

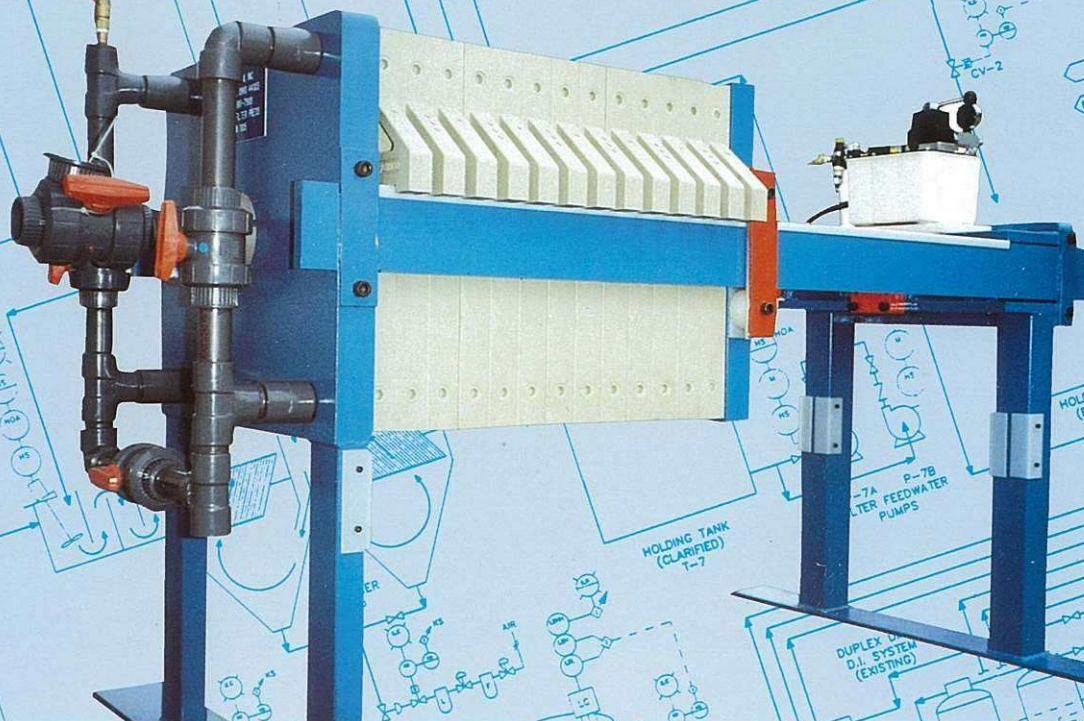


KAD INDUSTRIAL SERVICES

MET-CHEM
INC.®

Process Equipment for Pollution Control and Filtration

Since 1956



EXCELLENT QUALITY • LOW PRICES • HEAVY DUTY • FAST DELIVERY

Met-Chem Filter Presses feature heavy duty steel construction with polypro gasketed plates. Presses can be manufactured with manual or automatic closures, but always with a hydraulic cylinder for sure, high pressure closing. Met-Chem's filter presses are always expandable for larger future capacity.

STANDARD FEATURES:

- Air Driven Hydraulic Closing Pump with Pressure Gauge on Automatic Units
- 2 Stage Hand Pump on Manual Units
- Heavy Duty Hydraulic Cylinder for Opening and Closing of Press
- Polypro Gasketed Recessed Plates for Leak Free Operation
- Air Blow Down Manifold Piping for Air Drying Filter Cakes
- Air Line Filter, Oiler, Regulator, and Gauge on Automatic Units

OPTIONAL FEATURES:

- Sludge Dump Carts for Sludge Collecting and Dumping
- Cat-Walk Platform with Raised Legs for Disposal into Drums or Our Sludge Dryer
- Semi Automatic or Automatic Plate Shifter for Ease of Cleaning
- Distance Piece for Future Expansion
- Leg Mounted Control Panel
- Diaphragm Pump for Solids Feed to the Filter Press
- Pump Control System to Regulate and Automatically Adjust Pump Feed to Filter Press



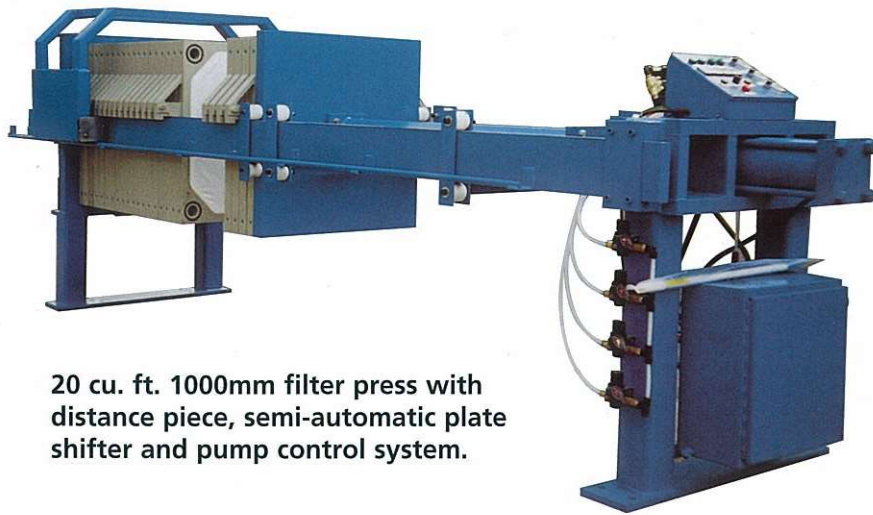
5 cubic foot 630mm filter press with automatic closure. Plates are polypro with gaskets for dry operation.

OUR FILTER PRESSES HAVE BEEN USED ON:

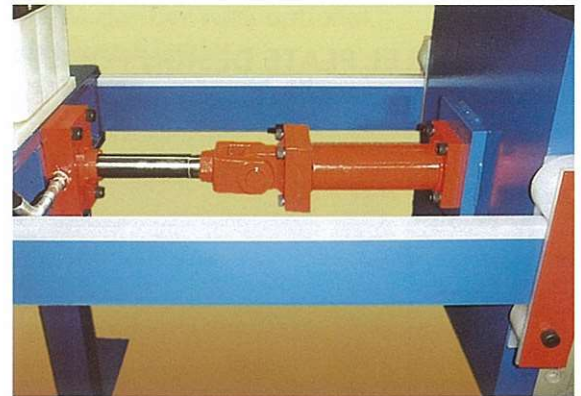
- Dewatering Sludges from Industry
- Reclaiming Precious Metals
- Processing of Pharmaceuticals
- Product Filtration
- Dewatering Hazardous Wastes
- Process Waste Waters in EPA Approved Treatment Systems



10 cubic foot 800mm filter press with air blow-down manifold piping helps us achieve the driest cake possible. Shown with optional dump cart.



20 cu. ft. 1000mm filter press with distance piece, semi-automatic plate shifter and pump control system.



Distance piece to allow immediate expansion. Shown is 1 cu. ft. expansion piece in a 4 cu. ft. unit. Other sizes available.

FILTER PRESS SPECIFICATIONS

Approximate Capacity in Cubic Feet	Plate Size in MM	Number of Plates	Size in Inches			
			L	x	W	x H
1	470	5	63	X	28	X 43
2	470	11	76	X	28	X 43
3	470	17	89	X	28	X 43
4	470	23	103	X	28	X 42
3	630	10	87	X	36	X 54
4	630	13	94	X	36	X 54
5	630	17	103	X	36	X 54
6	630	20	110	X	36	X 54
8	630	27	126	X	36	X 54
5	800	9	88	X	40	X 58
6	800	12	92	X	40	X 58
8	800	16	103	X	40	X 58
10	800	20	112	X	40	X 58
12	800	24	121	X	40	X 58
15	800	30	135	X	40	X 58
20	800	40	158	X	40	X 58
25	800	50	180	X	40	X 58
30	1000	37	180	X	52	X 68
50	1200	42	210	X	58	X 74
75	1200	62	260	X	58	X 74
100	1500	52	272	X	69	X 84

Clearance underneath filter plates is standard at 25 inches. It can be altered to fit special applications. Request drawings for exact dimensions.



1 cu. ft. 470mm filter press with manual closure. Unit closes hydraulically and opens with spring assisted return, pulling follower plate with it.

PARALLEL PLATE DESIGN FOR EFFICIENT SOLIDS SETTLING • COMPACT SIZE WITH LOW HEIGHT • CONE BOTTOM FOR SLUDGE STORAGE • FLOCCULATION TANK WITH MIXER IS STANDARD • EXCELLENT QUALITY • LOW PRICES • FAST DELIVERY

Met-Chem Clarifiers are made of cold rolled steel with coal tar epoxy lining on the inside, with epoxy coating on the exterior. The internal plate pack is set at 60° for optimum settling and is constructed of a epoxy-coated steel shell with plastic plates.

MET-CHEM'S CLARIFIERS OFFER THESE SPECIAL BENEFITS:

- Unit is Completely Assembled
- Low Installation Costs
- Conservative Design 0.2 GPM/Ft² Hydraulic Loading
- Completely Automatic, Gravity In Gravity Out
- Reduced Floor Space
- Large Compartment Flocculation Tanks with Mixer for Extra Retention Time
- Optional Sludge Blow Down System
- Meets EPA Discharge Limits for Metal Finishing Wastes



60 GPM clarifier with flocculation tank and sludge cone.

CLARIFIER SPECIFICATIONS

GPM	No. of Packs	No. of Cones	Projected Settling Area	Weight in Lbs.		Dimensions		
				Operating	Dry	L	x W	x H
2	1	1	13	3000	1200	4'	3'	6'
10	1	1	61	10,500	3,800	5'	5'	8'
15	1	1	89	12,000	4,200	6'	6'	9'
30	1	1	171	14,000	4,700	6'	7'	10'
60	2	1	342	38,000	7,500	8'	11'	10'
90	2	1	520	53,000	10,500	9'	11'	12'
120	4	2	685	81,300	15,000	14'	12'	12'
180	4	2	1041	110,000	18,300	18'	12'	12'
240	8	2	1388	125,000	15,500	24'	10'	12'



120 GPM clarifier with double sludge cones.

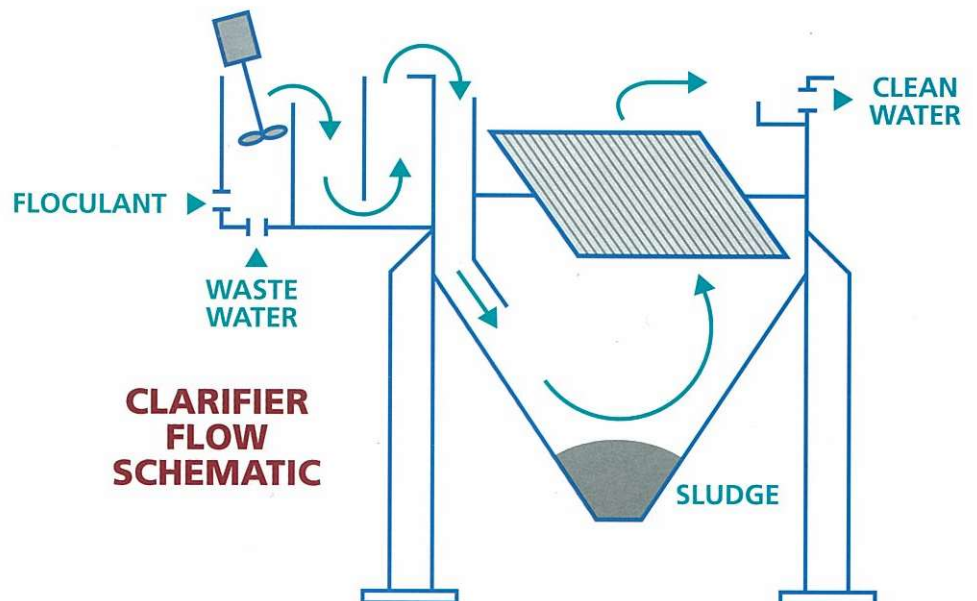
30 GPM clarifier with optional catwalk and ladder.



The Met-Chem clarifier uses the time proven concept of inclined plate clarification. This type of clarifier uses gravity in conjunction with the projected settling area of the 60° angle parallel plates to settle solids from the pre-treated liquid flow. This treated liquid flows first to the flocculation tank where polymer is added to promote floc growth, then up through the plate pack(s) while the solids settle out to the bottom sludge cones. The clean water flows out through our special laundering troughs to plant discharge or for polishing for water reuse. The solids are intermittently taken from the bottom cone to a filter press for further dewatering.



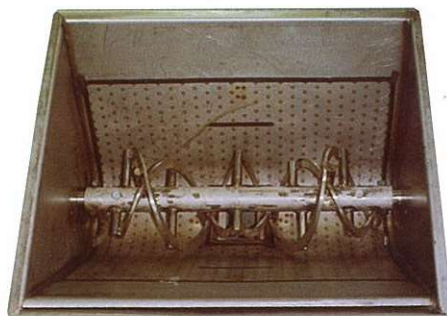
The heart of the clarifier is the parallel plate pack.



Met-Chem Sludge Dryers are designed for small, medium and large quantity sludge generators. These units can fit under the filter press for direct loading or can be located elsewhere in the plant. The sludge is dried by the heated liner of our unit while it is broken-up and circulated by our spiral blade system. The dryer liner uses indirect heat sources from either steam, electric strips or gas fire. Our preheated airflow system draws the moisture off the top of the internal dryer and out through our wet scrubber system. After 4-6 hours of drying time the reduced sludge is removed by simply opening our discharge panel underneath our units for gravity discharge into a container. A conveyor auger is available as an option to remove the sludge upward if the disposal container is elevated above the dryer.

SLUDGE DRYER BENEFITS

- Uses low cost steam, hot water or gas fire for indirect heat source
- Available with electric heat as an alternative
- 1-6 cubic feet sludge capacities available in our Mini-Series with capacity up to 100 cubic feet in our Maxi Series
- Internal parts are all made of grade 304 stainless steel (316SS is available as an option)
- Simple control panel allows for easy operation and maintenance
- Externally mounted pillow block bearings, to keep bearings out of harms way
- Temperature is controlled for over temperature protection
- Stainless steel wet fume scrubber is available as optional equipment (Grade 304)
- Sludge reduction savings offers an easy pay back on equipment purchase and operating costs
- Unit dimensions can be altered to fit each individual installation
- Up to 4 to 1 reduction of sludge volume can be expected



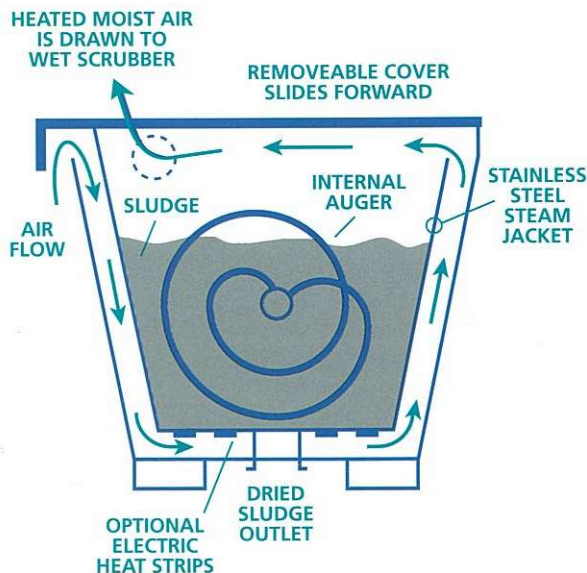
Inside sludge dryer shows auger and stainless steel liner.



6 cu. ft. steam sludge dryer mounted under a 6 cu. ft. filter press, shown mounted onto a drum disposal system.

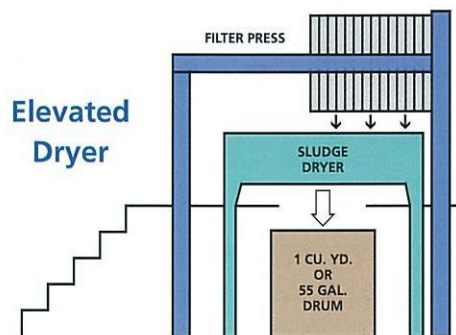
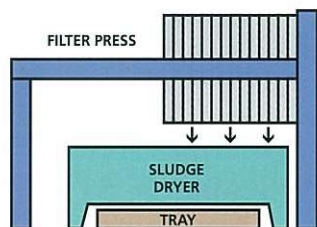
MINI-SERIES SINGLE AUGER
1, 2, 3, 4, 5, 6 Cubic Foot Models

MAXI-SERIES DOUBLE AUGER
6, 8, 10, 12, 15, 20, 25, 30, 40,
50, 60, 75, 100 Cubic Foot Models



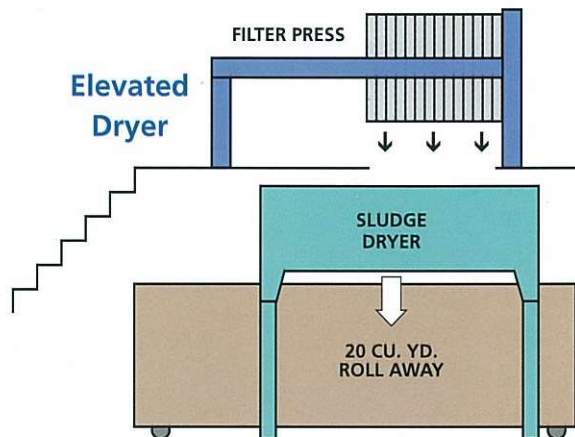
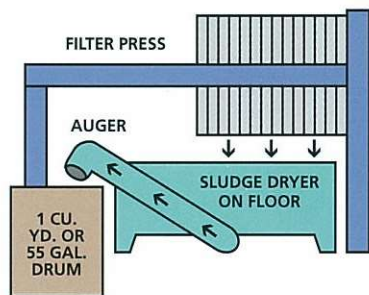
MINI DRYERS

for smaller installations



MAXI DRYERS

for larger installations



SLUDGE DRYER SPECIFICATIONS

Unit dimensions can be altered to fit individual installations

Cubic Feet	Steam Lbs. / Hr.	Electrical KW	Length	Overall Width	Height	Chamber Width
1-MINI	20	5	36"	42"	30"	29"
2-MINI	35	10	46"	42"	30"	29"
3-MINI	55	16	54"	42"	30"	29"
4-MINI	70	22	62"	42"	30"	29"
5-MINI	85	28	70"	42"	30"	29"
6-MINI	105	30	78"	42"	30"	29"
6-MAXI	105	30	85"	55"	32"	36"
8-MAXI	140	38	101"	55"	32"	36"
10-MAXI	160	47	115"	55"	32"	36"
12-MAXI	180	50	131"	55"	32"	36"
15-MAXI	200	58	117"	66"	35"	45"
20-MAXI	240	75	141"	66"	35"	45"
25-MAXI	280	90	143"	70"	39"	49"
30-MAXI	340	105	173"	70"	39"	49"
40-MAXI	450	122	193"	82"	46"	58"
50-MAXI	575	138	237"	82"	46"	58"
60-MAXI	700	210	207"	100"	52"	72"
75-MAXI	850	240	237"	100"	52"	72"
100-MAXI	1150	276	287"	100"	52"	72"

Drying cycle time is estimated at 4-6 hours depending on dryer temperature, capacity and water volume in sludge. Consult factory for dimensions and gas consumption on gas fired dryers.

Waste Water Treatment Systems

**COMPLETE SYSTEMS FROM 5-300 GPM FLOW • SKID MOUNTED PACKAGES OR COMPONENT
INSTALLATION • TURN KEY INSTALLATION SYSTEMS AVAILABLE • SYSTEMS FOR ALL METAL
BEARING WASTE STREAMS • EXCELLENT QUALITY • FAST DELIVERY • LOW PRICE**

Met-Chem has designed, sold and installed many waste water treatment systems over the years. We can build the necessary components to enable you to do your own system work or we can design the whole system to meet your needs. We can engineer the system, produce all the drawings, prepare the EPA paperwork, manufacture the equipment and install it at your request. Our prices are always very competitive because we manufacture all the major components ourself in our Cleveland, Ohio facility.



120 GPM turn key installation on nickel/chrome plating waste.



Custom built control panel for 60 GPM system on zinc phosphate waste.



30 GPM system for cyanide and chrome waste water with end of pipe multi-media and carbon filters for water recycle.

Fabrication & Repair Center

**TANKS – CARBON AND STAINLESS STEEL • TANK LINING – KOROSEAL OR RUBBER
EQUIPMENT REPAIR AND REBUILDING • PUMP REPAIR AND REBUILDING
REFURBISHED USED EQUIPMENT**

At our in-house fabrication center, we can build new tanks, catwalks, platforms and equipment skids as well as rebuild and refurbish used filters, pumps and a wide variety of other process equipment.

Met-Chem's crew of experienced fabricators can handle any project, large or small. This work can be done in our shop or in the field as your needs require. Let us quote on all your process needs from equipment fabrication to repair, rebuilding and installation.

Met-Chem also buys and sells used equipment. Our large inventory can be sold as is or totally reconditioned. Call for a current list or visit our web-site.

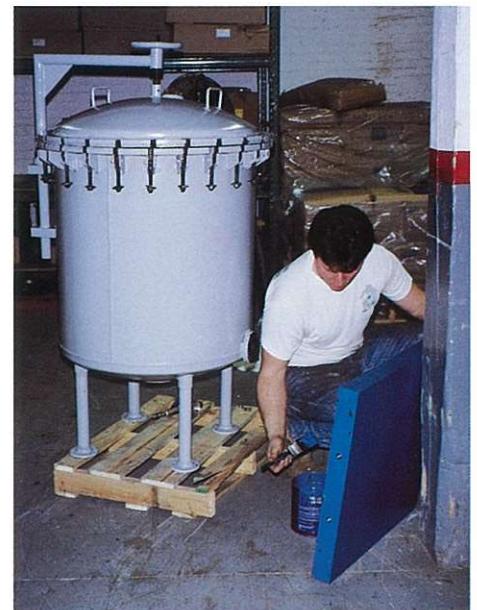


5000 gallon per hour horizontal plate nickel plating filter that was rebuilt by Met-Chem. The rebuild on this particular unit included:

- sandblast of all steel
- rubber lining repair
- new steel skid
- new CPVC piping and valves
- pump and filter rebuild



New steel dump carts with wheels being fabricated.



After the equipment is rebuilt and repaired it is always painted with epoxy coatings to protect the exterior.

- REPLACEMENT FILTER PRESS CLOTHS
- FILTER BAGS
- ANODE BAGS
- ROTARY VACUUM DRUM FILTER COVERS
- FILTER CIRCLES AND DISCS
- ROLL MEDIA AND CLOTH

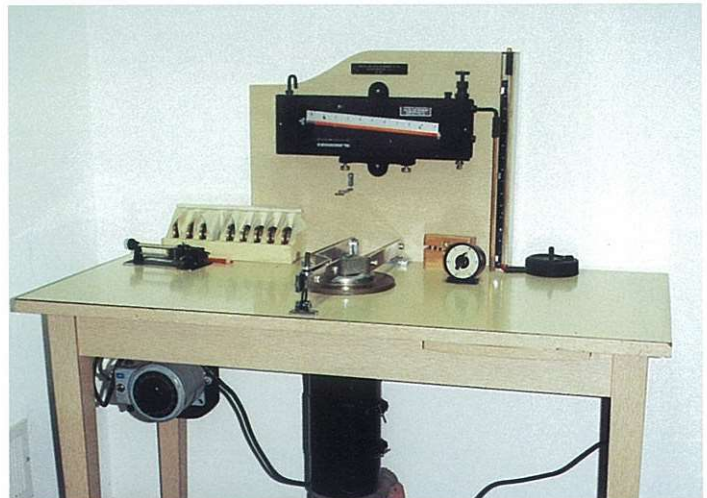


Replacement filter press cloth installed in a plate.

To further service our many process customers, Met-Chem has a large sewing factory on our premises to make any type filter bag, cloth or media, to your specifications. Applications include liquid, air or gas. Our deliveries are always within a few days since we stock many of the textiles required for these applications. We are also very proud of our testing lab that helps to determine the right fabric for your specific requirements.



Many of our fabricated products are displayed including filter discs, bags and roll media.



One of our lab machines used to test fabric permeability with air flow.



SMALL ORDER SEWING AREA

To allow us to ship smaller orders in 1 day, we keep part of our plant available to handle orders from start to finish. This includes laying out the fabric, cutting the bags from patterns, sewing and shipping the finished product. By having trained people in this area to "do the whole job", we can avoid the production line requirement our large orders face. This enables us to make and ship all of our smaller to medium size bag orders the day they are received.



**CONTACT US FOR A
QUOTATION AND SAMPLE FOR
ANY AND ALL OF YOUR
FILTRATION NEEDS INCLUDING
BAGS, PAPER, DISCS,
CARTRIDGES AND ROLL GOODS.**



INVENTORY

All of the fabrics we use are manufactured to our specifications by the many textile mills we contract with. We keep a large inventory of materials on hand so we can respond to your needs quickly.



Our largest cutting table allows us to fabricate large quantities of filter bags in a short time.

2 cu. ft. Filter Press
with 2 cu. ft. Mini
Steam Sludge Dryer



4 cu. ft. Electric Mini
Sludge Dryer with
Conveyor to Remove
Dried Sludge

Call, write or fax us today for
information or a quotation on all
your equipment needs.

- **Filter Presses**
- **Clarifiers**
- **Sludge Dryers**
- **Complete Waste Water
Treatment Systems**
- **Fabrication and Repair Center**
- **Field Repair and Installation**
- **Replacement Filter Media**
- **Used Equipment**



10 cu. ft. Filter Press



Our Customer Service Staff is always available
to serve you.

800mm Filter Press
with Semi-Automatic
Plate Shifter, Pump
Control System and
Sludge Dump Cart



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