

<u>Main Office</u>: 1135 Lance Road, Norfolk, Virginia 23502 Quality Equipment and Service Since 1962

**Branch Office:** 

4715 Stockholm Court, Charlotte, NC 28273

email: info@uapc.com

Telephone: 757-461-0077 Telefax: 757-461-0808 Telephone: 704-374-0600 Telefax: 704-374-1008

# **Enclosed Compressor System for Fueling Vehicles with Natural Gas (CNG):** 5 to 50 HP, Air Cooled Design



MODEL:*(HP = motor Horse Power)	UR40E - (HP)*	UR50E - (HP)*	UR65E - (HP)*
Manufacturer:	Universal Air Products GPD		
Power (Electric Motor):*	5 to 20 HP*	10 to 30 HP*	15 to 50 HP*
Inlet Pressure:	1 inch WC or	1 inch WC or	1 inch WC or
	higher	higher	higher
Discharge Pressure:	6000 psig maximum		
Flow (subject to inlet /outlet):	5 to 25 SCFM	10 to 35 SCFM	20 to 80 SCFM
Vehicles fueled / day:	Consult sales representative		
Compression Stages:	4	4	4
Cooling System Design:	Air	Air	Air
Electrical Classification (USA)	NEC NEMA Design 7, Class 1, Division 2, Group C, D		
Electrical Voltage / Hz	200 to 575V (50 or 60 Hz)		
Electrical Phase (Ph)	1 Ph to 10HP; 3	1 Ph to 10HP; 3 Ph	3 Ph
	Ph all HP	all HP	

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<sup>\*</sup>Larger HP Systems Available



# **Additional NG Compression System Features Include:**

- Structural steel base frame, fork-liftable
- Full system steel enclosure with oil-resistant, sound and ambient insulation; ventilation louvers and fans; pitched roof with ridge vents, heat reflective roof panels; lift-off (trigger latch) 16 gauge steel access panels,
- PLC (programmable logic control)
- Digital message board with fault history and real time readings for all sensors
- Common fault indicator light for programmed shutdown conditions
- Full voltage motor starter and electrical control system mounted and wired
- Control voltage circuit with step-down transformer
- Motor overloads
- Power-on light
- Emergency kill (mushroom) switch
- On-off switch for start/stop control (two-way switch)
- Face gauge panel, including 1st stage thru final discharge pressure and oil pressure.
- Face gauge for final system pressure prior to the pressure maintaining valve
- Discharge pressure sensor with infinite setting control and multiple set points
- Low and high inlet pressure sensor
- Low oil pressure sensor
- High outlet temperature sensor (1<sup>st</sup> & 4<sup>th</sup> stages)
- Contacts provided for remote monitoring of system controls
- Built-in air cooled intercoolers and aftercooler
- Moisture separation, all stages
- Auto condensate drainage, all stages
- Cartridge dryer / filtration manifold, installed
- Forced lubrication system with oil pump and filter
- Crankcase breather piped to inlet or vent (subject to inlet conditions)
- Automatic compressor unloading system with vented to vapor recovery tank
- Non-return valve at discharge
- Minimum pressure valve at discharge
- Finish paint in blue or light gray enamel
- ASME, inlet gas surge tank with pressure gauge and gas tight relief valve
- Integrated vapor recovery system with ASME storage vessel regulated to system inlet
- Detailed general arrangement, electrical and flow diagrams for customer review and approval prior to system construction
- Detailed operations, maintenance and parts manuals provided in electronic or hard copy format (Standard English, alternate languages available at option)

### **Typical Feature/Options Available:**

- o Completely custom designs
- Larger horse power (kW)
- Water cooled compressor or aftercooler designs
- o NEMA 7, Class 1, Division 1; rather than Division 2
- Loose starter and/or electrical controls for mounting remotely at the job site
- Reduced voltage starters (wye-delta, solid state or VFD)
- Wired / wireless (LAN and/or WAN) based controls with monitoring capabilities (HMI and/or SCADA)
  - (Continued on next page)



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- o Combination style disconnect switch for the duplex motor starter
- o Open frame design (elimination of the full system enclosure)
- Lockable, trigger latch door panels
- o Roof drainage systems complete with gutters and drain pipe connections to skid's edge
- o Off-shore base frame (skid) design with lifting eye and drag provisions
- Low ambient protection
- o Inlet pressure regulation
- Outlet pressure regulation
- Vapor recovery tank pressure or temperature sensors
- Analog controls rather than PLC
- o Custom programming of the PLC:
  - Remote monitoring or controlling of the system
  - > Customer site specific control or maintenance features
  - > Remote operation, monitoring and diagnostics
- o Engine driven designs
- High pressure storage tanks (ASME or DOT)
- o Priority fill to high pressure gas storage
- Cascade fill to the vehicle gas storage
- o Gas dispensing systems
- o Custom inlet or discharge gas dryer in lieu of standard cartridge dryer manifold
- o Inlet or discharge gas filtration
- Finish paint in epoxy and/or customer's color selection
- Hot dip galvanized structural steel base frame
- System modifications for non-municipal fuel gases, including biogas, landfill, digester, wastewater, Hydrogen and synthetic-gases. (Typical gas analysis required)
- o Installation & startup
- Aftermarket technical support or site services
- Manuals provided in languages other than English

## **END**