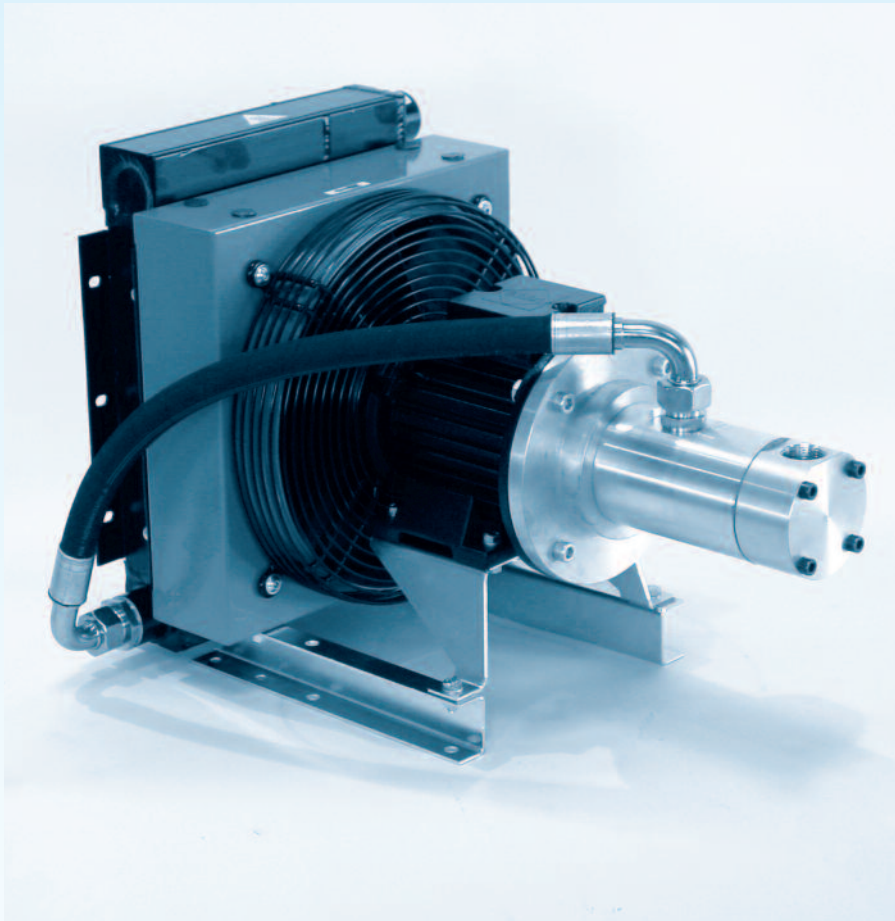


*advanced quality  
customized designs  
made in europe*

**UNIVERSAL  
HYDRAULIK**   
Your Partner for coolers and systems

## Partial-flow Cooling Unit



**Series**

# TFS/A

For industrial application



- **Compact design**
- **Variable mounting positions**
- **Very high-performance device**
- **Low costs**
- **Additional features:**
  - **Stainless steel radiator**
  - **Filter unit**
  - **Bypass in internal and external version**
- **IEC Motor with Nema Voltage, cUL/cLus-version**

## Product description

### Product description

The TFS/A is a compact partial-flow cooling unit. It was developed to improve the availability and reliability of hydraulic systems. Due to its combination of a motorpump unit and an oil-air cooler in one device, the TFS/A is an autonomous unit, which can be operated independently of the main system. In this manner continuous cooling is ensured.

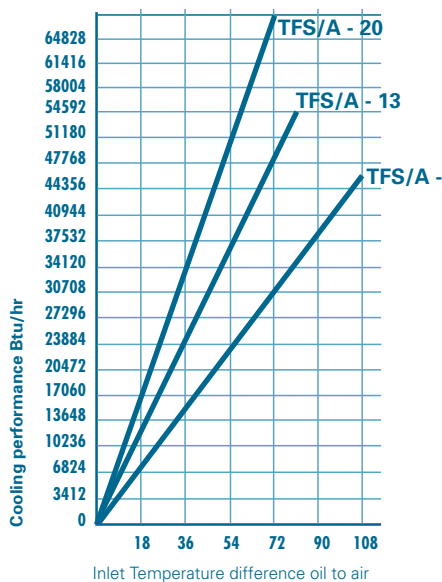
### Product features

- Compact design
- Nearly noiseless operation
- Ease of maintenance, since the number of working parts has been consequently reduced
- Any arbitrary mounting position is possible
- Option: Thermo bypass valve, Thermostat

### Advantages

- Extension of the service life of the hydraulic components
- Enhancement of the application reliability
- Improvement of the positioning accuracy
- Unproblematical retrofitting on existing systems is possible

## Cooling capacity



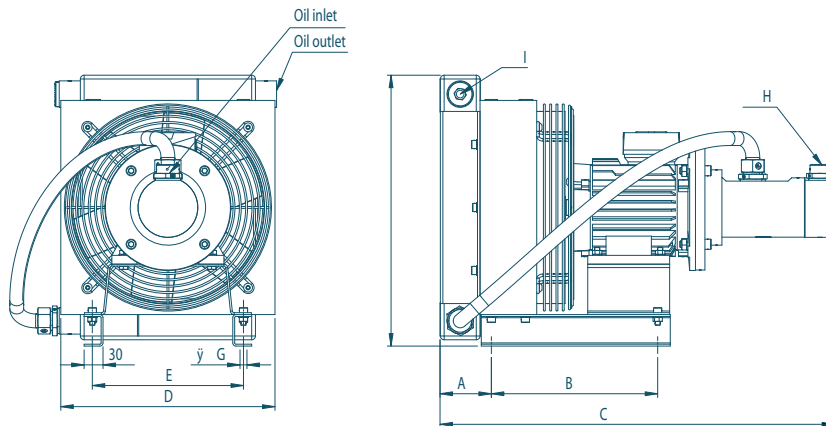
### Model

	<b>ETD DTE</b> (HP Δt 72°F)	<b>Standard Pump</b> (GPM)
TFS / A - 8,5	11.3	7.9
TFS / A - 13	17.4	10
TFS / A - 20	26.8	13.2

Cooling capacity of the oil-air cooler (with feed pump) as a function of the input temperature difference of oil to air.

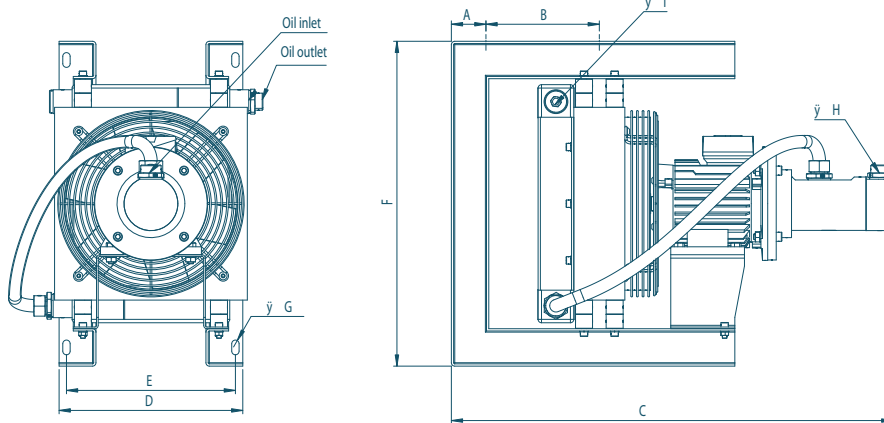
## Unit Dimensions

TFS / A - ... F



in INCH	... - 8,5	... - 13	... - 20
<b>A</b>	7.7	10.1	9.3
<b>B</b>	5.9	5.9	5.9
<b>C</b>	24.5	26.9	30.2
<b>D</b>	13.4	18.9	18.9
<b>E</b>	9.4	15.0	15.0
<b>F</b>	16.9	21.6	21.6
<b>G</b>	0.4	0.4	0.4
<b>H</b>	1" JIC	1" JIC	1" JIC
<b>I</b>	1" JIC	1" JIC	1" JIC

TFS / A - ... WH / DH



in INCH	... - 8,5	... - 13	... - 20
<b>A</b>	2.4	2.8	2.8
<b>B</b>	7.9	10.4	10.4
<b>C</b>	30.7	34.1	37.4
<b>D</b>	13.5	18.9	18.9
<b>E</b>	11.7	17.3	17.3
<b>F</b>	22.6	28.1	28.1
<b>G</b>	1 x 0.5	1 x 0.5	1 x 0.5
<b>H</b>	1" JIC	1" JIC	1" JIC
<b>I</b>	1" JIC	1" JIC	1" JIC

## Ordering code

**TFS / A - 8,5 - 400 - F - 05 - 19 - DBV - 10BY**

Model family

**Cooling capacity**

8,5 = 11.3 HP  
13 = 17.4 HP  
20 = 26.8 HP  
(at ETD = 72°F)

**Rated voltage of motor**

400 =  
230/460 V/60Hz, cUL/cULus

Low pressure filter (10 my)

DBV = internal pressure control valve

**Pump delivery volume**

19 = 1.16 in<sup>3</sup>  
27 = 1.65 in<sup>3</sup>  
34 = 2.07 in<sup>3</sup>

**Series**

**Mounting**

F = Standard feet  
WH/DH = combined wall/ceiling bracket

## Technical data\*

TFS / A ...		... - 8,5	... - 13	... - 20
Electrical connect load	HP	1.7	1.7	2.4
Rated current at 230/460 V 60 Hz	A	5.1/2.95	5.1/2.95	6.6/3.8
Devicetype	in <sup>3</sup>	1.16	1.65	2.07
Rotational speed at 60 Hz	RPM	1720	1720	1720
Weight rate of air flow	CFM	665	1509	1313
Viscosity range	Cst	10-300		
Permissible operating medium temperature	°F	212	212	212
Permissible operating-medium pressure at 40 mm <sup>2</sup> /s	PSI	145	145	72
Sound intensity level	dB (A)	64	74	76
Maximum suction height	inch	39	39	39
Maximum temperature spread	°F	140	140	140
Gearbox application: incl.internal Bypass valve - fix adjusted /	PSI	72	72	72

\*All declarations refer to a voltage of 460 V/60 Hz. The corresponding values for other voltages and mains frequencies can be requested from the Universal Hydraulic GmbH Company. Subject to technical modifications.

The technical data of this sheet is depending on the described operational conditions and individual cases. At different operational conditions and differing individual cases contact UniversalHydraulik.

Technical modifications reserved. Please also pay attention to our operation manuals and maintenance documentations.

## Sales

**Universal Hydraulik GmbH**

Siemensstr. 33 · D-61267 Neu-Anspach  
Tel: +49 60 81/94 18 - 0 · Fax +49 60 81/96 02 20  
eMail info@universalhydraulik.com  
[www.universalhydraulik.com](http://www.universalhydraulik.com)

**IC-Fluid Power, Inc.**

63 Dixie Hwy.  
Rossford, OH 43460  
Tel: +1.419.661.8811  
E-Mail: us@icfluid.com [www.icfluid.com](http://www.icfluid.com)