

Compressed Air Dryers

CDAS / OFAS HL 50 - 85

Engineering Data Sheet



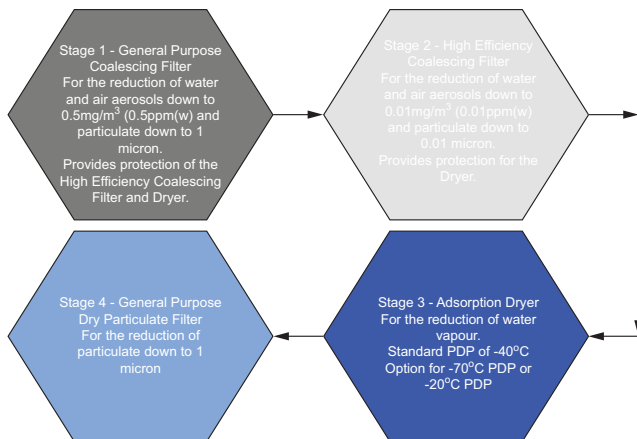
Description

Adsorption dryers operate on the principle of two drying beds, one to dry the process air whilst the other is being regenerated and readied for use, swapping periodically. CDAS HL / OFAS HL dryers operate on the Pressure Swing Adsorption (PSA) principle which uses a proportion of the dry process air to regenerate the off-line bed.

CDAS HL & OFAS HL are complete purification systems designed to reduce the major contaminants found in a compressed air system. CDAS HL provides 4 stages of contamination reduction for 7 contaminants (if liquid water or oil is present, the CDAS HL must be protected by an optional OIL-X WS grade Water Separator).

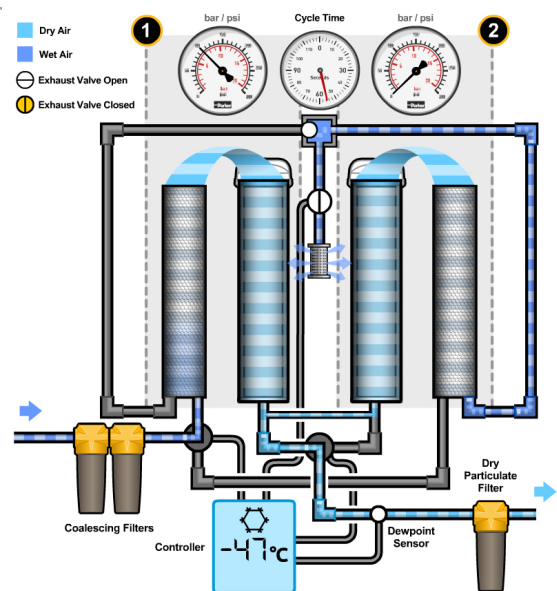
Stages of Purification: 4

Contaminants Reduced: 7 (9 with optional Water Separator*)

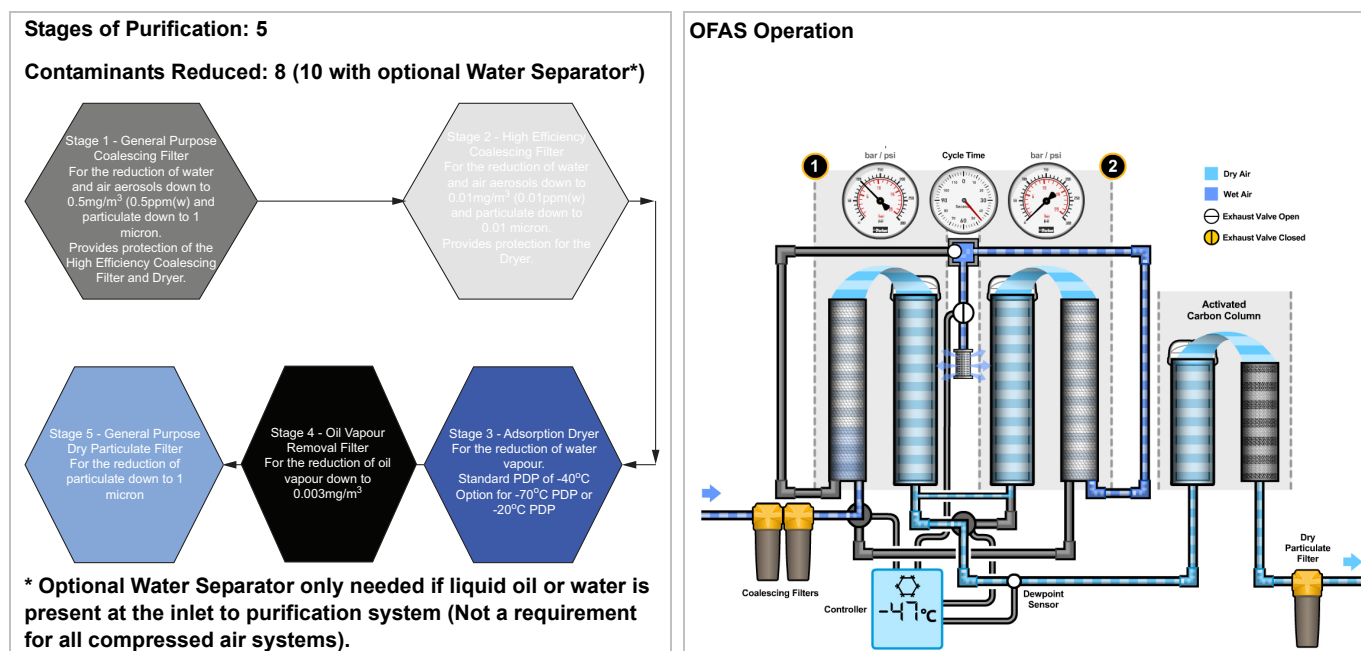


* Optional Water Separator only needed if liquid oil or water is present at the inlet to purification system (Not a requirement for all compressed air systems).

CDAS Operation



OFAS HL provides 5 stages of contamination reduction for 8 contaminants (if liquid water or oil is present, the CDAS HL must be protected by an optional OIL-X WS grade Water Separator)



Technical Specification

Dryer Performance

Dryer Model	Pressure Dewpoint (Standard)		ISO 8573-1:2010 Water Classification	Pressure Dewpoint (Optional)		ISO 8573-1:2010 Water Classification	Pressure Dewpoint (Optional)		ISO 8573-1:2010 Water Classification
	°C	°F	(Standard)	°C	°F	(Optional)	°C	°F	(Optional)
CDAS HL	-40	-40	Class 2.2.2	-70	-100	Class 2.1.2	-20	-4	Class 2.3.2
OFAS HL	-40	-40	Class 2.2.0	-70	-100	Class 2.1.0	-20	-4	Class 2.3.0

Important Note Regarding -70°C (-100°F) Dewpoint.

A compressed air dryer supplying a pressure dewpoint of -70°C (-100°F) requires a different desiccant fill to dryers supplying a standard -40°C / -20°C pressure dewpoint. During shipping, desiccant material adsorbs atmospheric moisture. Following installation, commissioning and initial operation, the dryer will start to "dry down" until it provides the desired -70°C (-100°F). Once achieved, the dryer will continue to supply air at the required dewpoint, however it is important to note that the dry down period may take several days / weeks to achieve the -70°C (-100°F) dewpoint.

Technical Data

Dryer Model	Min Operating Pressure		Max Operating Pressure		Min Operating Temperature		Max Operating Temperature		Max Ambient Temperature	
	bar g	psi g	bar g	psi g	°C	°F	°C	°F	°C	°F
CDAS/OFAS HL	4	58	16	232	5	41	50	122	55	131

Flow Rates

Dryer Model	Pipe Size BSPP or NPT	L/s	m ³ /min	m ³ /hr	cfm
CDAS/OFAS HL 050	1/2"	15	0.92	55	32
CDAS/OFAS HL 055	1/2"	19	1.17	70	41
CDAS/OFAS HL 060	1/2"	25	1.50	90	53
CDAS/OFAS HL 065	1/2"	31	1.84	110	65
CDAS/OFAS HL 070	3/4"	42	2.51	150	88
CDAS/OFAS HL 075	1"	51	3.09	185	109
CDAS/OFAS HL 080	1"	61	3.67	220	129
CDAS/OFAS HL 085	1 1/2"	83	5.01	300	177

Stated flows are for operation at 7 bar g (100 psi g / 0.7 MPa g) with reference to 20°C, 1 bar a, 0% relative water vapour pressure.

Product Selection & Correction Factors

For correct operation, compressed air dryers must be sized using for the minimum pressure, maximum temperature and maximum flow rate of the installation. To select a dryer, first calculate the MDC (Minimum Drying Capacity) using the formula below then select a dryer from the flow rate table above with a flow rate equal to or above the MDC.

Minimum Drying Capacity = System Flow x CFIT x CFAT x CFP x CFD

CFIT - Correction Factor Maximum Inlet Temperature

Maximum Inlet Temperature	°C	25	30	35	40	45	50
	°F	77	86	95	104	113	122
Correction Factor		1.00	1.00	1.00	1.04	1.14	1.37

CFAT - Correction Factor Maximum Ambient Temperature

Maximum Ambient Temperature	°C	25	30	35	40	45	50
	°F	77	86	95	104	113	122
Correction Factor		1.00	1.00	1.00	1.00	1.00	1.00

CFP - Correction Factor Maximum Inlet Pressure

Maximum Inlet Pressure	°C	4	5	6	7	8	9	10	11	12	13	14	15	16
	°F	58	73	87	100	116	131	145	160	174	189	203	218	232
Correction Factor		1.60	1.33	1.14	1.00	0.89	0.80	0.73	0.67	0.62	0.57	0.53	0.50	0.47

CFD - Correction Factor Dewpoint

Maximum Inlet Pressure	°C	-20	-40	-70
	°F	-4	-40	-100
Correction Factor		0.91	1.00	2.00

Electrical Data

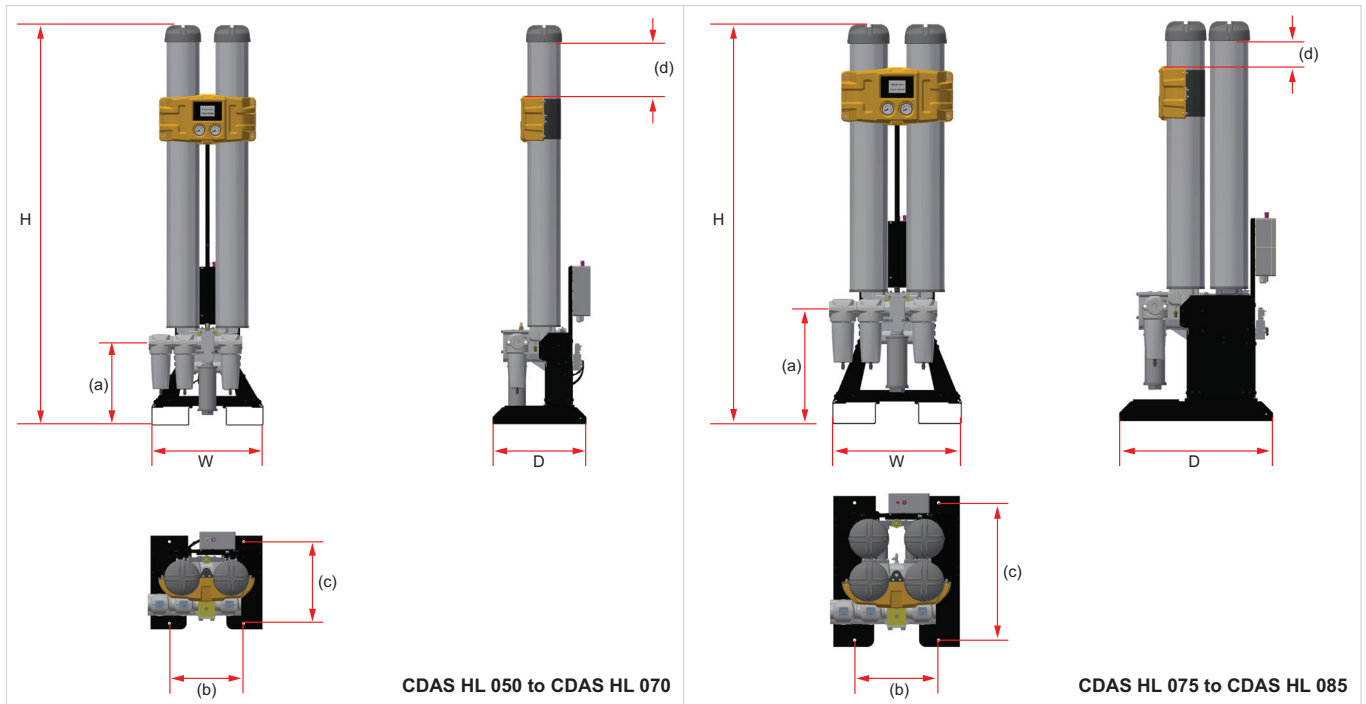
Dryer Model	CDAS HL 50	CDAS HL 55	CDAS HL 60	CDAS HL 65	CDAS HL 70	CDAS HL 75	CDAS HL 80	CDAS HL 85	CDAS HL 90
Supply Voltage (Standard)	85 - 265V 1PH 50/60Hz								
Supply Voltage (optional)	24V DC								
Dryer Model	OFAS HL 50	OFAS HL 55	OFAS HL 60	OFAS HL 65	OFAS HL 70	OFAS HL 75	OFAS HL 80	OFAS HL 85	OFAS HL 90
Supply Voltage (Standard)	85 - 265V 1PH 50/60Hz								
Supply Voltage (optional)	24V DC								

Environmental Data

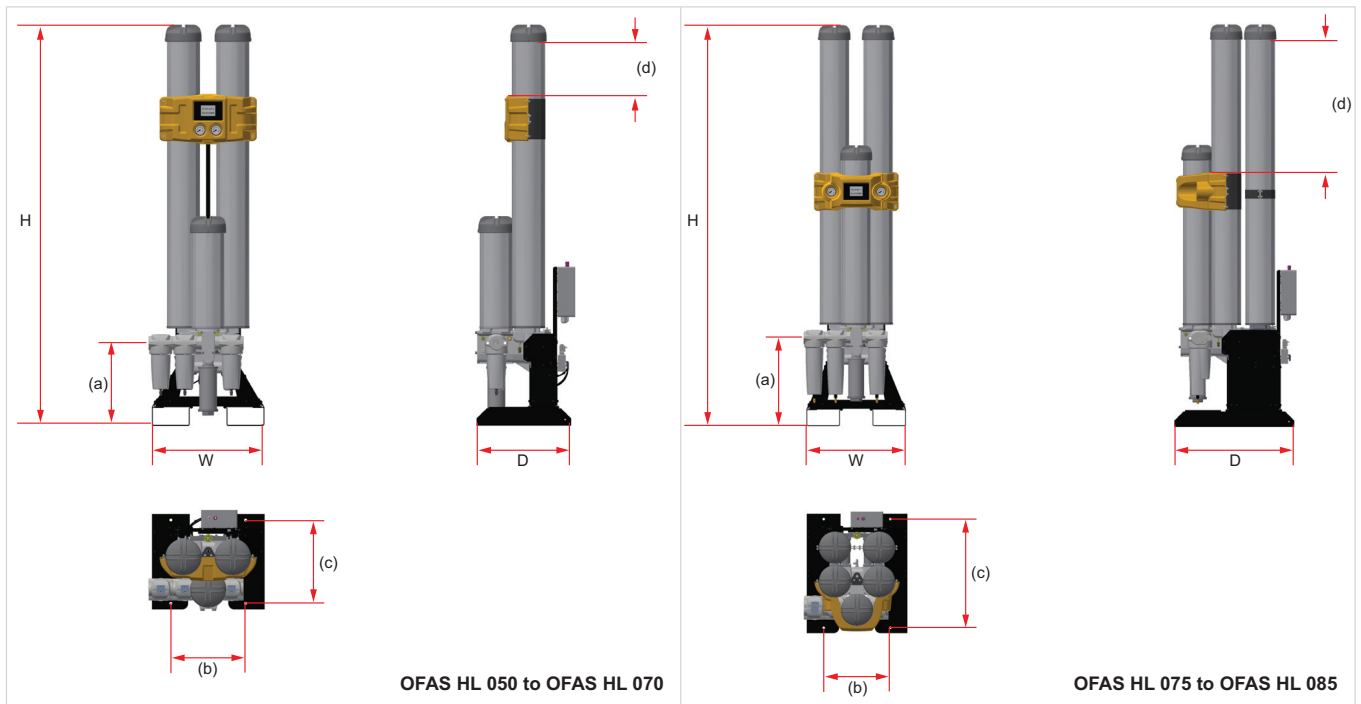
Relative Humidity	55%
IP Rating	IP55, indoor use only
Pollution Degree ⁽¹⁾	2
Maximum Altitude	800 m (2625) (ft)
Noise	< 75 dB(A)

(1) Pollution Degree 2 indicates that in order for this equipment to operate safely, only non-conductive pollution (i.e. solids, liquids or ionised gases) or temporary condensation may be present within the environment.

Weights and Dimensions















Dryer Model	Dryer Dimensions														Weight	
	H		W		D		(a)		(b)		(c)		(d)			
	mm	ins	mm	ins	mm	ins	mm	ins	mm	ins	mm	ins	mm	ins	Kg	lbs
CDAS HL 050	1133	44.6	559	22.0	490	19.3	416	16.4	371	14.6	410	16.1	76	3.0	76	168
CDAS HL 055	1313	51.7	559	22.0	490	19.3	416	16.4	371	14.6	410	16.1	56	2.2	84	185
CDAS HL 060	1510	59.4	559	22.0	490	19.3	416	16.4	371	14.6	410	16.1	53	2.1	93	205
CDAS HL 065	1660	65.4	559	22.0	490	19.3	416	16.4	371	14.6	410	16.1	103	4.1	100	220
CDAS HL 070	2020	79.5	559	22.0	490	19.3	416	16.4	371	14.6	410	16.1	263	10.4	120	265
CDAS HL 075	1595	62.8	559	22.0	682	26.9	416	16.4	371	14.6	410	16.1	53	2.1	165	364
CDAS HL 080	1745	68.7	559	22.0	682	26.9	416	16.4	371	14.6	410	16.1	103	4.1	180	397
CDAS HL 085	2105	82.9	559	22.0	682	26.9	416	16.4	371	14.6	410	16.1	263	10.4	210	463



Dryer Model	Dryer Dimensions														Weight	
	H		W		D		(a)		(b)		(c)		(d)			
	mm	ins	mm	ins	mm	ins	mm	ins	mm	ins	mm	ins	mm	ins	Kg	lbs
OFAS HL 050	1133	44.6	559	22.0	512	20.2	416	16.4	371	14.6	410	16.1	76	3.0	90	198
OFAS HL 055	1313	51.7	559	22.0	512	20.2	416	16.4	371	14.6	410	16.1	56	2.2	97	214
OFAS HL 060	1510	59.4	559	22.0	496	19.5	416	16.4	371	14.6	410	16.1	53	2.1	106	234
OFAS HL 065	1660	65.4	559	22.0	496	19.5	416	16.4	371	14.6	410	16.1	103	4.1	112	247
OFAS HL 070	2020	79.5	559	22.0	496	19.5	416	16.4	371	14.6	410	16.1	263	10.4	132	291
OFAS HL 075	1595	62.8	559	22.0	682	27	416	16.4	371	14.6	410	16.1	53	2.1	184	406
OFAS HL 080	1745	68.7	559	22.0	682	27	416	16.4	371	14.6	410	16.1	103	4.1	196	432
OFAS HL 085	2105	82.9	559	22.0	682	27	416	16.4	371	14.6	410	16.1	263	10.4	232	511

Service Intervals

Description of Service Required		Service recommended every:					
Component	Operation	Day	Week	3 month	6month	12 month	60 month
Dryer	Check POWER ON and STATUS / FAULT indicators.						
Dryer	Check for air leaks.						
Dryer	Check the pressure gauges during purging for excessive back pressure.						
Dryer	Check the condition of electrical supply cables and conduits.						
Dryer	Check for cyclic operation.						
Dryer	Replace the exhaust silencers.						
Filtration	Replace the inlet and outlet filters, and service drains.						
Dryer	Replace / Calibrate dewpoint transmitter						
Dryer	Replace the outlet check valves						
Dryer	Replace the inlet, outlet and control valves						
Dryer	Replace the Desiccant Cartridges.						
Dryer	Replace the Carbon Cartridges (OFAS Range only).						

Key:

	Check		Recommended Service
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Preventative Maintenance Kits - CDAS

Catalogue Number	Description	12	24	36	48	60	Order Qty
M12.FSK.0002	12 Month Filter Service Kit (-20 and -40 dryers)	✓	✓	✓	✓	✓	CDAS HL 050 - CDAS HL 055 (x1)
M12.FSK.1002	12 Month Filter Service Kit (-70 dryer)	✓	✓	✓	✓	✓	CDAS HL 050 - CDAS HL 055 (x1)
M12.FSK.0003	12 Month Filter Service Kit (-20 and -40 dryers)	✓	✓	✓	✓	✓	CDAS HL 060 - CDAS HL 065 (x1)
M12.FSK.1003	12 Month Filter Service Kit (-70 dryer)	✓	✓	✓	✓	✓	CDAS HL 060 - CDAS HL 065 (x1)
M12.FSK.0004	12 Month Filter Service Kit (-20 and -40 dryers)	✓	✓	✓	✓	✓	CDAS HL 070 - CDAS HL 080 (x1)
M12.FSK.1004	12 Month Filter Service Kit (-70 dryer)	✓	✓	✓	✓	✓	CDAS HL 070 - CDAS HL 080 (x1)
M12.FSK.0005	12 Month Filter Service Kit (-20 and -40 dryers)	✓	✓	✓	✓	✓	CDAS HL 085 (x1)
M12.FSK.1005	12 Month Filter Service Kit (-70 dryer)	✓	✓	✓	✓	✓	CDAS HL 085 (x1)
M60.DSK.0009	60 Month Service Kit (-20 and -40 dryers)	✗	✗	✗	✗	✓	CDAS HL 050 (x1)
M60.DSK.1009	60 Month Service Kit (-70 dryer)	✗	✗	✗	✗	✓	CDAS HL 050 (x1)
M60.DSK.0010	60 Month Service Kit (-20 and -40 dryers)	✗	✗	✗	✗	✓	CDAS HL 055 (x1)
M60.DSK.1010	60 Month Service Kit (-70 dryer)	✗	✗	✗	✗	✓	CDAS HL 055 (x1)
M60.DSK.0011	60 Month Service Kit (-20 and -40 dryers)	✗	✗	✗	✗	✓	CDAS HL 060 (x1)
M60.DSK.1011	60 Month Service Kit (-70 dryer)	✗	✗	✗	✗	✓	CDAS HL 060 (x1)
M60.DSK.0012	60 Month Service Kit (-20 and -40 dryers)	✗	✗	✗	✗	✓	CDAS HL 065 (x1)
M60.DSK.1012	60 Month Service Kit (-70 dryer)	✗	✗	✗	✗	✓	CDAS HL 065 (x1)
M60.DSK.0013	60 Month Service Kit (-20 and -40 dryers)	✗	✗	✗	✗	✓	CDAS HL 070 (x1)
M60.DSK.1013	60 Month Service Kit (-70 dryer)	✗	✗	✗	✗	✓	CDAS HL 070 (x1)
M60.DSK.0014	60 Month Service Kit (-20 and -40 dryers)	✗	✗	✗	✗	✓	CDAS HL 075 (x1)
M60.DSK.1014	60 Month Service Kit (-70 dryer)	✗	✗	✗	✗	✓	CDAS HL 075 (x1)
M60.DSK.0015	60 Month Service Kit (-20 and -40 dryers)	✗	✗	✗	✗	✓	CDAS HL 080 (x1)
M60.DSK.1015	60 Month Service Kit (-70 dryer)	✗	✗	✗	✗	✓	CDAS HL 080 (x1)
M60.DSK.0016	60 Month Service Kit (-20 and -40 dryers)	✗	✗	✗	✗	✓	CDAS HL 085 (x1)
M60.DSK.1016	60 Month Service Kit (-70 dryer)	✗	✗	✗	✗	✓	CDAS HL 085 (x1)

Preventative Maintenance Kits - OFAS

Catalogue Number	Description	12	24	36	48	60	Order Qty
M12.FSK.0011	12 Month Filter Service Kit (-20 and -40 dryers)	✓	✓	✓	✓	✓	OFAS HL 050 - OFAS HL 055 (x1)
M12.FSK.1011	12 Month Filter Service Kit (-70 dryer)	✓	✓	✓	✓	✓	OFAS HL 050 - OFAS HL 055 (x1)
M12.FSK.0012	12 Month Filter Service Kit (-20 and -40 dryers)	✓	✓	✓	✓	✓	OFAS HL 060 - OFAS HL 065 (x1)
M12.FSK.1012	12 Month Filter Service Kit (-70 dryer)	✓	✓	✓	✓	✓	OFAS HL 060 - OFAS HL 065 (x1)
M12.FSK.0013	12 Month Filter Service Kit (-20 and -40 dryers)	✓	✓	✓	✓	✓	OFAS HL 070 (x1)
M12.FSK.1013	12 Month Filter Service Kit (-70 dryer)	✓	✓	✓	✓	✓	OFAS HL 070 (x1)
M12.FSK.0014	12 Month Filter Service Kit (-20 and -40 dryers)	✓	✓	✓	✓	✓	OFAS HL 075 - OFAS HL 080 (x1)
M12.FSK.1014	12 Month Filter Service Kit (-70 dryer)	✓	✓	✓	✓	✓	OFAS HL 075 - OFAS HL 080 (x1)
M12.FSK.0015	12 Month Filter Service Kit (-20 and -40 dryers)	✓	✓	✓	✓	✓	OFAS HL 085 (x1)
M12.FSK.1015	12 Month Filter Service Kit (-70 dryer)	✓	✓	✓	✓	✓	OFAS HL 085 (x1)
M60.DSK.0009	60 Month Service Kit (-20 and -40 dryers)	✗	✗	✗	✗	✓	OFAS HL 050 (x1)
M60.DSK.1009	60 Month Service Kit (-70 dryer)	✗	✗	✗	✗	✗	OFAS HL 050 (x1)
M60.DSK.0010	60 Month Service Kit (-20 and -40 dryers)	✗	✗	✗	✗	✓	OFAS HL 055 (x1)
M60.DSK.1010	60 Month Service Kit (-70 dryer)	✗	✗	✗	✗	✗	OFAS HL 055 (x1)
M60.DSK.0011	60 Month Service Kit (-20 and -40 dryers)	✗	✗	✗	✗	✓	OFAS HL 060 (x1)
M60.DSK.1011	60 Month Service Kit (-70 dryer)	✗	✗	✗	✗	✓	OFAS HL 060 (x1)
M60.DSK.0012	60 Month Service Kit (-20 and -40 dryers)	✗	✗	✗	✗	✓	OFAS HL 065 (x1)
M60.DSK.1012	60 Month Service Kit (-70 dryer)	✗	✗	✗	✗	✓	OFAS HL 065 (x1)
M60.DSK.0013	60 Month Service Kit (-20 and -40 dryers)	✗	✗	✗	✗	✓	OFAS HL 070 (x1)
M60.DSK.1013	60 Month Service Kit (-70 dryer)	✗	✗	✗	✗	✓	OFAS HL 070 (x1)
M60.DSK.0014	60 Month Service Kit (-20 and -40 dryers)	✗	✗	✗	✗	✓	OFAS HL 075 (x1)
M60.DSK.1014	60 Month Service Kit (-70 dryer)	✗	✗	✗	✗	✓	OFAS HL 075 (x1)
M60.DSK.0015	60 Month Service Kit (-20 and -40 dryers)	✗	✗	✗	✗	✓	OFAS HL 080 (x1)
M60.DSK.1015	60 Month Service Kit (-70 dryer)	✗	✗	✗	✗	✓	OFAS HL 080 (x1)
M60.DSK.0016	60 Month Service Kit (-20 and -40 dryers)	✗	✗	✗	✗	✓	OFAS HL 085 (x1)
M60.DSK.1016	60 Month Service Kit (-70 dryer)	✗	✗	✗	✗	✓	OFAS HL 085 (x1)

Kit Contents - CDAS



-20 and -40 dryers

Catalogue No's.	Description	Contents
M12.FSK.0002 M12.FSK.0003 M12.FSK.0004 M12.FSK.0005	Kit: 12 month service	Filter elements (x3) Filter Drains (x2) Silencer element (x1) Dewpoint sensor (x1)

-70 dryers

Catalogue No's.	Description	Contents
M12.FSK.1002 M12.FSK.1003 M12.FSK.1004 M12.FSK.1005	Kit: 12 month service	Filter elements (x3) Filter Drains (x2) Silencer element (x1) Dewpoint sensor (x1)

Kit Contents - OFAS



-20 and -40 dryers

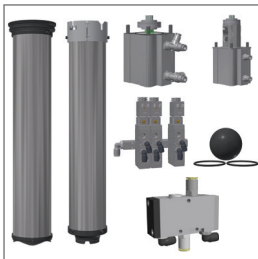
Catalogue No's.	Description	Contents
M12.FSK.0011 M12.FSK.0012 M12.FSK.0013 M12.FSK.0014 M12.FSK.0015	Kit: 12 month service	Filter elements (x3) Filter Drains (x2) Silencer element (x1) Dewpoint sensor (x1) Carbon Cartridge (x1)

-70 dryers

Catalogue No's.	Description	Contents
M12.FSK.1011 M12.FSK.1012 M12.FSK.1013 M12.FSK.1014 M12.FSK.1015	Kit: 12 month service	Filter elements (x3) Filter Drains (x2) Silencer element (x1) Dewpoint sensor (x1) Carbon Cartridge (x1)

Recommended every 60 months

Kit Contents - CDAS / OFAS



-20 and -40 dryers

Catalogue No's.	Description	Contents
M60.DSK.0009 M60.DSK.0010 M60.DSK.0011 M60.DSK.0012 M60.DSK.0013 M60.DSK.0014 M60.DSK.0015 M60.DSK.0016	Kit: 60 month service	Desiccant cartridges Inlet and exhaust valves Control valves Outlet check valve

-70 dryers

Catalogue No's.	Description	Contents
M60.DSK.1009 M60.DSK.1010 M60.DSK.1011 M60.DSK.1012 M60.DSK.1013 M60.DSK.1014 M60.DSK.1015 M60.DSK.1016	Kit: 60 month service	Desiccant cartridges Inlet and exhaust valves Control valves Outlet check valve

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