Overview

Note: *This feature is only available when using AccuLoad III-X Revision 10.01 firmware or better.*

AccuLoad III supports downstream additive injectors. Downstream injectors are defined as those that are plumbed downstream of the product meter. With a straight line product load arm or a sequential blending load arm, additive injectors are usually plumbed upstream. This allows the product meter to measure the additized product.

Ratio blending load arms present a greater challenge in the plumbing of additive injectors. For ratio blending applications, additive injectors may be plumbed into any or all of the product streams. Of course, the additive injector can only be delivered if it is plumbed into a product that is part of the recipe being delivered. This may require plumbing an additive into multiple products so that the additive can be delivered even when the recipe consists of a single product. This can be costly.

A solution is to set the additive injector(s) up as downstream injectors. This allows those additives to be available for delivery with any product in the blend since they are plumbed downstream of the manifold.

If an injector is plumbed downstream of the product meter the additive will not be metered by the product meter. Any additive injected downstream will be added to the product totals in proportion to the products pacing the additive. The end result is to have the same additive and product delivered for the batch as if the additive was plumbed upstream of the product meter. The following example indicates how downstream additive is added to the products.

Assume additive one is plumbed downstream of a two-product ratio blending arm. Assume throughout the course of the batch, product one flows at 80% of the total flow rate and product two flows at 20% of the total flow rate (80% product one – 20% product two ratio blending recipe). While the downstream additive is injecting, 80% of the additive injected into the blended product stream will be added to product one and 20% will be added to product two.

System 812, 815, 818, 821, 824, 827, 830, 833, 836, 839, 842, 845, 848, 851, 854, 857, 860, 863, 866, 869, 872, 875, 878, 881 – Additive Plumbing

Additive Injector selections are available dependent upon code 020. View Injector Plumbing lists the meter(s) into which the injector is plumbed.

Configure Injector Plumbing:

```
          812 Add #1 Plumbing
->   Meter 1
     Meter 2
     Meter 3

                  More…
```

Press ENTER.

```
          812 Add #1 Plumbing
                Meter 1

->   Yes
     No

                  More…
```

Meters selected have an asterisk.

```
          812 Add #1 Plumbing
->   Meter 1                              *
     Meter 2
     Meter 3

                  More…
```

Note: *Only Meter 1, Meter 2, and Meter 3 are available when using the AccuLoad III-S hardware.*

To configure the AccuLoad to support downstream injectors, System Parameters 812, 815, 818 … 881 in Program Mode must be properly programmed as indicated in the example below:

```
          812 Add #1 Plumbing

     Meter 1                          *
     Meter 2
     Meter 3
->   Downstream

                 More…
```

Setting this parameter to “Downstream” allows the AccuLoad to control Injector 1 as a downstream injector. The selection “Downstream” is available in firmware revisions 10.02 and above.

If the software revision is 10.00 or 10.01, the selection “Downstream” will not be available. With this scenario, no meters should have an asterisk next to them if the intent is to have the AccuLoad treat the injector as a downstream injector.

The “Recipe Injector” Directory will indicate plumbing of the injectors according to the setup in parameters 812, 815, 818 … 881. This is for verification purposes only. The following is an example:

```
                Recipe 1

->  Injector 1 (Downstream)
    Injector 2 (Downstream)
    Injector 3 (Upstream)
```

The specifications contained herein are subject to change without notice and any user of said specifications should verify from the manufacturer that the specifications are currently in effect. Otherwise, the manufacturer assumes no responsibility for the use of specifications which may have been changed and are no longer in effect.

Headquarters:
1803 Gears Road, Houston, TX 77067 USA, Phone: 281/260-2190, Fax: 281/260-2191

Gas Measurement Products:
Erie, PA USA Phone 814/898-5000
Thetford, England Phone (44) 1842-82-2900
Kongsberg, Norway Phone (47) 32/286-700
Buenos Aires, Argentina Phone 54 (11) 4312-4736

Integrated Measurement Systems:
Corpus Christi, TX USA Phone 361/289-3400
Kongsberg, Norway Phone (47) 32/286-700
San Juan, Puerto Rico Phone 787/274-3760
United Arab Emirates, Dubai Phone 971 +4/331-3646

Liquid Measurement Products:
Erie, PA USA Phone 814/898-5000
Longmont, CO USA Phone 303/702-7400
Los Angeles, CA USA Phone 661/296-7711
Slough, England Phone (44) 1753-57-1515
Ellerbek, Germany Phone (49) 4101-3040
Barcelona, Spain Phone (34) 93/201-0989
Moscow, Russia Phone (7) 495/564-8705

Melbourne, Australia Phone (61) 3/9807-2818
Beijing, China Phone (86) 10/6500-2251
Singapore Phone (65) 6861-3011
Chennai, India Phone (91) 44/450-4400

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