

# INVENTION DISCLOSURE FORM



**NMAM INSTITUTE  
OF TECHNOLOGY**

This form should be used by Researchers/Inventors of the NMAMIT, completed with a view to securing and obtaining patent protection for the same. This form is essentially designed to help the Researchers/Inventors to organize their thoughts about their invention in a structured manner. The Inventors are encouraged to explain their invention in an extremely simplistic manner and in complete terms so as to allow a person not familiar with the relevant technology to easily understand the disclosed invention. The disclosed invention would enable IP Attorneys in assessing its patentability and drafting a patent application on the same.

**This invention disclosure form contains information that is proprietary and highly confidential. Unauthorized possession, viewing, or distribution of the form is strictly prohibited.**

**HIGHLY CONFIDENTIAL**

## GUIDELINES TO FILL THE INVENTION DISCLOSURE FORM

Following are some guidelines that would help you in disclosing your invention in this Invention Disclosure Form (IDF):

- Please consider IP Attorneys as people who do not have any understanding of the technology in which your invention has been made, while disclosing the invention. Kindly disclose your invention to the fullest possible.
- Please do not limit yourself only to the specific method/process, formulation/composition, product/device or prototype that you have invented, while disclosing your invention but also consider identifying all the possible modifications/alternatives of your invention. Kindly explain all the identified modifications/alternatives in detail as well.

**Note:**

- *Please remember your competitors could easily design around your invention and come up with alternatives/modification, which when not properly disclosed in the IDF may provide your competitors with competitive advantages over your invention.*
  - *The best way you could think of the alternatives/modifications is to consider yourself as your own competitor!!*
- Inventors are encouraged to use ordinary and known technical terms to describe their invention. In case, some unusual terms are used then their appropriate definition must be provided.
- The invention must be explained with reference to the properly labeled drawings and flowcharts.
- The IDF is divided into following sections:

Sections	Purpose
Section- I	For disclosing details on the Applicant/Assignee and Inventor
Section-II	For disclosing details on the background of your invention
Section-III	For disclosing details of your invention
Section- IV	For disclosing Legal information relating your invention
Section-V	Miscellaneous information

## SECTION-I: DETAILS OF THE ASSIGNEE/APPLICANT AND INVENTORS

Please provide below complete details of the Assignee/Applicant to which the invention is assigned by the inventors.

Name of the Assignee	
Registered address of the Assignee	
Name of the Department and Campus from where the invention is originating	
Name of the Head of Department (HOD)	
Contact details of HOD	
Email ID of HOD	

Please provide details of all the inventors who have contributed to the invention. Feel free to add details of any additional inventors if required.

Name of the first inventor (surname followed by first and middle names)	
Nationality	
Address for communication	
Permanent address	
Contact details	
Email ID	

Name of the second inventor (surname followed by first and middle names)	
Nationality	
Address for communication	
Permanent address	

Contact details	
Email ID	

Name of the third inventor (surname followed by first and middle names)	
Nationality	
Address for communication	
Permanent address	
Contact details	
Email ID	

## **SECTION- II: BACKGROUND INFORMATION OF THE INVENTION**

1. Please write a brief background of the technology on which the invention has been made.
2. Please write a brief background of the direct area/areas of application and use for which the invention has been made.”
3. What are the existing problems of the technology that your invention proposes to solve? Have any previous attempts been made to solve these problems? Yes/No  
If YES, how and by what means and what are their drawbacks/deficiencies?
4. How your invention proposes to overcome the above noted problems?
5. Have you conducted any prior art search at your end on your invention? If YES, please YES  

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<sup>1</sup> Prior art search- This is a kind of search that inventors may conduct/undertake at their end to ascertain whether their invention is new and inventive over existing technologies.
6. Who all could be the major research groups/competitors with IPR activities in India and abroad working specifically in the area of application of your invention? Please suggest some names. If any.

### SECTION- III: DETAILS OF THE INVENTION

1. Please provide a short title of the invention in not more than 15 words. The title should be clear and succinct.
2. Does your invention relate to an Apparatus/Device/System; Method/Process; Formulation/Composition; or a combination of the above? Please specify.
3. What are the objectives of your invention?
4. **Working of the invention:**

- a. For the invention being a 'novel' process/method steps-  
Please list down all the process/method steps and discuss the listed steps in detail including all the process parameters. Please provide a detailed description of how your invention operates when all the process/method steps are executed. Most importantly, please explain how these steps when executed achieve beneficial results like synergistic effect, yield, etc. with respect to the known processes.

**Note: Please attach drawings and flowcharts explaining the process/method steps. Provide experimental data and/or graphical data (if available) in support of the obtained beneficial results.**

- b. For the invention being a 'novel' Apparatus/Device/System-  
Please list out the various components and technical features of the Apparatus/Device/System. Please explain the functions of the components and technical features, establish their connectivity with each other, and explain operation of the device/apparatus/system.
- c. For the invention being a 'novel' Formulation/Composition-  
Please list out the various components and constituents of the Formulation/Composition. Please mention concentrations/range of concentrations of each of the components and constituents and explain working of the invention by describing how the various components interact with each other. Most importantly, please explain how these components interact with each other to give a beneficial result i.e., synergistic effect, higher purity, lesser toxicity, etc. (Please attach additional sheets if the space provided herein is not sufficient)

**Note: Please attach relevant drawings. Provide experimental data and/or graphical data in support of the obtained beneficial results.**

- d. What are the novel features/steps of your invention?

- e. What are the advantages of your invention?
- f. What is the primary business or product application of your invention? Are there other business or product application that might extend past your immediate focus?
- g. What could be the possible Modifications/Alternatives of your invention, if any?\_  
**Think yourself as a competitor of your invention.**
- h. Has the invention been made and/or tested? Please provide details of any working example(s) that you would have.

#### **SECTION-IV: LEGAL INFORMATION RELATING YOUR INVENTION**

1. When did you first conceive the idea and begin working on your invention?
2. At what development stage currently your invention is? Is your invention at present in the form of a concept/partially developed/completely developed/ready for commercial launch, etc.? If ready for commercial launch, please mention the projected date.
3. Are you planning any sort of disclosure of this invention soon? If YES, please provide approximate dates and locations.
4. Has the invention been part of any previous commercial production? If YES, please provide the details along with the date of first production.
5. Has the invention ever been disclosed in news magazines, journals, academic and other publications, or demonstrated publicly in an event, conferences, on web, any third party (such as suppliers, fabricators, collaborators), offered for sale, oral disclosures, etc. Yes/No  
*If YES, please provide us with the details of event including to whom, when and where you have disclosed or demonstrated your invention?*
6. *Was the event governed by an executed agreement, e.g. a confidentiality agreement? Yes/No  
If YES, attach the agreement.*
7. Is this invention in continuity/modification to an earlier filed Patent Application? If YES, please furnish the relevant filing details of the earlier filed invention application.
8. Is the invention going to be a joint development between your Institute and any other third party (Sponsors, Co-investigator)? Yes/No

If YES, please provide details of the third party and the nature of its contribution to the invention.

9. Has the invention potential of being licensed? Have you identified any potential licensee of the invention? If YES, please provide the details of the same.
10. Are there any contributors, within and outside the Institute, who contributed in conceptualization and/or reduction to practice of your invention? The contribution should be more than a purely mechanical way. If YES, please provide their names.



**SECTION-V: MISCELLANEOUS INFORMATION**

Attestation:

I/We hereby verify that the foregoing information and details are true and correct. I/We understand that in accordance with my/our terms of employment and associated agreement (s), the intellectual property rights to this invention belong to NMAMIT, Nitte

Full name of the first inventor	Dr. Muralidhara
Signature	<i>Muralidhara R</i>
Date	20/1/2022

Full name of the second inventor	Dr. Rathnamala Rao
Signature	<i>Rath</i>
Date	20/1/2022

Full name of the third inventor	Sandesh Nayak
Signature	<i>Sandesh</i>
Date	20/01/2022

Full name of the HOD	Dr. Muralidhara
Signature	<i>Muralidhara R</i>
Date	20/01/2022

Remarks by the HOD: Provide views on the invention (if possible)

The piezo-hydraulic pump with active valve is a novel pump design with metallic bellows as the pumping chamber which replaces the existing positive displacement piston chamber for the pump. Active valves are controlled by flexurally amplified piezo-actuators which helps in operation of the pump at higher frequencies.

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