

**INDIAN IMMUNOLOGICALS LIMITED**

A wholly owned subsidiary of the National Dairy Development Board

TENDER OPENING FORM (Technical)

ENQUIRY NO. : 2223/01220
PLANT / DEPT : GACHIBOWLI - HH- PRODUCTION
ITEM DESCRIPTION : 20 INCH CARTRIDGE FILTRATION SYSTEM
DATE OF OPENING : 14-06-2022

Sl. No	NAME OF THE SUPPLIER (TENDERER)	REMARKS
1	NILSAN NISHOTECH SYSTEMS PVT LTD	E-MAIL
2	BPE BIOTREE INDIA PVT LTD	E-MAIL
3	BIOZEEN	E-MAIL
4	EKS FILETER TECHNIK (INDIA) PVT LTD	E-MAIL
5	PROPACK TECHNOLOGIES PVT LTD	SEALED
6	BRIGHT PHARMA ENGINEERING PVT LTD	SEALED
7	OMEGA SCIENTIFIC INSTRUMENTS	SEALED
8	WATERMSS SYSTEMS PVT LTD	SEALED
9	MICRO FILT INDIA (P) LTD	SEALED

A.DHANUNJAYA

SIGNATURE

2223/01220

MICROFILT INDIA (P) LTD

	HUMAN BIOLOGICALS INSTITUTE (A division of Indian Immunologicals Ltd.) Rukshapuram, Gachibowli Post. Hyderabad 500 032	USER REQUIREMENT SPECIFICATIONS	Page No. 1 of 5
		20 INCH CARTRIDGE FILTRATION SYSTEM	
		DEPARTMENT: HBI - PRODUCTION	Effective Date: 13 MAY 2022

Name of the Equipment	20 INCH CARTRIDGE FILTRATION SYSTEM
URS No.	URS/B5/003/22
Quantity required / capacity	1 No.
Section	(Block - B5)
Location	HBI - Hyderabad
AUC No.	80003668

1.0	OBJECTIVE:
	The objective of this document is to write down clearly User Requirement Specification for the 20 inch cartridge filtration skid system.
2.0	PROCESS/OPERATIONAL EQUIPMENT:
2.1	Purpose of the equipment:
	For sterile filtration.
3.0	EQUIPMENT REQUIREMENT:
3.1	Features of the equipment:
	➤ The equipment shall be designed for the following features: OK ➤ Equipment with two housings made of SS 316L (20 inch) mounted on skid (SS 304) with castor wheels. OK ➤ The two housings to be interconnected with 1 inch TC with Diaphragm valve and air connector to be provide for integrity purpose. OK ➤ The filtration skid should be insitu sterilizable. OK ➤ Air venting valves and pressure gauges should be on top part of the holder. OK ➤ The valves used should be of internal finish of Ra 0.8. OK ➤ Steam trap (SS 304) (spirax or equivalent) should be provided at the terminal end outlet of the skid to minimize the wastage of steam during stream sterilization (refer the diagram provided) OK ➤ The skid should be provided with RTD temperature sensor at the end of terminal filter with appropriate temperature display, circular chart temperature recorder. (refer the diagram provided) OK ➤ RTD Temperature sensor range should be from 0-150°C and accuracy should be of class A. (preferred Radix or equivalent). OK ➤ Temperature circular chart recorder with temperature display has to be provided. CC recorder range should be from 0-150°C (preferred Gtek or equivalent) OK ➤ All contact parts should be fabricated with SS 316 L grade and all joints & connections are sealed with PTFE /silicon/EPDM gasket. OK ➤ All diaphragm valves should be resistant to steam sterilization (preferred make Saunders or Genu) OK ➤ The vent should end in 1 inch TC instead of barbed hose to make it suitable for connecting to Integrity test equipment. OK ➤ Electro polished crevices free inner contact surfaces. OK ➤ 1 inch TC clamp fittings. OK ➤ The equipment should be passivated after electro polishing. OK ➤ The cartridge filter skid should have CODE 7 type holder for accommodating cartridge filter. OK ➤ All the accessories of filtration skid should be of removable kind for the purpose of cleaning. OK ➤ Compact & space saving design. OK ➤ The skid should be able to go through the door of width 90 cms. OK



**HUMAN BIOLOGICALS
INSTITUTE**
(A division of Indian Immunologicals Ltd.)
Rakshapuram, Gachibowli Post,
Hyderabad 500 032

**USER REQUIREMENT
SPECIFICATIONS**

**20 INCH CARTRIDGE
FILTRATION SYSTEM**

**DEPARTMENT: IIIH -
PRODUCTION**

Page No.
2 of 5

Effective Date:
13 MAY 2022

- 3.2 **Chemical/Physical characteristics of the process material:**
(Specify the physicochemical character of the material proposed to be handled in the required equipment)
Preparation of different solutions pH varies from 1-12.

- 3.3 **Suggested capacity and model**
2 nos of 20 inch housings on mobile skid OK

- 3.4 **Material inputs to the equipment:**
Different types of chemicals including acids and alkalis.

- 3.5 **Preferable method of cleaning:**
(Specify CIP/COP/Manual)
Manual: WFI → 0.5 N NaOH → WFI

- 3.6 **Recommended cleaning/ sanitizing agent & its chemical nature:**
WFI and 0.5N NaOH (Alkaline)

- 3.7 **Required utilities:**
(specify with details for required utilities such as Heating, cooling, Vacuum, Pressure) OK
Compressed air, WFI, purified water and Pure steam

- 3.8 **Available volume of the room for equipment:**
The available room is blending room.

- 3.9 **Specific requirement.**

Application	Description
Type	20 inch SS holders made up of SS 316 L - 2 nos OK
Mounting	Mounting on SS 304 mobile skid OK

Specification	Description	
In let /Out let	1 inch TC	OK
Vent/Drain	Sanitary valve with 1/4 inch diaphragm with 1 inch TC	OK
Maximum Allowable Working pressure	10 bar	OK
Maximum temperature	148 °C	OK
In-situ steam sterilization	45 min at 122° C	OK
Hot water Sanitization	30 min at 90° C	OK

Dimensions

Pressure gauges

Pressure range	-1 bar to 6 bar, accuracy should be of class 1 (according EN837-1) (make-Anderson or equivalent) without oil OK
----------------	---

Temperature sensors

Temperature range	0 to 150°C, accuracy should be of class A (make-Radix or equivalent) OK
-------------------	---

4.0 GENERAL SPECIFICATION:

- The inlet and outlet connectors are 1 inch regular TC ends. They assist in making the holder easy OK
- Clean and simplify the in-line installation. OK
- The swing-out clamps ensure leak-proof installation by simple hand-tightening. OK
- Silicon O-rings in the base plate for cartridge filter support. OK
- 1" Diaphragm valves to be provided at the inlet, outlet and middle of the housings as shown in diagram. OK
- The housing should be passivated after electro polishing. OK
- Supplier should provide FAT (if applicable). OK



**HUMAN BIOLOGICALS
INSTITUTE**
(A division of Indian Immunologicals Ltd.)
Rakshapuram, Caehibowli Post,
Hyderabad 500 032

**USER REQUIREMENT
SPECIFICATIONS**

**20 INCH CARTRIDGE
FILTRATION SYSTEM**

**DEPARTMENT: HH -
PRODUCTION**

Page No.
3 of 5

Effective Date:
13 MAY 2022

5.0 GMP REQUIREMENT:

- 100% Boroscopic test shall be carried out for all the joints & welding. OK
- "Ra" value shall be always less than 0.8 μ m for all inner surfaces. OK
- Zero dead legs shall be placed against all dead ending including all valves/gauges. OK
- Electro-polishing & passivation shall be ensured at all stages from erection to commissioning of the plant. OK
- All the contact parts should be made up of SS 316L and all external parts should be made up of SS 304. OK
- All gaskets should be made up of food grade/Silicone. OK
- All fittings should be sanitary types. OK
- All accessories should be aseptic and should pass air tightness tests. OK

{ P.T.O }



**HUMAN BIOLOGICALS
INSTITUTE**
(A division of Indian Immunologicals Ltd.)
Rakshapuram, Gachibowli Post,
Hyderabad 500 032

**USER REQUIREMENT
SPECIFICATIONS**

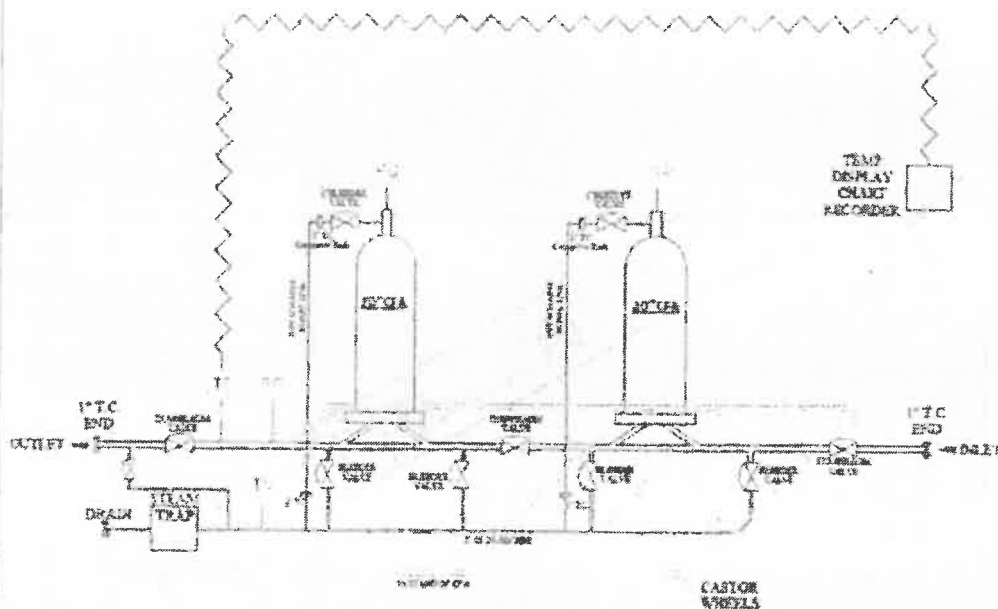
**20 INCH CARTRIDGE
FILTRATION SYSTEM**

**DEPARTMENT: HH -
PRODUCTION**

Page No.
4 of 5

Effective Date:
13 MAY 2022

SCHEMATIC REPRESENTATION OF MOBILE FILTRATION SKID



6.0 DOCUMENTATION REQUIREMENTS:

1. G.A. Drawing. ☒
2. Operation & Maintenance manual ☒
3. Instruction manual. ☒
4. Material test certificates. ☒
5. Calibration certificates (If applicable). ☒
6. Warranty certificates. ☒
7. Validation documents (DQ, IQ, and OQ if applicable). ☒
8. Qualification certificates of the technical personnel who has worked in welding and assembly of the equipment shall be available on request. ☒
9. Component list ☒
10. Welding inspection reports. ☒

7.0 DISCUSSION/REVIEW/COMMENTS:

1. The approved vendor has to submit the GA drawing as per attached drawing before proceeding for the fabrication. ☒
2. Additional 2 numbers of 10 inch housings to be provide for mobile skid. ☒

	HUMAN BIOLOGICALS INSTITUTE (A division of Indian Immunologicals Ltd.) Rakshapuram, Gachibowli Post, Hyderabad 500 032	USER REQUIREMENT SPECIFICATIONS	Page No. 5 of 5
		70 INCH CARTRIDGE FILTRATION SYSTEM	Effective Date: 13 MAY 2022
		DEPARTMENT: HH - PRODUCTION	

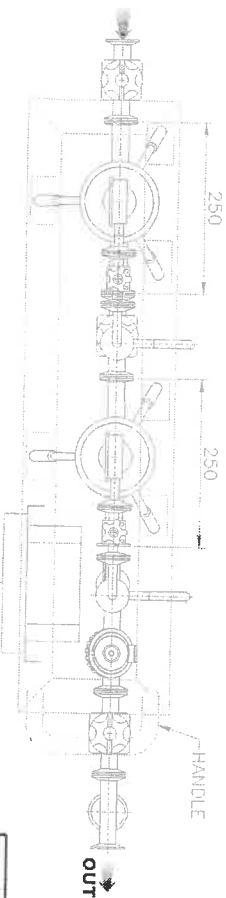
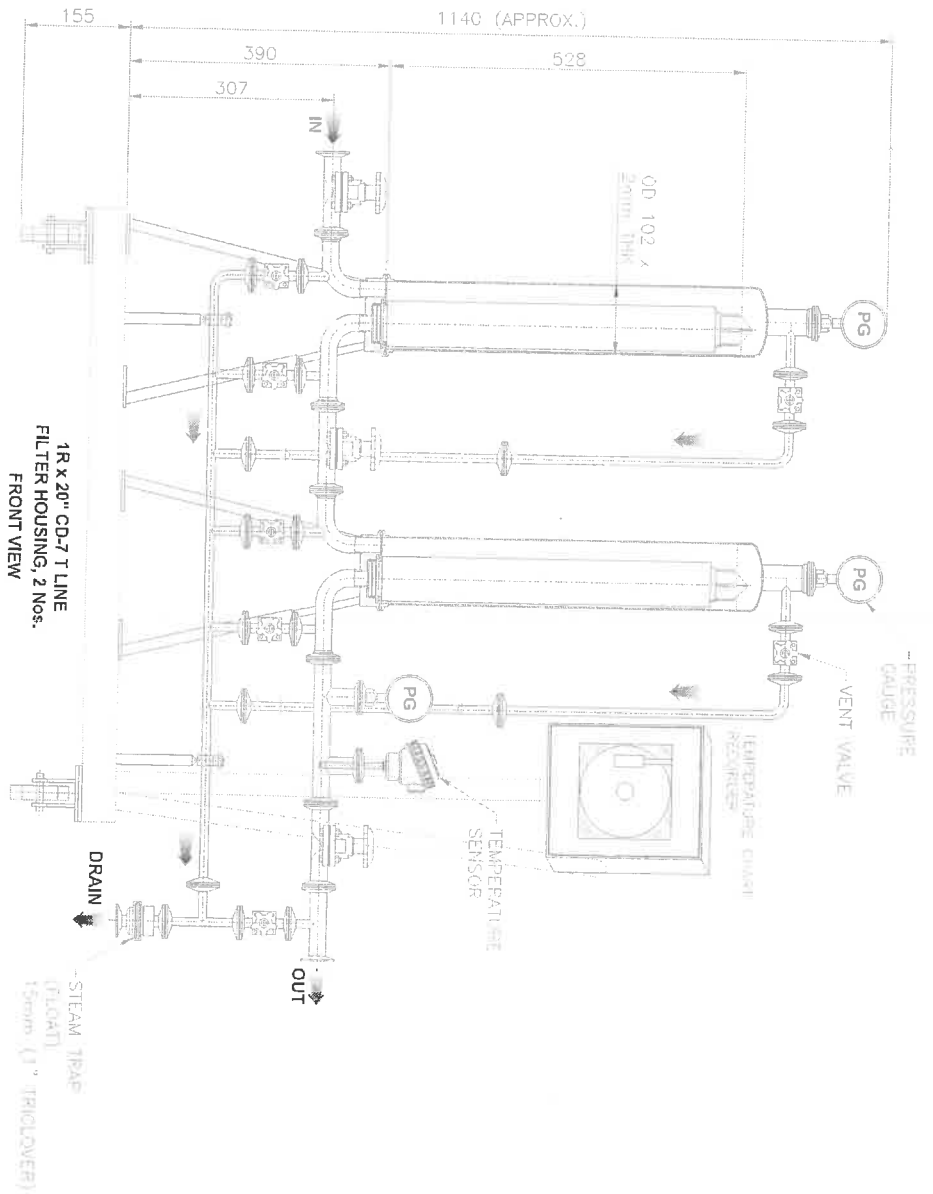
	NAME	DESIGNATION & DEPARTMENT	SIGN AND DATE
PREPARED BY	K. Janaki Ram	Op. manager Production	 12.05.22
REVIEWED BY	P. Veera Srida Reddy	Manager - Engrg	 12.05.22
	L. Chinakan	DEM Production	 12.05.22
	V. Srinivas	DEM Manufacturing	 12.05.22
APPROVED BY	C.S. Murthy	Sr. Manager - QA	 12.05.22

M/s. Microfit

Himanshu. Head - QA
Patel.



TDS-30 - IRR B5 0001 22



TOP VIEW

DESIGN CONDITIONS		SPECIFICATION	
DESIGN CODE	ASME SECTION VIII DIV II	QTY.	1-SET
WORKING PRESSURE KG/cm ² g	10.0	SHELL	10.0
DESIGN PRESSURE KG/cm ² g	5.0	WORKING TEMP. °C (MIN./MAX.)	90°C
WORKING TEMP. °C	148°C	HYDRO TEST PRESSURE KG/cm ² g	7.0
MOUNTING	TROLLEY MOUNTING		
IR FILTER HOUSING DOME/BASE		MOC	QTY.
SKID	SS316L		2
WHEEL	SS304		1
DOME/CLAMP	PI		4
SUPPORT LEGS	SS304		2
GASKET/O' RING	SS304		6
FILTER ELEMENTS	FOOD GRADE SILICONE		1-SET
			2
ACCESSORIES			
PRESSURE GAUGE	VENT/ DRAIN/ SAMPLING VALVE	IN/OUT VALVE	
MADE NESTECH	SAUNDERS	SAUNDERS	
TYPE GINGERIN FILLED DIAPH	DIAPHRAGM VALVE	DIAPHRAGM VALVE	
SIZE 65mm DIAL	1/4" (6mm)	25mm	
RANGE -1 to 6.0 kg/cm ² g	--	--	
QTY. 3	7	3	
TEMPERATURE SENSOR			
MAKE REDIX or EQUIVALENT			
CONNECTION			
INLET FOR HOUSING	25MM OD PIPE WITH 1" TRICLOVER		
OUTLET FOR HOUSING	25MM OD PIPE WITH 1" TRICLOVER		
DRAIN/SAMPLING	1" TRICLOVER		
AIR VENT	1" TRICLOVER		
PRESSURE GAUGE	1.5" TRICLOVER		
TEMPERATURE SENSOR	1.5" TRICLOVER		
NOTES :-			
1. ALL DIMENSIONS ARE IN MM			
2. ALL SHARP CORNERS TO BE CHAMFERED			
3. ALL WELDS TO BE GROUNDED SMOOTH & ROUNDED			
SURFACE FINISH : EXTERNAL : 40 Rm A11 MICRO			
INTERNAL : 40 Rm A11 MICRO			
TOLERANCE ± 5mm UNLESS OTHERWISE SPECIFIED			

MICROFILM

INDIAN IMMUNOLOGICALS LTD

DRAWN: Sudesh 25.05.22
CHKD: Manoj 25.05.22
APPRD: PROJ. No. 1
SHEET : 1 OF 1
REV

GA FOR 1R x 20" CD-7 T LINE HSG
FOLLOWED BY 1R x 20" CD-7 T LINE HSG

REVISION

REV NO	DESCRIPTION	MD BY	CHKD	DATE
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

SIZE: A3
DRAFTING NO: 106A-A0402D02C
O