Presented To:

- Logoplaste
  14420 Van Dyke Road
  Plainfield, IL 60085-6752

  Reference: West Virginia Plant

Logoplaste

Prepared By:

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This proposal is valid until 10/20/2012. After that date the quote and terms in the proposal may need to be revised.

Rotary Screw Air Compressor
200HP Sierra Oil-Free

Image for reference only

Technical Information:

Capacity:
- 715 scfm @ 150 psig
  Unload 140 psig load

Maximum Operating Pressure:
- 153 psig (150 psig)

Weight: 6709 lbs

Connection Size: 2.0" NPT

Dimensions (L x W x H):
- 106" x 62.5" x 93.4"
  Aircooled

Sound Level:
- 79dBA Aircooled
- per CAGI-PNEUROP
  PN2CPTC2

Additional Engineering Data available upon request

Product Description:

The Sierra oil-free models combine the technologies of the Xe Controller, premium components, high ambient rated coolers and the patented UltraCoat bonding process, to provide a durable, reliable, and energy efficient compressor.

These design elements provide the customer with ISO Class O air quality, continuous operation, reduced maintenance costs, and energy efficient controls. These values ensure that the customer has suitable air quality and quantity to efficiently manage his production.

Ingersoll Rand guarantees that the Sierra oil-free compressor will maintain its volume flow rate and specific energy within initial machine acceptance tolerance for a period of 24 months after date on installation.

Key Features & Benefits:

- ISO 8563-1:2001 Class O Air Quality
- Ultra Coolant
- Intellisys Controller
- UltraCoat Rotor Protectant
- Sound Attenuated Enclosure
- 115˚F Ambient Rated

Key Options Available:

- Power Outage Restart Option
- Low Ambient Modification
- Outdoor Modification
- Phase Monitor

Visit the Ingersoll Rand website for further information http://www.ingersollrandproducts.com

Air-Cooled Trim Cooler with Moisture Separator

Ingersoll Rand

Air Cooled AfterCoolers

The IPAC Advantage

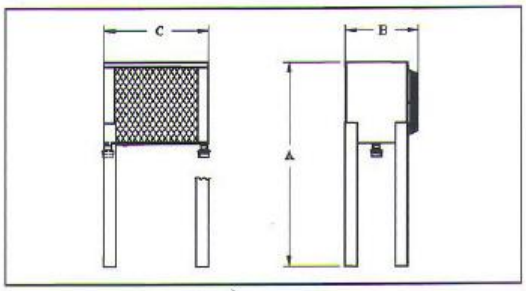
Product Features

- Compact
- Heavy Duty Industrial Grade Construction
- Rigid and Durable Air in/out Connections
- Flex Connections Unnecessary
- Available TEFC Motors
- Low Energy Cost
- Meets All OSHA Requirements

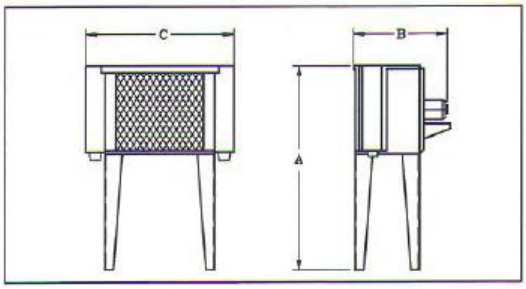
Product Options

- Air Motors With Mufflers
- Low Ambient Control Packages
- Special Coatings (i.e. Corrosion Resistant)
- Alternate Materials - Tube, Fin, or Housing
- Custom Designs Available

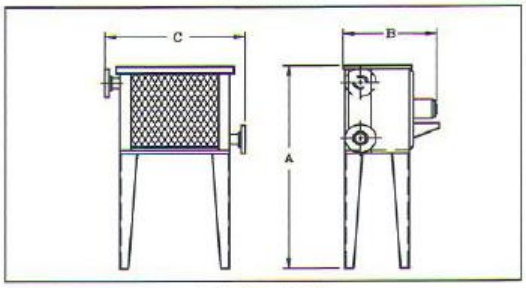
Air-Cooled Trim Cooler with Moisture Separator



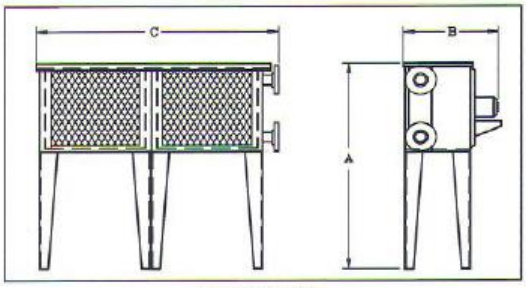
SMALL RANGE
A010 thru A050



MID RANGE
A080 thru A160



LARGE RANGE
A200 thru A400



LARGE RANGE
A480 thru A750

SELECTION AND DATA CHART

Air Cooled Aftercooler Model	Maximum Capacity (SCFM Approach) *				Dimensions (Inches)			Air In/Out Connections	Weight (Lbs.)	Fan Horsepower	Typical Compressor Horsepower	Recommended IPAC Separator**
	5	10	15	20	A	B	C					
	SMALL RANGE A010 thru A050											
A01000B00	24	36	50	64	34.2	11.5	18.5	1-1/2" NPT	42	1/25	10 to 15	WS01
A03000B00	58	88	125	140	38.2	14	20.3	1-1/2" NPT	60	1/25	30	WS02
A0500TB00	90	150	210	230	42.4	16.4	23.4	1-1/2" NPT	90	1/6	40	WS02
	MID RANGE A080 thru A160											
A0803T000	150	230	300	370	57.0	22.9	41.0	1-1/2" NPT	215	1/4	50 to 70	WS03
A1603T000	277	402	670	720	62.2	27.3	50.0	2" NPT	345	3/4	125	S04H
	LARGE RANGE A200 thru A750											
A2003T000	316	528	790	830	78.2	37.0	56.0	2-1/2" FLG	550	3/4	150	S04H
A2403T000	350	780	1010	1100	78.2	38.0	56.0	3" FLG	600	1-1/2	200	S4AH
A3203T000	550	830	1250	1400	78.2	38.0	56.0	3" FLG	700	1-1/2	250	S4AH
A4003T000	578	940	1500	1600	78.2	38.0	56.0	4" FLG	750	1-1/2	300	S05H
A4803T000	1,183	1,666	2,010	2,485	78.2	38.0	99.9	5" FLG	1,400	2 @ 1-1/2	350	S06H
A6403T000	1,340	1,800	2,470	3,010	78.2	38.0	101.7	5" FLG	1,500	2 @ 1-1/2	400	S06H
A7503T000	1,475	2,090	2,800	3,500	78.2	38.0	101.7	5" FLG	1,600	2 @ 1-1/2	700	S06H

NOTES: *Maximum SCFM Capacity is based upon 250°F inlet compressed air @ 100 PSIG
Ambient conditions are 75°F, 50% RH.
**Recommended IPAC drain trap for all models – SAC120
– IPAC's Air Cooled Aftercoolers are designed with maximum working pressure of 200 PSIG at 400°F.
– Model A0100B00 and A03000B00 are 115/1/60 (ODP).
– Model A0500TB00 is available 115/1/60 (TEAO) or 230/1/60 (ODP).
– Model A0803T000 through A7503T00 are 230/460/3/60 (TEFC).
– Other power variations available upon request – consult factory.
– Air motor option available on all sizes – consult factory.
– Maximum working pressure for Models WS01 – WS03 230 PSIG; all other models 200 PSIG.

Nirvana Cycling Refrigerated Dryer
NVC800

Image for reference only

Technical Information:

Capacity: 928 scfm @ 150 psig (corrected)

Dew Point: 38ºF

Refrigerant: R-404A

Maximum Operating Pressure: 230 psig

Weight:

- 1415 lbs. Aircooled

Air Connection: 3" NPT

Water Connection: 3/4" NPT

Drain Connection: 1/4" FPT

Dimensions (W x D x H): 42" x 40" x 62"

Additional Engineering Data available upon request

Product Description:

The Nirvana Cycling Dryer models are thermal mass type, refrigerated dryers that are designed to have high thermal efficiency and low pressure drop by utilizing a thermal mass medium and a premium corrugated, stainless steel pre-cooler / re-heater for heat transfer. This allows the dyer's refrigerant compressor to cycle on/off while maintaining a precise pressure dew point. The Microprocessor LED Controller, provides operational and energy savings readouts while offering flexibility and precision in chiller control.

Reliably produced dry air is important to the customer's productivity, product quality, and process equipment life. Nirvana Cycling Dryers afford the customer economical performance with minimal maintenance. Also, significant energy savings are realized due to the cycling compressor and minimal pressure drop.

Key Features & Benefits:

- Automatic Dryer Restart
- LED Microprocessor

Key Options Available:

- Aircooled or Watercooled
- NEMA 1 or NEMA 4 Electrics
- ENL No Loss Drain

High Efficiency Coalescing Filter
FA1200 IH

Image for reference only

Technical Information:

Capacity: 864 scfm @150 psig (corrected)

Maximum Operating Pressure: 250 psig

Weight: 20.5 lbs.

Connection Size: 3" NPT

Condensate Connection: 1/2" NPT

Dimensions (W x H): 8.07" x 23.63"

Additional Engineering Data available upon request

Product Description:

The Ingersoll Rand General Purpose filter provides particulate removal to 0.01 micron and coalescing filtration to 0.008 ppm (W). These filters are supplied as the pre filters with Ingersoll Rand heatless desiccant dryers.

Compressed air quality is important to the customer's product quality. Coalescing filters remove lubricant and water particles that can contaminate the customer's end product. High quality Ingersoll Rand filters provide this protection along with the added benefit of low-pressure drop. Each additional 2 psig of downstream pressure drop requires 1% additional compressor drive motor bhp. By minimizing pressure drop, these filters reduce the customer's energy costs.

Key Features & Benefits:

- Pressure Die Cast Aluminum Body
- Dual Scale Pressure Differential Gauge
- Proprietary Corrosion Resistant Coating
- Automatic Drain Valve

Key Options Available:

- Replacement Element
- Mounting Kit
- Manual Drain Kits
- O-Ring Kit

Controls - Intelliflow

Image for reference only

Technical Information:

Standard Valve:

- 2, 3, 4, 6 & 8" Valve sizes available
- 850 – 16,000 Scfm
- 150 psig and 150 DegF Max
- PID Control / Fail to Open position

High Performance Valve: Triple Offset valve

- 3, 4, 6 & 8" Valve sizes available
- 1,600 – 17,000 Scfm
- 150 psig and 400 DegF Max
- PID Control / Fail to Open position

Power Supply:

- 110 V, AC, single phase electrics

Control air to regulator must be between 80- 150 psig

Product Description:

Ingersoll Rand IntelliFlow control effectively uses system storage to compensate for high, random air usage and avoids the need to increase the entire system pressure.

Adding an IntelliFlow will eliminate the energy and maintenance costs associated with elevating pressure, providing bottom line savings

Key Features & Benefits:

- High Volume low pressure drop design
- Electronic PID control of valve position
- Mounted controller with digital interface
- Mounted pressure transducer & 3-valve bypass
- **Increased Productivity***:* Optimizes production air control
- **Increased Efficiency***:* Optimizes energy use
- **Increased Reliability***:* Eliminates compressor rapid cycling
- **Reduced Waste***:* Lower Pressure, less air consumption