



**Refrigerated Air Dryer with filters
CAT-X1-184A
Techno-Commercial Proposal**

**Commercial
offer**

5 COMMERCIAL OFFER

Offer Number: SMPL/SAL/OF/28/27819-0.1				Offer Date: 25/10/2022		
Customer Details:						
M/s Jindal Aluminium Limited SP-2/333, Industrial Area, Bhiwadi Dist Alwar-301019 Rajasthan				<i>600 CFM Air cooled.</i>		
Sl. No	Product Code	Product Description	HSN Code	Qty	Rate (INR)	Amount (INR)
1	CAT-X1-184A	Refrigerated Air Dryer	84193900	1	3,76,500.00	3,76,500.00
2	CAT-M1.2-150 PF	Pre-Filter with SFD 320	84219900	1	20,200.00	20,200.00
3	CAT-M1.2-150 FF	Final Filter with SFD 320	84219900	1	22,700.00	22,700.00
4	CAT-M1.2-150 CF	Carbon Filter with SFD 320	84219900	1	22,700.00	22,700.00
Basic Price: 4,42,100.00						
In words: Four Lakh Forty Two Thousand Hundreds Rupees Only.						
Note: As per enquiry number EN221001904 Point No. 2 (Material code: 08460120) cannot be supplied as we are not OEM of Air Compressor						
Terms and Conditions as detailed in Section 5.1						
Contact details: Kavan Mob:7349142424			For SANPAR MICROFILTERS PVT LTD			

CHECK LIST

DISCOUNT *of Rate as above*

PRICE BASIS : FOR BHIWADI *FOR. JALWAR*

TAXES : INCL / EXTRA

IGST: 18% Extra.

Warranty: 6 weeks.

7 d

SMPL/SAL/OF/28/27819-0.1
10/25/23

PAYMENT: *one year from the date of supply.*

VALIDITY: *Rajgarh*

CHECKED BY:

Discussed with Mr. KAVAN and agreed above rate

*Final Rate
Rs. 2,90,000/-
Rs. 3,78,000/-*

Offer Date: 25/10/2022



**Refrigerated Air Dryer with Filters
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**Technical
Specifications**

4.5 Miscellaneous

SR. NO.	DESCRIPTION	UNITS	SANPAR
1	PACKAGE DATA		
1.1	Weight of Drying Unit (Empty / Operating)	kgs	---
1.2	Space Required (Length X Breadth X Height)	mm	-----
2	SCOPE OF SUPPLY		
2.1	Transportation		Not applicable
2.2	Inspection and Testing as Per Specification		As per Sanpar Quality Assurance Plan
2.3	Sound Protection If Necessary		Not applicable
2.4	Painting as Per Manufacturer's Standard		Powder coated
2.5	Commissioning and Mandatory Spares		Included
2.6	Spares for Two Years Continuous Operation (Separate Quote)		Can be provided on request
2.7	Special Tools and Tackles If Required		Not applicable
2.8	Supervision of Erection And commissioning		Included



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5.1 Terms and Conditions

Price

Ex Works Bangalore

P&F Charges

Nil

GST

Extra @18%

DELIVERY

Within 4-6 weeks from the confirmed purchase order.

PAYMENT TERMS

100% against delivery

Freight Charges

Extra on To pay basis

WARRANTY

The equipment's supplied by SANPAR shall be warranted against any manufacturing defects or poor workmanship for a period of 12 months from the date of supply.

VALIDITY

Validity of our offer is for 30 days from the date of this offer.

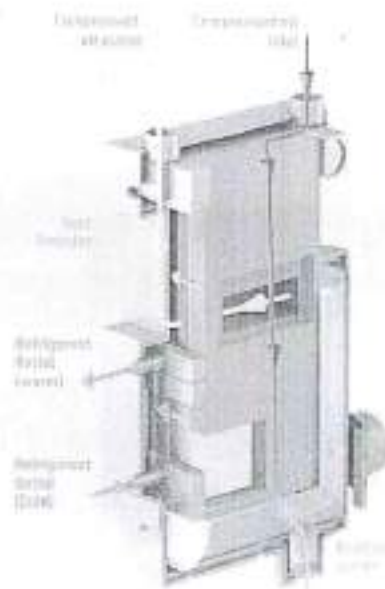
LIMITATION OF LIABILITY

Notwithstanding anything to the contrary in this Agreement or the Purchase Order or any other mutually agreed document between the parties, the maximum liability for damages of the Contractor/Supplier, its servants or agents, shall under no circumstances exceed an amount equal to the Agreement or the Purchase Order Price. The Contractor/Supplier shall not in any case be liable for loss of profit or special, punitive, exemplary, indirect, or consequential losses whatsoever.

Vacuum Brazed Aluminium Heat Exchanger



Compact Design
Reduced footprint without compromising performance



- Condenser Air/Air Heat Exchanger
- Wc Refrigerant Heat Exchanger
- Scroll Compressor
- Thermal Mass

3 in 1 Completely Integrated System

Economizer
Able to sub cool air without external electrical energy source by greater than **65%**

Refrigeration Components

Components with high EER and COP are selected to minimize power consumption & maximize drying efficiency



Scroll Compressor

Fewer moving parts and less torque variation compared to reciprocating compressor, resulting in smooth and quiet operation. Hence, long life guaranteed.

Rust Prevention

Dryer inlet made of to prevent corrosion

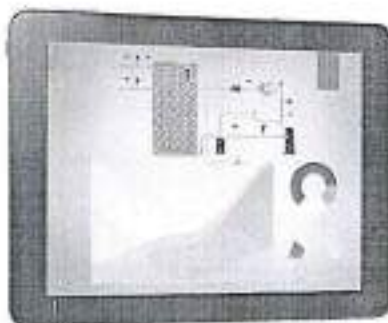
Eco-friendly Refrigerants

R134a and R407c with low Global Warming Potential (GWP) is used.



Beat the heat

Our dryer is designed for tropical conditions where average ambient temperature & humidity is higher than temperate zone.



Industry 4.0

- Monitor health of system
- Data Logging
- Remote Monitoring
- Preventive Maintenance
- Enhance Uptime

Optional Accessories

- Pressure Sensor
- Dew Point Sensor
- Automated Control System



**Refrigerated Air Dryer with Filters
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**Revision
History**

2 REVISION HISTORY

Revision No.	Date	Description of Changes	Reason for Change

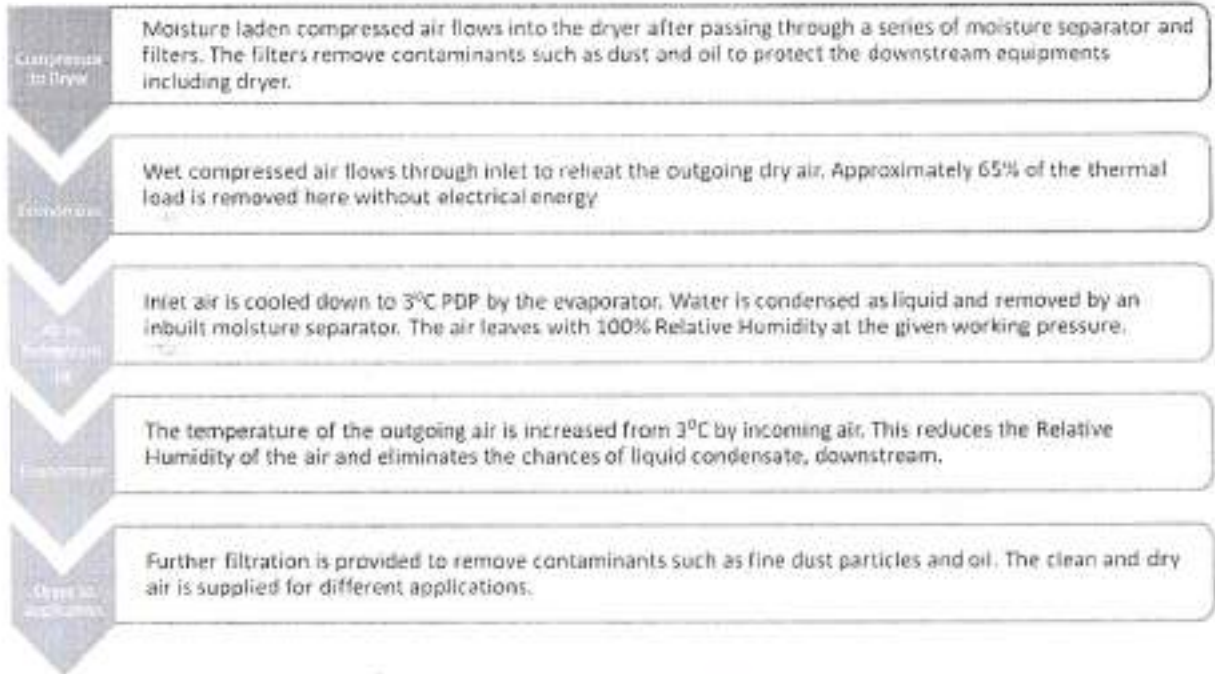
XEROS SERIES Refrigerated Air Dryer

Xeros series dryers are designed to handle high air flow rates from 150 - 6000 cfm. Xeros is the result of consistent evolution in design and manufacturing process over a period of 27 years. They are available in air & water cooled variants to cater to a wide range of applications.

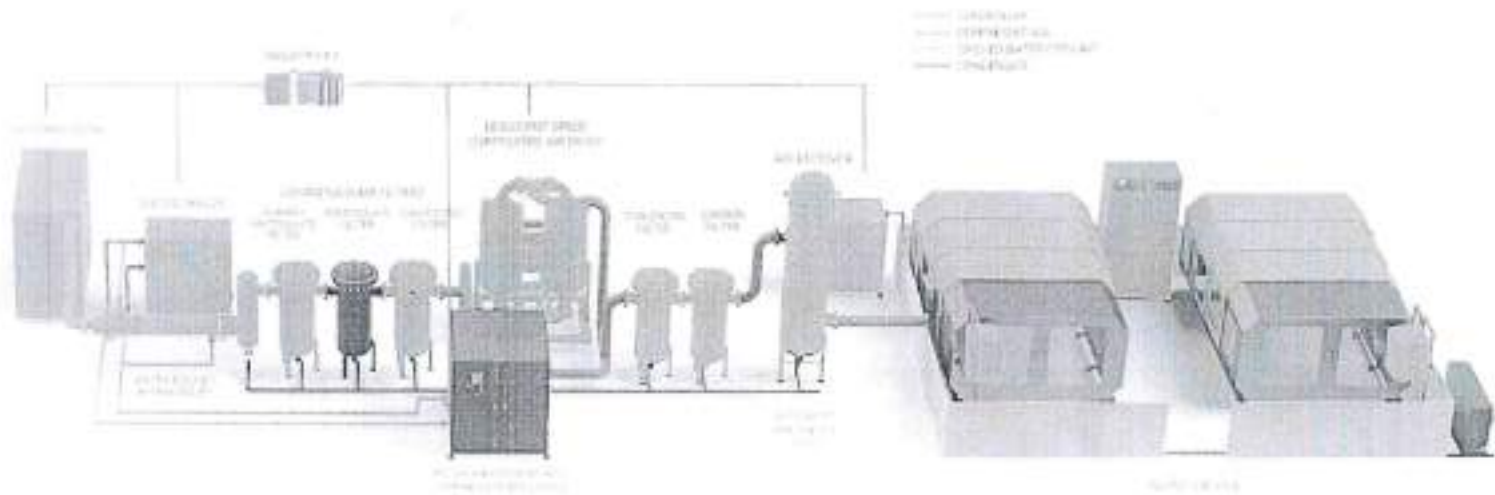
Process



- Design**
- (1) Compressor inlet
 - (2) Heat Exchanger system
 - (3) Desiccant filter
 - (4) Condensate trap
 - (5) 100% RH moisture separator
 - (6) Refrigerant condenser
 - (7) Moisture separator
 - (8) Filter
 - (9) Filter
 - (10) Refrigerant receiver
 - (11) Expansion valve



Scope of supply as per proposal





Refrigerated Air Dryer with Filters
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Technical
Specifications

4 TECHNICAL SPECIFICATIONS OF AIR DRYER

4.1 Technical Specifications of Dryer

SR. NO.	DESCRIPTION	UNITS	CAT-X1-184A
1	Model		CAT-X1-184A
1.1	Type of Dryer		Refrigerated Non-cyclic-Direct expansion
1.2	Make		SANPAR
1.3	Series		XEROS
1.4	Capacity (FAD)	cfm	600
1.5	Working Pressure	bar	7
1.6	Outlet Dew Point	Degree C	+3
1.7	Max. Inlet Air Temperature	Degree C	45
1.8	Ambient temperature	Degree C	40
1.9	Press. Drop across system	bar	< 0.18
1.10	Refrigerant		R 134a /R407c
1.11	Power supply	V/Ph/Hz	415±10% /3/ 50
2	End connections		
2.1	Air Inlet/outlet Flange	DN	80
3	Utility cooling water condition		
3.1	Cooling water temperature	Degree C	N.A
3.2	Pressure (operating / design)	Kg/cm ² g	N.A
3.3	Allowable pressure drop (Water side)	Kg/cm ²	N.A
3.4	Hardness	ppm	N.A
3.5	Water flow	lpm	N.A



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Technical
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4.2 Components

1	REFRIGERATION COMPRESSOR		
1.1	Type		Scroll
1.2	Make		Emerson/Danfoss
1.3	Quantity		1
1.4	Refrigerant		R 134a /R407c
1.5	Power supply	V/Ph/Hz	415±10% / 3 / 50
1.6	Power Consumption	kW	3.7
NOTE: Power consumption mentioned are the catalogue figures of the compressor manufacturer at rated conditions			
2	CONDENSER		
2.1	Type		Fin & tube type
2.2	MOC		Cu tube and aluminum fins
3	EXPANSION VALVE / CAPILLARY		Capillary / TEV
3.1	EVAPORATOR		
3.2	Type		Plate Type
3.3	Air Inlet / Outlet Temperature	Degree C	45/ 45-43
3.4	MOC – Plate		Aluminum
4	DRYER CANOPY		
4.1	Type		Box Type Fully enclosed
4.2	Skid (Base frame)		'C' Channel / IS 808 L angles
4.3	Doors – MOC		IS 513 Sheet Metal
4.4	Electrical Panel		Separate Canopy placed inside the dryer
5.5	Finish		Pretreated and powder coated
5	DRAIN		
5.1	Type		Automatic drain
5.2	Electronically operated		Provided



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**Technical
Specifications**

4.3 Testing & Standards

SANPAR is committed to design, manufacture and maintain its products to the satisfaction of the customer through continual improvement in the Quality Management System. We develop our solutions after careful consideration of technical and commercial data. Each product undergoes multiple tests and are designed according to international standards.

Standards	Description
ISO 8573-1:2010	Xeros refrigerated air dryer adheres to compressed air quality standard ISO 8573-1 Class 4 by maintaining PDP: +3°C at working pressure.
ISO 7183	Compressed air dryer is constructed as per ISO specification and testing methods
ISO 9001:2015	The entire operation of SANPAR is managed by the ISO 9001:2015 Quality Management System

Tests	Description
Nitrogen Test	Heat exchanger is filled with nitrogen and tested to ensure the absence of leaks.
Leakage Test	The refrigerant circuit is tested for leakage through the use of compressed air.



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**Technical
Specifications**

4.4 TECHNICAL SPECIFICATIONS OF FILTER

PRE-FILTER

Pre-Filter uses coarse filter element capable of removing dust particles of size 3 microns. It uses particulate filtration technology to achieve an efficiency of 99.99%.

The filter housing is powder coated internally and externally to protect against corrosion and scratches. The filter is also aerodynamically designed to minimize pressure drops.

The filter elements are manufactured inhouse and quality tested to ensure consistent performance.

SR. NO.	DESCRIPTION	UNITS	SANPAR
1.1	Make / Model		SANPAR/ CAT-M1.2-150 PF
1.2	Capacity (FAD)	cfm	600
1.3	Working pressure.	bar	7
1.4	Max. Air inlet temperature	Degree C	45
1.5	Micron Rating	micron	3
1.6	Filter Elements	Nos	1
1.7	Filter Element Material		Pleated Cellulose Acetate
1.8	Filter Housing M. O. C.		Aluminum Die Cast
1.9	Filter End connections	DN	80
2	ACCESSORIES		
2.1	'SANPAR' Float Drain		SFD 320



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FINE FILTER

Fine filter is capable of removing particles of maximum size 0.01 microns. It also removes oil with maximum remaining oil content down to 0.01 mg/m³.

SR. NO.	DESCRIPTION	UNITS	SANPAR
1.1	Make / Model		SANPAR/CAT-M1.2-150 FF
1.2	Max. flow rate	cfm	600
1.3	Working pressure.	Bar(g)	7
1.4	Max. Air inlet temperature	°C	45
1.5	Micron Rating	micron	0.01
1.6	Max. Oil concentration	mg/m ³	0.01
1.7	Filter Elements	Nos	1
1.8	Filter Element Material		Borosilicate Glass Fiber
1.9	Filter Housing M. O. C.		Aluminum Die Cast
1.10	Filter End connections	DN	80
2	ACCESSORIES		
2.1	'SANPAR' Float Drain		SFD 320

CARBON FILTER

Oil filter is capable of removing oil with maximum remaining oil content down to 0.005 mg/m³.

SR. NO.	DESCRIPTION	UNITS	SANPAR
1.1	Make / Model		SANPAR/CAT-M1.2-150 CF
1.2	Max. flow rate	cfm	600
1.3	Working pressure.	Bar(g)	7
1.4	Max. Air inlet temperature	°C	45
1.6	Max. Oil concentration	mg/m ³	0.005
1.7	Filter Element Material	Nos	Activated Carbon granules
1.8	Filter Housing M. O. C.		Aluminum Die Cast
1.9	Filter End connections	DN	80
2	ACCESSORIES		
2.1	SANPAR' Float Drain		SFD 320



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Project
Overview

1 Project Overview

Offer No	SMPL/SAL/OF/28/27819-0.1
Offer Date	Dated: 25/10/2022
Customer Details	
Customer Address: M/s Jindal Aluminium Limited SP-2/333, Industrial Area, Bhiwadi Dist Alwar-301019 Rajasthan	Consignee Address: M/s Jindal Aluminium Limited SP-2/333, Industrial Area, Bhiwadi Dist Alwar-301019 Rajasthan
Contact Person	Mr. Rajgopal C
Mob	+91 9611195368
Email Id	Purchase.bhiwadi@jindalaluminium.com
Document Overview	Techno-commercial offer for the requirement of Refrigerated Air Dryer with Filters.
Scope of Supply	
Sanpar's Scope	<ul style="list-style-type: none">• Refrigerated Air Dryer of capacity 600cfm.• Pre-Filter• Final Filter• Carbon Filter
Customer's Scope	<ul style="list-style-type: none">• Outlet Piping: Piping to connect Refrigeration Dryer and end application.• Inlet Piping: Piping to connect Compressed Air Line to Air dryer & Filters.• Electrical Wiring: Electrical wire from switch board to dryer.
Applicable Documents	<ul style="list-style-type: none">• Your mail dated:22-10-2022



SANPAR
Driving the Industry

SANPAR MICROFILTERS PVT LTD
PLOT NO.5, 2ND CROSS, KSSIDC INDUSTRIAL ESTATE,
BOMMASANDRA II STAGE, BANGALORE-560099



REFRIGERATED AIR DRYER
TECHNO-COMMERCIAL PROPOSAL
Xeros series

CAT-X1-184A

Enquiry No: EN221001904 Dated: 22/10/2022

PROPREITARY NOTICE

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INDUSTRIAL EQUIPMENT COMPANY
A-139, Bhagat Singh Colony, Bhiwadi
Rajasthan – 301019
www.iecbhiwadi.com



Revised Final offer

Date 13/02/2023

To
Jindal Aluminum Limited
Bhiwadi
Kind Attn.: Mr. Rajgopal

Subject : Final Prices Quotation for SUMMIT make Compressed Air Dryers

Sl. No.	Description	Qty	Amount
1.	<p>Series SI Summits <i>Fully Automatic Continuous Operation Refrigerant Air dryer</i> Suitable to handle 500cfm, Model SI 050 DA,</p> <p>Unique 3 in 1 Imported Aluminium Alloy Plate type Heat Exchanger Inbuilt Evaporator (Air to Refrigerant), Pre Cooler (Air to Air) & Demister type Moisture Separator, Air Cooled Condenser, Hermetically sealed Refrigerant Compressor of Copeland / Danfoss – SCROLL type, Eco friendly refrigerant of R407c / R404a, Air dryer controller of Microprocessor based Digital Dew Point temperature indicator Electronic timer based Auto Drain Valve.</p> <p>Operating air pressure of 7 - 12 bar g, Outlet Pressure Dew point of +3°C (PDP), Air inlet temperature upto 45°C, Designed Ambient temperature upto 40°C, Pressure drop across the air dryer of 0.2 bar g, Air inlet / Outlet sizes of 2 1/2" BSP F, Air Cooled Condenser of Fin & Tube type, (Fin MOC of Aluminium, Tubes MOC of Copper), Power supply of 3 Phase 415VAC 50 Hz with all standard accessories. Conformance Standards: ISO-8573-1 Table 3, Class 4.</p>	Each	2,65,000=00

Final offer



INDUSTRIAL EQUIPMENT COMPANY

A-139, Bhagat Singh Colony, Bhiwadi

Rajasthan – 301019

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2.	<p>Series SI SUMMITS brand <i>Fully Automatic Continuous Operation</i> Refrigerant Air dryer Suitable to handle 600cfm,</p> <p>Model SI 060 DA with -</p> <p>Unique 3 in 1 Imported Aluminium Alloy Plate type Heat Exchanger Inbuilt Evaporator (Air to Refrigerant), Pre Cooler (Air to Air) & Demister type Moisture Separator, Air Cooled Condenser, Hermetically sealed Refrigerant Compressor of Copeland / Danfoss – SCROLL type, Eco friendly refrigerant of R407c / R404a, Air dryer controller Microprocessor based Digital Dew Point temperature Indicator Electronic timer based Auto Drain Valve.</p> <p>operating air pressure of 7 - 12 bar g, outlet Pressure Dew point of +3°C (PDP), Air inlet temperature upto 45°C, designed Ambient temperature upto 40°C, Pressure drop across the air dryer of 0.2 bar g, Air inlet / Outlet sizes of 2 1/2" BSP F, Air Cooled Condenser of Fin & Tube type (Fin MOC of Aluminium), (Tubes MOC of Copper), Power supply of 3 Phase 415VAC 50 Hz with all standard accessories. Conformance Standards: ISO-8573-1 Table 3, Class 4.</p>	Each	2,65,000=00
2-a	<p>Series SF Summits Pre filter with - Differential pressure gauge & Internal float type drain valve. Suitable to handle 700cfm, Model SF 070 DP, operating air pressure of 7 - 12 bar g, Air inlet temperature upto 80°C, Air inlet / outlet sizes of 2" BSP F, Housing MOC of Aluminium Die cast, Element media of High efficiency Boro silicate glass fibre Solid / dust particles removal upto 5 micron / Oil or water residual upto 5mg/m³</p>	each	20,000=00



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2-b	<p>Series SF Summits Sub Micro filter with – Differential pressure gauge & Internal float type drain valve. Suitable to handle 700cfm, Model SF 070 DY, operating air pressure of 7 - 12 bar g, Air inlet temperature upto 80°C, Air inlet / outlet sizes of 2" BSP F, Housing MOC of Aluminium Die cast, Element media of High efficiency Boro silicate glass fibre Solid / dust particles removal upto 0.01 micron / Oil or water residual upto 0.01mg/m³</p>	each	20,000=00
2-c	<p>Series SF Summits Activated Carbon filter with Differential pressure gauge & Internal float type drain valve. Suitable to handle 700cfm, Model SF 070 DA, operating air pressure of 7 - 12 bar g, Air inlet temperature upto 80°C, Air inlet / outlet sizes of 2" BSP F, Housing MOC of Aluminium Die cast, Element media of High efficiency Boro silicate glass fibre Oil or water residual upto 0.003mg/m³</p>	each	20,000=00
3.	<p>Series SI SUMMITS brand <i>Fully Automatic Continues Operation Refrigerant Air dryer</i> Model SI 100 DA with -</p> <p>Unique 3 in 1 Imported Aluminium Alloy Plate type Heat Exchanger Inbuilt Evaporator (Air to Refrigerant), Pre Cooler (Air to Air) & Demister type Moisture Separator, Air Cooled Condenser, Hermetically sealed Refrigerant Compressor of Copeland / Danfoss – SCROLL type, Eco friendly refrigerant of R407c / R404a, Air dryer controller Microprocessor based Digital Dew Point temperature indicator Electronic timer based Auto Drain Valve.</p> <p>Suitable to handle 1000cfm, operating air pressure of 7 - 12 bar g, outlet Pressure Dew point of +3°C (PDP),</p>	Each	3,50,000=00



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	<p>Air inlet temperature upto 45°C, designed Ambient temperature upto 40°C, Pressure drop across the air dryer of 0.2 bar g, Air inlet / Outlet sizes of DIN 100, Air Cooled Condenser of Fin & Tube type (Fin MOC of Aluminium), (Tubes MOC of Copper), Power supply of 3 Phase 415VAC 50 Hz with all standard accessories. Conformance Standards: ISO-8573-1 Table 3, Class 4.</p>		
3-a	<p>Series SF Summits Pre filter with Differential pressure gauge & Internal float type drain valve. Suitable to handle 1000cfm, Model SF 100 DP, Operating air pressure of 7 - 12 bar g, Air inlet temperature upto 80°C, Air inlet / outlet sizes of 3" BSP F, Housing MOC of Aluminium Die cast, Element media of High efficiency Boro silicate glass fibre Solid / dust particles removal upto 5 micron / Oil or water residual upto 5mg/m³</p>	each	50,000=00
3-b	<p>Series SF Summits Sub Micro filter with Differential pressure gauge & Internal float type drain valve. Suitable to handle 1000cfm, Model SF 100 DY, Operating air pressure of 7 - 12 bar g, Air inlet temperature upto 80°C, Air inlet / outlet sizes of 3" BSP F, Housing MOC of Aluminium Die cast, Element media of High efficiency Boro silicate glass fibre Solid / dust particles removing upto 0.01 micron / Oil or water residual upto 0.01mg/m³</p>	each	50,000=00
3-c	<p>Series SF Summits Activated Carbon filter with Differential pressure gauge & Internal float type drain valve. Suitable to handle 1000cfm, Model SF 100 DA, operating air pressure of 7 - 12 bar g, Air inlet temperature upto 80°C, Air inlet / outlet sizes of 3" BSP F, Housing MOC of Aluminium Die cast,</p>	each	50,000=00



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	Element media of High efficiency Boro silicato glass fibre Oil or water residual upto 0.003mg/m ³		
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Commercial Terms:

- Prices are Ex Summit Works at Coimbatore,
- Freight Extra as actual on To Pay basis to Transporter
- GST Extra @18% on the prices quoted
- Delivery 8 Weeks from the date of your confirm PO.
- Payment 90% against Performa invoice before dispatch. Balance within 15 days of delivery.

For Industrial Equipment Company

Shobhit Agrawal