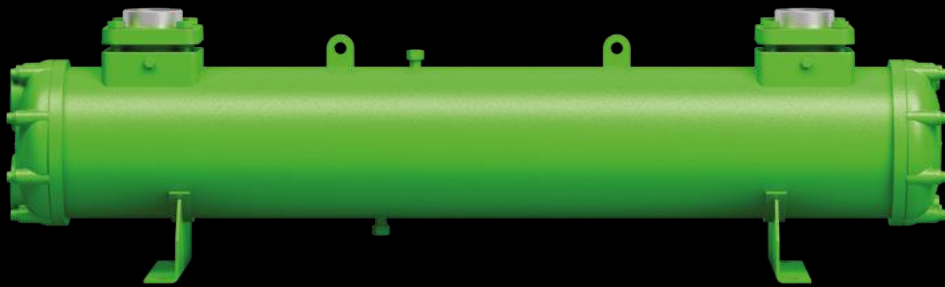




DAS HERZ DER FRISCHE

# WATER COOLED OIL COOLERS

DP-450-1 EN



OWD SERIES



REFRIGERATION



PROCESS  
COOLING



HEAT  
PUMPS

# BITZER. EXPERTISE AND INNOVATION.

- AIR CONDITIONING
- HEAT PUMPS
- REFRIGERATION
- PROCESS COOLING
- TRANSPORT

As an independent global leader in refrigeration, air conditioning and heat pump technology for comfort air conditioning, process technology and mobile applications, we use our extensive experience to provide innovative products and intelligent solutions which create additional value for our partners and the environment all over the world.

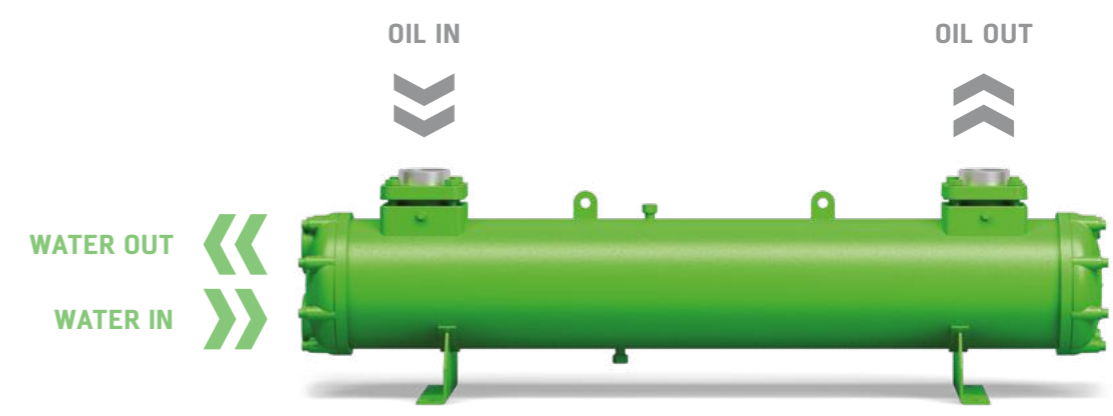
Learn more at [bitzer.de](http://bitzer.de)

## YOUR REFRIGERATION SYSTEM IN SAFE HANDS

OWD is a brand-new family of water cooled oil coolers that complements the traditional OW oil coolers. Its specialty: It enlarges the existing capacity range fivefold and improves the efficiency of the heat exchange. Thanks to BITZER oil coolers, the compressor operation is always under control and in safe conditions as the correct oil temperature is carefully maintained.

The OWD series is optimised for the capacity range of BITZER OS and HS screw compressors and is suitable for both parallel operation of multiple compressors and single compressor systems. Thanks to the BITZER SOFTWARE, the system components can be easily and precisely designed to match each other.

Featuring a standard version as well as one for seawater applications, OWD is a universal product platform suitable for HFC, HFO and hydrocarbon cooling and heating systems.

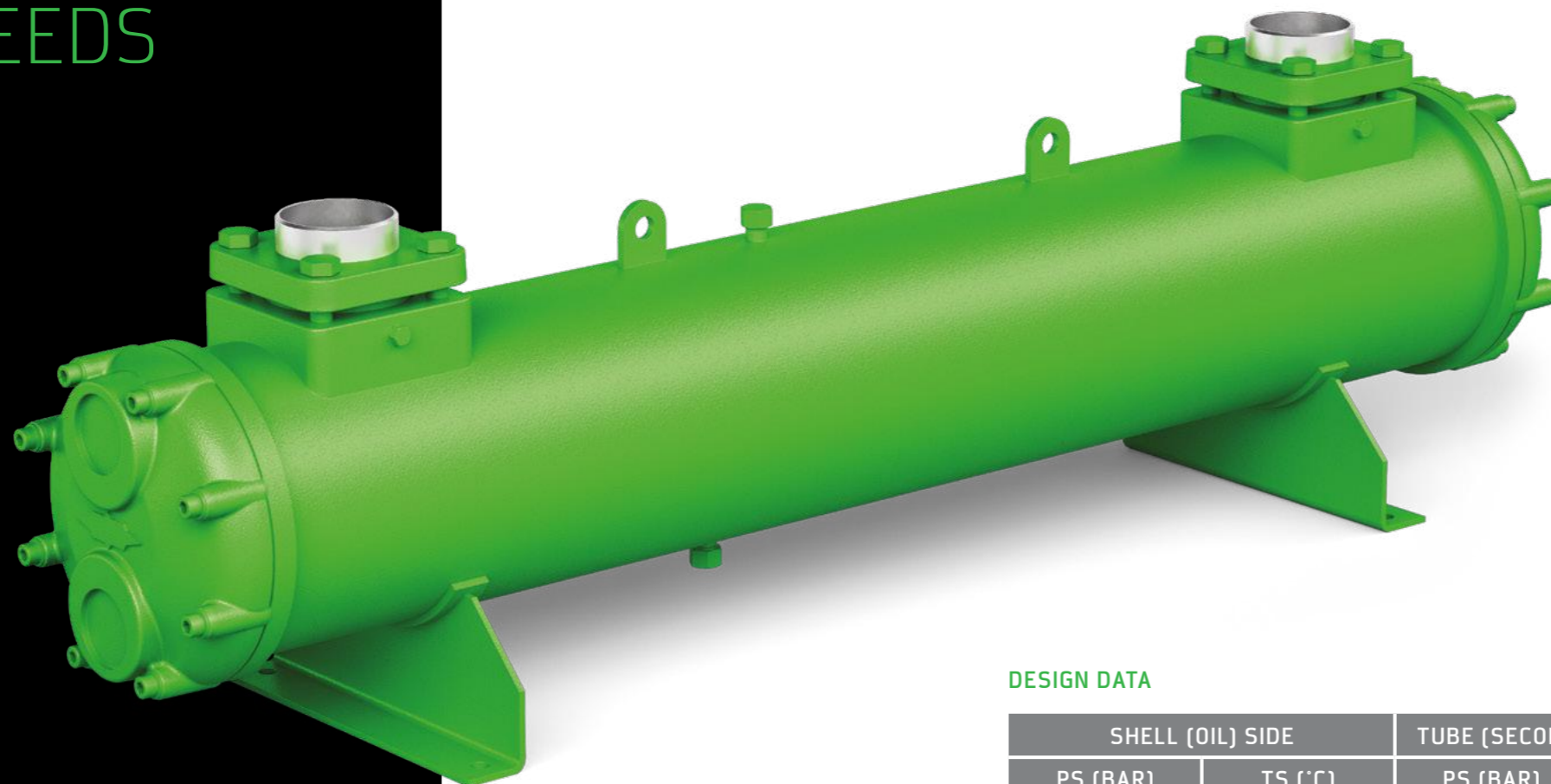


## CAPACITY AND APPLICATION RANGES

OWD coolers can fulfil oil cooling duties up to 300 kW in single- or multiple-compressor compound systems. The entire oil flow in the system can easily be treated in a single oil cooler, saving space and simplifying the design of the whole refrigeration machine.

The wide approval range of OWD oil coolers allows for maximum flexibility in the application, with oil temperatures up to 150°C and water temperatures up to 95°C.

# ONE ANSWER FOR MULTIPLE OIL COOLING NEEDS



## ONE PRODUCT. ENDLESS CONFIGURATIONS

- OWD oil coolers can be provided in different versions:
- // Standard material version for operation with normal water or antifreeze fluids (copper tubes)
  - // Seawater-resistant version (CuNi10Fe1Mn tubes and sacrificial anodes)
  - // Five different shell diameters (from 139.7 to 323.9 mm)
  - // Two different tube diameters
  - // Five different tube lengths
  - // Two-pass water-side configuration
  - // Four-pass water-side configuration

## AVAILABLE ACCESSORIES AND OPTIONS

- // Oil outlet shut-off valve
- // Oil drain shut-off valve
- // Warranty extension

## DESIGN DATA

SHELL (OIL) SIDE		TUBE (SECONDARY FLUID) SIDE	
PS (BAR)	TS (°C)	PS (BAR)	TS (°C)
-1/32	-20/150	-1/10	-10/95
All types of refrigeration oil with traces of refrigerant compatible with the oil cooler materials*		Fresh water, water + ethylene or propylene glycol, other heat transfer fluids compatible with the oil cooler materials*	

PS = minimum/maximum allowable pressure  
 TS = minimum/maximum allowable temperature  
 \* Not approved for R717 applications

## AVAILABLE PRESSURE VESSEL APPROVALS

- // CE (PED 2014/68/EU)
- // SELO/CML
- // Marine approvals (DNV, BV, LR etc.) on request

## STANDARD MATERIAL OF MAIN COMPONENTS

	STANDARD VERSION	SEAWATER-RESISTANT VERSION
Tubes	Copper	CuNi10Fe1Mn
Tube sheets	Carbon steel P265GH	Stainless steel AISI316L
Shell	Carbon steel P265GH	Carbon steel P265GH
Refrigerant connections	Carbon steel P235GH	Carbon steel P235GH
Water end covers	Cast iron / Carbon steel P265GH	Stainless steel AISI316L
Water connections	Cast iron / Carbon steel P265GH	Stainless steel AISI316L
Sacrificial anodes	-	Decarbonised steel

## + LARGE CAPACITIES

HIGH OIL COOLER CAPACITIES OF UP TO 300 KW POSSIBLE

## + REDUCED COMPLEXITY

SUITABLE FOR BOTH SINGLE- AND MULTI-COMPRESSOR SYSTEMS

## + A PERFECT MATCH

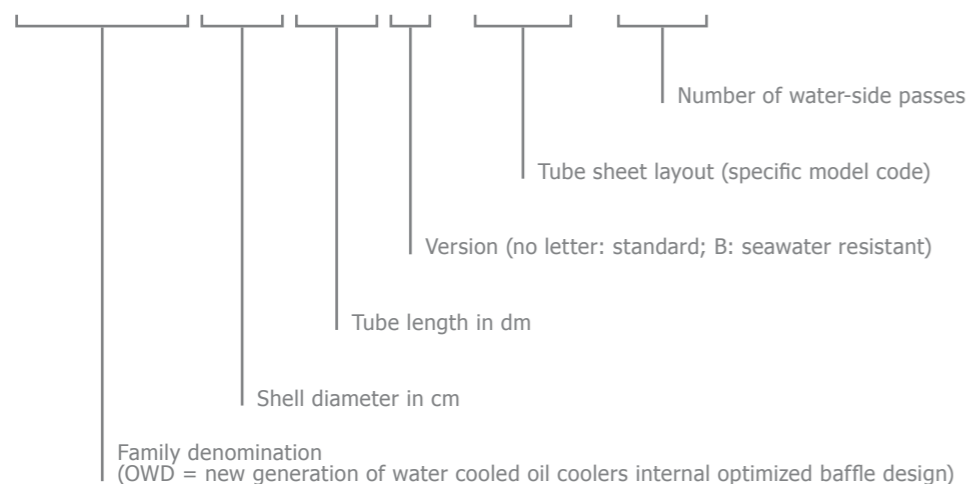
STRAIGHTFORWARD SYSTEM DESIGN IN THE BITZER SOFTWARE

## TECHNICAL DATA

Model	Shell diameter mm	Total length mm	SHELL (OIL) SIDE				TUBE (BRINE) SIDE				Weight kg		
			Maximum flow rate m³/h	Inlet/outlet	Air purge	Oil drain	Volume dm³	Minimum flow rate m³/h	Maximum flow rate m³/h	Inlet/outlet 4-pass 2-pass		Volume dm³	
OWD1307-10-2P	139.7	873	5.4	ODS 42			7.0	2.3	8.5	G 1"	G 1 1/2"	2.7	36
OWD1307-10-4P			5.4				1.1	4.2					
OWD1307-20-2P			5.4				2.8	10.6					
OWD1307-20-4P		5.4	1.4				5.3	3.2	38				
OWD1310-20-2P		5.4	2.8				10.6						
OWD1310-20-4P		5.4	1.4				5.3						
OWD1607-20-2P	168.3	887	12.9	ODS 54			8.5	4.8	18.0	G 1 1/2"	G 2"	5.6	60
OWD1607-20-4P		12.9	2.4				9.0						
OWD1610-20-2P		1138	4.8				18.0	7.1	71				
OWD1610-20-4P		12.9	2.4				9.0						
OWD1612-20-2P		1342	18.3				33.8	8.5	77				
OWD1612-20-4P		18.3	4.5				16.9						
OWD1615-20-2P		1647	18.3				33.8	10.4	89				
OWD1615-20-4P		18.3	4.5				16.9						
OWD1618-20-2P		1952	18.3				33.8	12.2	102				
OWD1618-20-4P		18.3	4.5				16.9						
OWD2112-20-2P	219.1	1350	31.4	ODS 76	3/4"-16 UNF	3/4"-16 UNF	23.6	15.9	59.7	G 2"	G 2 1/2"	16.3	125
OWD2112-20-4P		31.4	8.0				29.9						
OWD2115-20-2P		1655	31.4				59.7	19.8	143				
OWD2115-20-4P		31.4	8.0				29.9						
OWD2118-20-2P		1960	31.4				59.7	23.3	185				
OWD2118-20-4P		31.4	8.0				29.9						
OWD2712-20-2P	273.0	1378	55.1	ODS 108			34.5	26.1	98.0	G 2 1/2"	G 4"	28.3	198
OWD2712-20-4P		55.1	13.1				49.0						
OWD2715-20-2P		1683	55.1				98.0	34.1	229				
OWD2715-20-4P		55.1	13.1				49.0						
OWD2718-20-2P		1988	55.1				98.0	39.8	260				
OWD2718-20-4P		55.1	13.1				49.0						
OWD3212-20-2P	323.9	1385	92.7				48.2	37.9	142.0	G 3"		40.4	263
OWD3212-20-4P		92.7	18.9				71.0						
OWD3215-20-2P		1690	92.7				142.0	48.7	307				
OWD3215-20-4P		92.7	18.9				71.0						
OWD3218-20-2P		1995	92.7				142.0	57.1	349				
OWD3218-20-4P		92.7	18.9				71.0						

## EXPLANATION OF TYPE DESIGNATION

# OWD2115B-20-4P



# SAFETY AND PERFORMANCE SEAMLESSLY COMBINED



### PROCESS COOLING

Demanding process cooling applications require the safest and most precise oil cooling in order to protect their compressors today and tomorrow – especially when set to operate in medium or low temperature operation. Shell and tube oil coolers represent the safest solution: they ensure a robustness unmatched by other heat exchanger types and the ability to undergo easy and repeatable cleaning processes. In this way, they maintain their performance over time.



### HEATING

High temperature heating systems require dedicated components in order to ensure the optimal production of hot water. Relying on an efficient oil cooler is the key to avoiding unnecessary risks. With a maximum design temperature set at 150°C on the oil side, OWD oil coolers are designed to reliably meet this challenge.

CLOSER TO YOU.  
BITZER WORLDWIDE.



**BITZER Kühlmaschinenbau GmbH**

Peter-Schaufler-Platz 1 // 71065 Sindelfingen // Germany

Tel +49 7031 932-0 // Fax +49 7031 932-147

bitzer@bitzer.de // [www.bitzer.de](http://www.bitzer.de)

Subject to change // 80193701 // 04.2025