Mumbai
701-C, Poonam Chambers,
Dr. Annie Besant Road,
Worli, Mumbai - 400 016. INDIA
Tel.: (022) 6660 2236, 6660 7738
Fax: (022) 2493 7505
email: mumbai@indboilers.com

Vapi
227 - 228,
Vapi Industrial Township,
Vapi - 396 195. INDIA
Tel.: (0260) 2431 549, 2432 899, 2400 491
Fax : (0260) 2421 102
email: vapi@indboilers.com

New Delhi
79-80 Satkar,
Nehru Place,
New Delhi - 110 019. INDIA
Tel.: (011) 2641 7983, 2645 3194/95.
Fax : (011) 2645 3197
email: delhi@indboilers.com

Kolkata
“Topaz”,
23, Gobinda Banerjee Lane
(on Tollygunge-Anwar Shah Crossing)
Kolkata - 700 033. INDIA
Tel.: 09350169010
email: kol@indboilers.com

Marketing Offices:
- Ahmedabad
- Amritsar
- Bhiwara
- Chandigarh - Mohali
- Chennai
- Gorakhpur
- Hyderabad
- Indore
- Kanpur
- Patiala
- Panipat
- Rajahmundry
- Sural
- Bharuch
- Bareilly - Kashipur

International Network:
- Colombo - Sri Lanka
- Kushitia - Bangladesh
- Chapai Nawabgonj - Bangladesh
- Dhaka - Bangladesh
- Lahore - Pakistan
- Ekaterinburg - Russia
- Nairobi - Kenya
- Dar es salaam - Tanzania
- Bangkok - Thailand
- Jakarta - Indonesia
- Sharjah - UAE
- Yangon - Myanmar
BMT - 6 Multistage Back Pressure Turbine

IBL offers a range of Steam turbines to perfectly match the Magnum boiler range. The design and supply of a Cogeneration system of Boiler and Turbine from a single source ensures complete “Peace of Mind” and an assurance for Optimum performance, without the associated pitfalls of incompatibility.

The option to install Back Pressure driven Turbo Drives to operate Fans and Pumps is also available as an option to replace Deaerator steam Pressure Reducing Station in a most economic manner.

With extensive experience in cogeneration, IBL offers its expertise for the entire Power Generation Cycle. Before installation, specific requirements are minutely observed, studied in detail by experienced IBL engineers and the most effective combination of Turbine and Boiler to match the process is suggested.

QUICK START UP
At start-up the water circulation starts very quickly because there are short overflow distances from downcomer to heating surface on water side. Due to these short distances all water filled tubes reach saturation temperature very quickly at start-up. Dangerous material stress caused by different thermal expansion does not occur.

LARGE COMBUSTION ZONE
A Generous Combustion Volume above the Fluidised Bed ensures complete combustion of the Fuel, leading to Low Unburnt and High combustion efficiency. The Combustion Space is strategically expanded to reduce Flame Velocity and allow Radiation to impart its energy to the water Walls.

HIGH QUALITY STEAM
The water level in the drum keeps calm compared to Bi Drum boiler since Steam-Water mixture pre-separates externally before entering the Drum.

NO TUBE EXPANDING
The admissible temperature variation gradient is significantly higher due to welded construction, leading to a quick start-up. Welded tubes have always been more reliable than Expanded tubes.

DEFINED DOWNCOMERS
Unlike Bi-Drum Boilers where the Downcomer tubes also act as Riser Tubes at high load, Magnum has Separate and Distinct downcomers with large diameter. Steam bubbles forming at pressure fluctuations and high load change velocities cannot endanger the water circulation.

EXTREMELY COST EFFECTIVE, COGENERATION BRINGS IN RICH FINANCIAL REWARDS AND A SHORT PAYBACK PERIOD WHEN INSTALLED CORRECTLY.

IBL Turbo Works - Greater Noida
Tremendous amount of Startup Fuel is saved on the Magnum due to the quick startup.

The entire boiler is of fully welded construction, unlike conventional boilers with Expanded Tubes. This makes the Boiler safer for quick response to fluctuating loads.

An extraordinarily large Furnace volume and high Freeboard allows complete combustion of the fuel thru ample retention Time, Temperature and a Proven Combustion System ensures Turbulence. This Performance is reflected in the quality of combustion and lack of combustible matter in ash, resulting in significant reduction in fuel consumption.

Minimal Refractories saves considerable fuel during shut down cooling and reduces Thermal inertia for efficient response.

Unlike Bi-Drum boilers, the pressure parts of the Magnum are Factory manufactured, ensuring Factory Built quality and Inspection procedures.
**CHOICE OF COMBUSTION SYSTEMS**

Magnum is offered with the following Broad Combustion choices:

| Coal / Lignite | Underbed FBC |
| Rice Husk / Coal / Petcoke / Saw Dust | Overfeed FBC |
| Mustard Straw / Bagasse / Parali | Underfeed with FBC |
| Biogas / Methane / Husk | Brownian |
| Wood Logs, Non Fluidisable Biomass | Overspray with |
| Vinasse with Rice Husk, Palm Fibre | Overfeed FBC |

**FUELS FOR THE MAGNUM**

The Magnum is tailor made for a wide variety of fuels. Based on the fuels preferred by the customer, IBL design teams work to ensure that the boiler is designed to perform well on that particular fuel and consistently deliver the desired ratings.

IBL’s vast experience in a range of Fuels and their combustion systems helps to deliver a proper package which is a delight to the customer.

**Combustion system will be adapted to the fuels specified during order.**

<table>
<thead>
<tr>
<th>STD FUELS</th>
<th>SPL FUELS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coal / Lignite</td>
<td>Maize Pellets</td>
</tr>
<tr>
<td>Sawdust</td>
<td>Biogas / Methane</td>
</tr>
<tr>
<td>Petcoke</td>
<td>Biogas</td>
</tr>
<tr>
<td>Rice Husk</td>
<td>Bagasse</td>
</tr>
<tr>
<td>Wood Chips</td>
<td>Wheat/Mustard Straw</td>
</tr>
</tbody>
</table>

*Magnums are manufactured from 8 Ton/hr to 150 Ton/hr, with Pressure ratings from 33 Bar to 132 bar.*