



KP10-2 Oil Filtration System

The KP10-2 oil filtration system supports long-term equipment operation by reducing the probability of oil related failures or unscheduled maintenance due to contaminated oil.

A factor in industrial oil reliability is the control and removal of undesired contamination. When contamination invades oil, protection of the rotating components are placed at risk and equipment performance is jeopardized.

Kaydon Filtration manufactures oil filtration systems to remove harmful contamination from lube oil used at industrial locations, such as steam, combustion, or hydroelectric power plants, steel/aluminum mills, or paper mills. The Kaydon Filtration KP10-2 oil filtration system provides continuous and persistent oil filtration service and adds additional benefit during shutdown by quickly preparing the oil for equipment start-up.

Kaydon Filtration is aware of the demand for meeting oil cleanliness requirements. Kaydon Filtration's years of experience in the area of oil filtration proves Kaydon Filtration is ready to respond. By placing Kaydon Filtration oil filtration equipment into service, provision for oil dependability and equipment reliability is accomplished.



SPECIFICATIONS & DETAILS

System Flow	10 GPM / 38 LPM (maximum flow)
Sizing	Up to 600 gallons / 2,270 liters
System Pressure	100 psig / 7 BAR (maximum)
Environmental Parameters	NEMA 4 / IP54 Minimum Temperature: 32°F (0°C) Maximum Temperature: 104°F (40°C)
Operating Voltage	460 VAC / 3PH / 60Hz / 3.5 AMPS
Materials of Construction	Metals: Aluminum, Carbon Steel, Stainless Steel Elastomers: Buna-N Paint: Acrylic Urethane Enamel
Pressure Vessels	Carbon Steel Steel with Ductile Iron Head/Base
Inlet/Outlet Connections	Type: NPT Inlet: 2 inch (50.8 mm) Outlet: 1 inch (25.4 mm)
Pump/Motor Assembly	Pump Type: Gear - positive displacement Motor: 2 HP (1.49 KW)
Fluid Compatibility	mineral base oil (maximum viscosity = ISO 320)
Filter Stages	1st Stage: 30 mesh pump protection strainer 2nd Stage: particulate removal 3rd Stage: water removal or polishing
Performance	Particulate: ISO Cleanliness Code 18/16/13 ⁽¹⁾ (System pre-installed : 11μ and 7μ filter elements)
Controls	ON/OFF Motor Starter (NEMA 4)
Weight	600 LBS (275 kg) approximate
Dimensions	48 inches (L) x 35 inches (W) x 55 inches (H) 1220 mm (L) x 889 mm (W) x 1397 mm (H)

KP10-2 OIL FILTRATION SYSTEM PROVIDES THESE BENEFITS:

- Longer Equipment Life
- Dependable Equipment Operation
- Reduced Failures Related to Poor Oil Quality
- Fewer Forced Outages and Downtime
- Increased Oil Life and Reliability

FEATURE AND BENEFIT OPTIONS

SKID MOUNTING: System includes a single skid, with forklift points for accessible positioning, drip containment rim, skid drain port and mounting tabs.

1st STAGE: This stage removes protects the pumps by preventing large particulate and debris from entering system.

2nd STAGE: At this stage, smaller particles in the oil is removed, reducing contaminated oil related component failures such as wear and scoring of bearing surfaces and premature failure of hydraulic compments. The A910245 element is preinstalled.

3rd STAGE: Final filtration or optional water absorption with KDO Quick-Dry™ element. The A910118 filter element is preinstalled.

CONTROLS: Simple ON/OFF motor starter is installed in a easy to view location. The control of starting and stopping the system is easy to use and understand.

DIFFERENTIAL PRESSURE GAUGES: Provides visual indication of the life of the element. Typical starting differential pressure will be less than 5 psid (.35 kg/cm²) and terminal (change-out) differential pressure is 25 psid (1.75 kg/cm²).

VACUUM GAUGE: Located on the suction side of the oil pump, this gauge indicates the suction condition of the pump. The reading should be 5 inches (127 mm) Hg or less during operation.

MODEL 512 FILTER VESSEL FEATURES:

- o **Operator Friendly:** The "T" top handle makes the element change-out procedure quick and simple. No tools are required to change an element. Element change-out can be accomplished in less than two minutes.
- o **Positive Element Sealing:** As the operator is closing the vessel lid by twisting the "T" top handle, the "T" top spring compresses against the element sealing plate, which provides a postive and secure seal against fluid by-pass around the element.
- o **Reduced Fluid Resistance:** Pressure drop through the Kaydon Filtration Model 512 vessel is minimized, creating longer element life, and less strain on the pumping assembly.

SAMPLE PORT: Allows for oil sampling during system operation for test and analysis.

MANUAL AIR RELEASE VALVE: Allows for the efficient removal of trapped air in the filter vessel. Elimination of air provides for complete oil filling of vessel, which permits complete use of element surface area.

380 VAC / 3 PH / 50 Hz or 575 VAC / 3 PH / 60 Hz (optional): 460 VAC is the standard operating voltage, but 380 VAC and 575 VAC are available.

STAMPED AND INSPECTED ASME CODE FILTER VESSELS (optional): The filter vessels are designed and built in accordance with the latest ASME Pressure Vessel Code, Section VIII, Division I (150 PSIG design pressure at 250° F) and also stamped and inspected.

LIFTING LUGS (optional): Lifting lugs are added on the filter vessel cover and are designed to allow lifting of the assembly from above.

PORTABILITY KIT (optional): Includes four casters, inlet/outlet hoses, power cord (plug not provided), and tow connector. For use if one system will be used for more than one reservoir.

EXPORT CRATING (optional): Heavy duty and rugged crate for extra protection for overseas shipments.

AVAILABLE OPTIONS
380VAC / 3PH/ 50Hz
575VAC / 3PH / 60Hz
Stamped and Inspected ASME Code Filter Vessels
Lifting Lugs
Portability Kit
Export Crating

CONSUMABLES		
DESCRIPTION (choose one element for 2nd stage and one element for 3rd stage)	QTY	PART NUMBER
4 MICRON FILTER ELEMENT ⁽²⁾	1	A910269
5 MICRON FILTER ELEMENT ⁽³⁾	1	A910266
7 MICRON FILTER ELEMENT ⁽⁴⁾ (preinstalled)	1	A910118
11 MICRON FILTER ELEMENT ⁽⁵⁾ (preinstalled)	1	A910245
17 MICRON FILTER ELEMENT ⁽⁶⁾	1	A910122
WATER ABSORBING / 14 MICRON	1	A910394
FILTER VESSEL LID SEAL ⁽⁷⁾	2	54M99

FOOTNOTES

(1) As measured with inline automatic particle monitor calibrated to ISO 11171 and influent no greater than ISO 22/19/17

(2) Removes 99.9% of all particles 4.2 micron and larger per ISO 16889

(3) Removes 99.9% of all particles 5.1 micron and larger per ISO 16889

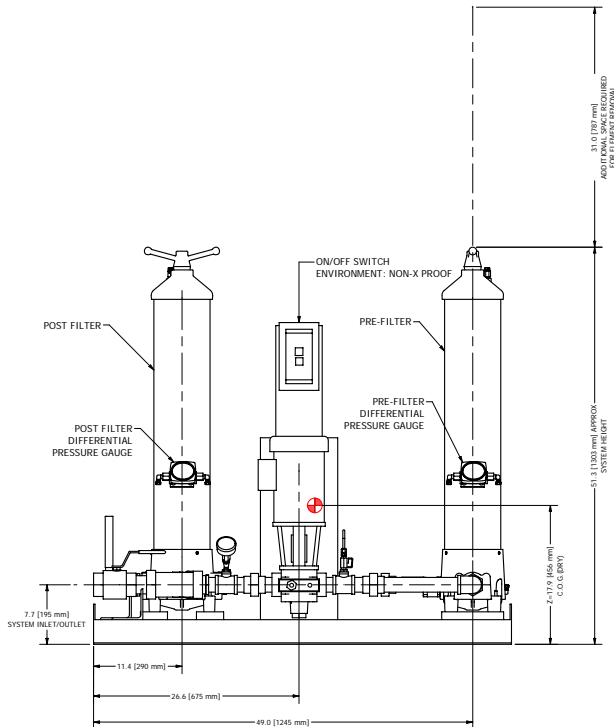
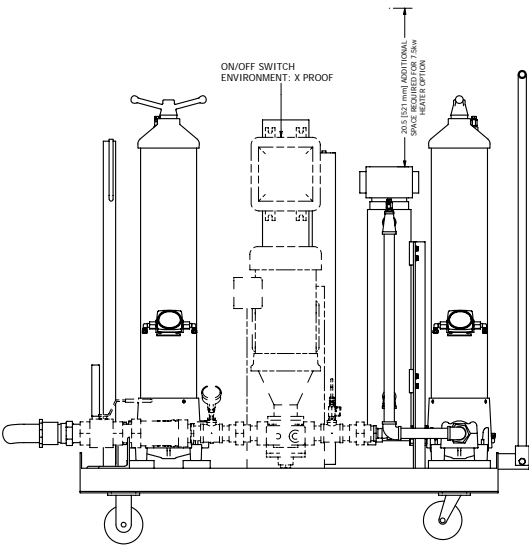
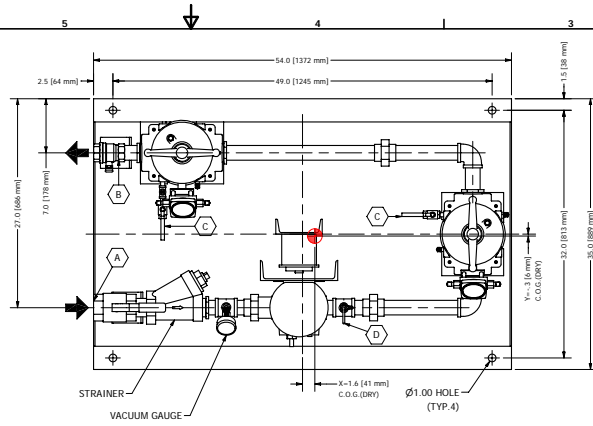
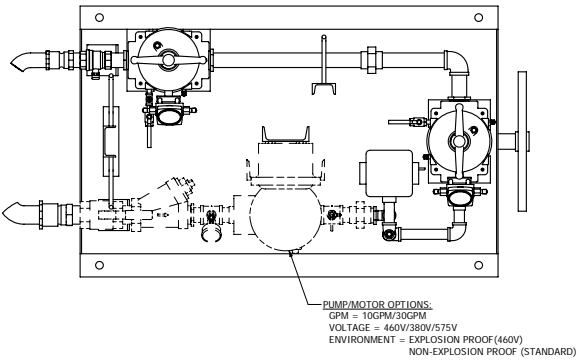
(4) Removes 99.9% of all particles 7.1 micron and larger per ISO 16889

(5) Removes 99.9% of all particles 11.3 micron and larger per ISO 16889

(6) Removes 99.9% of all particles 17.5 micron and larger per ISO 16889

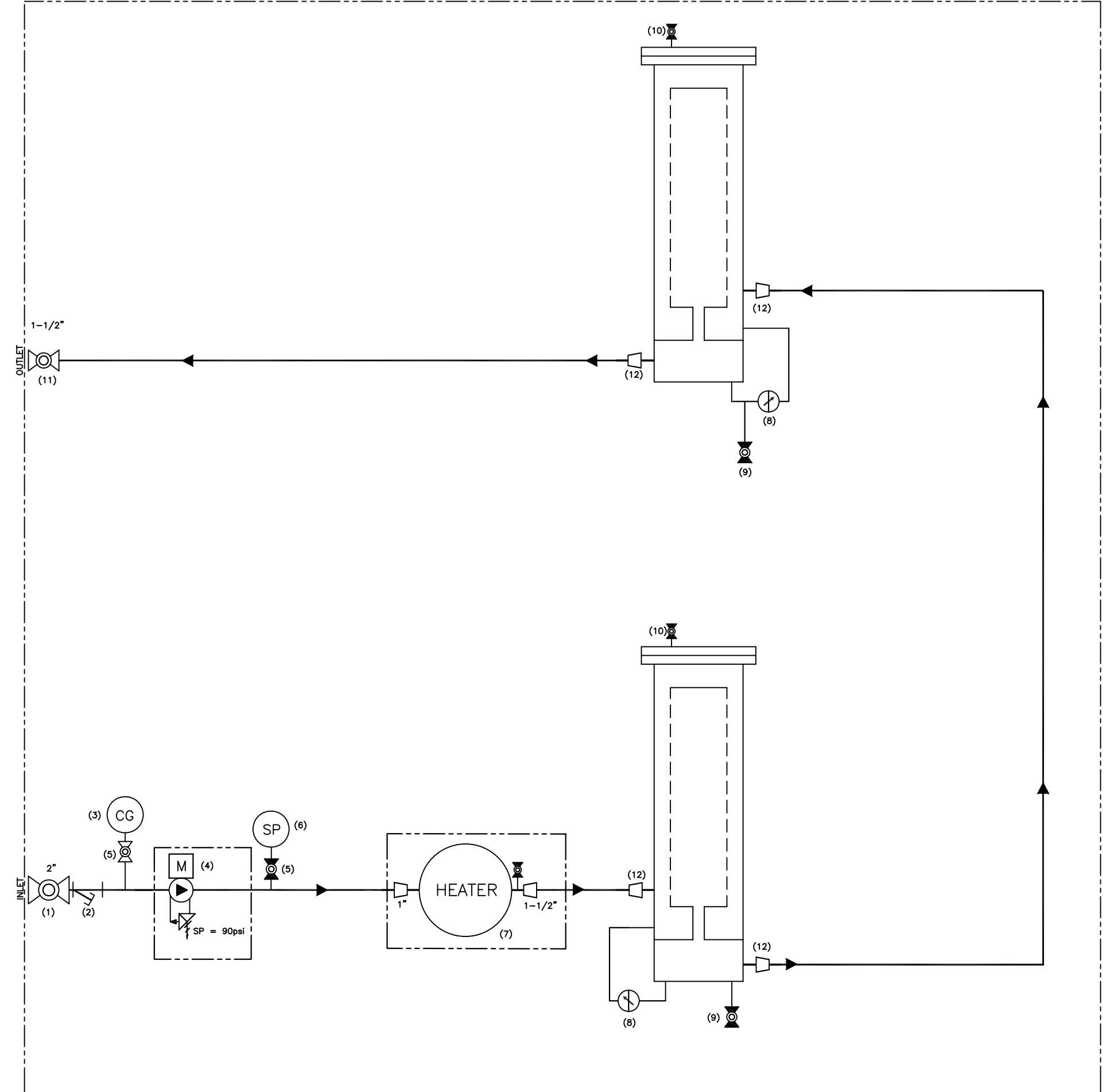
(7) Required for element change

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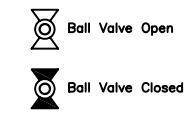
- NOTES:
1. CONSTANT OIL FLOW RATE: APPROX. 10 GPM @ 25 PSI AND 30 GPM @ 50PSI
 2. VESSEL DESIGN PRESSURE: 150 PSIG @ 250°F.
 3. SHIPS WITH THE FOLLOWING ELEMENTS:
 PRE-FILTER (VESSEL #1) = A910245 (QUANTITY 1)
 POST-FILTER (VESSEL #2) = A910118 (QUANTITY 1)
 4. DIRTY & PROCESSED FLUID SAMPLE PORTS PROVIDED.
 ALLOWS FLUID SAMPLES TO BE TAKEN UPSTREAM & DOWNSTREAM OF FILTRATION SYSTEM.
 5. ALL PRESSURE CONTAINING SEALS ARE VITON.
 6. APPROXIMATE DRY WIEGHT: 475lbs. [215kg]
 APPROXIMATE FLUID VOLUME: 17 US Gallons [64L]
 APPROXIMATE WET WIEGHT: 650lbs. [293kg]
 7. VALVE/PORT DESIGNATION:
 A. INLET PORT VALVE, 2" NPT BALL VALVE, NORMALLY OPEN
 B. OUTLET PORT VALVE, 1 1/2" NPT BALL VALVE, NORMALLY OPEN
 C. VESSEL OIL DRAIN PORT, 1/4" NPT BALL VALVES NORMALLY CLOSED
 D. UPSTREAM FLUID SAMPLE PORT, 1/4"
 9. PORTABILITY KIT OPTION INCLUDES:
 1. INLET VACUUM RATED HOSE WITH CAM & GROOVE FITTINGS
 2. PRESSURE RATED DISCHARGE HOSE WITH CAM & GROOVE FITTING
 3. 25 FT. ELECTRICAL CORD (PLUG PROVIDED BY CUSTOMER)
 4. CASTERS
 5. TOW BAR

QUANTITIES FOR ORDER PREPARATION (TY per 100, 000 units)	DIMENSIONS ARE IN INCH AND METRIC	THIRD ANGLE PROJECTION
QUANTITY	DESCRIPTION	
00000000	GENERAL CUSTOMER FILTRATION CODE: 1311 (GENERAL INDUSTRIAL DRIVE WEST) 100000 (HOUSTON, TX, USA)	
KP10 / KP30 GENERAL ARRANGEMENT		
REV	DATE	
E20093	11/25/10	
D	SD940006	



BILL OF MATERIAL					
Item	Abrv.	Qty.	Part Number	Size	Description
1	-	1	A900662	2"	Inlet Ball Valve
2	-	1	A900644	2"	Strainer
3	CG	1	A000018	1/4"	Compound Gauge
4	M	1	Pump/Motor	1-1/2"	Flow Rate And Voltage Varies Based On System
5	-	2	A010064	1/4"	Isolation Ball Valve
6	SP	1	-	-	Sample Port
7	-	1	Heater	1"	Wattage Varies Based on System
-	-	1	53M25-Purch	1/8"	Air vent added with heater option
-	-	-	13227	2" x 1"	Bushing added with heater option
-	-	-	13221	1-1/2" x 1"	Bushing added with heater option
8	-	2	A452018	1/4"	Differential Pressure Gauge
9	-	2	A900666	1/4"	Drain Valve
10	-	2	53M25-Purch	1/8"	Air Vent
11	-	1	16586	1-1/2"	Outlet Ball Valve
12	-	4	13229	2" x 1 1/2"	Bushing

Notes:
 1. Process flow symbols per ANSI Y32.11 are used on this schematic.



Approved As Is	
Approved Per Mark-Ups	
	DATE

REV.	DATE	DESCRIPTION	BY	DATE
-	-	-	-	-

DIMENSIONS ARE IN INCH

KAYDON
 KAYDON FILTRATION
 KAYDON CUSTOM FILTRATION CORP.
 1571 LUKKEN INDUSTRIAL DRIVE WEST
 LAGRANGE, GA 30240

Flow Schematic - KP10 / KP30

DRAWN BY: E2093
 DATE: 9.28.10
 SCALE: N/A
 SHEET: 1 OF 1

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