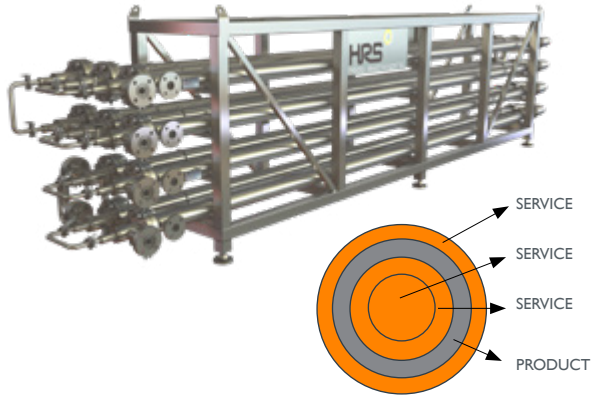
ANNULAR SPACE HEAT EXCHANGERS

HRS AS 4 SERIES



The HRS AS 4 Series is a complete stainless steel quadruple tube heat exchanger designed for applications with viscous fluids. The product flows through the annular spaces and the service fluid flows through the service tubes to ensure even heating or cooling. The removable inner tube allows for easy inspection of annular space. Using HRS' corrugation technology, heat transfer and efficiency are increased over standard smooth and dimple tube heat exchangers. In addition, effects of fouling are minimised.

With the HRS AS 4 Series it is possible to offer designs with a high pressure on product side due to increased tube wall thickness. This makes it the ideal heat exchanger for very highly viscous food industry applications.

TECHNICAL DATA

APPLICATIONS

Higher Viscosity Products
Fluids Containing Fibres or Small Particulates

STANDARD MATERIALS OF CONSTRUCTION

Service Side: AISI 304 Stainless Steel
Product Side: AISI 316L Stainless Steel
Other material options available

STANDARD CONNECTIONS

Service Side: Flange
Product Side: Clamp
All flange & clamp types available

SURFACE FINISH

External: Polished
Internal: <0.8µ
Other surface finishes available

STANDARD DESIGN CONDITIONS

Service Side: 10 bar/185°C
Product Side: 25 bar/185°C

FEATURES

- Corrugated tubes for increased heat transfer for turbulent flow applications
- Bellows are fitted as standard to absorb differential expansion between shell and annular space
- Multiple units can be interconnected and have the option of frame mounting, insulation and cladding in stainless steel
- Smooth tube option available for laminar flow applications

RANGE

MODELS	LENGTHS (m)	SURFACE AREA (m^2)	SERVICE SIDE CONNECTION	PRODUCT SIDE CONNECTION	MAX FLOW SERVICE (m^3/hr)	MAX FLOW PRODUCT (m^3/hr)	SERVICE SIDE VOLUME (l)	PRODUCT SIDE VOLUME (l)
AS 76/51/34/25	3 - 6	1.65	DN20	1"	6	3.5	8.8	3.8
AS 89/63/48/34	3 - 6	1.87	DN25	2"	25	5.5	26.1	3.9
AS 114/89/60/48	3 - 6	2.59	DN40	3"	35	13	35	16.8
AS 140/114/89/60	3 - 6	3.55	DN50	4"	50	27	59.2	20.1
AS 168/140/114/89	3 - 6	4.46	DN65	4"	70	32	91	25.2

The surface area and volumes shown are for 6m length models.

DESIGN CODE AND COMPLIANCE

PD 5500, PED 2014/68/EU, ASME | FDA, 3A, TR CU 032, DOSH Compliant

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