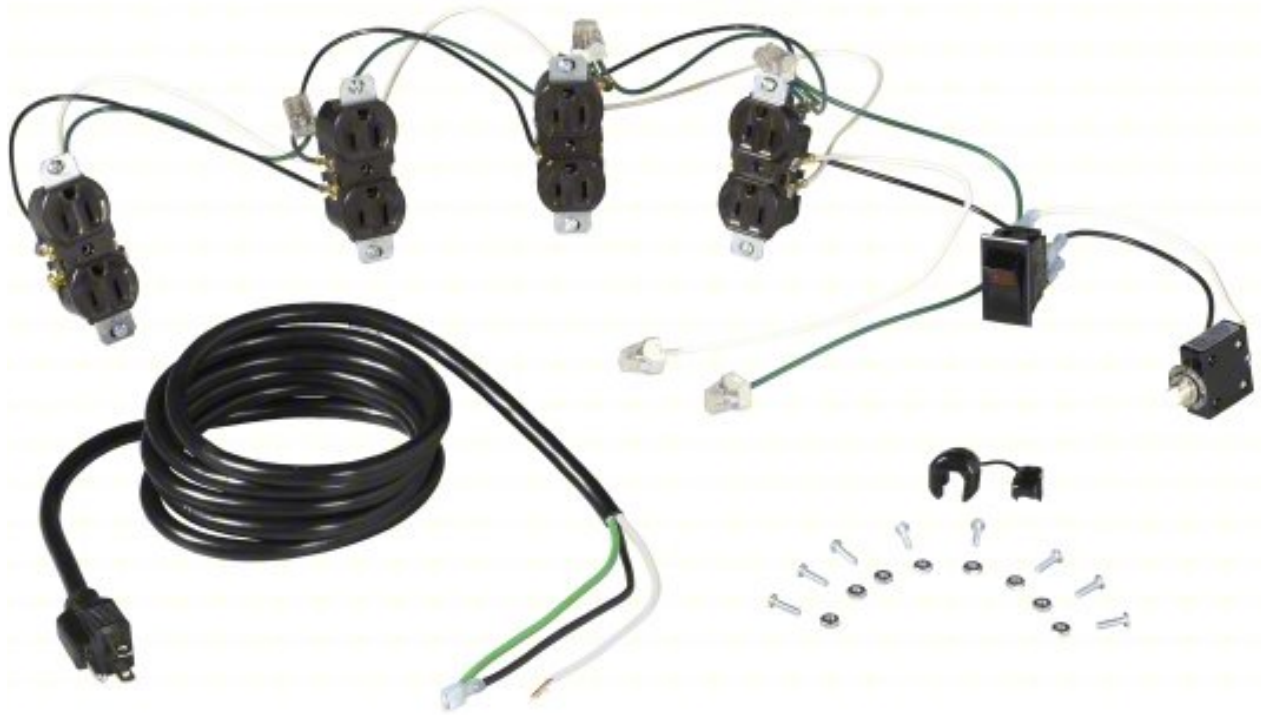
Assembly	Unassembled
Edge Shape	Square
Brake Type	None
Features	Tops Supported by Complete Steel Framework; Wiring Kit not Included.
Foot Type	Plain
Leg Type	Panel Leg
Number of Cabinets	0
Number of Drawers	0
Number of Knockouts	8
Number of Legs & Bases	2
Number of Outlets	16
Number of Shelves	1
Display Qty	1
Display Sell UOM	EA
Manufacturer Part Number	EB-2-3072S
UNSPSC	24102006
Country of Origin	USA (subject to change)

TENNSCO Wiring Kit

Item 1PB78 Mfr. Model WK-1



Web Price **AS OF MARCH 2024**
\$129.84 / each



Product Details

Catalog Page [1278](#)

Brand	TENNSCO
Product Type	Wiring Kit
Includes Mounting Hardware	Yes
Includes	(4) Duplex Receptacles and On/Off Switch, Prewired; On/Off Switch, Prewired
Number of Outlets	0
Includes Wiring Kit	Yes
Operating Voltage	115 V

Features	On/Off Switch With Pilot Light; Prewired
For Use With	Electronic Riser; Electronic Workbench; Outlet Panels
Assembly	Unassembled
Power Cord Length	8 ft
Standards	SCS Certified
Manufacturer Part Number	WK-1
UNSPSC	24102006
Country of Origin	USA (subject to change)

Product Description
Power strip wiring kits fit into outlet knockouts on workbenches to provide electrical connections to power tools and equipment. They supply power within reach of the work surface, eliminating the need for extension cords. Channels install on upright mounting frames and are used to organize, route, and protect the wiring.

Industrial Packing Table - 96 x 30", Composite Wood Top

PRICE SEE BELOW



AS OF APRIL 2025



Customize your work area with these packing tables.

- 1 1/2" thick composite wood top with rounded edges.
- Holds up to 500 lbs.
- 14" bottom shelf for additional storage.
- Adjustable steel legs 30 to 37" in 1 1/2" increments.
- [Packing Table Accessories](#) and pre-drilled [Replacement Top](#) available.

MODEL NO.	DIMENSIONS L x W	ADJUSTABLE HEIGHT	CAPACITY (LBS.)	WT. (LBS.)	PRICE EACH		TOP STYLE	IN STOCK SHIPS TODAY
					1	2+		
H-2484-WOOD	96 x 30"	30-37"	500	233	\$540	\$510	Composite Wood ▾	<input type="text" value="1"/> ADD

SHIPS UNASSEMBLED VIA MOTOR FREIGHT

HEAVY DUTY WORKBENCH NEW

CD-5
MD-4

ITEM NAME/NUMBER

**Durham HWBMT-367234-95 72"W X 36"D X 34"H
Extra Heavy Duty Machine Table**

Item #: T9FB891808

PRICE

Price: \$756.00

WEBSITE

www.globalindustrial.com/

AS OF 5-18-2020

IMAGES



DESCRIPTION

Top is 1/4" thick steel plate welded to 3" channel frame. Legs are 3" x 3" x 3/16" solid steel angle iron. Foot pads with pre-drilled holes for lagging to the floor.

SPECIFICATIONS

Product Specifications	
WIDTH INCHES	72
DEPTH INCHES	36
HEIGHT INCHES	34
CAPACITY LBS (Evenly Distributed)	14,000
COLOR FINISH	Gray
ASSEMBLY	All-Welded
BRAND	Durham Mfg.®
CONSTRUCTION	Steel
LEG STYLE	Angle Leg
LEG TYPE	Fixed
MANUFACTURERS PART NUMBER	HWBMT-367234-95
SHELF QUANTITY	1
TOP CONSTRUCTION	Steel Square Edge
WEIGHT LBS	465

PARTS SHELVING (6')
NEW

ITEM NAME/NUMBER	Web Price 
	\$914.09 / each
	
AS OF MARCH 2024	

TENNSCO Boltless Shelving: Standalone, Extra-Heavy-Duty, 72 in x 24 in, 84 in Overall Ht, 5 Shelves

Item 8ZA32 Mfr. Model RXHS-722484MED GR



Product Details

Catalog Page [1187](#)

Brand TENNSCO	Load Capacity per Shelf 2,750 lb
Duty Rating Extra-Heavy-Duty	Finish Powder Coated
Shelving Configuration Standalone	Number of Shelves 5
Decking Material Steel	Color Medium Gray
Overall Height 84 in	Side Panel Style Open
Overall Width 72 in	Beam Profile Channel
Overall Depth 24 in	Frame Material Steel
Maximum Post Load Capacity 13,000 lb with Beam Evenly Spaced at 24 in	Manufacturer Part Number RXHS-722484MED GR
Decking Gauge 16 ga	UNSPSC 24102004
Post Gauge 14 ga	Country of Origin USA (subject to change)

Product Description

Extra-heavy-duty boltless metal shelving units generally are sturdier and can hold heavier items than shelving units with lower duty levels. Also known as die shelving, they are used for storing dies, fixtures, jigs, and other heavy equipment. These shelving units have solid steel decking that provides a smooth, solid surface that items cannot fall through. It is more resistant to damage than particleboard decking and will not splinter. The decking installs over the shelving units' beams to distribute the weight of items placed on the decking across the beams.

ITEM NAME/NUMBER



Grizzly G0860 1-1/2 HP Portable Cyclone Dust Collector

\$1,095⁰⁰ + \$199⁰⁰ Freight

AS OF MARCH 2024



FEATURES

- Collection drum with quick-release handle for easy disposal
- Two-stage operation for ultimate dust collection
- Swivel casters
- Lift handle and roll drum for easy sawdust disposal
- Pleated filter with paddle brushes and crank handle for max air flow efficiency
- Vacuum equalizer built into collection drum for use with disposable plastic bags
- Wireless remote control

SPECIFICATIONS

SPECIFICATIONS

- Motor: 1-1/2 HP, 110V, single-phase, 15A
- Intake hole size: 6"
- Impeller: 12-3/4" aluminum
- Airflow capacity: 868 CFM @ 1.8" SP
- Max static pressure: 9.7"
- Filtration: 1 micron
- Filter surface area: 28.1 sq. ft.
- Collection size: 20-gallon drum
- Sound rating: 78dB
- Overall dimensions: 27-1/2" W x 44" L x 70" H
- Approximate shipping weight: 278 lbs.

Electrical:

Power Requirement.....	110V, Single-Phase, 60 Hz
Full-Load Current Rating.....	15A
Minimum Circuit Size.....	20A
Connection Type.....	Cord & Plug
Power Cord Included.....	Yes
Power Cord Length.....	72 in.
Power Cord Gauge.....	14 AWG
Plug Included.....	Yes
Included Plug Type.....	5-15
Switch Type.....	Remote Control Magnetic Switch w/Overload Protection

Motors:

Main

Horsepower.....	1.5 HP
Phase.....	Single-Phase
Amps.....	15A
Speed.....	3450 RPM
Type.....	TEFC Capacitor-Start Induction
Power Transfer	Direct
Bearings.....	Shielded & Permanently Lubricated
Centrifugal Switch/Contacts Type.....	External

W1055 Woodstock Dust Collection Kit #2

Woodstock Dust Collection Kit #2 takes the dust collection kit concept a step further by providing the necessary hoses, clamps, hoods and fittings to connect two woodworking machines to a dust collector.

Air flow to each machine is controlled by a blast gate. Kit comes complete with comprehensive instructions and can be expanded even further using our other dust collection accessories (list enclosed in each box).









\$56⁹⁵

Accessories Included:

- (2) W1007 4" Blast Gates
- (2) D4206 4" x 10' Clear Hose
- (1) W1004 Table Saw Dust Hood 4" OD
- (1) W1010 Universal Dust Hood 4" OD
- (1) W1015 Y-Fitting 4" x 4" x 4" OD
- (10) W1317 Wire Hose Clamps

INCLUDE MAGFITT DUST COLLECTION KIT

<p>New</p>  <p>4" Magnetic Machine Coupling \$9.99</p>	<p>New</p>  <p>4" Magnetic Hose Connector \$19.99</p>	<p>New</p>  <p>2-1/2" Magnetic Machine Coupling \$8.99</p>
<p>New</p>  <p>2-1/2" Magnetic Hose Connector \$16.99</p>	<p>New</p>  <p>4" x 2-1/2" Magnetic Machine Coupling \$9.99</p>	<p>New</p>  <p>4" x 2-1/2" Magnetic Hose Connector \$19.99</p>

MagFitt™: Effortless Dust Collection for Your Workshop

Establishing a clutter-free and healthy woodworking workshop environment is crucial. The lack of an efficient dust collection system can greatly impact your health. From the debris from wood chips to fine dust particles that can hang in the air for hours, a dust collection system is needed not only for cleanliness of your shop but also for the long-term health of your eyes and lungs.

Introducing the MagFitt™ Magnetic Dust Collection System, a series of revolutionary magnetic couplings and connectors developed by Woodcraft. MagFitt is flexible and efficient—and fast—making setting up dust collection in your shop quick and easy, as easy as 1-2-3! Install MagFitt Connectors and Couplings as illustrated below, and your workshop will remain dust-free, clean and safe.

Ideal for Workshops of All Sizes and Layouts

For larger workshops a central dust collection system is the go-to solution. However, for smaller spaces or garage workshops with limited room for expansion, the implementation of a traditional dust collection system can be challenging and costly. The MagFitt System steps in as the ideal alternative, eliminating the need to run dedicated duct work, blast gates and hoses from a central collector to all of your tools.

Once the MagFitt components are installed, setting up dust collection for a power tool is incredibly easy. When your work takes you to another tool, simply move the MagFitt Connector, attached to your dust collector, to the MagFitt Coupling attached to that tool, and so on. Ensuring that your shop has an efficient dust collection system has never been easier.

ITEM NAME/NUMBER

Model #: T9FB241932 MPN #: 63304

Wilton 63304 Model WS8 8" Jaw Width 4" Throat Depth
Shop Vise W/ Swivel Base

IMAGES

PRICE

\$629.00

WEBSITE



AS OF **FEB 2024**



SPECIFICATIONS

DESCRIPTION

Weights & Dimensions

Pipe Jaw Capacity	3/4 - 3 in
Throat Depth	4 in
Jaw Width	8 in
Size	8 in
Max Opening Capacity	8 in

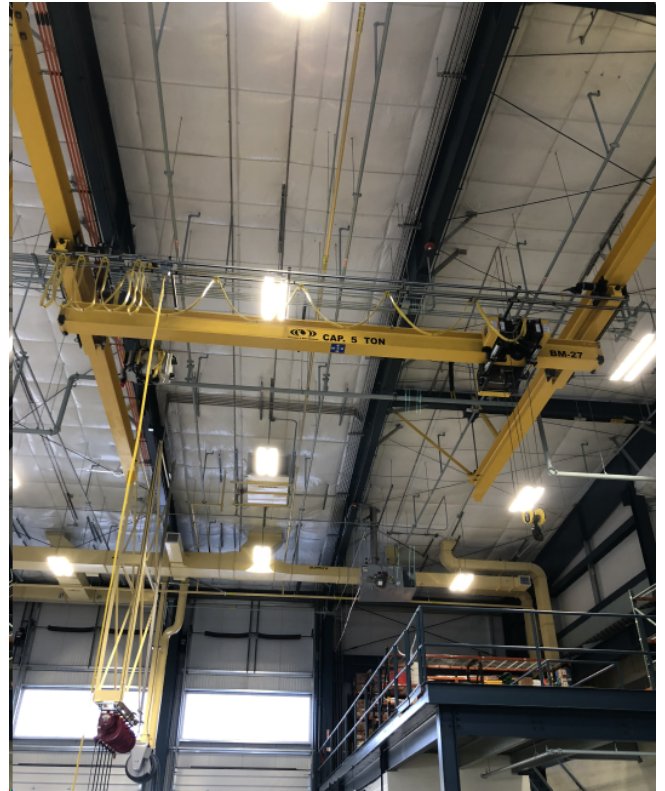
Wilton Shop Vises have heavy-duty castings with a 30,000 PSI iron body built for rugged use and extended life. Each has the capability of handling pipe as well as mounting to the bench with 3 mounting posts providing more stability and secure hold.

Features:

- Replaceable serrated top jaws
- 360° swivel base with double lockdown for quick and easy positioning
- Designed for general duty applications
- Built in pipe jaws handle various pipe sizes
- Rubber pinch point safety guards
- Large anvil work surface
- 30,000 PSI iron castings

5-TON OVERHEAD BRIDGE CRANE NEW

IMAGES



PRICES FROM 1/20/20 - prices don't include runway beams

Scenario #2 - All New Cranes		
Location	Description	Total
Vehicle Maint. Bay	New 20/5-Ton Crane, ASCE Rails, and Conductor Bars	\$ 184,900
PM Bay	New 7.5-Ton Crane, ASCE Rails, and Conductor Bars	\$ 56,600
Wash Bay	New 5-Ton Crane, ASCE Rails, and Conductor Bars	\$ 65,600
Welding Bay - Crane #1	New 15-Ton Crane, ASCE Rails, and Conductor Bars	\$ 105,700
Welding Bay - Crane #2	New 10-Ton Crane (rails and bars with 15-ton crane)	\$ 62,300
Budget Total - Scenario #2 Total:		\$ 475,100

SPECIFICATIONS

(1) - 10 ton x 20'-6" span R&M underrunning single girder crane x (1) 100'-0" +/- long runway

- Overhead building steel designed by others to support (1) 10 ton underrunning bridge crane.
- Structural runway beam steel and support hardware included – (1) runway x 100'-0" long.
- Runways designed for (1) 10 ton crane per 24'-8" maximum support center.
- Insulated conductor bar electrification & hardware included - (1) runway x 100'-0" long.
- Hoist = R&M SX Series electric wire rope hoist – H4 rated.
- Hoist includes an electric motor brake an electromechanical load limit up to 110% capacity, thermal motor protection and a 4 position limit switch. This is non-mechanical load brake hoist which allows it to run cooler and more efficient.
- Hoist lift = 29'-8" available on unit. Maximum hook height TBD upon final layout
- Hoist speed = 19/3.2 FPM with 4 part "true lift" single reeving.
- Trolley speed = 65 FPM with Variable Frequency Drive (VFD) Control.
- Bridge speed = 100 FPM with Variable Frequency Drive (VFD) Control.
- Push button control festooned across the bridge on a separate track thus allowing the operator to be safely away from the lifted load.
- Radio remote control package with harning horn and beacon included.
- Crane voltage = 460V-3ph-60hz
- Crane to be painted safety yellow.
- Crane and runway structure transportation to site included.
- Crane and runway structure installation included.
- Rentals for installation included.
- System will be leveled & braced per CMAA code.
- Disconnect and power to crane runway elevation by others with electrical hook-up by us.
- Crane start-up operational testing included.
- Certified load testing included.
- PE stamp included.
- Engineering drawings and product data sheets and submittals included.

(price from Tewksbury - 12/14/20)

• Total BUDGETARY cost for

MA Prevailing Wage

Rates..... **\$91,000.00**

POWER (480 V / 3 PHASE)

460V, 3-phase is assumed for all cranes
15 Ton: 30 A (main fuse size at bridge panel)
10 Ton: 30 A (main fuse size at bridge panel)
5 Ton: 15 A (main fuse size at bridge panel)

POWER (208 V/ 3 PHASE)

2 TON CRANE

2 Electrical

Main voltage	208 V /60 Hz
Control voltage.....	115 V
Nominal power of crane.....	4.3 hp
Main fuse size at bridge panel.....	15 A
Maximum current of crane ¹⁾	45.1 A
Nominal current of crane ¹⁾	13.5 A
Power factor at starting current.....	0.76
Power factor at nominal current.....	0.83
Voltage drop of crane (conductor) power supply .. %	<= 4.0 %

5 TON CRANE

Electrical

Main voltage	208 V /60 Hz
Control voltage.....	115 V
Nominal power of crane	8.8 hp
Main fuse size at bridge panel	30 A
Maximum current of crane ¹⁾	112.3 A
Nominal current of crane ¹⁾	26.0 A
Power factor at starting current	0.78
Power factor at nominal current	0.93
Voltage drop of crane (conductor) power supply .. %	<= 4.0 %

Note! The maximum current of crane includes the starting current of hoisting motor(s) and nominal current of trolley and bridge traveling motors. The nominal current of crane includes the nominal current of hoisting, trolley and bridge motors. Maximum or nominal currents of crane do not include the currents of additional accessories, such as lamps, magnets etc.
Note! Do not use estimated main fuse size to define other electrical components.



FLEXMAX419
18,800 lbs. capacity column

Shown: MCH419U100



FLEX / FLEXMAX 18,800 lb. COLUMN CAPACITIES

MODEL	MCHF419	MCHF619
Column configuration*	4	6
Capacity per set	75,200 lbs.	112,800 lbs.
Rise	70" (1778 mm)	
Column width	45.5" (1156 mm)	
Wheel Rim Size	9"to 24" (228 to 610 mm)	
Clearance / fork to column	10" (254 mm)	
Speed of rise	78 seconds	
Charging voltage	110v charger** (2.5 amps max.)	

FLEX / FLEX MAX 14,000 lb. COLUMN CAPACITIES

MODEL	MCHF414	MCHF614
Column configuration*	4	6
Capacity per set	56,000 lbs.	84,000 lbs.
Rise	69" (1760 mm)	
Column width	43" (1092 mm)	
Wheel Rim Size	9"to 24" (228 to 610 mm)	
Clearance / fork to column	10" (254 mm)	
Speed of rise	68 seconds	
Charging voltage	110v charger** (2.5 amps max.)	

* Two, four, six and eight column configurations are available.
** Call factory for alternate voltage

ACCESSORIES

FRAME-ENGAGING 18,000 LBS. CAPACITIES

LIFTING KITS

FORE and AFT END LIFT KITS

Frame-engaging end lift kits enable lifting by the front and rear of the vehicle using stacking adapters.



M140168YL

THE WIDEST REACH IN THE INDUSTRY

For use with two MCH18 or MCH19Flex series columns or for use with two MCH13 or MCH14 Flex series columns
Maximum capacity: 18,000 lbs.
Rise height: 70"



OPTIONAL M110108BK

Storage cart for lifting kits



M140168YL

18,000 lbs. capacity lift

Shown: MCH418U100 with M14005YL frame lift kit

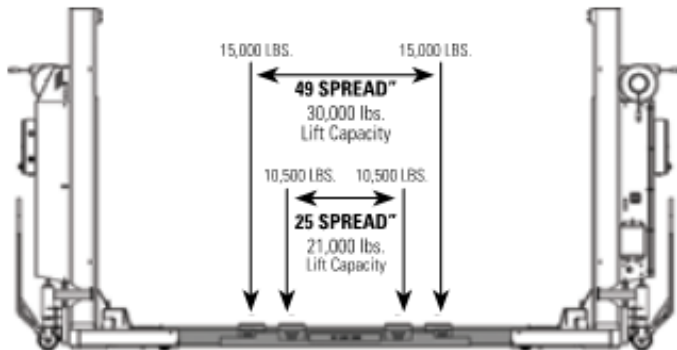
FRAME-ENGAGING

CROSS BEAM KITS

21,000 TO 32,000 LBS. CAPACITIES

Pick up buses, RVs and more with wheels-free, frame-engaging cross beam kits. Beam vehicle spotting allows technicians to service wheels and tires with ease.

All kits are designed for use with the MACH418 or MCHFlex419 Series lifts



CAPACITIES

30,000 lbs. at 49" adapter spread / 15,000 LBS. per adapter

21,000 lbs. at 25" adapter spread / 10,500 LBS. per adapter

ALI THIRD-PARTY GOLD CERTIFIED



APPROXIMATE PRICE: ~\$70,000
(Based on Burlington DPW Quote 4/5/2019)

(Get updated quote Specific to each project)



SPO20-SW 20,000 LBS. CAPACITY
VERSATILE SUPER LIFT
The industry's standard 20,000 lbs. heavy-duty two post lift is now the world's fastest!

Model shown: SPO20UOTORD
20,000 lbs. capacity SHOCKWAVE-equipped lift

LOW CEILING MODEL AVAILABLE

SPO16
16,000 LBS. CAPACITY
SERVICE FLEET LINES and MORE
Setting the mark for reliability and quality in heavy duty lifts.

Available with **SHOCKWAVE™**
Model shown: SPO16OT0BL
16,000 lbs. capacity 2-post lift

LOW CEILING MODEL AVAILABLE



Extended Height Kits

Raise the overhead clearance on 10,000 and 12,000 lbs. capacity two-post lifts to service more vehicles at a comfortable working height. Kit includes column extensions and hardware.

CONSULT FACTORY FOR OPTIONS



Jack Stands / 4,000 lbs. CAPACITY

The lift certified RS4 jack stand provides added assurance of vehicle lift safety.

Maximum height: 84" (2133mm)

Minimum height: 55 1/2" (1410mm)

Fine thread-up height:

1 5/8" to 7 1/8" (41mm to 181mm)



MW-200 Tire Lift

200 lbs. capacity air operated tire and wheel lift. Provides maneuverability and adjustable lifting and lowering speeds.

- Quick transfers to tire balancers
- Easy positioning of the tire / wheel
- Includes air hose and auxiliary air tool connection

#MW-500

500 lbs. capacity model available



Air / Utility Box

Mounts easily on any column and provides quick access to utilities

- Two 110v electric outlets and air connection
- The filter/regulator/lubricator helps extend the life of your air tools

#FA5911BK



Tool Holder

To keep tools handy for the technician, this patented tool holder keeps air guns, torque sticks, and other tools within easy reach. This accessory mounts easily in holes already drilled and tapped in the two-post column.

#FA5191EBK



Power and Air Requirements from Installation Manual

IMPORTANT: Use separate circuit for each power unit. Protect each circuit with time delay fuse or circuit breaker. For single phase 208-230V, use 30 amp fuse. For wiring see Figs. 19 and 20. All wiring must comply with NEC and all local electrical codes.

Note: Absence of air filter/regulator/lubricator will void the warranty on all pneumatic components.

To Main Air Supply

Note: Use an Operational
Air Pressure of 90-100 psi

Available with
SHOCKWAVE™

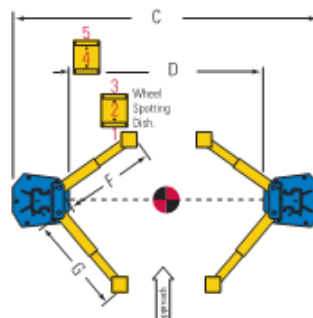
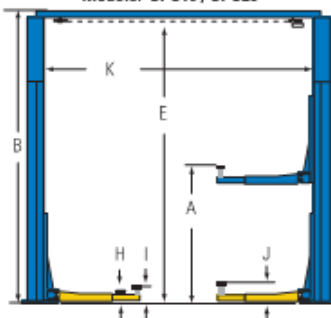


Model:



SHOCKWAVE Models		SP016 -SW	SP020 -SW
Lifting Capacity		16,000 lbs. (7257kg)	20,000 lbs. (9072kg)
Max. Load (per arm)		4,000 lbs. (1814kg)	5,000 lbs. (2268kg)
A.	Rise*		
	Min. Truck Adapter Height	77 31/32" (1979mm)	77 31/32" (1979mm)
	Max. Truck Adapter Height	80 1/32" (2035mm)	80 1/32" (2035mm)
B.	Height Overall:		
	Standard Adjustments	15' to 16' 6" (4572-5029mm)	15' to 16' 6" (4572-5029mm)
	Low Ceiling (LC)	13' 6" to 14' 6" (4115-4420mm)	13' 6" to 14' 6" (4115-4420mm)
C.	Width Overall (outside to outside of base plates)		
	Narrow	12' 11" (3937mm)	12' 11" (3937mm)
	Standard	13' 5" (4089mm)	13' 5" (4089mm)
	Wide	13' 11" (4242mm)	13' 11" (4242mm)
	Wide width setting provides greatest tire clearance for shorter wheelbases		
D.	Narrow Drive-Thru Clearance	105 11/32" (2677mm)	105 11/32" (2677mm)
	Standard Drive-Thru Clearance	111 11/32" (2829mm)	111 11/32" (2829mm)
	Wide Drive-Thru Clearance	117 11/32" (2981mm)	117 11/32" (2981mm)
E.	Floor To Overhead Switch	15' 10 13/16" (4851mm)	15' 10 13/16" (4851mm)
F.	Reach / Front Arm Min./Max.	34 11/16" (881mm) / 64" (1626mm)	34 11/16" (881mm) / 64" (1626mm)
G.	Reach / Rear Arm Min./Max.	34 11/16" (881mm) / 64" (1626mm)	34 11/16" (881mm) / 64" (1626mm)
H.	Min./Max. Truck Adapter Height	5 31/32" to 8 1/32" (152-203mm)	5 31/32" to 8 1/32" (152-203mm)
I.	Min./Max. Low Step Height	10 31/32" to 13 1/32" (278-344mm)	10 31/32" to 13 1/32" (278-344mm)
J.	Min./Max. High Step Height	15 31/32" to 18 1/32" (406-470mm)	15 31/32" to 18 1/32" (406-470mm)
K.	Inside Columns		
	Narrow	120 15/32" (3061mm)	120 15/32" (3061mm)
	Standard	126 15/32" (3213mm)	126 15/32" (3213mm)
	Wide	132 15/32" (3366mm)	132 15/32" (3366mm)
Motor / Voltage**		4 HP / 208v-230v	4 HP / 208v-230v
With SHOCKWAVE		5 HP / 110v	5 HP / 110v
Time of Full Rise		81 seconds at full capacity	81 seconds at full capacity
With SHOCKWAVE***		60 seconds at full capacity 36 seconds at half capacity	60 seconds at full capacity 36 seconds at half capacity
Time of Descent		20 seconds for all vehicle weights	
Ceiling Height Required:			
Standard		15' 2" to 16' 8" (4576-5080mm)	15' 2" to 16' 8" (4576-5080mm)
Low Ceiling (LC)		13' 8" to 14' 8" (4166-4470mm)	13' 8" to 14' 8" (4166-4470mm)
Min. Bay Size		15' x 30' (4572 x 9144mm)	15' x 30' (4572 x 9144mm)
Total Product Weight		3,500 lbs.	3,500 lbs.

Models: SP016 / SP020



* Rise is measured from floor to adapter in lowest and highest position

** Optional DC SHOCKWAVE battery power available

*** Actual rise times may vary depending on weight of the vehicle

Standard color of lifts are blue and red unless otherwise noted. Gray and black are available at no additional charge. Additional colors are available, consult your Rotary® representative for details.

RAL5005 RAL3002 RAL7040 RAL9005

**COMPARTMENT TANKS
NEW & WASTE FLUIDS
NEW**

SEE FOLLOWING PAGES



Lube Cube® lube oil tanks are the best solution for storage of new and used lubrication oils. Lube Cubes provide lower installed costs than underground tanks, better space utilization than cylindrical aboveground tanks and lower operation costs than 55-gallon drums.

Lube Cube Tanks are designed for easy and convenient installation either indoors, in service bays or basements, or outdoors, next to the building. Lube Cube's rectangular shape allows for the storage of up to 20% more volume in a given space than comparable cylindrical tank capacities.

Lube Cubes are available as either single or double-wall tanks. Double-wall tanks are UL listed as integral secondary containment and therefore do not require dikes for leak containment.

Desert sand primer finish is standard. Special colors, coatings and interior linings, custom dimensions and equipment packages are available upon request.

STANDARD FEATURES:

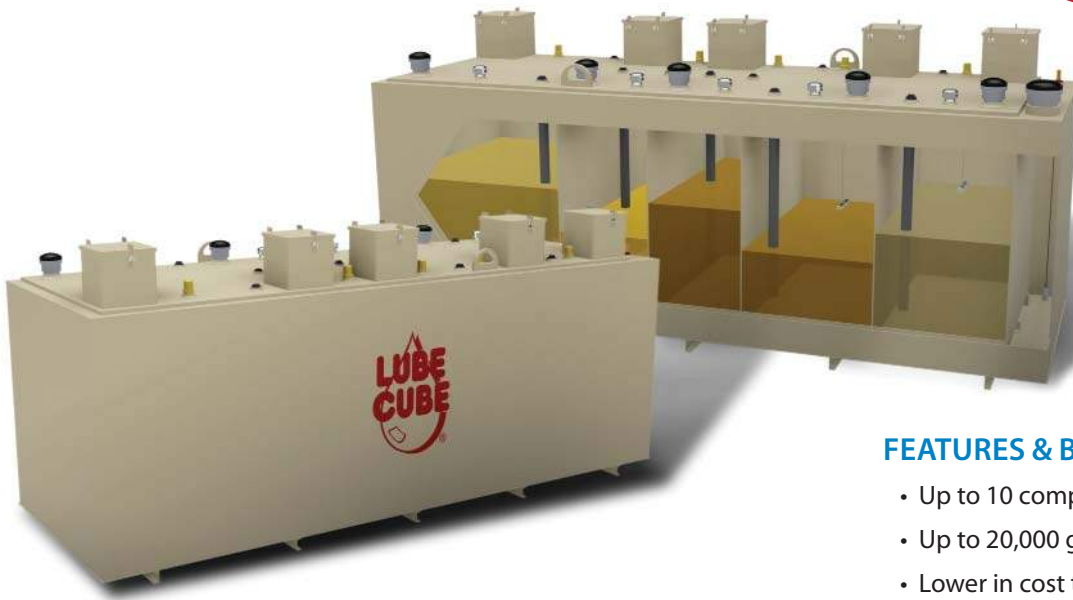
- UL-142 listed
- Meets NFPA 30 Standard
- Skid mounted for easy installation
- Shop primed exterior
- Moveable by forklift
- NPT fittings with PVC plugs
Single-Wall: 5 (plus emergency vent opening)
Double-Wall: above fittings (plus emergency vent and inspection opening)
- Lifting lugs

OPTIONS:

- Corrosion resistant exterior coating
- 7 gallon spill box
- Custom sizes
- Compartments available
- Stainless-steel construction
- Interior coatings
- Equipment packages



Lube Cube tanks are available in standard sizes from 60 to 20,000 gallons.



MULTI-COMPARTMENT TANKS

Containment Solutions offers multi-compartment tanks for the storage of new and used lubrication products. Multi-compartment Lube Cube® tanks from CSI provide lower installation costs and better space utilization than multiple aboveground tanks.

CSI compartment tanks provide a minimum floor space savings of 15% and cost savings of 20%-30% when compared to multiple tanks.

Multi-compartment tanks can be manufactured with up to 10 compartments and may store up to 20,000 gallons. Leak detection for these tanks will also require fewer electronic sensors compared to individual tanks. CSI compartment tanks are UL-142 listed and meet NFPA 30 standards and can be custom designed to suit limited space requirements.

A complete selection of Containment Solutions tank configurations are available nationwide. Our experienced sales staff is ready to assist you in selecting the tank best suited to fit your needs.

FEATURES & BENEFITS:

- Up to 10 compartments in a single tank
- Up to 20,000 gallons per unit
- Lower in cost than individual units
- Lower insurance costs*
- UL-142 listed
- Meets NFPA 30 Standard
- Skid mounted for easy installation
- Moveable by forklift
- Lifting lugs
- Shop primed exterior standard
 - (Epoxy exterior coating available)

OPTIONS:

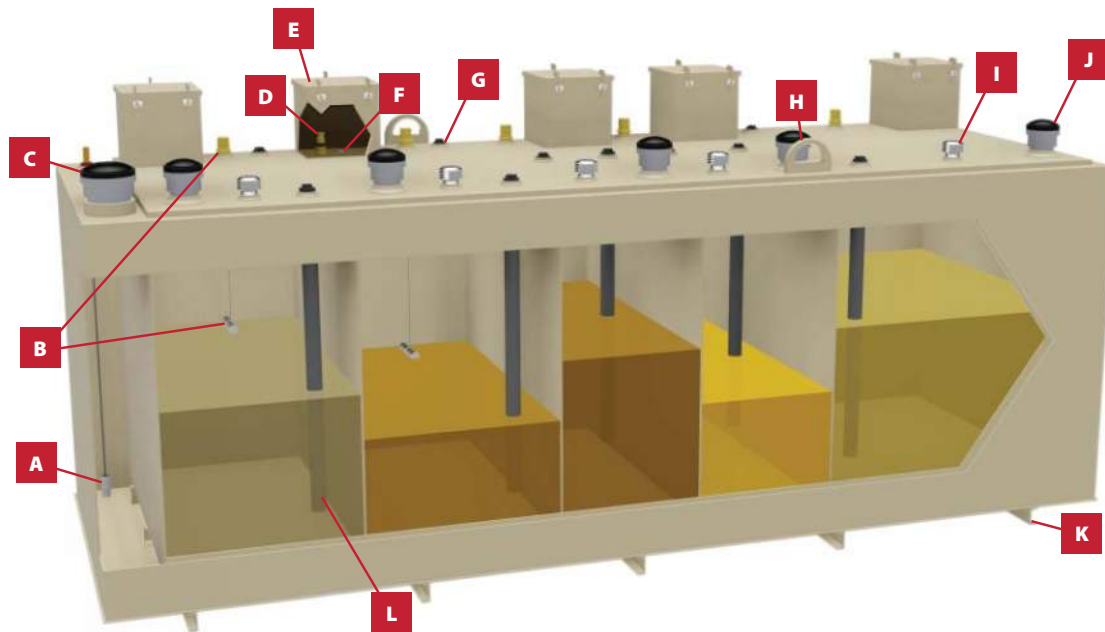
- Stainless-steel construction
- Interior coatings
- 7 gallon spill box
- Equipment packages

** Savings will vary by area, and are dependant on insurance carrier.*



1,250 gallon, 4 compartment tank.

LUBE CUBE® MULTI-COMPARTMENT TANK



- A. Secondary Containment Leak Gauge
- B. Product Level Gauge
- C. Secondary Containment Emergency Vent - 4", 6", 8" or 10"
- D. Primary Tank Fill opening - 2", 4", or 6"
- E. Optional Spill Box
- F. 1/2" NPT Drain

- G. 2" Spare
- H. Lifting Lugs
- I. 2" Primary Working Vent
- J. Primary Tank Emergency Vent - 4", 6", 8", or 10"
- K. Support Feet
- L. Product Suction Tube

▼ TYPICAL CLUTTERED LAYOUT



▼ FLOOR SPACE SAVINGS OF CSI TANKS

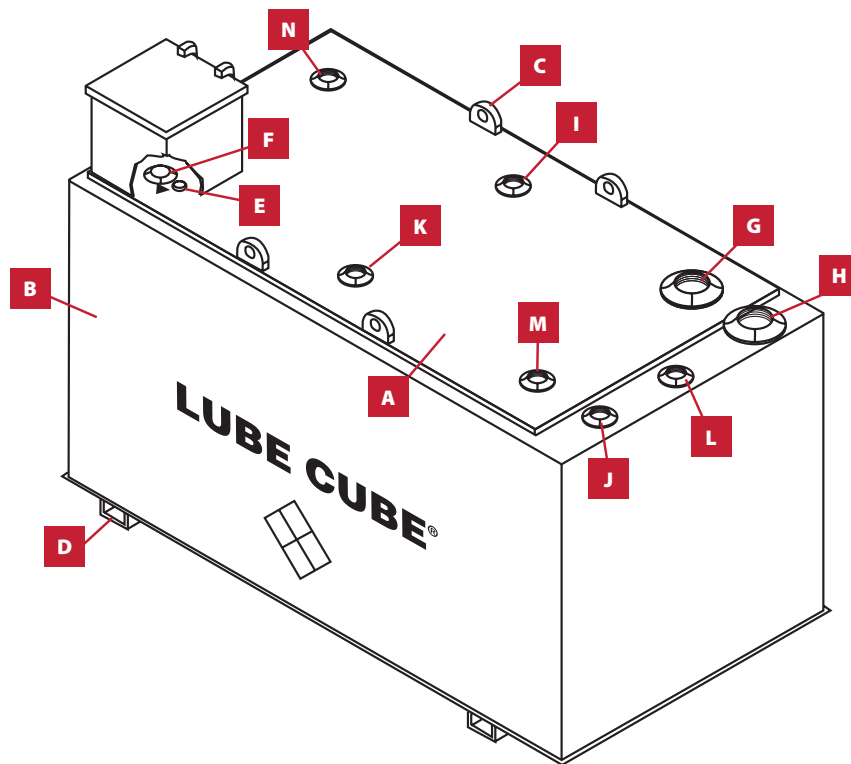


**CONTAINMENT
SOLUTIONS®**

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STANDARD TANK SIZES:

CAPACITY (GALLONS)	DIMENSIONS (L x W x H)	WEIGHT (LBS)	CAPACITY (GALLONS)	DIMENSIONS (L x W x H)	WEIGHT (LBS)
60	1' 11" x 2' 10" x 3' 1"	385	480	5' 8" x 3' 10" x 4' 1"	1,350
90	2' 6" x 2' 10" x 3' 1"	460	500	4' 10" x 3' 10" x 5' 1"	1,425
120	3' 2" x 2' 10" x 3' 1"	485	550	5' 2" x 3' 10" x 5' 1"	1,450
150	3' 9" x 2' 10" x 3' 1"	675	600	5' 7" x 3' 10" x 5' 1"	1,475
150	2' 10" x 2' 10" x 4' 1"	650	650	6' 3" x 3' 10" x 5' 1"	1,525
180	3' 4" x 2' 10" x 4' 1"	700	750	6' 9" x 4' 0" x 5' 1"	1,625
200	3' 7" x 2' 10" x 4' 1"	740	1,000	9' 4" x 4' 0" x 5' 1"	2,400
210	3' 9" x 2' 10" x 4' 1"	765	1,500	13' 4" x 4' 0" x 5' 1"	3,250
225	3' 11" x 2' 10" x 4' 1"	790	2,000	13' 9" x 5' 0" x 5' 1"	3,800
240	4' 2" x 2' 10" x 4' 1"	830	2,500	17' 0" x 5' 0" x 5' 1"	4,500
250	4' 4" x 2' 10" x 4' 1"	860	3,000	20' 5" x 5' 0" x 5' 1"	6,650
275	4' 8" x 2' 10" x 4' 1"	900	4,000	22' 3" x 5' 0" x 6' 1"	8,150
280	4' 10" x 2' 10" x 4' 1"	850	5,000	17' 1" x 8' 0" x 6' 1"	10,150
300	3' 10" x 3' 10" x 4' 1"	925	6,000	20' 3" x 8' 0" x 6' 1"	11,400
325	4' 1" x 3' 10" x 4' 1"	975	8,000	19' 11" x 8' 0" x 8' 1"	14,000
350	4' 4" x 3' 10" x 4' 1"	1,000	10,000	24' 7" x 8' 0" x 8' 1"	16,125
375	4' 7" x 3' 10" x 4' 1"	1,050	12,000	29' 3" x 8' 0" x 8' 1"	18,550
400	4' 10" x 3' 10" x 4' 1"	1,100	15,000	36' 3" x 8' 0" x 8' 1"	22,100
450	5' 5" x 3' 10" x 4' 1"	1,200	20,000	48' 2" x 8' 0" x 8' 1"	28,900



Standard Equipment

- A. Primary Tank
- B. Secondary Tank
with Corrosion Resistant Desert Sand
Primer Exterior Coating
- C. Lifting Lugs
(2) 60 - 650 Gallon
(4) 1,000 - 20,000 Gallon
- D. Support Feet
- E. 1/2" NPT Drain with Optional Spill Box
- F. Fill - 2", 4" or 6"
- G. Primary Tank Emergency Vent
4", 6", 8", or 10"
- H. Secondary Containment
Emergency Vent 4", 6", 8" or 10"
- I. 2" Primary Working Vent
- J. 2" Secondary Containment
Working Vent
- K. 2" Gauge
- L. 2" Monitoring Point
- M. 2" Spare
- N. 2" or 4" Spare



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POWER MASTER III

IMAGES



DESCRIPTION

Ball pumps

- Material outlet: 3/4 in. NPTF
- Output per cycle: 11.9 cu. in. (195 cc)
- Approximate cycles per gal./L: 20 gallons/ 5 liters
- Gallons/Liters per minute:
- Air motors and pump tubes shipped separately. Assembly required.
- State of the art, fully pneumatic Air Motors, 3–4–6–8 inches (76–101–152–203 mm) diameter
- Full 6" stroke for greater output per cycle
- Modular design for easy repair
- Only 5 moving parts, no metal to metal contact
- Newly designed pump tubes offer ratios and outputs to fit any application
- Available to fit any drum or pail size
- Offered in carbon steel, stainless steel or hard chrome plated
- Complete selection of packing materials available
- Full line of priming equipment and mounting devices
- Ball style for fluid materials, shovel foot style for high viscosity non-fluid materials

SPECIFICATIONS

Model	Ratio	Pump tube style	Pump tube model	Air motor model	Diameter		Min. ID air supply hose		Air consumption per cycle			
									SCFM	M3/Min.	SCFM	M3/Min.
std. Air					in.	mm	in.	mm	@ 70 psig	@ 4.8 bar	@ 100 psig	@ 6.8 bar
Motor only												
2021(1)	24:1	55 gal	84985	Std. 84806 w/ AirBrake 94906*	6	152	1/2	12	1.1	0.031	1.6	0.045
2001	12:1	55 gal	84985	Std. 84804 w/ AirBrake 94904*	4-1/4	108	1/2	12	.08	0.023	1.1	0.031
2014	12:1	stub	84986	Std. 84804 w/ AirBrake 94904*	4-1/4	108	1/2	12	.08	0.023	1.1	0.031
2052	6:1	55 gal	84985	Std. 84803	3	76	3/8	10	0.5	0.014	0.7	0.02
2051	6:1	stub	84986	Std. 84803	3	76	3/8	10	0.5	0.014	0.7	0.02

*Order pump tube and air motor separately for these models or when ordering AirBrake™ equipped models.

ITEM NAME/NUMBER



SEE FOLLOWING PAGES

HEAVY DUTY REELS

Alemite Heavy Duty Reels set the industry standard for reliable, rugged performance in tough work environments. Engineered for optimum performance and safety, these reels are suitable for a wide range of demanding applications.

FEATURES:

- Superior Performance – Swivel and reel ball bearings reduce torque load on power spring for smooth retraction every time
- Anti-Lockout Design – Ratchet prevents lockup when hose is fully extended, eliminating the need to manually release the pawl at the reel
- Corrosion Resistant – Sealed bearings prevent contamination and minimize maintenance, a critical performance factor in dirty environments
- Easy Installation and Maintenance – Factory lubricated one piece power spring cassette makes installation and maintenance safe and easy
- Durable – Heavy metal arbor design withstands extreme stress and eliminates breakage associated with non-metal and light weight metal arbors
- Adjustable and Versatile – 5 position guide arm allows hose to release at an optimum position. Narrow design allows for efficient use of available space
- Compatibility – Oil, grease, air, water

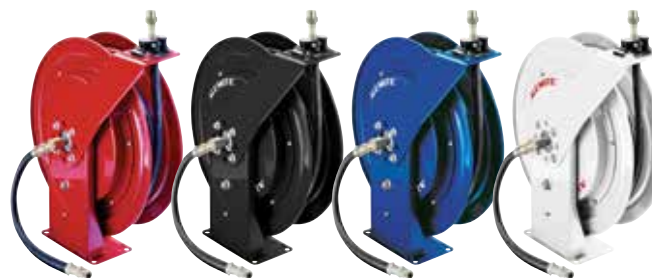


8078 Series

INCLUDED ITEMS:

- Hose Reel
- Hose
- Hose Stop
- Union
- 24" (61 cm) Connecting Hose

Colors not
available in
every size
or length.



Oil

Product #	Color	Max Pressure	Delivery Hose			Connecting Hose ⁽¹⁾		Weight
			Specification	Part #	Outlet	Inlet	Part #	
8078-C	Maroon	1,500 psi (103 bar)	1/2" ID x 30 ft	317813-30	1/2" NPTF(m)	1/2" NPTF(m)	317813-2	58 lb (26 kg)
8078-D	Maroon	1,500 psi (103 bar)	1/2" ID x 50 ft	317813-50	1/2" NPTF(m)	1/2" NPTF(m)	317813-2	58 lb (26 kg)
8078-DBL	Blue	1,500 psi (103 bar)	1/2" ID x 50 ft	317813-50	1/2" NPTF(m)	1/2" NPTF(m)	317813-2	58 lb (26 kg)
8078-DBK	Black	1,500 psi (103 bar)	1/2" ID x 50 ft	317813-50	1/2" NPTF(m)	1/2" NPTF(m)	317813-2	58 lb (26 kg)
8078-DW	White	1,500 psi (103 bar)	1/2" ID x 50 ft	317813-50	1/2" NPTF(m)	1/2" NPTF(m)	317813-2	58 lb (26 kg)

⁽¹⁾Connecting Hose length is 24" (61 cm)

Grease

Product #	Color	Max Pressure	Delivery Hose			Connecting Hose ⁽¹⁾		Weight
			Specification	Part #	Outlet	Inlet	Part #	
8078-A	Maroon	6,400 psi (440 bar)	1/4" ID x 30 ft	317874-30	1/4" NPTF(f)	3/8" NPTF(m)	317876-2	56 lb (25 kg)
8078-B	Maroon	6,000 psi (413 bar)	1/4" ID x 50 ft	317874-50	1/4" NPTF(f)	3/8" NPTF(m)	317876-2	59 lb (27 kg)
8078-T	Maroon	6,400 psi (440 bar)	3/8" ID x 50 ft	317870-50	1/4" NPTF(f)	3/8" NPTF(m)	317882-2	63 lb (29 kg)
8078-BBL	Blue	6,000 psi (413 bar)	1/4" ID x 50 ft	317874-50	1/4" NPTF(f)	3/8" NPTF(m)	317876-2	59 lb (27 kg)
8078-BBK	Black	6,000 psi (413 bar)	1/4" ID x 50 ft	317874-50	1/4" NPTF(f)	3/8" NPTF(m)	317876-2	59 lb (27 kg)
8078-BW	White	6,000 psi (413 bar)	1/4" ID x 50 ft	317874-50	1/4" NPTF(f)	3/8" NPTF(m)	317876-2	59 lb (27 kg)

⁽¹⁾Connecting Hose length is 24" (61 cm)

HEAVY DUTY REELS

Air/Water

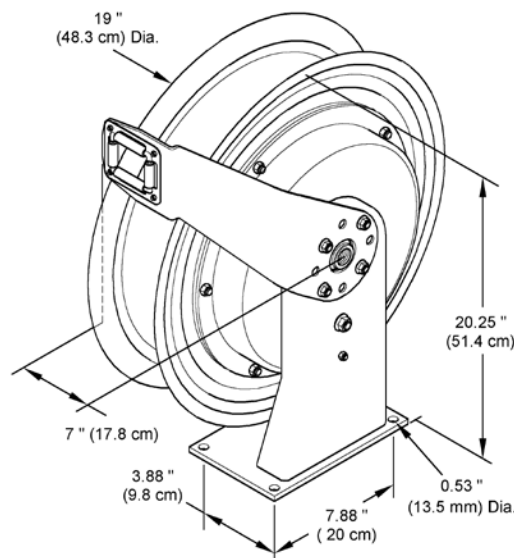
Product #	Color	Max Pressure	Delivery Hose			Connecting Hose ⁽¹⁾		Weight
			Specification	Part #	Outlet	Inlet	Part #	
8078-E*	Maroon	300 psi (20 bar)	3/8" ID x 30 ft	317803-30	1/4" NPTF(m)	1/2" NPTF(m)	317811-2	51 lb (23 kg)
8078-F*	Maroon	300 psi (20 bar)	3/8" ID x 50 ft	317803-50	1/4" NPTF(m)	1/2" NPTF(m)	317811-2	53 lb (24 kg)
8078-M*	Maroon	300 psi (20 bar)	1/2" ID x 50 ft	317811-50	1/2" NPTF(m)	1/2" NPTF(m)	317811-2	61 lb (28 kg)
8078-FBL*	Blue	300 psi (20 bar)	3/8" ID x 50 ft	317803-50	1/4" NPTF(m)	1/2" NPTF(m)	317811-2	53 lb (24 kg)
8078-FBK*	Black	300 psi (20 bar)	3/8" ID x 50 ft	317803-50	1/4" NPTF(m)	1/2" NPTF(m)	317811-2	53 lb (24 kg)
8078-FW*	White	300 psi (20 bar)	3/8" ID x 50 ft	317803-50	1/4" NPTF(m)	1/2" NPTF(m)	317811-2	53 lb (24 kg)

⁽¹⁾Connecting Hose length is 24" (61 cm)

* **⚠ WARNING** California Proposition 65: Cancer and reproductive harm. www.P65Warnings.ca.gov

Bare Reels

Product #	Color	Usage	Max Pressure	Reel Inlet	Reel Outlet	Weight
7135-A	Blue	Oil	1,500 psi (103 bar)	1/2" NPTF(f)	1/2" NPTF(f) Swivel	50 lb (23 kg)
7135-B	Black	Oil	1,500 psi (103 bar)	1/2" NPTF(f)	1/2" NPTF(f) Swivel	50 lb (23 kg)
7135-C	White	Oil	1,500 psi (103 bar)	1/2" NPTF(f)	1/2" NPTF(f) Swivel	50 lb (23 kg)
7335-B	Maroon	Oil	1,500 psi (103 bar)	1/2" NPTF(f)	1/2" NPTF(f) Swivel	50 lb (23 kg)
7134-A	Blue	Grease	6,000 psi (413 bar)	1/2" NPTF(f)	3/8" NPTF(f) Swivel	50 lb (23 kg)
7134-B	Black	Grease	6,000 psi (413 bar)	1/2" NPTF(f)	3/8" NPTF(f) Swivel	50 lb (23 kg)
7134-C	White	Grease	6,000 psi (413 bar)	1/2" NPTF(f)	3/8" NPTF(f) Swivel	50 lb (23 kg)
7334-B	Maroon	Grease	6,400 psi (440 bar)	1/2" NPTF(f)	3/8" NPTF(f) Swivel	50 lb (23 kg)
7136-A	Blue	Air/Water	300 psi (20 bar)	1/2" NPTF(f)	3/8" NPTF(f)	50 lb (23 kg)
7136-B	Black	Air/Water	300 psi (20 bar)	1/2" NPTF(f)	3/8" NPTF(f)	50 lb (23 kg)
7136-C	White	Air/Water	300 psi (20 bar)	1/2" NPTF(f)	3/8" NPTF(f)	50 lb (23 kg)
7336-B	Maroon	Air/Water	300 psi (20 bar)	1/2" NPTF(f)	3/8" NPTF(f)	50 lb (23 kg)



POWER & LIGHT REELS

COB LED Light Reel

Alemite COB LED Light Reels for automotive workspaces combine next-generation COB (Chip on Board) technology with several robust design features. These reels are built to illuminate the tightest automotive workspaces and withstand the toughest shop conditions.


8082-A

Product #	Cord Size	Connection Cord Length	Reel Length	Input Volts	Output Light	Weight
8082-A	18 gauge	4 ft (1.2 m)	50 ft (15 m)	125 V	600 Lumens	33 lb (15 kg)

Power Cord Reels

Alemite Light and Electric Cord reels keep your cords within reach, but safely out of the way, to improve safety, convenience and productivity. NOTE: Power cord reels are not weatherproof.


7261

Product #	Cord Size	Connection Cord Length	Reel Cord Length	Volts	Amperes	Outlet	Weight
7260	12 gauge	5 ft (1.5 m)	45 ft (13.7 m)	115 V	20 amp	Duplex with GFCI	30 lb (14 kg)
7261	10 gauge	5 ft (1.5 m)	50 ft (15 m)	115 V	35 amp	RV Plug	47 lb (21 kg)
7262-A	12 gauge	5 ft (1.5 m)	40 ft (12 m)	115 V	15 amp	Triple	15 lb (7 kg)

METERS

Alemite Electronic and Mechanical Meters provide consistent, reliable performance for dispensing applications.

Electronic

The versatile Alemite Electronic Meter is designed for accurate, high volume dispensing of a wide range of fluids.

FEATURES:

- Electronic digital readout ($\pm 1\%$ accuracy)
- Ergonomic trigger design for easy dispensing
- Rubber guard to protect meter from damage
- Programmable to measure in pints, quarts, gallons or liters
- Displays current fluid delivery, and registers total amount of fluid used
- Easy to calibrate – no disassembly required
- Uses 2 standard AAA batteries, replaceable with a coin screw on back of meter
- Low battery indicator
- $\frac{1}{2}$ " NPT(f) Inlet
- **Fluid compatibility:** oil, gear oil, transmission fluid, antifreeze - antifreeze concentrate only, not compatible with water/antifreeze mixture



3670-B

Product #	Description	Measures	Totalizes	Extension	Non-drip tip	Weight
3670	Electronic meter	Quart	Gallon	Rigid	Automatic	3 lb (1.4 kg)
3670-B	Electronic meter	Quart	Gallon	Rigid	Manual	3 lb (1.4 kg)
3671	Electronic meter	Quart	Gallon	Flexible	Automatic	3 lb (1.4 kg)
3671-B	Electronic meter	Quart	Gallon	Flexible	Manual	3 lb (1.4 kg)
3673	Electronic meter	Pint	Gallon	Rigid	Automatic	3 lb (1.4 kg)
3674-C	Electronic meter	Gallon	Gallon	Rigid	High-volume manual	3 lb (1.4 kg)
3679	In-line electronic meter	Quart	Gallon	–	–	0.83 lb (0.4 kg)

MISCELLANEOUS

Non-Drip Nozzles

Alemite Non-Drip Nozzles help prevent drips and spills, for a cleaner, safer work space. The nozzles are available with an automatic shut off, or manual twist lock mechanism.

Product #	Description	Used with	Thread Sizes
B339800	Automatic assembly (blister pack)	3620 Series, 3621, 3621-A, 3622, 3622-A, 3640 Series, 3641-1, 3686-1, 3686-B, 3670, 3671, 3671-A, 3672, 3673, 7948	1/4" NPTF(f)
339084	Manual	3620-B, 3621-B, 3641-B1, 3670-B, 3671-B, 3685-J, 3685-F, 3685-G	1/4" NPTF(f)
340084	Manual high-volume	3624-C, 3644-C1, 3674-C, 3691-C, 3690 Series, 7498-C	1/2" NPTF(f)

Water Bib (BSWA321)

Alemite's Water Bib manual dispensing valve is suitable for dispensing water, antifreeze, or windshield washer fluid. Inlet size is 1/4" (6 mm).



BSWA321

SUMP HIGH LEVEL ALARM NEW

ITEM NAME/NUMBER

WARRICK CONDUCTIVITY CONTROLS

WARRICK TA-730 ALARM PANEL

PRICE

\$784.00

Part Number: TA731A0

AS OF 5-20-2020

IMAGES



DESCRIPTION

Features

- Intrinsically Safe Approved
- Auxiliary Contact for Remote Annunciation or Cutoff
- One or Two Channels
- Two Conduit Connection Hubs

SPECIFICATIONS

Model	TA73
Protection	Intrinsically Safe
Enclosure	NEMA 4
Sku	TA731A0
Supply Voltage	120 VAC
Secondary Voltage	12 VAC
Audible Alarm	Adjustable from 77 to 97 dB at 2 feet
Interface Contacts	Normally Open Dry
AuxiliaryContacts	1
Contact Design	N/A
Contact Rating	N/A
Indicators	Red, Green, Yellow Solid State LED's
Maximum Temperature	150°F
Approvals	UL 913 Intrinsically Safe



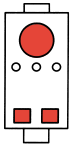
**WARRICK
CONTROLS**

TA-730 SERIES

Intrinsically
Safe

MONITORING PANEL

APPLICATIONS

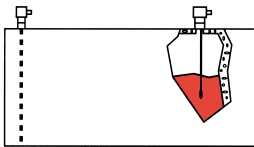


Non-Hazardous Area

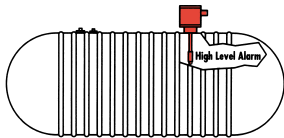
Seal Off Fitting

Hazardous Area

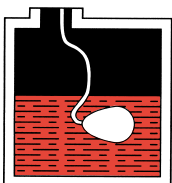
**Aboveground Fuel
Storage Tanks**
Leak Detection,
Overfill



**Underground Fuel
Storage Tanks**
High Level Alarm,
Leak Detection,
Piping Sumps



Liquid Level Alarms
High/Low Floats



- A** Power and auxiliary contact wiring
- B** Adjustable sound level from 77-97 dB via moveable horn shutter
- C** Red LED indicates current fault condition
- D** Green LED indicates panel has power
- E** For TA-731, yellow LED indicates fault condition has occurred, even if fault has cleared itself (TA-732 "Alarm 2" red LED)
- F** Test button allows alarm activation and system testing
- G** Acknowledge button allows direct alarm silencing
- H** Intrinsically safe sensor wiring

Warrick TA-730 Series intrinsically safe monitoring panels solve simple tank monitoring needs. Packaged in secure 3R rated electrical enclosures, they are designed to interface with a variety of leak detection or overfill sensors. Applications include refill alarm, overfill alarm, high level alarm and leak detection.

These cost-effective, solid state TA-730 monitoring panels offer many features not commonly found in controls of this type:

- Intrinsically safe sensor circuit(s)
- Auxiliary contact for remote alarm or cutoff
- Field selectable operation of auxiliary relay for cutoff mode or alarm mode
- Caution LED to warn when a fault condition has occurred and cleared itself (TA-731 only)
- Available in 1-channel model (TA-731) and 2-channel model (TA-732)
- Indoor or outdoor installation
- Low cost, long life
- High impact polycarbonate plastic housing
- Compact design, small footprint
- Easy-to-reach screw-in wiring terminals for easy installation and secure connections
- Options for either normally open or normally closed contacts

TA-730 SERIES

I.S. MONITORING PANEL

SPECIFICATIONS

- **Supply Voltage:**
120 VAC + 10%,
-15%, 6.6 VA
maximum
- **Indicators:**
Red, green and
yellow (TA-731)
solid state LEDs
- **Audible Alarm:**
Field adjustable
from 77-97 dB at 2 ft.
- **Enclosure:**
NEMA 3R polycar-
bonate (6 1/4"H x
3 1/4"W x 3 1/2"D)
- **Sensor Circuit(s):**
12 VDC,
.238 milli-amp
- **Terminals:**
Size 6 pan head
screws with
captivated wire
clamping plate
- **Temperature:**
-22° to 150° F
ambient
- **Sensitivity:**
0-26K ohm
maximum specific
resistance
- **U.L. 913 Listing:**
Process control
equipment associ-
ated apparatus,
intrinsically safe
- **Conduit Connections:**
sensor 3/4" NPT,
PVC material;
power 1/2" NPT,
metal
- **Auxiliary Contact:**
SPDT, 10A @
120/240 VAC,
resistive

TA-731 Operation:

The green LED will light when power is applied to the unit. When the remote contact changes state (fault condition), the audible alarm will activate and the red and yellow LEDs will light. When the acknowledge pushbutton is pressed, the audible alarm will stop and the yellow LED will clear. The red LED will remain lit as long as the fault condition exists. When the fault condition is corrected, the red LED will clear.

When a fault condition occurs and corrects itself prior to depressing the acknowledge button, the audible alarm and red LED will automatically activate and clear, matching the fault condition. However, the yellow LED will remain lit to indicate that the fault condition had previously occurred. Pressing the acknowledge button will clear the yellow LED.

TA-732 Operation:

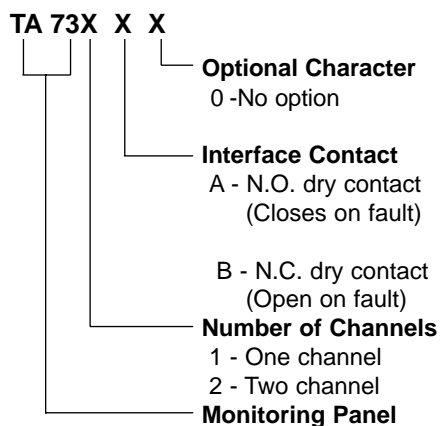
The green LED will light when power is applied to the unit. When the

appropriate sensor contact changes state (fault condition), the audible alarm will activate and the appropriate red LED will light. When the acknowledge pushbutton is pressed, the audible alarm will stop. The alarm LED will remain lit as long as the fault condition exists. When the fault condition is corrected, the alarm LED will clear.

TA-73XXO models include an onboard selector switch to change the operating mode of the auxiliary relay. In cut-off mode, the relay mimics the red LED. The relay activates on fault condition and remains activated until the fault condition has been cleared. Pressing the acknowledge button will not reset the auxiliary relay. On the model TA-732XO, the auxiliary contact will only operate off of channel 1 (Sensor 1).

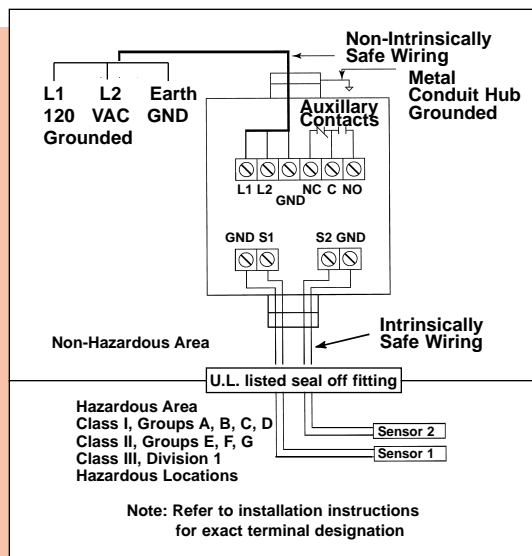
In the alarm mode, the relay mimics the horn. The relay will activate on fault condition and will reset on pressing the acknowledge button or clearing the fault condition.

Ordering Information:



Maximum Sensor Wire Run:
5000 feet based on 12 through 22
gauge wire

Caution: The TA-730 must be
located in a non-
hazardous area.



Authorized Distributor:

STEEL WORK BENCH W/ CASTERS NEW

MD-3
ME-5



Heavy Welding Tables

Price Ea.: \$2,600.00

WEBSITE



AS OF MARCH 2024



H4X12WELD-12WC



H5X8WELD-1



H4X8WELD-12



H3X6WELD-38WC



H4X8WELD-12WC



Rigid Caster (WC)



Swivel Caster (WC)

Product No.	H3X6WELD-14-WC
Size W x D x H	72 x 36 x 36"
Top	1/4"
Optional Casters	Yes
Wt. (lbs.)	350

- Solid Heavy Duty, long lasting shop tables for any welding application.

If you are looking for a solid heavy duty shop table, look no further. These Welding Tables offer 1/4", 3/8", 1/2", 3/4", and 1" plate steel tops. Each table offers all-welded construction and is built to 36" overall working height. The unpainted top is ideal for welding applications. Each table is built using 4 x 4" 11 ga. legs and features a bottom shelf with wire decking. All tables are powder coated black. Additional powder coated colors available -- call for pricing. FOB Shipping Point.

Heavy Welding Tables with optional casters (-WC) come standard with 2 rigid and 2 locking swivel casters. H5X8WELD-1-WC includes 2 rigid, 2 swivel and 2 locking swivel casters.

Steel surcharge may apply.

WHAT'S MORE HARDCORE THAN METAL AND FIRE? NOTHING. EXCEPT OUR BADASS WELDING TABLES.

Our welding tables are made by hand in the USA with heavy gauges of steel for superior strength and durability. You can weld, cut, grind, pound, or do whatever badass things you do for the rest of your life on this welding table Our lifetime warranty proves it.

ITEM NAME/NUMBER Gates Hose Reel Rack Gates #78186	\$758.11
	
	AS OF APRIL 2024

IMAGES



SPECIFICATIONS


PRODUCT DETAILS

Part #	HOSE REEL RACK	Product #	74840019
Description	78186 HYDRAULIC HOSE RACK	UPC	072053630176
Specifications	Dimensions: 28" wide by 30" deep by 72" high.		

SKU	7484-0019
Weight	165.0000
Part Number 1	78186
Part Number 2	HOSE REEL RACK
Brand	Gates
Manufacturer	Gates
Upc	72053630176

HYDRAULIC HOSE REELS AND FITTINGS STORAGE NEW

ME-7

ITEM NAME/NUMBER	PRICE
GATES CORPORATION 78190 - Storage Cabinet - Hydraulic Coupling Cabinet and Parts - 4 Sliding Shelves	\$307⁷²
	WEBSITE 
	AS OF FEB 2022

IMAGES



SPECIFICATIONS/DESCRIPTION

Product Description

Storage Cabinet - Hydraulic Coupling Cabinet and Parts - 4 Sliding Shelves

Product Attributes

Description	Coupling Cabinet with 4 Sliding Shelves
Industrial Description	Cabinet with 4 Shelves
Product Type	Hydraulic Coupling Cabinet and Parts

Additional Information

Country of Origin (Primary)	US
Harmonized Tariff Code (Schedule B)	9403200080
UPC	00072053113280
UNSPSC	56131600
VMRS Code	059032012

ITEM NAME/NUMBER 4 Cylinders - Large Tanks - Outdoor - Vertical Storage - Green - Gas Cylinder Cabinet Model # CBESTS4SC	PRICE \$1,185.00
	WEBSITE www.USAsafety.com/
	AS OF 2-2023

IMAGES



SPECIFICATIONS/DESCRIPTION


Cabinet capacity: 4 cylinders of 9.5" diameter or equivalent combination

Cabinet dimensions: 24"w x 24"d x 71"h

Gas Cylinder Storage Cabinet Features:

- OSHA compliant
- Fully-welded steel framing
- Laser-cut steel door and sides
- Tamper-resistant stainless steel hinges
- Powder coated with an outdoor-grade coating
- Lockable door (lock not included)
- E-track strapping system inside
- E-Hook Ratchet strap included (4ft)
- Made in the USA
- Product weight: 220 lbs

TIRE STORAGE RACK
NEW

ITEM NAME/NUMBER TENNSCO Steel Single Sided Boltless Tire Rack, Shelf Capacity 2000 lb. 60" H x 60" W x 21" D Item # 45UW73 Mfr. Model # ZST-6060S Catalog Page # N/A UNSPSC # 24102004	Web Price ⓘ \$198.61 / each
	
	AS OF APRIL 2024

IMAGES



SPECIFICATIONS

Technical Specs				
Item	Single Sided Boltless Tire Rack		Material	Steel
Tire Capacity	16		Color	Medium Gray
Width	60"		Finish	Powder Coated
Depth	21"		Includes	(4) Uprights, (6) Angle Beams, (4) Shelf Supports, (2) Wall Ties
Height	60"		Shelf Depth	12"
Number of Shelves	2			
Shelf Capacity	2000 lb.			