



# Blending

# Questionnaire

Please complete and return to Jiskoot

Customer ref \_\_\_\_\_  
 JAC ref \_\_\_\_\_  
 Blender type \_\_\_\_\_  
 Blender throughput \_\_\_\_\_  
 Batch sizes \_\_\_\_\_

### Stream data

Fluid \_\_\_\_\_  
 Line size \_\_\_\_\_  
 Flow  
     Maximum \_\_\_\_\_  
     Normal \_\_\_\_\_  
     Minimum \_\_\_\_\_  
 Operating temp  
     Maximum \_\_\_\_\_  
     Normal \_\_\_\_\_  
     Minimum \_\_\_\_\_  
 Base temp \_\_\_\_\_  
 Pressure  
     Maximum \_\_\_\_\_  
     Normal \_\_\_\_\_  
     Minimum \_\_\_\_\_  
 Press design/line rating \_\_\_\_\_  
 Press at pump inlet \_\_\_\_\_  
 Press at pump discharge \_\_\_\_\_  
 Press at stream inlet \_\_\_\_\_  
 Press at blend header \_\_\_\_\_  
 Viscosity at temp \_\_\_\_\_  
 Viscosity at temp \_\_\_\_\_  
 Viscosity at temp \_\_\_\_\_  
 SG at temp \_\_\_\_\_  
 RVP/flash/pour point \_\_\_\_\_  
 Handling problems \_\_\_\_\_

	STREAM 1	STREAM 2	STREAM 3	STREAM 4
Fluid				
Line size				
Flow				
Maximum				
Normal				
Minimum				
Operating temp				
Maximum				
Normal				
Minimum				
Base temp				
Pressure				
Maximum				
Normal				
Minimum				
Press design/line rating				
Press at pump inlet				
Press at pump discharge				
Press at stream inlet				
Press at blend header				
Viscosity at temp	/	/	/	/
Viscosity at temp	/	/	/	/
Viscosity at temp	/	/	/	/
SG at temp				
RVP/flash/pour point				
Handling problems				

Blending Questionnaire

### General data

Services available  
     Electrical \_\_\_\_\_  
     Instrument air \_\_\_\_\_  
     Steam \_\_\_\_\_  
     Other \_\_\_\_\_  
 Location/area classification  
     Control electronics \_\_\_\_\_  
     Field equipment \_\_\_\_\_  
 Distance between field and control equipment \_\_\_\_\_  
 Will analysers be used for quality control? Yes/No \_\_\_\_\_  
 Blender to interface with computer? Yes/No \_\_\_\_\_  
 Is a printer required Yes/No \_\_\_\_\_  
 Pump sequencing Auto/Manual \_\_\_\_\_

What analysers, what stream? \_\_\_\_\_  
 What make? \_\_\_\_\_  
 What interface \_\_\_\_\_  
 Tank line up Auto/Manual \_\_\_\_\_



## Details required for assessment of blending facilities

### 1. Details of blend formulations

- The required blender throughput for each formulation.
- Required batch size for each blend.
- What is the final viscosity, density etc, for each blend.
- Are requirements regular or in periodic supply.

### 2. Details of component stream

- The viscosity of each component at pumping temperature.
- Density of each component.
- The pressure of each component at blender inlet.
- The pumping temperature of each component at.
- Coefficient of expansion (temperature).
- The required volume accuracy for each component, base stock or additive.
- Details of component/additive contamination on different recipes.
- Any past experience on difficult additives, ie. additive tending to precipitate, or recommended pre-mixing of additives with the main component or base stock prior to blending.

### 3. Site layout

- Details of existing site layout showing proposed location of blender.
- The detail of stock and additive tank locations, and their distance from the proposed blender location.
- Present location of product pumps.
- Sizes of existing pipelines from stock and additive storage tanks to proposed blender location.
- Information on the proposed routing of cable runs and the existence of any cable trays.

### 4. Details of handling final blended product

- What services are to be supplied
  - ⇒ Pipeline
  - ⇒ Storage tanks
  - ⇒ Marine loading/bunkering
  - ⇒ Road/rail loading rack
  - ⇒ Can or drum filling machines
- Are there any existing "buffer" storage facilities feeding the above services.
- Distance of each "outlet" from blend header.

The pressure required at each outlet.

### 5. Existing equipment that may be used on the In-Line blender

#### Valves:

1. Manufacturer
2. Model no
3. Type, globe, disc, ball, etc  
If globe, single or double ported
4. Characteristic type  
(equal percentage, quick opening etc.)
5. Is positioner fitted
6. Size

#### Pumps:

1. Capacity
2. Outlet pressure
3. Manufacturer
4. Model no
5. Type, i.e. PD or centrifugal

#### Meters:

1. Manufacturer
2. Model, type
3. Size
4. Accessories fitted (ATC, counters etc)

Other Information: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Completed by: \_\_\_\_\_ Date: \_\_\_\_\_

