

# SHR

## SHELL-AND-TUBE HEAT EXCHANGER

### 管壳式换热器

The shell-and-tube heat exchanger is a universal processing unit for operation of heat transmission and exchange between materials. It's widely applied in such industries as chemical engineering, petroleum, petrochemistry, electricity, light industry, metallurgy, food, atomic energy, shipbuilding, aviation and heat supply. In particular, it accounts for about 40% of the total devices and 30%-45% of total investment in oil refining and chemical engineering. Currently the shell-and-tube heat exchanger is most used in the heat exchange equipment.

管壳式换热器是一种实现物料之间热量传递、进行热交换操作的通用工艺设备。广泛应用于化工、石油、石油化工、电力、轻工、冶金、食品、原子能、造船、航空、供热等行业中。特别是在炼油和化工装置中，管壳式换热器占总设备数量40%左右，占总投资的30%~45%。目前，在换热设备中，使用量最大的是管壳式换热器。



#### 技术参数 Technology parameter

| 公称直径 | 管程数 | 管子数量 | 换热面积 公称值/计算值 |          |          |          |          | 管程通道截面 管程通道流速为0.5m/sec时的流量m/hr |             | 公称压力 |
|------|-----|------|--------------|----------|----------|----------|----------|--------------------------------|-------------|------|
|      |     |      | 管子长度 (m)     |          |          |          |          | φ 25 × 2.5                     | φ 25 × 2    |      |
|      |     |      | 1500         | 2000     | 3000     | 4000     | 6000     |                                |             |      |
| 159  | 1   | 14   | 1.5/1.62     | 22.17    | 33.27    |          |          | 0.0044/0.0049                  | 7.92/8.82   | 0.25 |
| 219  | 1   | 26   | 3/3.00       | 4/4.02   | 6/6.06   | 8/8.1    |          | 0.0082/0.0090                  | 14.76/16.20 | 0.6  |
|      | 2   | 26   | 3/3.00       | 4/4.02   | 6/6.06   | 8/8.81   |          | 0.0041/0.0045                  | 7.38/8.01   | 1.0  |
| 273  | 1   | 44   | 5/5.08       | 7/5.18   | 10/10.26 | 14/13.72 | 21/20.63 | 0.0138/0.0152                  | 24.84/27.36 | 1.6  |
|      | 2   | 40   | 5/4.62       | 6/6.19   | 9/9.33   | 12/12.47 | 19/18.76 | 0.0063/0.0069                  | 11.24/12.42 | 2.5  |
| 325  | 1   | 60   | 7/6.93       | 9/9.28   | 14/14.00 | 19/18.71 | 28/28.13 | 0.0188/0.0208                  | 33.84/37.44 | 0.6  |
|      | 2   | 56   | 6/6.47       | 9/8.66   | 13/13.05 | 17/17.46 | 36/26.26 | 0.0088/0.0097                  | 15.84/17.46 | 1.0  |
| 400  | 1   | 119  | 14/13.47     | 18/18.41 | 28/27.76 | 37/37.10 | 55/55.8  | 0.0374/0.0412                  | 67.32/74.16 | 1.6  |
|      | 2   | 110  | 13/12.70     | 17/17.02 | 26/25.66 | 34/34.20 | 50/51.58 | 0.0173/0.0190                  | 31.14/34.20 | 2.5  |