RICHARDSON Database for Sage THE RICHARDSON NAME THAT YOU HAVE TRUSTED FOR YOUR COST DATA NEEDS FOR OVER 59 YEARS WE HAVE A NEWLY UPDATED REVISED PRODUCT FOR 2019!!!

Data For Construction Estimating

A comprehensive database of construction material and labor pricing for the US, Canada and International Markets.





PLEASE CONTACT US FOR A WEBEX – 'WALK THROUGH' OF THE NEWLY RELEASED RICHARDSON PROCESS PLANT CONSTRUCTION ESTIMATING LINE ITEM DATABASE DESIGNED FOR PROCESS MINDED ESTIMATORS AND ENGINEERS

Our Comprehensive database is required for accurate computerized estimating. Obtaining and maintaining a reliable database of material and equipment costs, labor productivity and subcontractor pricing is every Estimators ongoing challenge.

We at Cost Data On Line, Inc is accepts this challenge – and meets it – offering again

Richardson's Process Plant Construction Estimating Database - 193,000 Approx Line items

With your 365 day subscription to our Richardson's Process Plant Construction Estimating Database you will receive with your subscription access to our Process Plant Estimating Manuals On Line.

Benefits:

- Save time Estimate immediately without creating a database
- Improve Accuracy Complete backup provided for all line items
- Increase Confidence Richardson Data used world wide for over 45 years
- Regular Updates Material Prices and man-hours updated annually

Database Licensee Information, contact Tony Colburn at tonyc@eosgroup.com or call Tony at 1-602.429.0181

Here is a complete list of the data that is contained in our Database:

Account Sections Included:

GENERAL NOTES AND INSTRUCTIONS

Square Foot and Parametric Estimating

Cranes and Hoisting Equipment

Rental Equipment Scaffolding and Shoring

Testing and Quality Assurance

SITEWORK

Clearing and Grubbing

Topsoil Stripping, Stock Piling and Replacing

Site Grading, Filling and Compacting

Site Grading

Site Grading, Filling and Compacting

Elevated Fills for Buildings Dewatering and Shoring

Structural Excavation - Case 580 Loader-Backhoe

Structural Excavation and Backfill by Hand Structural Excavation - Cat 225 Backhoe Structural Excavation - Cat 235 Backhoe

Structural Excavation - Cleveland 7036 Trencher Structural Excavation Using Cat Wheel Loaders

Structural Excavation - Rock

Loading Loose Materials - Cat Wheel Loaders

Structural Backfill and Compaction Trench Excavation - Case 30+4 Trencher Dump Truck Hauling and Dump Charges

Slope Protection and Brow Ditches Using Air Blown Mortar

Wood Piling Steel "H" Piling Precast Concrete Piling

Drilled Foundations

Polyvinyl Chloride Gravity Sewer Pipe

Cast Iron Soil Pipe Concrete Drainage Pipe Corrugated Metal Pipe Vitrified Clay Pipe

Concrete Drainage Structures
Polyvinyl Chloride Pressure Pipe

High Density Polyethylene Pressure Pipe (HDPE)

Ductile Iron Pressure Pipe

A.W.W.A. Waterworks Valves and Hydrants

Flexible Transition Couplings

Cement Mortar Lining of Pipelines in Place Asphalt Concrete Paving and Base Materials

Portland Cement Concrete Paving

Curbs, Curbs and Gutters, and Cross Gutters Portland Cement Concrete Walks, Steps and Pads

Chain Link Fencing

Landscaping Insulating Fills on Floor and Roof Decks

Concrete Stairways Railroad Sidings

Flagpoles, Pipe Bumpers and Metal Guard Railing

Dike Construction

Gabions and Reno Mattresses

High Density Polyethylene (HDPE) Liners

Demolition and Removals

CONCRETE

Continuous Wall Footings and Grade Beams

Continuous Footings with Integral Stem Walls

Square Footings Slabs on Grade

Structural Mats on Grade

Round Columns and Piers Using Regular Sonoco Sonotubes Round Columns and Piers Using Light Sonoco Sonotubes

Square Columns and Piers Concrete Walls - Gang Formed

Curved Concrete Walls - Gang Formed Concrete Walls - Single Waler System

Curved Concrete Walls - Single Waler System

Tilt-Up Concrete Walls

Ganged Formed Concrete Walls

One and Two Way Solid Slabs and Beams

One Way Pan-Joists

Two Way Pan-Joists Waffle Slabs

Flat Plates and Flat Slabs

One and Two Way Solid Slabs and Beams

One Way Pan-Joist

Two Way Pan-Joist Waffle Slabs

Flat Plates and Flat Slabs Domed Concrete Tank Covers

Concrete Fills on Floor and Roof Decks Post-Tensioned Prestressed Concrete

Plant Produced Pretensioned

Prestressed Concrete
Pile Caps and Tie Beams

Grouting Structural Steel Column Base Plates

Process Equipment Foundations Miscellaneous Concrete Items

Concrete Embossing

MASONRY

Concrete Block Masonry Lightweight Concrete Block

Screen Blocks

Surface Bonded Concrete Blocks

Accessory Materials
Split Face Concrete Blocks
Fluted Concrete Blocks
Slump Concrete Blocks
Glazed Concrete Blocks

"Through The Wall" Hollow Clay Units

Glass Block Partitions Brick Masonry Units Accessory Materials

Concrete Block Masonry - IMSI® Insulated Block Wall

Natural Stone Masonry

Split Ashlar Round Rubble Indiana Limestone Marble and Granite Acid Brick Tile Floors Brick floors And Stairways Hollow Unit Masonry Walls Solid Unit Masonry Walls

Veneer and Composite Brick-Block Walls -

Miscellaneous Masonry Items

STEEL AND METAL

Round and Square Structural Steel Tube Columns

Ledger Angles

Structural Steel, Buildings and Structures

Open Web Steel Joists

Steel Trusses

Tapered Steel Girders Steel Floor and Roof Decks

Miscellaneous Metals for Buildings

Miscellaneous Steel Items Gratings and Stair Treads\

Process Plant Platforms, Ladders and Handrails

Pipe Supports and Pipe Racks **Overhead Condenser Supports** Man-hours for Carbon Steel Welding Pre-Engineered Metal Buildings Modular Relocatable Structures

CARPENTRY

Sills and Ledgers

Interior Wood Partitions

Wood Wall and Partition Framing

Columns and Posts Floor or Flat Roof Joists **Built Up Girders and Headers** Glued Laminated Beams

Gang Nail Trusses and Pitched Roof Framing

Board Sheathing on Pitched Roofs

Plywood Sheathing

Particle Board and Hardboard Underlayment

Plank Flooring

Laminated Wood Floors on Edge

Roof Decking

Sidings, Wood, Plywood, Hardboard

Solid Wood Paneling Hardboard Wallboards **Custom Prefinished Paneling**

Wood Trim

Prefinished Custom Cabinets and Countertops

MOISTUR PROTECTION

Building Paper and Vapor Barrier Moisture Barriers and Pargeting **Building Paper and Vapor Barrier** Moisture Barriers and Pargeting

Building Insulation Built-Up Roofing

Roll, Shingle, Shake, Tile and Elastomeric Roofing

Single Ply Roofing

Preformed Metal Roofing and Siding Sheet Metal Roofing on Pitched Roofs

Flashing and Sheet Metal

Roof Hatches and Heat & Smoke Vents

Skylights

Caulks and Sealants Firestop Compounds

DOORS & WINDOWS

Steel Access Doors Steel Door Frames **Wood Door Frames** **Hollow Metal Doors**

Wood Doors

Fiberglass Faced Entrance Doors

Entrance Doors

Laminated Plastic Clad Doors

Builders Hardware Prehung Doors Wood Folding Doors

Folding and Bypass Closet Doors **Aluminum Framed Sliding Glass Doors Aluminum Framed Mirrored Closet Doors**

Sliding Wood Framed Doors

Roll-Up and Sectional Overhead Doors

Garage Doors

Wood Window Units Sliding Aluminum Windows

Fixed Glazing

Aluminum Framed Entrance Doors and Storefronts Aluminum and Steel Window Walls and Curtain Walls

FINISHES

Non-Bearing Steel Studs and Suspended Furring for Gypsum

Wallboard (Drywall)

Load-Bearing Steel Stud Walls Gypsum Wallboard (Drywall)

Metal Furring, Lath and Plaster Interior and Exterior

Fireproofing of Structural Steel Dryvit® Outsulation® System Acoustical and Integrated Ceiling Ceramic Tile, Quarry Tile and Terrazzo

Hardwood Floors

Seamless Floors and Wainscoting

Resilient Flooring Carpet Floor Covering

Painting

Preparation and Protective Coatings for Metal Surfaces Vacuum Blasting Surface Preparation for Metal Surfaces

Wall Coverings

Wall Systems - RAPIDS

SPECIALITIES

Gypsum Partitions and Shaft Walls

Laminated Partitions

Toilet Partitions and Toilet Room Accessories

Wire Mesh Partitions

Vinyl Fabric and Vinyl-Clad Folding Partitions

Portable Partitions Operable Walls **Access Floor Systems**

Metal Lockers

Linen/Trash Chutes and Compactors

Air Curtains

Hydraulic Dock Levelers, Lifts, Shelters and Bumpers

Dumbwaiters and Elevators Moving Walkways and Escalators

MECHANICAL

Water Chillers

Cooling Towers for Water Chillers

Pumps for Water Chillers

Heating and Cooling Units - Roof Mounted And Through The

Wall Type

Unit Heaters and Forced Air Furnace/Cooling Units Boilers, Circulating Booster Pumps and Convectors

Tanks, Tank Heaters and Instantaneous Heaters

Air Handling Units

Ductwork and Accessories

Insulation for HVAC Equipment and Ductwork

Air Conditioning Control Systems

Air Balancing Water Closets Lavatories Urinals

Bathtubs

Integral Bathtub/Shower and Wall Surrounds Kitchen Sinks and Garbage Disposal Units

Service Sinks Wash Sinks Wash Fountains

Emergency Showers and Eye-Wash Fountains

Drinking Water Fountains

Floor Drains Floor Sinks

Interceptors, Separators and Backwater Valves

Water Heaters

Vent Through Roof and Clean Outs

Plumbing Fixtures - Rapid Estimating System

Roof Drains and Rain Leaders Copper Piping Systems Red Brass Piping Systems

Cast Iron Drain, Waste and Vent Piping Systems

A-120 Steel Piping Systems

Victaulic® Pressfit® Carbon Steel Piping

Victaulic® Pressfit® Type 316 Stainless Steel Piping System

Grooved End A-106 Carbon Steel Piping

CPVC Plastic Piping Systems

Polypropylene Drain, Waste and Vent Piping Systems

PVC Drain, Waste and Vent Piping Systems ABS Drain, Waste and Vent Piping Systems Flanged Cast Iron Cement Lined Piping Systems

A-106 Carbon Steel Piping Systems

A-53 Carbon Steel Piping Systems - Shop Fab A-53 Carbon Steel Piping Systems - Field Fab Carbon Steel Piping Systems, Large Diameter - Field

Fabricated

Aluminum Piping Systems
Stainless Steel Piping Systems
Flanged Plastic Lined Piping Systems
PVDF (Kynar) ™ Plastic Piping Systems
Fiberglass Reinforced Piping Systems (RTRP)

High Density Polyethylene (HDPE) Compressed Air Service

Piping

Self-Contained Regulating Valves and Back Flow Preventers

Control Valves

Liquid Level and Pressure Gauges Tank Level Gauging Devices Measurement Elements Safety Relief Valves Flow Instruments, Pneumatic and Electronic, Local Mounted Liquid Level Instruments, Pneumatic and Electronic, Local

Mounted

Pressure Instruments, Pneumatic and Electronic, Local

Mounted

Temperature Instruments, Pneumatic and Electronic, Local

Mounted

Distributed Control Systems (DCS)

Honeywell Instruments

Instrument Control Panels and Instruments

Control Panel Installation Instrument Piping

Piping Assemblies for Liquid Level Instruments

Stainless Steel Tubing Systems

Expansion Joints and Flexible Pump Connectors

Steam Tracing

Steam Traps and Strainers

Bolts and Gaskets Sample Coolers

Hot Taps

X-Ray of Buttwelds

Cement Mortar Lining and Coating of Carbon Steel Pipe

Pipe Hangers and Supports

Fire Hose Racks, Fire Extinguishers and Accessories

Insulation on Hot and Cold Service Piping

Insulation on Cold Process Piping and Process Equipment Insulation on Hot Process Piping and Process Equipment

FOAMGLAS Insulation

KOOLPHEN K Phenolic Foam Insulation

Steam Trap Assemblies

Air Conditioning, Heating And Ventilating Systems - Installed

Costs

Plumbing Fixtures - Total Installed Costs Fire Protection Systems - Total Installed Costs

ELECTRICAL

Galvanized Rigid Steel Conduit Systems

PVC Coated Galvanized Rigid Steel Conduit Systems

Rigid Aluminum Conduit Systems

Electrical Metallic Tubing (EMT) Thinwall Conduit Systems

PVC Plastic Rigid Conduit Systems

Underground Plastic Utility Duct Systems

Sealtite Conduit Systems
Cable Tray and Accessories
Wireway Gutter and Accessories
Steel Underfloor Duct Systems

Service Entrance Caps, Ells, Capped Ells, and Ground Rods Hazardous Area Elbows, Pulling Ells, Unions, Flexible

Couplings

Junction Boxes, Sealing Fittings, Drains and Breathers

Conduit Hangers and Supports

Wire and Cable

Armored/Metal Clad Cable

Armored Flexible Cable (BX) and Terminations

Electronic Instrument Wire and Cable Armored Electronic Instrument Cable Thermocouple Extension Wire and Cable

Armored Thermocouple Cable

Non-Metallic Sheathed Cable (ROMEX) and Terminations

Enclosures and Junction Boxes Feeder Bus Duct and Accessories Plug-In Bus Duct and Accessories Trolley Duct and Accessories Metal Clad Switchgear

Service Entrance and Distribution Switchboards

Transformers

Circuit Breaker Distribution Panelboards

Panelboards/Loadcenters/Sub-Panels in Hazardous Areas Panelboards/Loadcenters/Sub-Panels - General Purpose

Safety Switches Circuit Breakers Motor Starters Meter Panels

Motor Control Centers

Control Stations (Pushbuttons and Pilot Lights)

Terminal Blocks

Ground Fault Protection System

Convenience Outlets and Toggle Switches

Lighting Fixtures General Purpose

Lighting Fixtures Vaportight and Explosion Proof

Outdoor Floodlights and Floodlight Poles Audible Signal Devices Explosion Proof

Grounding Systems

Power Line Poles and Power Line Transmission Wire

Electric Heat Tracing Systems Circuit Feeders - RAPIDS

Branch Circuits with Convenience Outlets - RAPIDS Branch Circuits with Toggle Switches - RAPIDS

Branch Circuits for Lighting - RAPIDS 480 Volt Motor Feeders - RAPIDS

Electrical Systems for HVAC - Total Installed Costs Electrical Wiring and Fixtures - Total Installed Costs

PROCESS EQUIPMENT

Radiant Heat Cable - Total Installed Costs

Troughed Belt Conveyors

Bucket Elevators Screw Conveyors Tube-Flo Conveyors Multi-Flo Conveyors Twin Rotor Impactors Ring-Type Granulators Gravity Impact Crushers

Hammermills

Reversible Impactors Single Roll Crushers

Single Roll Frozen Coal Crackers

Bin Activators Vibrating Feeders Pressure Sifters Rotary Screens

Turbo-Screen Classifiers Vibrating Packers

Industrial Fans

Positive Displacement Air Blowers

Gas Scrubbers Cyclone Collectors Centrifugal Scrubbers Filter Cartridge Dust Collectors
Bag House Dust Collectors

Feeder Valves
Portable Mixers
Gearmotor Mixers

High Speed Dispersion Mixers

Chemical Mixer/Feeder Packaged Units

Liquid Polymer Blender
Pipeline Homogenizer-Mixers
Batch Homogenizer-Mixers
Rotary Flask Agitators
Liquid Clarifiers
Vibrating Separators
Lab Separators
Rubber Lined Filters
Vane-Type Separators
White Water Filters

Drum Dryers

Rotary Vacuum Dryers

Conical Rotating Vacuum Dryers

Cooling Drum Flakers Packaged Boilers

Deaerating Feedwater Heaters

Steel Stacks for Boilers Tank Heating Coils

Fired Tank Immersion Heaters

Fuel Oil Heaters

Hairpin Type Heat Exchangers Heat Exchangers for Heating Water TEMA R Shell and Tube Heat Exchangers

Vertical Tube Surface Condensers and Receivers

Acid Coolers

Process Plant Cooling Towers

Inert Gas Generators

Reciprocating Air Compressors
Rotary Screw Air Compressors
Breathable Air Compressors
Centrifugal Air Compressors
Integral Gas Engine Compressors
Air Receivers/Gas Pulsation Dampeners

Refrigerated Air Dryers Chiller Air Dryers

Air Dryers, Desiccant Type, 2 To 50 SCFM Air Dryers, Desiccant Type, 50 to 1600 SCFM Air Dryers, Desiccant Type, 1900 To 9600 SCFM

Air Dryer Prefilters, Afterfilters and Automatic Drain Valves

Centrifugal Pumps, Single Stage, Vertical Split Case Centrifugal Pumps, Single Stage, Horizontal Split Case

Centrifugal Pumps, Single Stage, ANSI Centrifugal Pumps, Single Stage, API 610

Centrifugal Pumps, Two Stage, Horizontal Split Case Centrifugal Pumps, Multi-Stage, Radially Split Case

Centrifugal Pumps, Single Stage, In-Line

Centrifugal Pumps, Single Stage, In-Line, API 610 Turbine Pumps, Vertical, Single and Multi-Stage

Sump Pumps Plunger Pumps

Sewage Pumps, Horizontal

Sewage Pumps, Vertical Chemical Metering Pumps

Surge Suppressors High Vacuum Pumps

Two-Stage Mechanical Vacuum Pumps

Multi-Stage Mechanical Booster Vacuum Pumps

Vacuum Booster Pumps Hot Vacuum Pumps

Rotary Vane Vacuum Pumps Vacuum Pump Accessories

Ejectors

Instructions for Using Pressure Vessel Fabrication Data ASME Section VIII Pressure Vessel Shells & SE Heads

Wear Plates & Saddles for Horizontal Vessels

Angle Legs for Vertical Vessels Skirts for Vertical Vessels Coupling Nozzles

Buttweld Flange Type Nozzles Long Weld Neck Type Nozzles

Nozzle Extensions and Internal Piping

Drip Legs

Baffles, Draw-Off Boxes, Vortex Breakers and Ladder Rungs

Tray Rings for Removable Trays
Shop Installation of Trays in Columns
Shop Installation of Demisting Pads
Insulation Supports and Vacuum Stiffeners

Ladder, Platform and Pipe Support Clips, Lifting Lugs and

Davits Stress Relief

Shop Costs, Engineering and Administrative Costs

Removable Type Trays Demisting Pads ASME Spheres Glass Lined Reactors

API Cone Roof Storage Tanks Installation of Pressure Vessels Propane Storage Tanks, ASME 250 PSI

Gravimetric Feeders Volumetric Feeders

Wing-Type and Conveyor-Type Feeders Pre-Wetting Dry Chemical Feeders

Vibrating Screens

Full-Flow Rectangular Separator

Centrifugal Sifter

API Floating Roof Storage Tanks

Concrete Silos

Hot Process Water Softener Systems

Gravity Filtration Units

High Speed Mechanical Surface Aerators

Floating Spray Coolers

Comminutors

Wastewater Stationary Screening Wastewater Clarifier/Interceptors

Clarifier-Reactivators Wastewater Chlorinators

High Capacity Chlorinators and Sulfonators

API Type Oil/Water Separators

Oil/Water Coalesce Coalescing Filters Oil Skimmers

Sludge Level Control Systems Sludge Density Controllers Nitric Oxide Analyzers Hydrocarbon Analyzers Automatic Liquid Samplers

Infrared Analyzers

Density Measuring Systems

Electric Hoists

Overhead Traveling Bridge Cranes

Motor Truck Scales Railroad Track Scales Tank and Hopper Scales

Self Contained Low Profile Platform Scales

Bench and Portable Scales

Generator Sets
Small Motors
Medium Size Motors
Large AC Motors
Gearing Products
Horizontal Gearmotors

Concentric Shaft Speed Reducers

Flexible Couplings Steam Turbines Shaft Alignment

Freight Rates for Process Equipment

On Line Access of the PPCES PDF Version:

With each seat of the Richardson Database Product you receive access to the Richardson Process Plant Cost Estimating Standards (PPCES) PDF Version.

Union Wages

The CostDataOnLine.com Union Labor presents data detailing "Hourly Wage Rates and Fringe Benefits" for journey level construction craft workers. Union Labor Wage Rates are currently updated quarterly and ultimately will be updated monthly.

Union Wage Rates and Fringe Benefits are based on the best data available at time of each release. Where possible, the Local Union is used as the source in that city, as well as the expiration dates for the rate. Fringe Benefits include all monies paid by the contractor specifically required by contract. These include, but are not limited to, Health and Welfare, Pensions, Vacations, Apprentice Training, and in certain instances Promotional Funds and Unallocated Funds. These monies are listed in the Fringes column.

If a "P" is posted behind the expiration date (12/31/xxP) it indicates that the Union Wages were analyzed and a "projected" Wage and Fringes are posted. One of the major reasons for this maybe a new union contract could be in negotiations and not completed the date of posting.

Worker's compensation premiums are not included in this data. These rates are experience-based and can vary dramatically; so we will not publish this data.

USA Cities that we report Union:

Anchorage, AK Fairbanks, AK Birmingham, AL Huntsville, AL Mobile, AL Montgomery, AL Little Rock, AR Phoenix, AZ Fremont, CA Fresno, CA Long Beach, CA Los Angeles, CA Oakland, CA Riverside, CA Sacramento, CA San Diego, CA San Francisco, CA Santa Ana, CA Denver, CO Hartford, CT New Haven, CT Stamford, CT Washington, DC Wilmington, DE Jacksonville, FL Miami, FL St. Petersburg, FL Tampa, FL Atlanta, GA Savannah, GA Honolulu, HI Des Moines, IA Boise, ID Chicago, IL Peoria, IL Rock Island, IL

Rockford, IL Evansville, IN Hammond, IN Indianapolis, IN South Bend, IN Topeka, KS Wichita, KS Louisville, KY New Orleans, LA Shreveport, LA Boston, MA New Bedford, MA Springfield, MA Worcester, MA

Baltimore, MD Portland, ME Detroit, MI Flint, MI Grand Rapids, MI Lansing, MI Duluth, MN Minneapolis, MN St. Paul, MN Kansas City, MO St. Louis, MO Jackson, MS Billings, MT Charlotte, NC Raleigh, NC Fargo, ND Omaha, NE Manchester, NH Newark, NJ Trenton, NJ Albuquerque, NM Santa Fe, NM Las Vegas, NV Albany, NY Buffalo, NY New York, NY Rochester, NY Schenectady, NY Syracuse, NY Akron, OH Cincinnati, OH Cleveland, OH Columbus, OH Dayton, OH Toledo, OH

Tulsa, OK
Portland, OR
Erie, PA
Philadelphia, PA
Pittsburgh, PA
Reading, PA
Scranton, PA
York, PA

Youngstown, OH

Oklahoma City, OK

Cayey, PR
Providence, RI
Columbia, SC
Spartanburg, SC
Sioux Falls, SD
Chattanooga, TN
Knoxville, TN
Memphis, TN
Nashville, TN
Corpus Christi, TX
Dallas, TX
El Paso, TX
Fort Worth, TX
Houston, TX

Lubbock, TX
San Antonio, TX
Salt Lake City, UT
Norfolk, VA
Richmond, VA
Burlington, VT
Seattle, WA
Spokane, WA
Green Bay, WI
Madison, WI
Milwaukee, WI
Charleston, WV
Cheyenne, WY

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