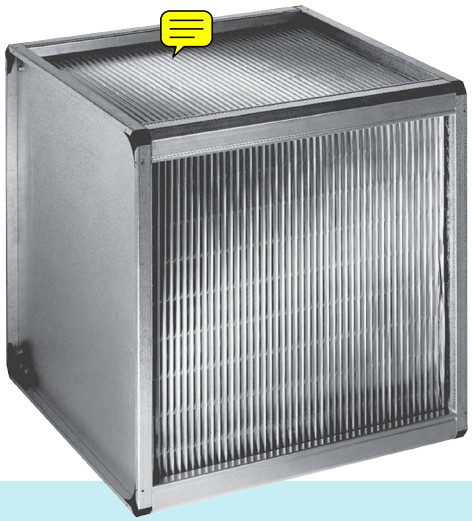
HOVAL
PLATE EXCHANGER



The most efficient cross-flow plate heat exchanger in the world

Thanks to their wide size and spacing selections, high quality construction, great effectiveness and affordable prices, Hoval plate exchangers are one of the most popular heat recovery components in the industry. Now featuring new spacings that can lead to sensible effectiveness levels exceeding 80%, Hoval plate exchangers set a new standard for sensible cross-flow plate exchangers.

These plate exchangers are also the only product on the market featuring unique multi-folded plate connections and a special casting sealing method for extremely leakproof assemblies, 100% of the time. Lastly, Hoval plate exchangers highly optimized embossment and folded leading and trailing edges gives them an outstanding rigidity able to resist pressure differentials as high as 10" w.g..

Features and benefits

- Most effective sensible cross-flow plate heat exchanger in the market
- Lightweight, compact design; easy to install
- Operating temperatures up to 400 °F (Series ST)
- Outstanding corrosion resistance (Series SG)
- Unique embossment for the lowest pressure drops and great effectiveness
- Easy to clean thanks to its simple cross-flow design.
- No moving parts; no wear, always ready for operation
- Separate air streams; no cross leakage
- No external power required; no extra running costs
- AHRI Certified performances; bears the AHRI Standard 1060 (I-P) certified seal

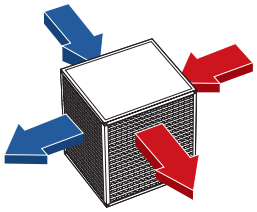
Options

- Corrosion protection coating (
- High temperature assembly (
- Counter or side bypass
- Purge seal (Laboratories or Indirect Evaporative Cooling applications)

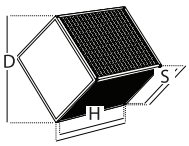
Operating Principle:

Summer operation
In summer operation, heat from the outside fresh air is transferred to the outgoing air, greatly reducing air-conditioning costs.

Winter operation
In winter, heat from the outgoing air is recovered and transferred to the fresh incoming air, greatly contributing to reduced heating costs.



Dimensional data (in/mm)



M	Square size (S)	Diagonal (D)	Height (H)
60	23.62/600	32.64/829	Any
70	27.56/700	38.19/970	Any
85	33.46/850	46.54/1182	Any
100	[illegible]000	54.88/1394	Any
120	47.24/1200	66.02/1677	Any
140	55.12/1400	77.17/1960	Any
170	66.93/1700	93.86/2384	Any
200	78.74/2000	110.55/2808	Any

setting the standard for energy recovery

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HOVAL PLATE EXCHANGER SPECIFICATIONS

Specifications:

1. General specifications:

1.1 Furnish and install the Hoval Series air-to-air plate exchanger as shown in the schedule, to be manufactured by Innergy tech inc., Drummondville, Quebec, Canada.

1.2 The air-to-air plate exchanger shall transfer heat between outgoing and incoming air streams in cross flow arrangement.

1.3 Performance data derived from laboratory testing on heat exchanger conditions is in accordance with ASHRAE Standard 84-2013 "method of testing air-to-air heat exchangers". Performance shall be rated in with AHRI Standard 1060 (I-P) testing procedures.

1.4 The sensible plate exchanger shall be listed in the AHRI Certified Product Directory.

1.5 The sensible plate exchanger shall bear the AHRI Certified Product Seal.

1.6 Sensible, latent and total effectiveness along with pressure drop, EATR and OACF rating shall be clearly documented with performance tests conducted in accordance with ASHRAE Standard 84-213 and AHRI Standard 1060 (I-P).

1.7 Manufacturers of alternate equipment must be approved to bid via addendum, in writing by the specifying engineer, at least two weeks prior to bi time in order for their bid to be accepted by the contractor. If the equipment is not pre-approved then under no circumstances shall the contractor invest time or money in receiving submittals or considering the equipment. Costs associated with dimensional, performance, or other deviations from the specified equipment, including engineering costs to evaluate such deviations, shall be paid by the contractor.

1.8 The air-to-air plate exchanger manufacturer must be ISO: 9001-2008 certified.

1.9 The air-to-air plate exchanger manufacturer must have a least ten (10) years of experience in the manufacturing of energy recovery components.

2. Product specifications:

2.1 The exchanger plates shall be 99.9% pure aluminum. Plates made from aluminum alloys, plastic, fiber, steel or other material(s) are unacceptable.

2.2 The plates shall be die formed with the patented positive/negative dimple stamping that provides the Hoval Series' exclusive plate profile and discontinuous channel design. Plate profiles of the laminar flow design type are unacceptable.

2.3 Aluminum plate thickness shall be 0.005" (0.127 mm) for the best possible effectiveness. Thicker aluminum plates shall not be acceptable.

2.4 The connecting plate edges shall be multiple folded. The double fold shall provide a six fold material thickness on the leading and trailing edges of the plate exchanger and provide protection from the cutting edge of the exchanger plates within the double fold. Construction methods that use a single fold, or glue at the leading and trailing edges of the exchanger are not acceptable.

2.5 The air-to-air plate exchanger core shall be assembled into a strong, self-supporting frame made of aluminum corner extrusions and 20 gauge galvanized steel end plates.

2.6 The corners of the assembled exchanger package and the inside of the double folded seams shall be sealed with synthetic casting resin.

2.7 The aluminum corner extrusions shall be hollow to accept mounting screws and shall provide a 45° corner support angle

2.8 The Hoval "V" Series construction (standard product): The air-to-air plate exchanger package with synthetic resin sealed corners shall be resistant to temperatures up to 194°F (90°C).

2.9 The Hoval "G" Series construction option: The air-to-air plate exchanger plates shall have a an Epoxy-phenol applied coating. The extrusions, endplates and all sheet metal surfaces are to be epoxy coated, providing protection for installations in corrosive environments. The heat exchanger package with synthetic resin sealed corners is to be resistant to temperatures up to 194°F (90°C).

2.10 The Hoval "T" Series construction option: The air-to-air plate heat exchanger shall be of High-Temperature construction. The plate exchanger shall be sealed with a special high temperature resistant sealant to protect the heat exchanger package against temperatures in the air streams of up to 392°F (200°C).

2.11 The air-to-air plate exchanger shall withstand, without significant change in its performances and pressure drops, a pressure differential of at least 6" w.g.. It shall withstand a pressure differential of 10" w.g. without permanent deformation.

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