



# Xceptional Instruments

1200 Grand St. Suite 423  
Hoboken, NJ 07030  
PH: 315-750-4345  
Fax: 408-409-1015

<b>Company Info:</b>	<b>Contact Info:</b>
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### 1. Business type:

- Pharma   
  Biotech   
  University   
  CRO (contract R&D)   
  CMO (contract manufacturing)
- Other (please specify): \_\_\_\_\_

### 2. Development Stage / Application:

- Hot Melt Extrusion   
  Twin Screw Granulation
- Feasibility:** Early development, proof of concept or volume polymer characterization of HME/TSG
- Early Formulation:** Discovery + non cGMP formulation demands. Few grams of material but scale up is important
- Formulation:** cGMP formulation demands. More material is available but scale up is important
- Pilot Production:** cGMP & scale to production requirements, integration and process optimization
- Production:** Process simplification; scale up or scale out demands

### 3. Formulation challenges:

- Solubility Enhancement (BCS Class II / IV API)   
  Controlled / Modified release dosage form
- Enhance stability of dosage form   
  Other (Please Specify) \_\_\_\_\_

### 4. Sample Information: *Input values as necessary*

Sample Volume (g):

Formulation Breakdown  
(% polymer / % API):

### 5. Materials Properties:

	Material Name	Pellets	Powders*	Liquid	Super-critical Fluid	Gas
Primary:	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Secondary:	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other:	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### 6. Dosage form(s) to be developed: *(select all that apply)*

- Tablets   
  Capsules   
  Oral dispersions
- Implants   
  Transdermals   
  Other (Please Specify): \_\_\_\_\_

### 7. Desired Feeder Properties: *Input values as necessary and all that apply*

- Operation:   
 Manual or   
 Color Touch Screen HMI\*;   
 Integrated or   
 Stand Alone\*
- Precision:   
 Volumetric\*   
 Gravimetric
- Feeder Qty:   
 Manual \_\_\_   
 Vol. \_\_\_   
 Grav. \_\_\_   
 Liquid \_\_\_
- Feeder 1 Rates:   
 Material \_\_\_\_\_   
 Min \_\_\_\_\_   
 Max \_\_\_\_\_   
 Density \_\_\_\_\_
- Feeder 2 Rates:   
 Material \_\_\_\_\_   
 Min \_\_\_\_\_   
 Max \_\_\_\_\_   
 Density \_\_\_\_\_
- Feeder 3 Rates:   
 Material \_\_\_\_\_   
 Min \_\_\_\_\_   
 Max \_\_\_\_\_   
 Density \_\_\_\_\_
- Feeder 4 Rates:   
 Material \_\_\_\_\_   
 Min \_\_\_\_\_   
 Max \_\_\_\_\_   
 Density \_\_\_\_\_



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## 8. Desired Extruder Properties: *Input values as necessary and all that apply*

Operation:  Co-rotating\*  Counter-Rotating  
 Controls:  Simple  Color Touch Screen HMI\* (Separate Enclosure  Yes  No)

Barrel Diameter:  5mm\*\*  9 mm\*\*  12 mm\*\*  16 mm  Custom \_\_\_\_\_

Primary Barrel L/D:  15  20  25  30\*  40  Other\_\_\_\_  
 Second Barrel L/D:  15\*  20  25  30  40  Other\_\_\_\_  
 Feeding Ports:  Standard\*  Powder\_\_\_\_  Pellets\_\_\_\_  Liquids\_\_\_\_  Side\_\_\_\_  Gas\_\_\_\_

Primary Screw set:  Solid\*  Modular  Low Shear  Med. Shear\*  High Shear  
 Second Screw set:  Solid  Modular\*  Low Shear  Med. Shear  High Shear

Temperature Control:  Liquid  Electric\*  Electric with Cooling  
 Temperature Range:  Sub-Ambient  up to 230 C\*  Above 230 C\_\_\_\_

Dies/Nozzles:  Round\* \_\_\_\_\_  Tape \_\_\_\_\_  Catheter  Other \_\_\_\_\_

9. Extrudate Handling:  Conveyor Belt  Spheronizer  Pelletizer  Tablet Calender  Other \_\_\_\_\_

10. Project Time Lines:  Exploratory  Budgetary  This year  Next Year  Short-Term Rental

11. Environment:  Lab  Clean Room  Containment Box  Other \_\_\_\_\_

12. Lay out: \_\_\_\_\_

## 13. Special Design Requirements (*continue on back as necessary*):

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Type Name: \_\_\_\_\_

Title: \_\_\_\_\_

\* Recommended/Standard

\*\* Available in both 5mm and 9 mm, or 5 mm and 12 mm, or 9 mm and 12 mm