

# Large Residential / Small Commercial Multi Meter Excess Flow Valves



# Pressure Ranges

5 PSI\* to 1000+ PSI

\* Series 1100, 1800 & 5500 (2" only)

# Service Line Sizes

Polyethylene : 1" CTS - 2" IPS

## Large Volume EFVs

Series 1100



Series 2600



Series 1800



Series 5500



Series 10000



Steel:  $\frac{3}{4}$ " IPS – 2" IPS



# Flow Capacity Ranges

1000 SCFH - 10,000 SCFH Minimum Trip Flow at 10 PSI

## Series 1100

1100 SCFH @ 5 PSI  
2030 SCFH @ 60 PSI

## Series 1800

1800 SCFH @ 5 PSI  
3800 SCFH @ 60 PSI

## Series 2600

2600 SCFH @ 10 PSI  
4900 SCFH @ 60 PSI

## Series 5500

4800 SCFH @ 5 PSI  
10,100 SCFH @ 60 PSI

## Series 10,000

10,000 SCFH @ 10 PSI  
16,000 SCFH @ 60 PSI

# Sizing Recommendations

## **Consider** Minimum Pressure Conditions

- Larger Load Conditions Require More Scrutiny

## **Consider** Future Load Growth Potential

- Size right the First Time
- Pipe Capacity Vs Meter Capacity
- What is the largest Meter that could be installed?

## **Consider** Length of Service Line

# Length of Service Restrictions

**As Always:** Extra Scrutiny on Longer Service Lines

**As Always:** Extra Scrutiny on Lower Pressure Conditions

# Potential Installation Issues

Longer length large diameter service lines present long reset issues

- **Consider** Manual Shutoff UP or Downstream of EFV

# Realistic Commercial Availability

Service Line Applications Above 2"

- Custom Steel Flanged EFVs

Loads Above 25,000 SCFH

- Pushing the Limits of Flow Induced Pressure Drop EFV



# **Examples of Existing Customer Approach**

# Instructions

## Service Lines Serving a Single Meter (Residential and Commercial)

Determine the meter connection capacity

Determine the largest capacity EFV for the given pipe size and length

If the meter connection capacity cannot be met for the given pipe size and length use the EFV that satisfies the meter connection capacity

If the meter connection capacity is shown as N/A or is larger than the maximum EFV capacity(Series) for the pipe size – STOP, do not install an EFV

## Example Single Meter

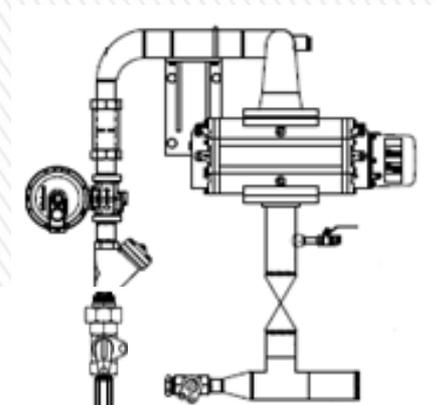
2" Service Line

Length - 400'

7M Rotary meter

Cap = 9000cfh @ 2" drop

EFV – 10,000cfh (max length 667')



## Max EFV capacity

1" cts service line

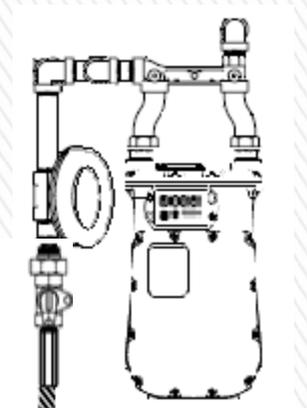
Length 110'

1 x 630 meter

- Capacity = 1400cfh @ 2" drop

EFV = 1800cfh (max length 258')

EFV = 2600cfh (max length 127')



# Instructions

## **SERVICE LINES SERVING MULTIPLE METERS**

(Residential and Commercial, including manifolds and split services)

- Determine the capacity of each meter setting served by the service line
- If there is an unused space on a manifold or split use the capacity of the largest meter that can be connected for this space
- Total the capacities for ALL meters and unused spaces
- Determine the largest capacity EFV for the given pipe size and length
- If the total meter connection capacity cannot be met for the given pipe size and length use the EFV that satisfies the meter connection capacity
- If any meter connection capacity is listed as N/A or the total capacity is larger than the EFV capacity (Series) for the pipe size– STOP, do not install an EFV

# Example: Manifold Setting

1" cts service line

Length 250'

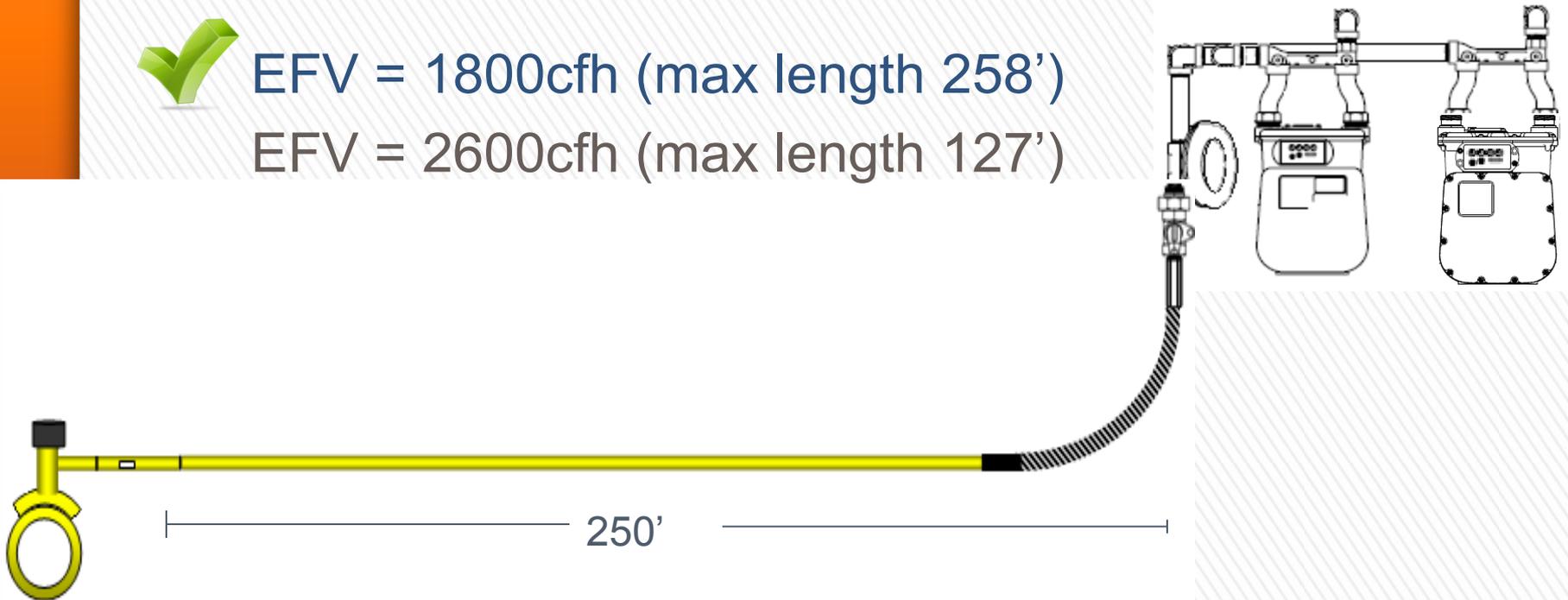
1 x 425 meter + 1 x 630 meter

Capacity = 1800 @ 2" drop



EFV = 1800cfh (max length 258')

EFV = 2600cfh (max length 127')



# Utilize Available Protection

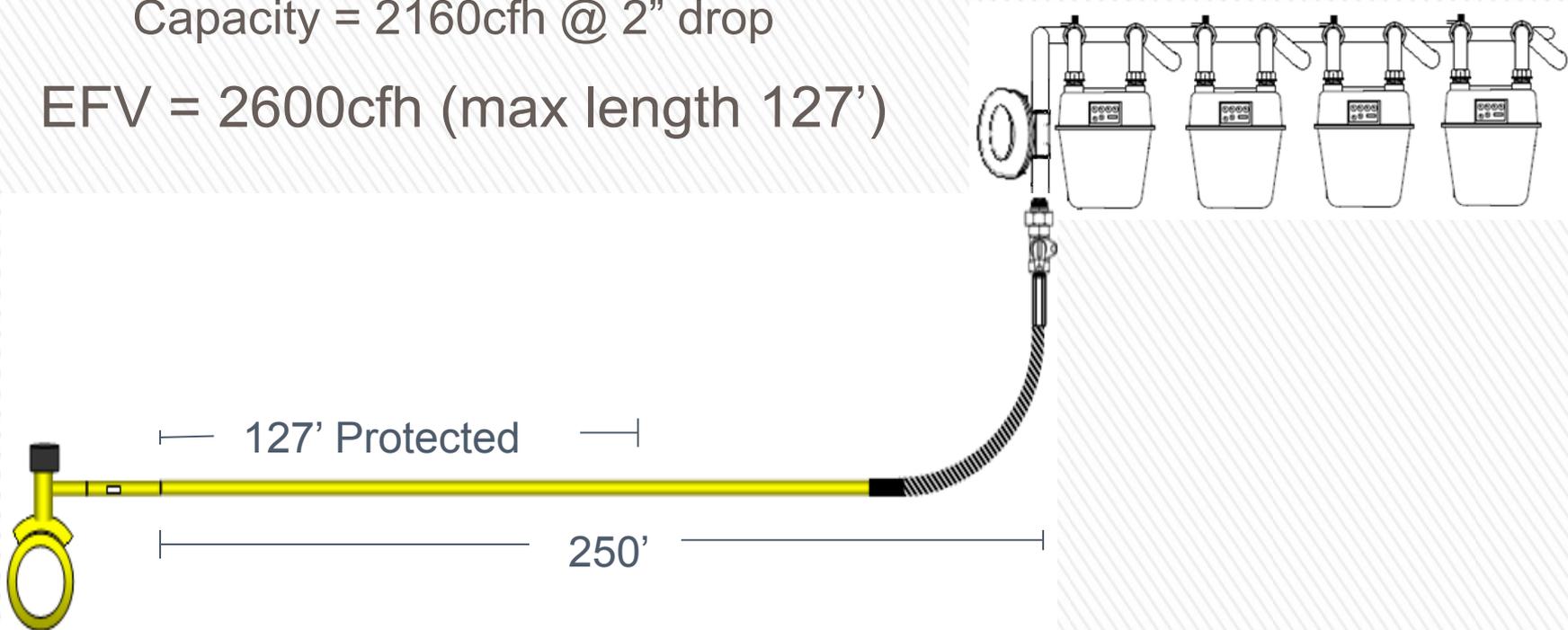
1" cts service line

Length 250'

4 x 250 meter

Capacity = 2160cfh @ 2" drop

EFV = 2600cfh (max length 127')



# Standards

## **All Valves Comply with:**

DOT 192.381

ASTM F 2138

MSS-SP-115

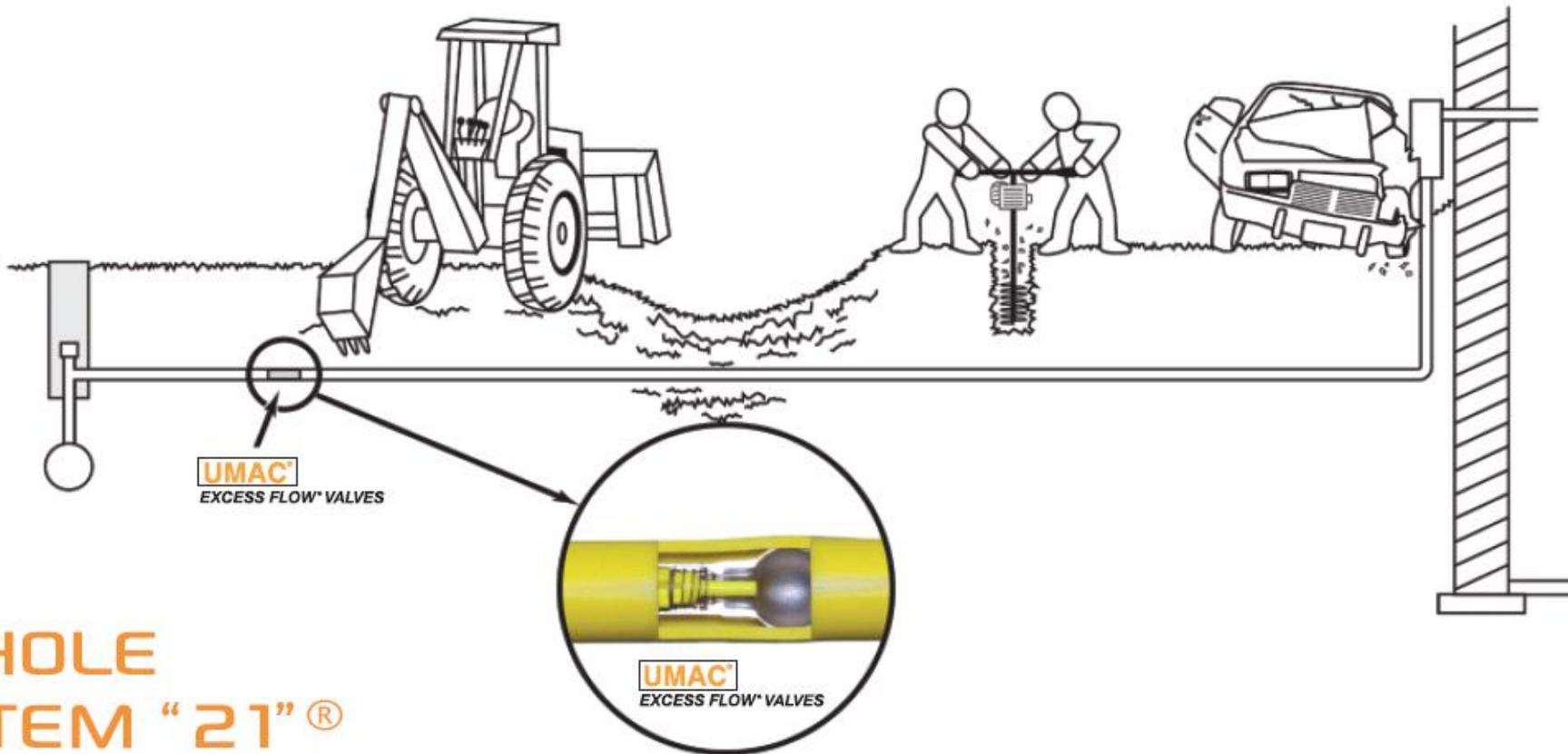
MSS-SP-142

# Testing

All EFVs Tested to or in Accordance with ASTM F 1802  
for Trip Flow and Bleed By

# **New EFV Technology**

Excess Flow Valves For Insertion into Existing Gas Services

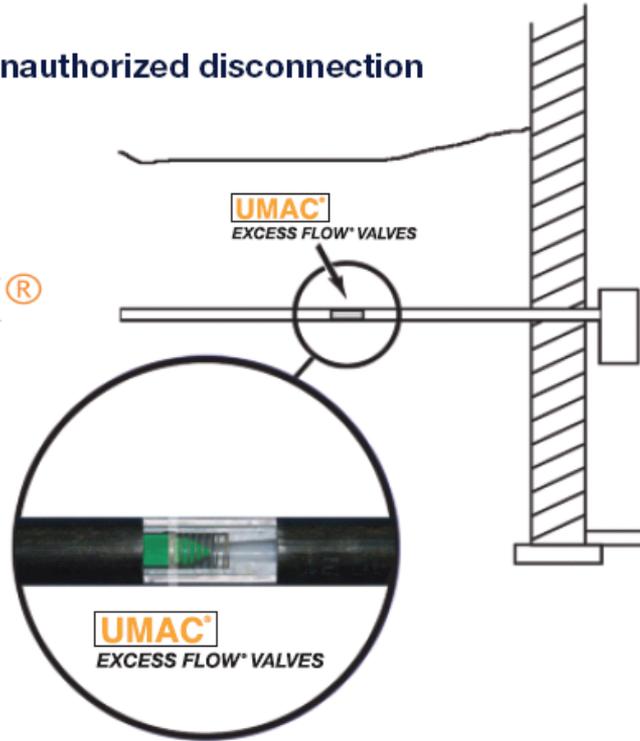


## NO-HOLE SYSTEM "21"®

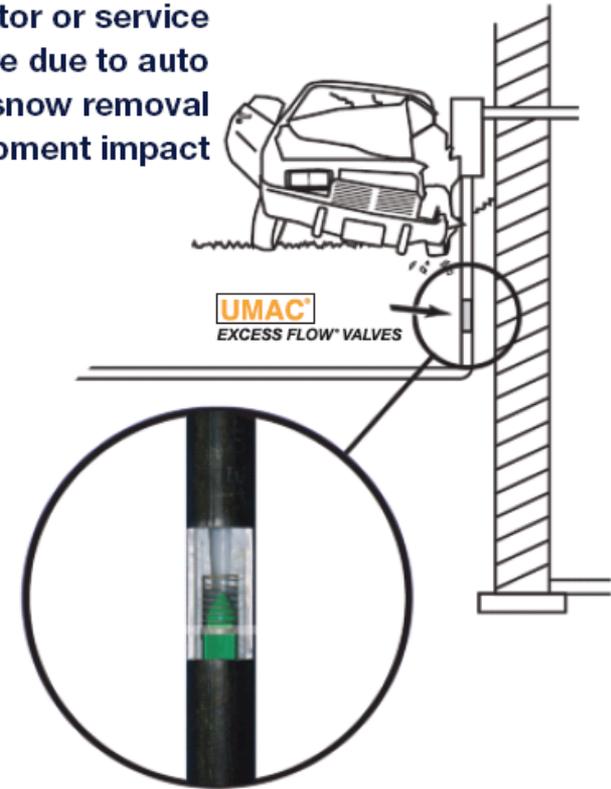
**UMAC EFVs are the leader in Excess Flow® Valve (EFV) technology. The No-Hole System "21" allows insertion of a special No-Hole EFV, up to 150 feet from the meter set, under live (pressurized) gas conditions in systems with normal operating pressures up to 150 psig without an excavation.**

# UMAC AUTOCOCK® EFVS

Unauthorized disconnection



Regulator or service  
line failure due to auto  
or snow removal  
equipment impact



**The UMAC AutoCock® Excess Flow® Valve is designed for installation under live gas condition, pressures up to 150 psig, in existing steel gas utility service lines or risers immediately upstream of the meter set. AutoCocks protect against unsafe conditions that result from damage to the exposed or aboveground portion of the service line.**



**Questions?**