

OXYGEN NITROGEN ACETYLENE PLANTS

IN TECHNICAL COLLABORATION WITH

ING L & A BOSCHI OF ITALY



UNIVERSAL INDUSTRIAL PLANTS MFG. CO.(P) LTD.

UB-SERIES OXYGEN/NITROGEN PLANT



AIR COMPRESSOR

This is a multistage air compressor complete with flywheel inter cooler, foundation bolt, motor pulley, motor, v-belts, guard and slide rails and air filter. This can also be supplied in skid mounted versions to avoid civil foundation for quick installation. This is used to compress atmospheric air. -1No.

PROCESS SKID

This consists of the following items:

1. After Cooler with Tank
2. Nitrogen Cooler with Tank
3. Moisture Separator (PURGER)
4. Chilling Unit with Freon Unit.
5. Oil Absorber filled with Alumina.
6. Molecular Sieve Battery on skid
7. Defrost Heater.
8. Gas/Air Lines as per Standard Layout on skid/platform.
9. Water Pump
10. Inlet and Outlet Water Lines
11. Drain Manifold complete with Ball Valves for draining moisture.

All the above equipments are neatly mounted on a skid/platform complete with inter-connecting piping and ready for installation. -1 Set.



UB-SERIES OXYGEN/NITROGEN PLANT



MOLECULAR SIEVE BATTERY

Complete with 2 Nos M.S. Vessel Reactivation heater complete with Molecular sieve designed for process skid mounting-1No.



OIL ADSORBER

Complete with Alumina and inlet and outlet filter and connection designed for process skid mounting-1 No.



DUST FILTER

Complete with Cartilage, cyclone type with inlet outlet connections -1 No.

EXPANSION ENGINE

Complete with Motor/starter/starter shall be Siemens /ABB/Kiirloskar, with hydraulic valve control bursting disc for safety, complete with Flywheel pressure gauge, Motor pulley V-Belts, Belt Guard slide rails inter connecting copper pipes(Inlet & Outlet) -1 No.



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AIR SEPARATION UNIT

(Air separation column-cold box) Consists of outer steel casing, Main heat exchanger, liquifier, Bottom column, Top column, Condenser, Sub-cooler, Liquid oxygen & nitrogen filter. Cooling pipe line, insulation material, Digital electronic temperature indicator & scanner, PT 100 sensor, DP gauge monometer, Expansion vavle with longstemp type with pointer & index & wheel -1 set.



LIQUID OXYGEN PUMP

With S.S. Jacket, Piston Liner Complete with electric motor piston rings, Safety device and non-return valve-1 No.

CYLINDER FILLING MANIFOLD

Complete with socket, control valve pressure gauges safety valves and filling connections mounted on a stand -1 Set.

ELECTRIC PANEL

Electrical panel complete with ON/OFF switches-1 No.

COOLING TOWER

FRP Cooling Tower complete with fan and motor -1 Set.

OPTIONAL ITEMS

Other optional items are also available on request.

UB-SERIES OXYGEN/NITROGEN PLANT

TECHNICAL SPECIFICATIONS

SMALL CAPACITY

| S.No. | MODEL | UB-20 | UB-30 | UB-40 | UB-50 |
|-------|----------------------------------|------------------------|-------------------------|-------------------------|-------------------------|
| 1. | Capacity Oxygen Nitrogen | 20 CuM/Hr 80 CuM/Hr | 30 CuM/Hr 100 CuM/Hr | 50 CuM/Hr 150 CuM/Hr | 50 CuM/Hr 200 CuM/Hr |
| 2. | Purity Oxygen Nitrogen(Optional) | 99.6% 96%-99.6% | 99.6% 96%-99.6% | 99.6% 96%-99.6% | 99.6% 96%-99.6% |
| 3. | Power Connected | 55KW | 70KW | 80KW | 95KW |
| 4. | Power Consumed (abt.) | 40KW | 45KW | 60KW | 70KW |
| 5. | Power Supply | 415Volts | 415Volts | 415Volts | 415Volts |
| 6. | Air Capacity | 150 CuM/Hr | 200 CuM/Hr | 250 CuM/Hr | 300 CuM/Hr |
| 7. | Starting Pressure | 60Kg/sq. Cm | 55Kg/sq. Cm | 55Kg/sq. Cm | 55Kg/sq. Cm |
| 8. | Working Pressure (abt.) | 50Kg/sq.Cm | 40Kg/sq.Cm | 40Kg/sq.Cm | 40Kg/sq.Cm |
| 9. | Starting Time (After Defrost) | 8 Hours | 8 Hours | 7 Hours | 7 Hours |
| 10. | Starting Time (After Tripping) | 40 Mts. | 40 Mts. | 40 Mts. | 40 Mts. |
| 11. | Area Required | 6MX8M | 6MX10M | 8MX10M | 8MX12M |
| 12. | Assembly Height | 7M | 7M | 7.5M | 7.5M |
| 13. | Weight (About) | 14 Tons | 16 Tons | 18 Tons | 19 Tons |
| 14. | Air Separation Column | Type-Boschi | Type-Boschi | Type-Boschi | Type-Boschi |

MEDIUM CAPACITY

| S.No. | MODEL | UB-60 | UB-80 | UB-100 | UB-150 |
|-------|----------------------------------|-------------------------|-------------------------|--------------------------|--------------------------|
| 1. | Capacity Oxygen Nitrogen | 60 CuM/Hr 200 CuM/Hr | 80 CuM/Hr 250 CuM/Hr | 100 CuM/Hr 300 CuM/Hr | 150 CuM/Hr 500 CuM/Hr |
| 2. | Purity Oxygen Nitrogen(Optional) | 99.6% 96%-99.6% | 99.6% 96%-99.6% | 99.6% 96%-99.6% | 99.6% 96%-99.6% |
| 3. | Power Connected | 110KW | 130KW | 150KW | 200KW |
| 4. | Power Consumed (abt.) | 88KW | 95KW | 105KW | 165KW |
| 5. | Power Supply | 415Volts | 415Volts | 415Volts | 415Volts |
| 6. | Air Capacity | 300 CuM/Hr | 400 CuM/Hr | 600 CuM/Hr | 900 CuM/Hr |
| 7. | Starting Pressure | 45Kg/sq. Cm | 45Kg/sq. Cm | 45Kg/sq. Cm | 45Kg/sq. Cm |
| 8. | Working Pressure (abt.) | 40Kg/sq.Cm | 38Kg/sq.Cm | 36Kg/sq.Cm | 36Kg/sq.Cm |
| 9. | Starting Time (After Defrost) | 7 Hours | 7 Hours | 6 Hours | 6 Hours |
| 10. | Starting Time (After Tripping) | 40 Mts. | 30 Mts. | 20 Mts. | 20 Mts. |
| 11. | Area Required | 12MX15M | 12MX15M | 14MX15M | 14MX15M |
| 12. | Assembly Height | 8M | 9M | 9.5M | 9.5M |
| 13. | Weight (About) | 20 Tons | 25 Tons | 30 Tons | 40 Tons |
| 14. | Air Separation Column | Type-Boschi | Type-Boschi | Type-Boschi | Type-Boschi |

HIGH CAPACITY

| S.No. | MODEL | UB-200 | UB-300 | UB-400 | UB-500 |
|-------|----------------------------------|--------------------------|---------------------------|---------------------------|---------------------------|
| 1. | Capacity Oxygen Nitrogen | 200 CuM/Hr 800 CuM/Hr | 300 CuM/Hr 1200 CuM/Hr | 400 CuM/Hr 1400 CuM/Hr | 500 CuM/Hr 2000 CuM/Hr |
| 2. | Purity Oxygen Nitrogen(Optional) | 99.6% 96%-99.6% | 99.6% 96%-99.6% | 99.6% 96%-99.6% | 99.6% 96%-99.6% |
| 3. | Power Connected | 300KW | 400KW | 600KW | 750KW |
| 4. | Power Consumed (abt.) | 220KW | 330KW | 400KW | 500KW |
| 5. | Power Supply | 415Volts | 415Volts | 415Volts | 415Volts |
| 6. | Air Capacity | 1200 CuM/Hr | 1800 CuM/Hr | 2400 CuM/Hr | 3000 CuM/Hr |
| 7. | Starting Pressure | 45Kg/sq. Cm | 45Kg/sq. Cm | 45Kg/sq. Cm | 45Kg/sq. Cm |
| 8. | Working Pressure (abt.) | 36Kg/sq.Cm | 30Kg/sq.Cm | 30Kg/sq.Cm | 30Kg/sq.Cm |
| 9. | Starting Time (After Defrost) | 6 Hours | 5 Hours | 5 Hours | 5 Hours |
| 10. | Starting Time (After Tripping) | 20 Mts. | 20 Mts. | 20 Mts. | 20 Mts. |
| 11. | Area Required | 14MX15M | 15MX16M | 15MX18M | 18MX20M |
| 12. | Assembly Height | 9.5M | 9.5M | 10M | 10M |
| 13. | Weight (About) | 50 Tons | 60 Tons | 70Tons | 80 Tons |
| 14. | Air Separation Column | Type-Boschi | Type-Boschi | Type-Boschi | Type-Boschi |

OPTIONAL

High Purity of Nitrogen PPM grade also available. Higher Capacities of 400 CuM/Hr & 500 CuM/Hr are also available with liquid output. •Liquid Nitrogen Pump•Nitrogen Compressor• Liquid Plants

- Notes: 1.About 40% of Nitrogen is used for the regeneration of the Molecular Sieve Battery.
 2.The above capacities are based on gaseous output on design Suction Conditions of 30deg cen,760mm hg pressure,50% relative humidity & 0.03% Carbon dioxide in the atomsphere.
 3.Oxygen/Nitrogen is filled in Cylinders at 155 Bar pressure(Optional 200 & 300 BAR).
 4.The above specifications are subject to modification.

CYLINDER FILLING CHART

| Name of the Models | UB-20 | UB-30 | UB-40 | UB-50 | UB-60 | UB-80 | UB-100 | UB-120 | UB-130 | UB-150 | UB-200 | UB-300 | UB-400 | UB-500 |
|---|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| Capacity (CuM/Hr) | 20 | 30 | 40 | 50 | 60 | 80 | 100 | 120 | 130 | 150 | 200 | 300 | 400 | 500 |
| No. Of cylinders in a Day (Oxygen/Nitrogen) | 70 | 100 | 140 | 180 | 200 | 300 | 400 | 400 | 400 | 600 | 800 | 1000 | 1600 | 2000 |

NOTE:-Cylinder capacity 5 to 7 cubic meter.

SALIENT FEATURES

LOW WORKING PRESSURE
 LOW OPERATING COST
 STURDY DESIGN
 LOW MAINTENANCE
 SIMPLE OPERATION
 HIGH SAFETY

DESIGN QUALITY

We manufacture oxygen plants as per the latest technology & design of the company ING. L.&A. BOSCHI,ITALY.This technology has been proven all over the world for its working efficiency & trouble free operation,safety & low Power Consumption.

BOSCHI Column have been known for its efficiency & long life.There are plants working trouble free for more than thirty years in various parts of the Globe.

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