



CNG Ultrafast Fill System

presented by

**Eurotec Engineering Corporation
&
Compac Industries (India) Limited**

Technology Partners

Oasis Engineering Ltd., New Zealand

Compac, New Zealand

A reputed, technology driven group providing high-tech equipment and services along with group company IDEC having **50 years' experience** in the Oil, Gas & Energy Sectors

Key Practice Areas

- **CNG / BIOGAS / HYDROGEN** – Compressors, Dispensers, Mobile Refueling Unit
- **CNG ULTRA FAST FILL SYSTEM** – Flow Products to enhance CNG Station Filling Efficiency
- **LNG INFRASTRUCTURE** – Small Scale LNG Liquefaction, LNG Station Equipment & Transport Modules, On Ground and Mobile Storage Tanks
- **CLEANTECH** – **Micro Gas Turbine, CO2 Capture & Liquefaction, Waste Heat Recovery, Energy Recovery from Gas Pipeline TurboExpander, Petrol Vapor Recovery** – Toxic Emissions Reduction
- **METHANE & GHG EMISSIONS MANAGEMENT** – **Fugitive Emissions** Quantification / Reduction
- **CUSTOM SOLUTIONS** – Biogas Projects, Gas Monetization, LSTK Projects, Gas Technology Consulting

CNG ULTRAFAST FILL SYSTEM

Oasis Engineering, New Zealand

Oasis 

MEMBER OF THE
ELAFLEX GROUP

The first system on the market that has maximized ultra-fast fill technology
across the CNG transfer process

- Design & manufacturing company based in New Zealand
- Subsidiary of **Elaflex Germany**, largest manufacturer of petrol nozzles in Europe
- Active in the CNG industry for over 30 years with presence in 40 countries
- ISO 9001:2015 Certified QMS: Commitment to Quality and Safety
- Focus Areas: High Flow, Safety, Serviceability

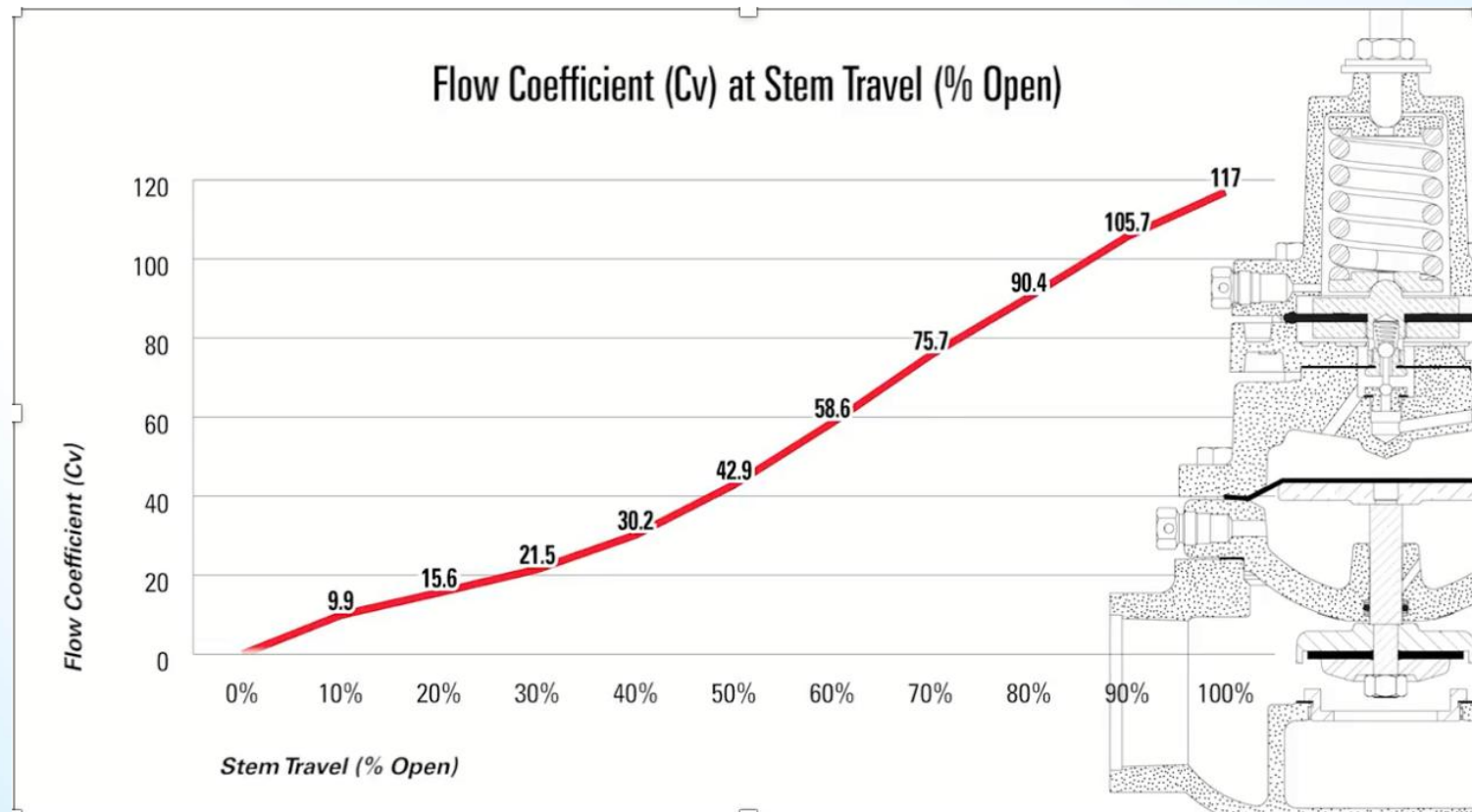
Valve Cv Coefficient



QUI

The flow coefficient of a device is a relative measure of its efficiency at allowing gas transfer

Higher Cv = Higher Flow (less restriction)



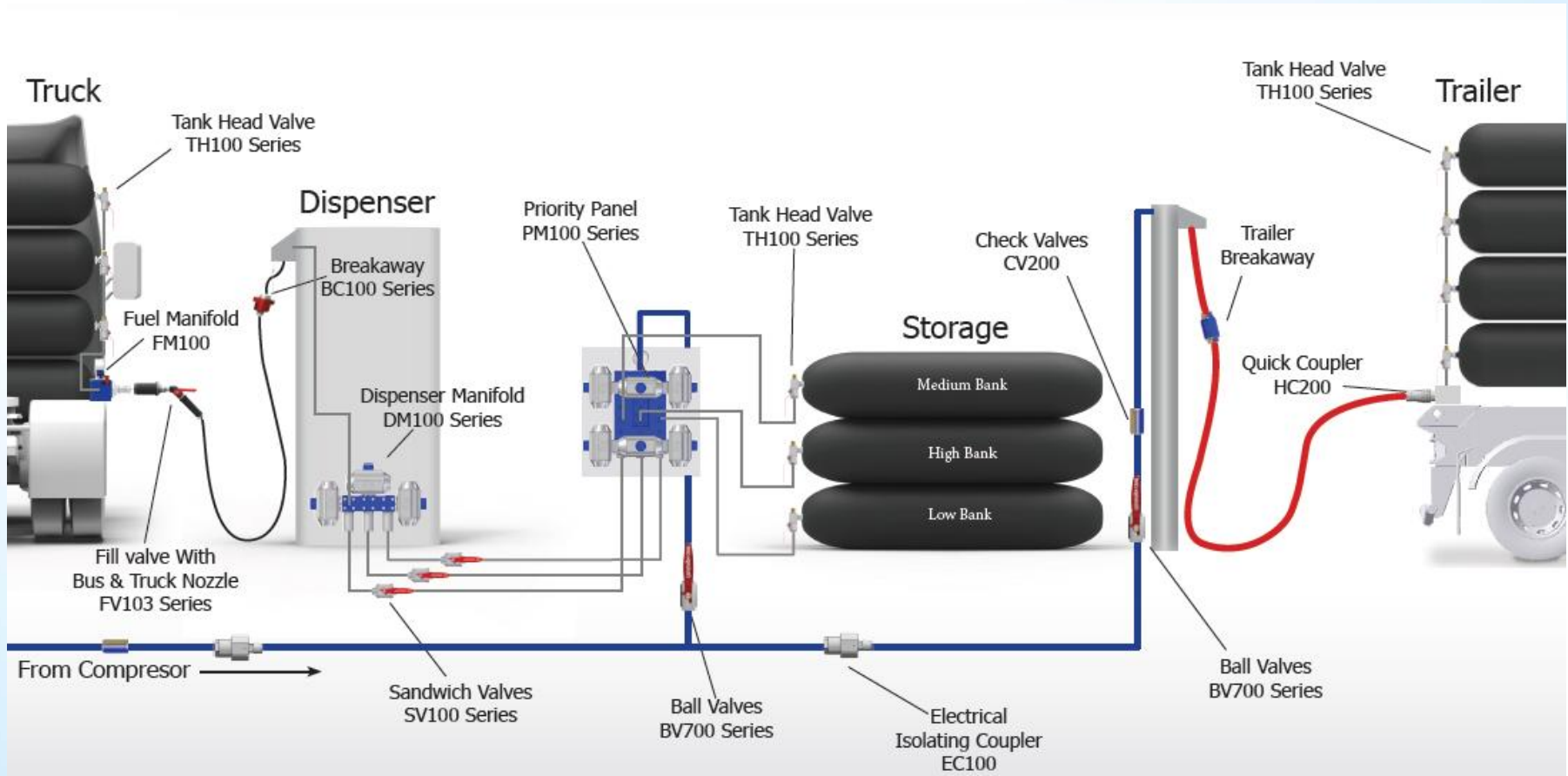


CNG Ultrafast Fill System



www.OasisNGV.com

The Oasis Ultra Fast Fill System presents all the components that Oasis has available for the ideal CNG transfer process

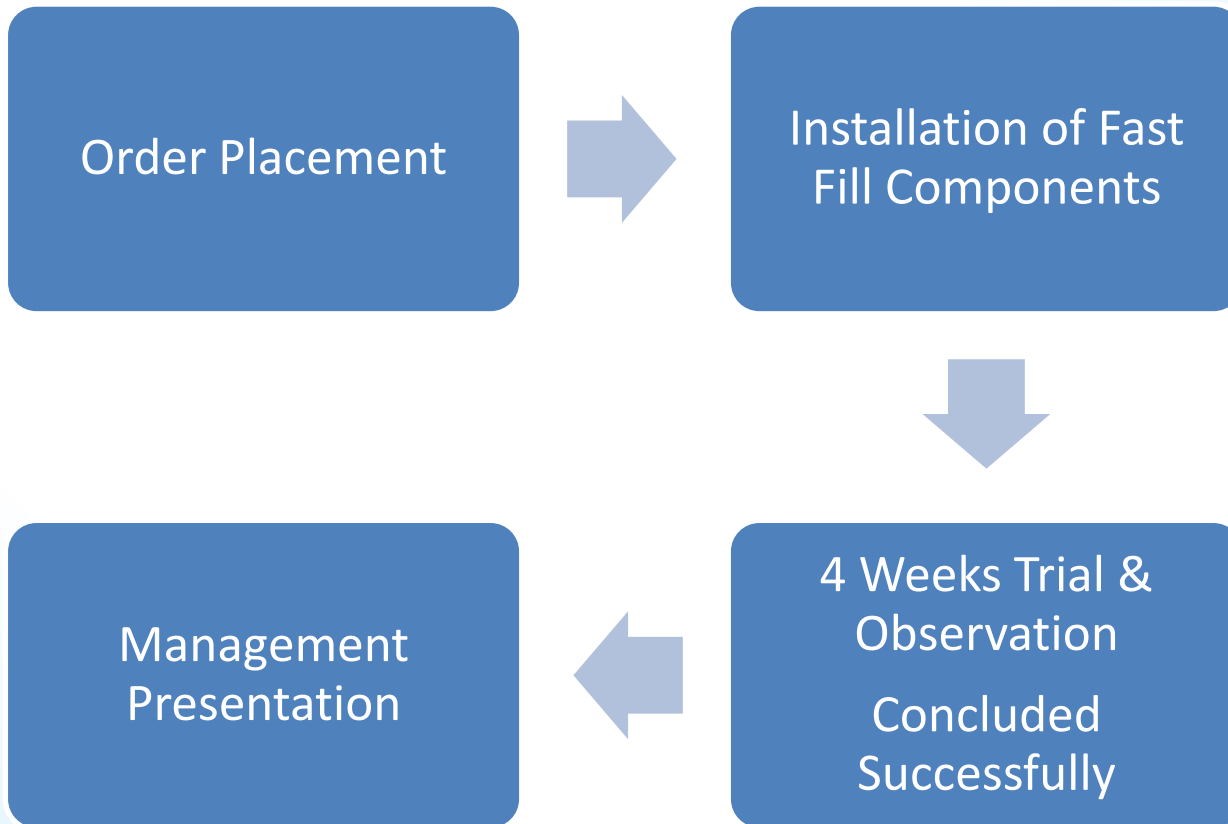




CNG Mother Station – MNGL Case Study LCV Cascade Filling

- Improve Cascade filling time
- Improve overall efficiency of the system
- Improve LCV filling time
- Better queue management
- Better customer satisfaction
- Less traffic congestion

Objective: Improve CNG Filling Efficiency for Cascade Sequence of Activities





Products used in Pilot Project – MNGL, Pune

BALL VALVES



ACTUATED BALL VALVES



3-WAY VALVE MANIFOLD



CHECK VALVES



QUICK COUPLERS



INLINE TRAILER BREAKAWAY





Observations – Vimal CNG Station

Sr No.	LCV Fill Post Data at Vimal CNG Stn.	Avg Filling Time per LCV (Minutes)	Efficiency Achieved (% Time saved)
1	Old Arrangement with NON-Modified LCV	33.17	
2	New Oasis Arrangement with Modified LCV	23.45	29.30 %
3	New Oasis Arrangement with Modified LCV	24.64	25.72 %
	Average Performance Improvement		27.51 %



Vimal CNG Station – Pilot Project





Vimal CNG Stn. – MNGL Operations & HSE Team





Vimal CNG Station – MNGL Management Visit



Reference Projects – Bulk LCV Cascade Filling

Projects Completed



Projects at Conclusion Stage



Projects at Supply Stage





Introducing Ultrafast Fill Dispenser for Vehicle Filling Improvement

presented by

Compac Industries (India) Limited





Current Challenges of CGD industry in Gas Dispensing

Major Challenges :

- Unmetered Gas sales
- Need for Faster CNG filling
- Possibility of In-Built Receipt Printers
- Trouble with Presets

Some of the CGD companies are increasingly demanding certain smart features in the dispensers so as to attract more customers:

- Live digital display for vehicle cylinder Pressure
- Live Flow rate measurement during refueling



Unmetered Gas Sales

We at  **compac** have taken the following measures to control this menace:

Family Integrity

All the electronic components Mass Flowmeter, Power card, Display & Processor board are electronically integrated through a unique code, so as to prevent any unauthorized substitution. The dispenser will go into error state, in case of any unauthorized substitution.

Fixed Chips

The software & RAM chips are fixed on the processor board and cannot be replaced, so as to prevent any unauthorized replacement.

Secure Door Locks

C5000 dispensers are equipped with high-security tamper-proof door-locks, the keys for which cannot be duplicated



Unmetered Gas Sales

SCADA Disabling feature

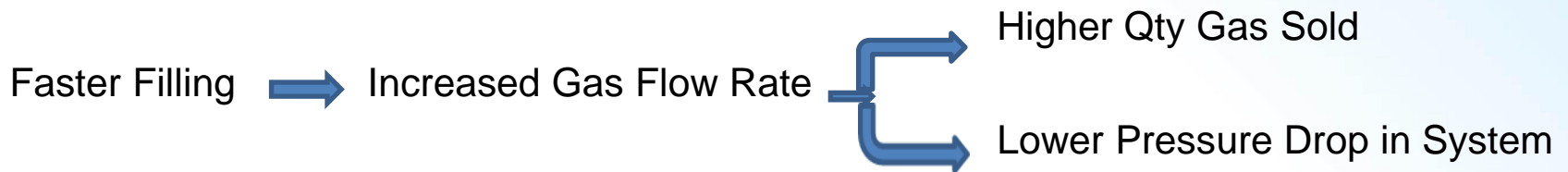
In case the SCADA is disconnected by some unauthorized person, the Dispenser functioning will be totally disabled. This feature can be switched On or Off by the owner, from the SCADA control room.

Zero Data-Loss in Internet outage

Even when the internet is down, the C5000 continues to store the date internally. This can be later downloaded or transferred to SCADA, as & when the Internet is restored.



Ultra-Fast CNG Filling



Method of reducing System Pressure Drop

- Use of Full-Bore Ball Valves
- NGV Nozzle with High Cv
- Break-Away coupling of High Cv
- Large bore hoses

The flow rate goes up by 25 to 30%



4 Hose Dispenser

- ❖ Can fill Four vehicles at a time
- ❖ Foot-print same as that for 2-Hose Dispenser
- ❖ Ideal for 2 & 3-wheelers
- ❖ Available in 3-bank and single bank designs
- ❖ Can also be used for filling cars





EUROTEC ENGINEERING
Integrated Solutions for Gas & Energy



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JOIN THE CNG REVOLUTION!

Thank You

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