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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 coderequired 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
 - 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)
 - 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
 - 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
 - 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.
 - 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?

- 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*:













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:Variable Refrigerant Flow (VRF):	\$800/ton \$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 <u>masssave.com/en/business/programs-and-services/new-construction-and-major-renovations</u> 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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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 ctric Cost	ombined tility Cost	ι	innual Jtility \$/s.f.	Annual kBTU/s.f. (EUI)	Annual Maint. Cost	Annual Expense	Tot	al 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
1 a	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.

Town of Truro New Public Works Facility Schematic Design Report

SECTION VII

Industrial Equipment Documents



EXISTING EQUIPMENT INVENTORY



MB-1 2-Post Inground Lift



MH-8	Fluids Shelving	Replace (same model as parts storage)
MC-1	Spill Pallet	Reuse



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



MC-5	120-Gallon 0W-20 Bulk Tank	BEC STATE OF	Replace w/ Compartment Tank
MC-5	15W-40 Bulk Tank		Replace w/ Compartment Tank



MD-1	Metal Worktop	Reuse
MD-3	Workbench	Replace



MD-3 Workbench



ME-1	Hose Clamp Rack (Wall- Mounted)	RMBALL IN THE PARTY OF THE PART	Reuse
ME-1	Hose Clamp Rack (Wall- Mounted)	BREEZE STAINLESS STEEL For Automotive, Industrial, Marine & General Use. 28 32-36 KIV.	Reuse



ME-2	Hydraulic Hose Bins	Reuse
ME-3	Mikita Chop Saw	Reuse



ME-4	Coll-O-Crimp	COUTDON CONTROL OF THE PARTY OF	Reuse
ME-5	Hydraulic Hose Workbench		Replace



ME-6 Hose Reels

Store on Hose Reel Rack



MF-1	Torch Cart		Reuse
MF-2	Lincoln AC225 Arc Welder	SNE SNE SNE SNE SNE SNE SNE SNE	Reuse



MF-3	Millermatic 252	Miller.	Reuse
MF-4	Metabo HPT Hammer Cart	me la do Rui	Reuse



MF-5	Thermal Dyncamics Welder		Reuse
MF-6	Lincoln Welden Power	CONTROL OF THE PROPERTY OF THE	Reuse



MF-7	Lincoln SP-170T Arc Welder		Reuse
MF-8	Drill Press	JET	Reuse



MF-9 Manual Shop Press
Reuse



MG-1	Tire Changer		Reuse
MG-2	Wheel Balancer	COLUMN TO SERVICE TO SERVICE TO COLUMN TO SERVICE TO	Reuse



MG-3 Tire Storage Replace



MH-1	Snap-on Classic 96 Red Tool Box		Reuse
MH-2	MAC Tools Blue Cart	MAL TOOLS	Reuse



мн-з	Wooden Cabinet (Glass Window)		Reuse
MH-4	Windshield Wiper Blade Rack	TRICO Proces TR	Reuse



MH-5	Nuts and Bolts Storage		Reuse
MH-6	Flammable Cabinet 60- Gallons	AUSTRITE INSTALLABLE INFLAMABLE INFLAMA	Reuse



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



MH-8	Shelving	Lupot robats	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



MM-1	Tall Jack Stand	Reuse
MM-2	Small Jack Stands	Reuse



MM-3	Floor Jack		Reuse
MM-4	Chop Saw on Cart	DPW STATE OF THE PARTY OF THE P	Reuse



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



MM-7	Mytee Lite II Heated Carpet Extractor	ATTENTION	Reuse
MM-8	Parts Washer		Replace



MM-9	Pedestal Grinder	The season of th	Replace
MM-9	Pedestal Grinder		Replace



SM-1	Vinyl Express Printer	Roland CAMMA-1700 Roland	Reuse
SD-1	Drafting Table	P _P	Reuse



SH-1	Hanging Tube Storage	ECC A7 COS 83 FDC Allante Highwa Sin, ce Si	Reuse
SH-2	Wood Shelving Closet	G G G G G G G G G G G G G G G G G G G	Replace w/ parts shelving



CD-1	Wood Workbench with Casters		Reuse
CD-2	Wood Workbench	Ivalon' ser Dispenser om Loading em: Adelwaredra	Replace



CD-3	Charging Table		Replace
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CH-1	Carpentry Tool Drawer	Transport of the state of the s	Reuse
CH-2	Flammable Cabinet 60-Gallons	CEPTRE AND PESTICIDA PESTI	Reuse



CH-3 Flammable Cabinet 45-Gallons



CH-4	Shelving	THE CONTROL OF THE CO	Replace
MH-11	Hanging Storage	BRDTE	Replace



MH-11 Hanging Storage Replace



CM-1	Miter Saw	Reuse
CM-2	Sawhorse	Reuse



CM-3	Pallet Jack	Reuse
CM-4	Portable Table Saw	Reuse

tel: 978-532-1900 www.westonandsampson.com



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 representive 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:
 - o 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 Patform

V-16 Undercarriage Wash Traffic Light



HEAVY DUTY WORKBENCH NEW



Model #: T9FB170016

MPN #: HWB-3672-95

\$909.00

BESTSELLER

Durham Mfg. Standard Workbench W/ Shelf & Steel Square Edge, 72"W x 36"D, 14000 Lb Capacity, Gray



AS OF APRIL 2024



The top is 1/4" thick steel plate welded to 3" channel frame while legs are 3" x 3" x 3/16" solid steel angle iron. All units are 36" deep and work surface is 34" above the floor. All models include a 29-1/4" deep shelf which sits 10" above the floor. Unit ships fully assembled ready for use. Optional roller bearing drawer (sold separately) attaches easily to underside of work surface using pre-drilled holes and drawer includes recessed handle, a lock and 2 keys. This unit has durable gray powder coat finish, and a 34" height overall.

Weights & Dimensions

Width	72 in
Depth	36 in
Height	34 in

Top Thickness	3/16 in
Nominal Height	34 in
Weight Capacity	14000 lbs

Product Details

Assembly Required	No
Power	No
Туре	Extra Heavy Duty Workbench
Color	Gray
Number of Drawers	
Edge Type	Square
Leg Style	Square Tubular Leg
Mobile or Stationary	Stationary

Number of Shelves	1
Construction Type	All-Welded
Leg Type	Fixed
Manufacturers Part Number	HWB-3672-95
Primary Use	Manufacturing Facilities
Brand	Durham Mfg.
Top Material	Steel



ELECTRIC CHARGING WORKBENCH NEW



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

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



Web Price 🕡

\$716.03 / each AS OF MARCH 2024



Product Details Catalog Page 1276

Brand TENNSCO	Assembly Unassembled
Portability Stationary	Edge Shape Square
Height Adjustability Fixed Height	Brake Type None
Top Surface Material Steel	Features
Overall Load Capacity 1,800 lb	Tops Supported by Complete Steel Framework; Wiring Kit not Included.
Overall Width 72 in	Foot Type Plain
Overall Depth 30 in	Leg Type Panel Leg
Overall Height 33-1/2 in	Number of Cabinets 0
	Number of Drawers 0
Height to Surface Top 33-7/8 in	Number of Knockouts 8
Included Components Stringer	Number of Legs & Bases 2
Riser Power Strip	Number of Outlets 16
Top Gauge 12 ga	Number of Shelves 1
Frame Material Steel	Display Qty 1
Frame Gauge 13 ga	Display Sell UOM EA
Frame Material Finish Powder Coated	Manufacturer Part Number EB-2-3072S
Color Gray	UNSPSC 24102006
	Country of Origin USA (subject to change)



WORKBENCH ELECTRIC SHELF NEW



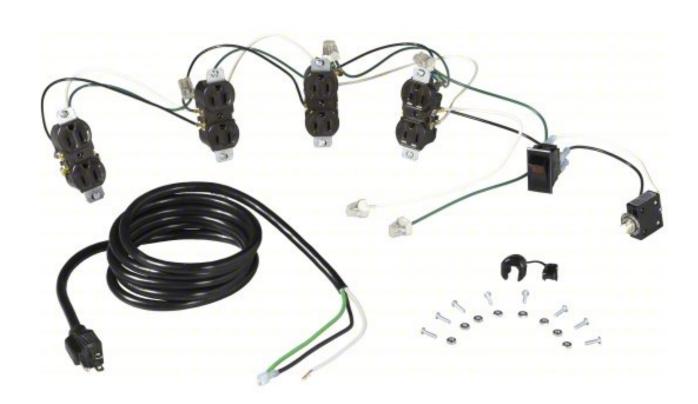
TENNSCO Wiring Kit

Item 1PB78 Mfr. Model WK-1



Web Price (i) \$129.84 / each

AS OF MARCH 2024



Product Details

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

Catalog Page 1278

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.



LONG WOOD WORKBENCH NEW

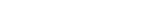


Industrial Packing Table - 96 x 30", Composite Wood Top

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.
- <u>Packing Table Accessories</u> and pre-drilled <u>Replacement Top</u> available.

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

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

Web Price (7) \$914.09 / each



AS OF MARCH 2024



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.



PORTABLE CYCLONE DUST COLLECTOR



ITEM NAME/NUMBER



\$1,095⁰⁰ +*199⁰⁰ Freight (9)

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

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	154
Minimum Circuit Size	20A
Connection Type	Cord & Plug
Power Cord Included	Yes
Power Cord Length	
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	
Amps	
Speed	
Type	
Power Transfer	
BearingsS	
Centrifugal Switch/Contacts Type	



PORTABLE CYCLONE DUST COLLECTOR

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



PORTABLE CYCLONE DUST COLLECTOR



INCLUDE MAGFITT DUST COLLECTION KIT













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.



BENCH VISE NEW

CM-6 MM-10

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

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

DESCRIPTION

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

MA Prevailing Wage

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	
Nominal power of crane	4.3 hp
Main fuse size at bridge panel	15 A
Maximum current of crane*)	45.1 A
Nominal current of crane*)	13.5 A
Power factor at starting current	0.76
Power factor at nominal current	0.83
Voltage drop of crane (conductor) power su	upply % <= 4.0 %

5 TON CRANE

Electrical

Main voltage	208 V /60 Hz
Control voltage	
Nominal power of crane	8.8 hp
Main fuse size at bridge panel	30 A
Maximum current of crane*)	112.3 A
Nominal current of crane*)	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.



ROTARY MOBILE COLLUMN LIFTS

MB-1

NEW





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



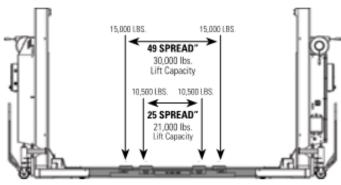
FRAME-ENGAGING

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)



ROTARY TWO POST LIFT NFW





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.



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.



- . 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.

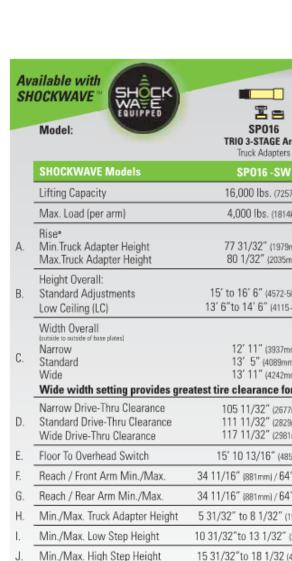
Power and Air Requirements from Installation Manual

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







TRIO 3-STAGE Arms Truck Adapters



TRIO 3-STAGE Arms Truck Adapters

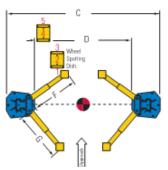
SP020 -SW

	SHOCKWAVE MIDUEIS	2L010-2AA	3PU20-3W
	Lifting Capacity	16,000 lbs. (7257kg)	20,000 lbs. (9072kg)
	Max. Load (per arm)	4,000 lbs. (1814kg)	5,000 lbs. (2268kg)
Α.	Rise° Min.Truck Adapter Height Max.Truck Adapter Height	77 31/32" (1979mm) 80 1/32" (2035mm)	77 31/32" (1979mm) 80 1/32" (2035mm)
В.	Height Overall: Standard Adjustments Low Ceiling (LC)	15' to 16' 6" (4572-5029mm) 13' 6"to 14' 6" (4115-4420mm)	15' to 16' 6" (4572-5029mm) 13' 6"to 14' 6" (4115-4420mm)
S.	Width Overall (outside to outside of base plates) Narrow Standard Wide Wide width setting provides are	12' 11" (3937mm) 13' 5" (4089mm) 13' 11" (4242mm) eatest tire clearance for shorter w	12' 11" (3937mm) 13' 5" (4089mm) 13' 11" (4242mm)
	Narrow Drive-Thru Clearance	105 11/32" (2677mm)	105 11/32" (2677mm)
).	Standard Drive-Thru Clearance Wide Drive-Thru Clearance	111 11/32" (2829mm) 117 11/32" (2981mm)	111 11/32" (2829mm) 117 11/32" (2981mm)
	Floor To Overhead Switch	15' 10 13/16" (4851mm)	15' 10 13/16" (4851mm)
	Reach / Front Arm Min./Max.	34 11/16" (881mm) / 64" (1626mm)	34 11/16" (881mm) / 64" (1626mm)
ì.	Reach / Rear Arm Min./Max.	34 11/16" (881mm) / 64" (1626mm)	34 11/16" (881mm) / 64" (1626mm)
١.	Min./Max. Truck Adapter Height	5 31/32" to 8 1/32" (152-203mm)	5 31/32" to 8 1/32" (152-203mm)
	Min./Max. Low Step Height	10 31/32" to 13 1/32" (278-344mm)	10 31/32" to 13 1/32" (278-344mm)
	Min./Max. High Step Height	15 31/32"to 18 1/32 (406-470mm)	15 31/32"to 18 1/32 (406-470mm)
ζ.	Inside Columns Narrow Standard Wide	120 15/32" (3061mm) 126 15/32" (3213mm) 132 15/32" (3366mm)	120 15/32" (3061mm) 126 15/32" (3213mm) 132 15/32" (3366mm)
	Motor / Voltage** With SHOCKWAVE	4 HP / 208v-230v 5 HP / 110v	4 HP / 208v-230v 5 HP / 110v
	Time of Full Rise With SHOCKWAVE***	81 seconds at full capacity 60 seconds at full capacity 36 seconds at half capacity	81 seconds at full capacity 60 seconds at full capacity 36 seconds at half capacity
	Time of Descent	20 seconds for a	all vehicle weights
	Ceiling Height Required: Standard Low Ceiling (LC)	15' 2" to 16' 8" (4576-5090mm) 13' 8" to 14' 8" (4166-4470mm)	15' 2" to 16' 8" (4576-5080mm) 13' 8" to 14' 8" (4166-4470mm)

Models: SP016 / SP020

Min. Bay Size

Total Product Weight



15' x 30' (4572 x 9144mm)

3,500 lbs.

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

15' x 30' (4572 x 9144mm) 3,500 lbs.

- ** 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.









COMPARTMENT TANKS NEW & WASTE FLUIDS NEW

MC-5,6

SEE FOLLOWING PAGES



LUBE CUBE® MULTI-PURPOSE TANKS



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

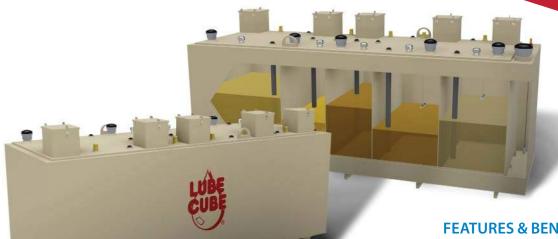


Lube Cube tanks are available in standard sizes from 60 to 20,000 gallons.



LUBE CUBE®

MULTI-COMPARTMENT TANKS



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)

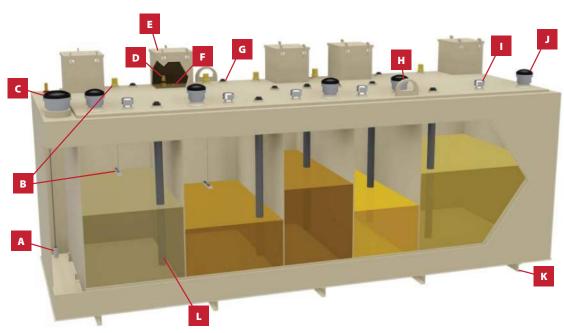
OPTIONS:

- · 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



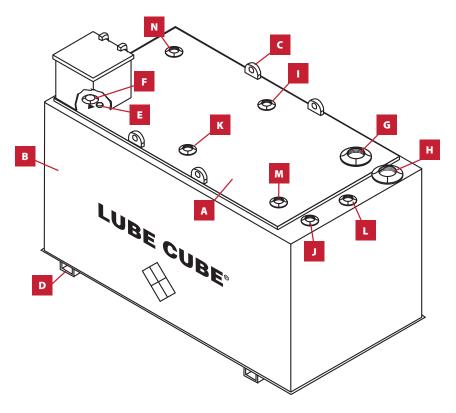
▼ FLOOR SPACE SAVINGS OF CSI TANKS





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″x8′0″x6′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″x8′0″x8′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









FLUID DISTRIBUTION PUMPS NEW





Lincoln Industrial

SKF

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 nonfluid materials

Model	Ratio	Pump	Pump	Air motor	Diam	eter	Min.		Air c	onsumption	n per cy	cle
std. Air		tube style	tube model	model			air s	upply	SCFM	M3/Min.	SCFM	M3/Min.
Motor only					in.	mm	in.	mm	@ 70 psig	@ 4.8 bar	@ 100 psig	@ 6.8 bar
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
												l e

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



REELS NEW



ITEM NAME/NUMBER





SEE FOLLOWING PAGES

REELS



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

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

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

Grease

			Delivery Hose	Delivery Hose			Connecting Hose(1)		
Product #	Color	Max Pressure	Specification	Part #	Outlet	Inlet	Part #	Weight	
8078-A	Maroon	6,400 psi <i>(440 bar)</i>	1/4" ID x 30 ft	317874-30	1/4" NPTF(f)	3/8" NPTF(m)	317876-2	56 lb <i>(25 kg)</i>	
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 <i>(27 kg)</i>	
8078-T	Maroon	6,400 psi <i>(440 bar)</i>	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 <i>(27 kg)</i>	
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 <i>(27 kg)</i>	
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 <i>(27 kg)</i>	

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

| Alemite Product Catalog www.alemite.com



HEAVY DUTY REELS

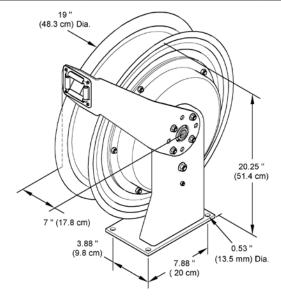
Air/Water

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

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

Bare Reels

Product #	Color	Usage	Max Pressure	Reel Inlet	Reel Outlet	Weight
7135-A	Blue	0il	1,500 psi <i>(103 bar)</i>	1/2" NPTF(f)	1/2" NPTF(f) Swivel	50 lb (23 kg)
7135-B	Black	0il	1,500 psi <i>(103 bar)</i>	1/2" NPTF(f)	1/2" NPTF(f) Swivel	50 lb (23 kg)
7135-C	White	0il	1,500 psi <i>(103 bar)</i>	1/2" NPTF(f)	1/2" NPTF(f) Swivel	50 lb (23 kg)
7335-В	Maroon	0il	1,500 psi <i>(103 bar)</i>	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 <i>(20 bar)</i>	1/2" NPTF(f)	3/8" NPTF(f)	50 lb (23 kg)
7136-B	Black	Air/Water	300 psi <i>(20 bar)</i>	1/2" NPTF(f)	3/8" NPTF(f)	50 lb (23 kg)
7136-C	White	Air/Water	300 psi <i>(20 bar)</i>	1/2" NPTF(f)	3/8" NPTF(f)	50 lb (23 kg)
7336-В	Maroon	Air/Water	300 psi <i>(20 bar)</i>	1/2" NPTF(f)	3/8" NPTF(f)	50 lb <i>(23 kg)</i>



 $[\]begin{tabular}{ll} * \triangle \textbf{WARNING} \ California \ Proposition \ 65: Cancer \ and \ reproductive \ harm. \ www.P65Warnings.ca.gov \end{tabular}$



POWER & LIGHT REELS

COB LED Light Reel

Alemite COB LED Light Reels for automotive workspaces combine nextgeneration 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.



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

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.



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 <i>(14 kg)</i>
7261	10 gauge	5 ft (1.5 m)	50 ft (15 m)	115 V	35 amp	RV Plug	47 lb <i>(21 kg)</i>
7262-A	12 gauge	5 ft (1.5 m)	40 ft (12 m)	115 V	15 amp	Triple	15 lb <i>(7 kg)</i>

CONTROL VALVES AND METERS



METERS

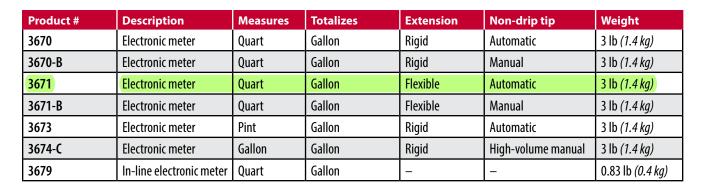
Alemite Electronic and Mechanical Meters provide consistent, reliable performance for dispensing applications.

Electronic

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

FEATURES:

- Electronic digital readout (±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
- 1/2" NPT(f) Inlet
- Fluid compatibility: oil, gear oil, transmission fluid, antifreeze antifreeze concentrate only, not compatible with water/antifreeze mixture





Alemite Product Catalog www.alemite.com

CONTROL VALVES AND METERS



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 #	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 ¼" (6 mm).



Alemite Product Catalog www.alemite.com





SUMP HIGH LEVEL ALARM NEW

ITEM NAME/NUMBER

WARRICK CONDUCTIVITY CONTROLS

Part Number: TA731A0

WARRICK TA-730 ALARM PANEL

PRICE

\$784.00

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

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
AuxillaryContacts	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



TA-730 SERIES

Intrinsically MONITORING PANEL Safe

APPLICATIONS



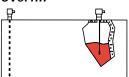
Non-Hazardous Area

Seal Off Fitting

Hazardous Area

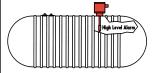
Aboveground Fuel Storage Tanks

Leak Detection, Overfill



Underground Fuel Storage Tanks

High Level Alarm, Leak Detection, Piping Sumps



Liquid Level Alarms High/Low Floats





arrick 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

- A Power and auxiliary contact wiring
- B Adjustable sound level from 77-97 dB via moveable horn shutter
- Red LED indicates current fault condition
- 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)
- Test button allows alarm activation and system testing
- G Acknowledge button allows direct alarm silencing
- (H) Intrinsically safe sensor wiring
- 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 polycarbonate (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 associated apparatus, intrinsically safe
- Conduit Connections: sensor 3/4" NPT, PVC material; power 1/2" NPT, metal
- Auxiliary Contact: SPDT, 10A @ 120/240 VAC, resistive

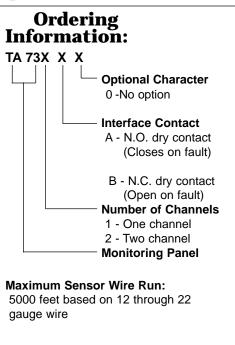
TA-731 Operation:

he 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:

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

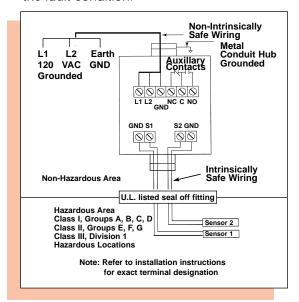


Caution: The TA-730 must be located in a non-hazardous area.

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 cutoff 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.



Authorized Distributor:	

Warrick Controls Inc. • One Cowles Rd. • Plainville, CT 06062-1198 • Telephone: (860) 793-4579 • Fax: (860) 793-4580



STEEL WORK BENCH W/ CASTERS





Heavy Welding Tables

Price Ea.: \$2,600.00

WEBSITE



AS OF MARCH 2024



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

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.



HYDRAULIC HOSE REEL RACK



ITEM NAME/NUMBER

Gates Hose Reel Rack

Gates #78186

\$758.11



AS OF APRIL 2024

IMAGES



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



ITEM NAME/NUMBER

GATES CORPORATION 78190 - Storage Cabinet - Hydraulic Coupling Cabinet and Parts - 4 Sliding Shelves

PRICE

\$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



OXYGEN/ACETYLENE CAGE NEW

MF-12

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 (1) \$198.61 / each



AS OF APRIL 2024

IMAGES



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	Site. Dept.	
Shelf Capacity	2000 lb.		