# Alternative source of energy (substitution for natural gas) For installations with output 0,7 – 73 MW

Mixing system LPG with air can produce homogenous inexplosive mixture which can 100% substitute natural gas in all cases of its use.

Combustion properties are identical with those of natural gas.

Designed for commercial and large industrial natural gas consumers.

#### Advantages for our customers:

Not depending on natural gas supplies and price development.

It works in compliance with natural gas supplies.

Two sources = competitive surrounding = costs reduction.

No penalties for consumption exceeding or lower than the limit.

No modification of the systems (burners) needed – we guarantee compatibility.

Zero costs for technology, service, revision and maintenance of the installation – paid by PROFER GROUP.

You do not have to monitor gas quantity in the tank – by means of telemetric device we monitor the gas level at the dispatching.

#### LPG/AIR RATIO:

The mixture with natural gas can be done in whatever ratio needed.

#### THE FUNCTION PRINCIPLE:

The basis of the system is a mixer and a vaporizer. Each type of vaporizer uses a different kind of energy – electricity or gas – to transform LPG liquid into gaseous state and the diffusor-type mixer uses the gas pressure to suck needed amount of air into the system through a safety valve. The mixture is put under pressure in the mixer and at such state it enters the accumulator tank. The air is added by the compressor in order to obtain better output and bigger outlet pressures. The mixing is digitally cotrolled.

The homogenous mixture is without any changes distributed though the existing piping through measuring and regulating station to the burners working originally with natural gas only.

## Obrázek – popis:

Zásobník LPG = LPG storage tank Plnicí místo = Filling station Plynná fáze LPG = Gaseous phase of LPG Kapalná fáze LPG = Liquid phase of LPG Čerpadlo = Pump Směšovač = Mixer Výparník = Vaporizer Vzduch = Air

Homogenní směs LPG a vzduchu =Homogenous mixture of LPG and air

Plynovod = Gas pipeline

Zemní plyn = Natural gas

# Types of systems depending on the way of LPG evaporation:

#### DFM (with a vaporizer DirectFired – direct warming-up)

Combination of a vaporizer DF with a mixer.

For output 750 KW - 8 MW with outlet pressures 300 - 800 mbar for propane and 300 - 500 mbar for butane (without a compressor).

• Possibility of 100% closure means that these units are ideal for variable and steady installations.

#### XPM (with an electrical vaporizer XP)

Combination of an electic vaporizer XP with a mixer.

For output 750 KW - 6 MW with outlet pressures 300 - 800 mbar for propane and 300 - 500 mbar for butane (without a compressor).

- Ready to produce natural gas in one minute.
- Explosion-proof (Class I, Division 1, Group D).
- Possibility of 100% closure.
- Air inlet silencer.

### QM (with a vaporizer for waterbath)

Combination of a vaporizer Q with a mixer.

For output 750 KW - 44 MW with outlet pressures 300 - 1 bar for propane and 300 - 500 mbar for butane (without a compressor).

- Integrated operation control system, user interface, economical mode.
- Air inlet silencer.

#### <u>Tabulka – popis:</u>

Výstupní tlak = Outlet pressure Výkon = Output Objem akumulační nádrže = Accumulator tank capacity Min. výstupní tlak = Min. outlet pressure

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