



Knowledge Based



PACKMAN
Industrial Group



Condensing
Boiler (Optima Series)

PACKMAN GROUP

History

The Packman Company was founded in February 1975, and was soon afterwards registered in Tehran registration department. In early years the Packman construction and service branch focused on building construction. Different mega power plants were built by cooperating with Brown Boveri and Asseck companies in 1976.

The company started its official activities in construction of High-Pressure Vessels such as Hot-Water Boilers, Steam Boilers, Storage Tanks, Softeners and Heat Exchangers from 1984.

Packman Company is one of the first companies which supplied the high quality and standard hot water boilers to the customers.

Packman has exported its products to countries such as Uzbekistan, United Arab Emirates and other countries in the region. It is one of the largest producers of hot-water and steam boilers in the Middle East.

Now we are proud to announce that the Packman industrial group has five major sub-brands that have product titles in all field of HVAC equipment and engineering services, and we do not know this success except with the help and support of our customers.

1. Construction Services Industry Association
2. Industry Association
3. Construction Companies' Syndicate
4. Technical Department Association
5. Mechanical Engineering Association
6. Engineering Standard Association

Departements:

Sales Deps:

- ∩ Power Plant & Petrochemical
- ∩ Industrial
- ∩ Hospitally Service
- ∩ Commercial & Residential
- ∩ Sport Complex & Pool

Technical Deps:

- ≡ Manufacturing R&D
- ≡ Innovation Center
- ≡ EPC Execute Unit
- ≡ Product Develop Unit
- ≡ Sales Engineering Dep

Others:

- ≈ After Sales Service
- ≈ Project Control
- ≈ Financial Office
- ≈ Commercial Office
- ≈ Marketing Dep



PACKMAN GROUP Brands



PACKMAN

Industrial Group

Designer & manufacturer of Condensing, Hot Water, Steam, Hot Oil & Waste Heat Boilers, Heat Exchangers, Autoclave Pressure & Storage Vessels,...



GREENMAN

Green mindset, green future

Engineering & Designing Greenhouse Pant, CO2 Capture System, Flue gas Condenser & Special HVAC Systems,...



ROMAN

Water solution

Designer & manufacturer Reverse Osmosis Plant & Package, Water Treatment, Softener & Filters and Chemical Dosing Systems,...



RAADMAN

a look to the future

Designer & manufacturer of Industrial Mono & Dual Block Gas, LPG, Light & Heavy Oil Burners, Premixed & Postmixed Burners, Watertube burners, Process burners, Special application burners & Combustion Solutions,...



CHILLMAN

Cooler hvac around

Designer & manufacturer of Air & Water Cooled Chillers, Air Handling Units, Fancoil, HVAC Equipment,...



1. Isfahan Factory



2. Vilashahr Factory



3. Parand Factory



4. Parand (2) Factory



5. Bonyad Factory



SOME OF Certificates are

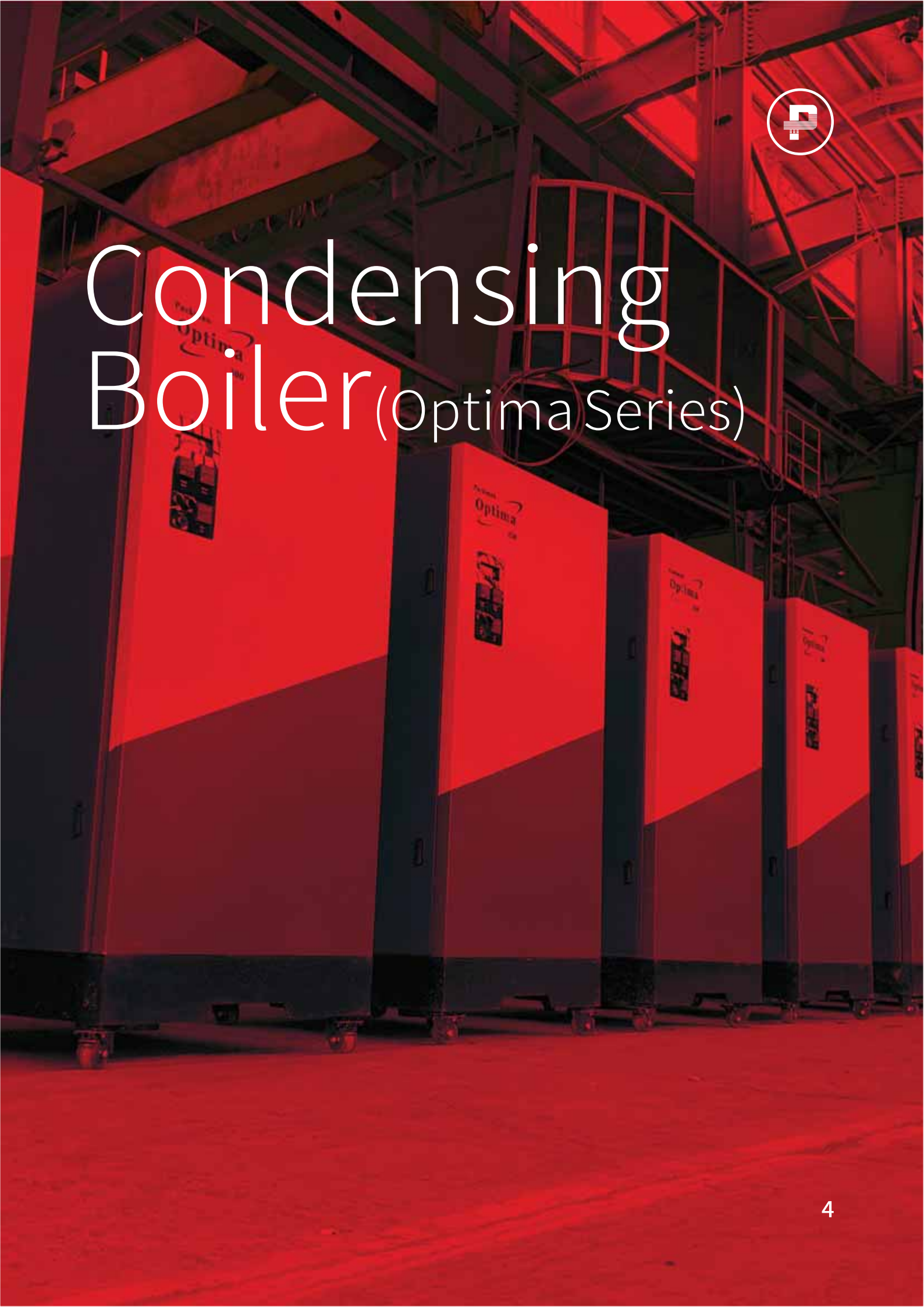


www.packmangroup.com





Condensing Boiler (Optima Series)





Packman Condensing Boiler (Optima Series)

The condensing technology of boilers and water heaters features an advanced high efficiency and convenient that produces installation, operating, and lifetime cost advantages to systems operating from 100 to 600 kW. For applications greater the 600 kW, you can easily chain multiple units together.

Premix burners with a fiber mesh make the PACKMAN Condensing Boilers ideal for “green” operation. The Premix burner technology help to achieve emission levels less than 20 ppm Nox.

At a Glance

Key Features:

- Available in five sizes from 100 to 600 kW
- Efficiencies of up to 98%
- Advanced modulation technology
- Natural gas fuel
- Turndown ratio up to 5:1
- Whisper-quiet operation, even at full fire
- Small footprint
- chain multiple units for applications over 600 kW
- Direct/conventional vent with CPVC or Polypropylene (PP)

OPTIMA Series

The OPTIMA Series of boilers and water heaters continues the PACKMAN tradition of meeting the market demand for hot water solutions that reduce installation and life cycle costs while providing the best uptime reliability. Incorporating the latest in high efficiency, the OPTIMA Series brings best-in class operation to a wide range of facilities including:

- Multi-family/Apartments
- Education
- Hotels
- Medical Centers/Nursing Homes
- Office Buildings



High performance in a compact, flexible design makes the OPTIMA Series the perfect hot water solution for systems requiring 100 to 300 kW and above. In addition to lowering energy usage, the OPTIMA Series maximizes each square foot for a greater return on new facility investment. A variety of quick-to-install, cost-efficient accessories eliminate the need for special rigging or system changes to existing mechanical rooms, making the OPTIMA Series equally well suited for retrofits. The end result is an easily-installed, highly efficient solution that conserves space and lowers energy use to create significant short and long-term savings for all kinds of buildings.

The modular design in the OPTIMA Series creates installation, operational, and reliability benefits unmatched by competitive boilers or water heaters in the same class. Designing a hydronic system with an OPTIMA Series unit delivers advantages such as:

Lower Costs: Installation, operating, and lifetime costs are all reduced due to the modular design that maximizes efficiency and operation.

Higher Uptime Reliability: The modular design also creates a level of redundancy and reliability from a single OPTIMA Series boiler or water heater that is typically only found in multi-unit systems.

Installation Flexibility: A wide variety of venting options allows the OPTIMA Series to be easily integrated into any system, whether it is a retrofit or new construction.

Space Savings: Its compact footprint allows the OPTIMA Series to be installed in small mechanical rooms.



○ **Easy Access:** Simple side access makes it more efficient for technicians to conduct scheduled service and maintenance on the units, which in turn saves time and reduces labor costs.

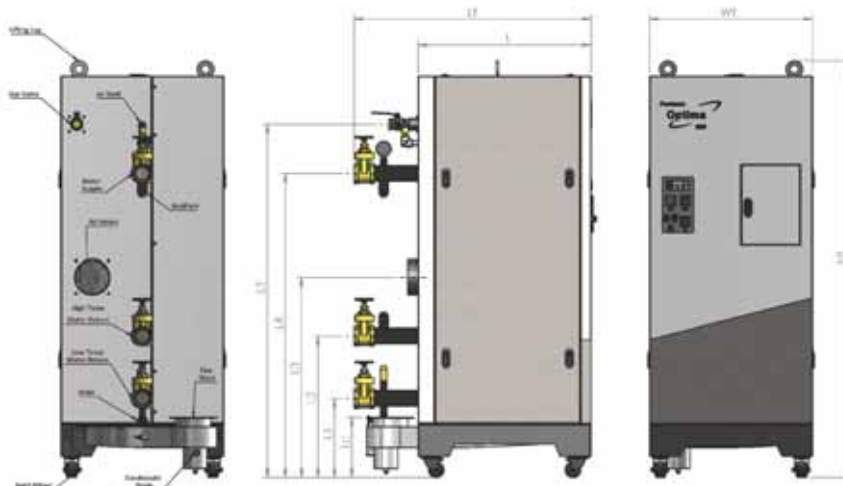
Maintaining the PACKMAN heritage, the OPTIMA Series delivers high operating efficiency of up to 98%. By achieving the highest possible seasonal efficiencies, the OPTIMA Series creates short-term and lifecycle energy savings. Best-in-class performance is achieved by using superior design approach that incorporates:

○ **High-quality materials:** At the heart of the boiler is a unique heat exchanger designed with oval-section stainless steel tubes. The heat exchanger is constructed out of 316L stainless steel tubes for high reliability and long life.

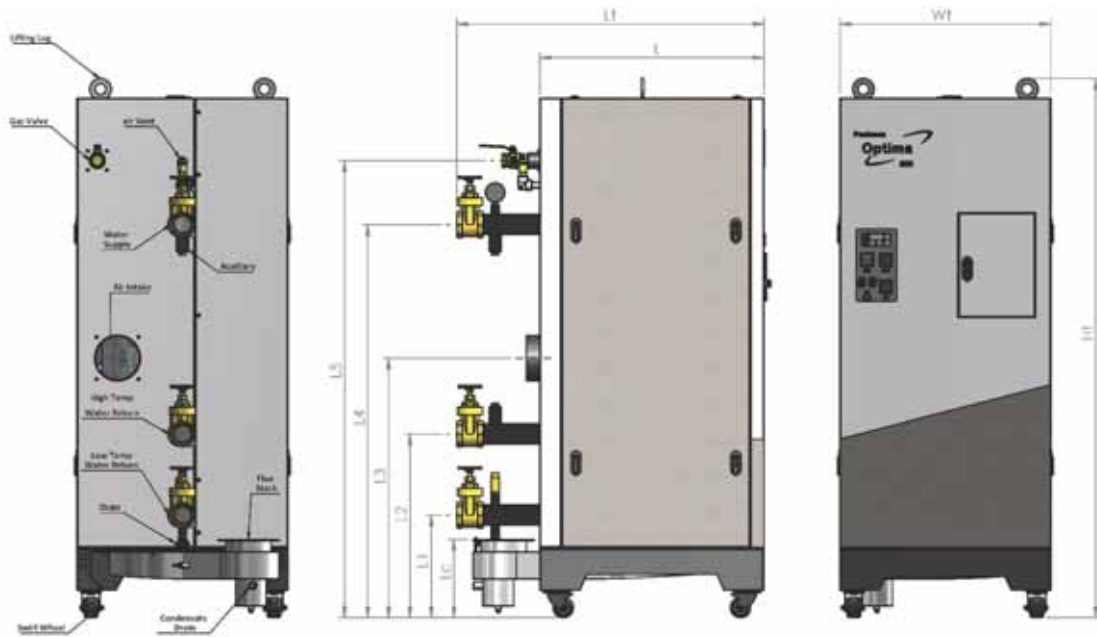
○ **Advanced Modulation and Condensing Technologies:** The OPTIMA Series continues the decades-long trademark of PACKMAN solutions featuring fully modulating and condensing technologies. High modulation means the OPTIMA Series matches loads exactly to need, minimizing cycling, eliminating over-firing, and achieving tight temperature control.

○ **Premix Burner:** The OPTIMA Series features a total premix combustion unit, with variable-speed fan. The burner occupies very little space vertically, allowing the entire length of the heat exchanger to be exploited and bringing obvious benefits regarding condensation and stratification in the boiler.

○ **High Level Design:** PACKMAN condensing boilers are designed using high level technics such as computational fluid dynamics (CFD) for high thermal efficiency and finite elements (FE) analysis for ensuring long life.



Model	unit	100	150	200	250	300	400	500	600	
Technical DATA										
Min heat input	kw	25	37.5	50	62.5	75	100	125	150	
Man heat input	kw	100	150	200	250	300	400	500	600	
Min gas consumption	m ³ /hr	23	3.45	4.6	5.75	6.9	9.2	11.5	13.8	
Max gas consumption	m ³ /hr	9.2	13.8	18.4	23	27.6	36.8	46	55.2	
Efficiency	30/50	%								
	60/80	%								
Gas Connection	inch	1	1	1-1/4	1-1/4	1-1/4	1-1/2	1-1/2	1-1/2	
Min gas pressure	mbar	18								
Max gas pressure	mbar	60			100					
Min-Max working pressure	bar	2.5-6								
Water temp.range	c	40-80								
Electric supply	VAC/Hz/PH	220/50/1								
Max condensate	Lit/hr	12	18	24	30	36	48	60	72	
Min-Max water flow	Lit/s	2.5-6	3.75-9	5-12	6.3-15	7.5-18	10-24	13-30	15-36	
Inlet/outlet connections	inch	2	2	2-1/2	2-1/2	2-1/2	3	3	3	
Vent/Air intake	inch	5	5	6 1/2	6	6	8	8	8	
Vent material	-	CPVC/PP								
Consensate discharge	inch	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	
Condensate PH	-	4-4.5								
Drain	inch	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	
Relief Valve	inch	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	



Model (COMB)	Unit	100	150	200	250	300	400	500	600
Dimension									
L	mm	650	715	765	790	830	910	940	980
Lt	mm	900	970	970	1100	1140	1260	1290	1330
Wt	mm	600	665	715	740	780	860	890	930
Ht	mm	1680	1740	1890	1930	2000	2090	2090	2200
L1	mm	380	380	380	380	380	380	380	380
L2	mm	730	730	730	730	730	730	730	730
L3	mm	960	960	960	960	960	960	960	960
L4	mm	1315	1365	1390	1430	1505	1485	1485	1605
L5	mm	1530	1580	1580	1615	1685	1790	1790	1910
Lc	mm	300	300	300	300	300	300	300	300
Water Content	Lit	95	125	155	170	200	230	270	325
Weight (dry)	Kg	330	400	450	500	570	705	760	850
Weight (Wet)	Kg	425	525	605	670	770	935	1030	1175

Knowledge Based



PACKMAN



GREENMAN



ROMAN



RAADMAN



CHILLMAN

+9821 42 362

www.packmangroup.com

No 14, 10th Alley, Beihaghi St., Argentina Sq., Tehran-Iran