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Type Approval Certificate

This is to certify that the undernoted product(s) has/have been tested with satisfactory results in accordance with the relevant requirements of the LRQA Type Approval.

This certificate is issued to:

MANUFACTURER*	Parker Hannifin Manufacturing Limited	
	Dukesway	LRQA
MANUFACTURER	Team Valley Trading Estate	
ADDRESS*	Gateshead	
	Tyne & Wear, NE11 0PZ	LRQA
	United Kingdom (UK)	
		_
TYPE*	FBP HL 100, FBP HL 110, FBP HL 120, FBP HL 130, FBP HL 140, FBP HL 150,	
	FBP HL 160, FBP HL 170	LIKGAN
	FBP LE 100, FBP LE 110, FBP LE 120, FBP LE 130, FBP LE 140, FBP LE 150,	
	FBP LE 160, FBP LE 170	
		LRQ/\
DESCRIPTION*	FOOD BEVERAGE PHARMACEUTICAL GRADE COMPRESSED AIR TREATMENT SYSTEM (PURIFICATION	1
	SYSTEM)	
TRADE NAMES	FBP / FOOD BEVERAGE PHARMACEUTICAL / FBP HL (HEATLESS)	1
	FBP / FOOD BEVERAGE PHARMACEUTICAL / FBP LE (HEATLESS LOW ENERGY)	
<u></u>		1
ΔΡΡΙ ΙζΑΤΙΟΝ	Compressed Air Treatment to provide a supply of Food / Beverage / Pharmaceutical grade clean dry	LRQA
ATTEICATION	oil-free compressed air	
]
SPECIFIED	ISO 7183: 2007 Compressed-air drivers – Specifications and testing	LRQ/\
STANDARD	ISO8573-1:2010 Contaminant and purity classes	
011112/1112	ISO8573-2:2018 Contaminant measurement - Oil aerosol content	
	ISO8573-3:1999 Test Methods for measurement of humidity	RQA
	ISO8573-4-2019 Contaminant measurement - Particle content	
	ISO 8573-5:2001 Test methods for oil vanour and organics solvents	
	ISO12500-1:2007 Filters for compressed air – Test methods Oil Aerosols	
	Best Practice Guideline (BPG 102-1) Food and Beverage Grade Compressed Air	LRQA
	best hadde onderne (b) o 102 1/1000 and beverage orade compressed hin]
PPODUCT PATINGS	When sized in accordance with the manufacturer's instructions, the EBP HL or EBP LE Treatment	1
r KODOCT KATINGS	System will deliver compressed air purity that meets or exceeds the following ISO 8573-1:2010	LRQ/\
	compressed air purity classifications:	
	Driver sized for $< 40^{\circ}$ C PDP ISO8573, 1:2010 Class 1:2:0*	
	Dryer sized for $\leq -40^{\circ}$ C PDP = 1508573-1.2010 Class 1.2.0	DOA
	$BPG_{102,1} Direct Contact = ISO8573, 1:2010 Class 1.1.0$	
	DFG 102-1 Direct Contact - 1500575-1.2010 Class 1.2:0	
	DFG 102-1 III-UITECT CONTACT - ISO8573-1:2010 Class 1:2:0	
-		
	*Class 0 Total Oil (<0.002mg/m ³) 8 Pottor than Class 1	LRQ/\
	*Class 0 Total Oil (<0.003mg/m³) & Better than Class 1	LRQA

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	The FBP HL or FBP LE Air System is supplied as a package, comprising of Parker OIL-X Grade AO and AA coalescing filters upstream of the dryer and OIL-X Grade OVR adsorption filter, OIL-X Grade AO and OIL-X Grade AA dry particulate filters downstream of the dryer. The combined ISO8573-1 classifications for the total package are stated in the product ratings section above.					LRQA
TEST CONDITIONS	The Parker tested at IS	OIL-X Grade AO and O reference conditions	Grade AA coalescing filt s, in accordance with the	ers models upstream of the dryer requirements of ISO12500-1.	r have been	LRQ/\
	When challenged with up to 40mg/m ³ of oil aerosol, the measured residual oil content measured downstream achieved an outlet air purity equal to Class 1 (<0.01mg/m ³); when challenged with up to 8mg/m ³ of oil vapour, the residual oil content measured downstream achieved an outlet air purity equal to Class 0 (< 0.003mg/m ³) for oil, as defined by ISO8573-1:2010.				LRQA	
	When tested in accordance with the requirements of ISO 7183 and challenged with the inlet conditions of 7bar.g, 35°C, 100% humidity, 25°C ambient temperature and 100% rated flow (as required by Table 2, Option A1), the FBP Oil Free Air System on test achieved the following outlet pressure dew points (PDP):				LRQA	
	 When flowed to achieve a pressure dew point of ≤-40°C, the FBP dryer on test achieved a consistent outlet pressure dew point ≤-40°C, equating to ISO8573-1:2010 Class 2 for water. When flowed to achieve a pressure dew point of ≤-70°C, the FBP dryer on test achieved a consistent outlet pressure dew point ≤ -70°C. equating to ISO8573-1:2010 Class 1 for water. 					LRQA
	Power consumption (peak & average) & purge air volume were also tested and recorded in accordance with ISO7183.					LRQA
	The Parker OIL-X Grade AO dry particulate filter installed downstream has been tested in accordance with the requirements of ISO 8573-4. The declared air purity class measured upstream and downstream of the FBP HL or FBP LE Oil Free Air System in accordance with ISO 8573-4 is provided below:					LRQ/\
		Upstream air purity class	Downstream air purity class	Measurement uncertainty on concentration		LRQ/\
		Class 3	Class 1	±2.5%		POA

		-
NOTES	British Compressed Air Society Best Practice Guideline 102-1 Food & Beverage Grade Compressed Air recommends that each compressed air usage point in a food and beverage manufacturing facility be designated as either Direct Contact, In-direct Contact or Non-Food Contact.	LRQA
	To ensure consumer safety, the minimum recommended ISO 8573-1:2010 air purity classification for usage points designated as Direct Contact is:	RQA
	ISO 8573-1:2010 Class 1:2:1	
	To ensure consumer safety, the minimum recommended ISO 8573-1:2010 air purity classification for usage points designated as In-direct Contact is:	LRQA
	ISO 8573-1:2010 Class 1:2:1	
	Parker FBP treatment systems meet the minimum requirements for both Direct Contact & In-direct Contact applications as recommended in British Compressed Air Society Best Practice Guideline 102-1	LRQA

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Details of the equipment, methodology and results are contained within the Technica	al Documentation Files	LRQ/\
referred to in the Design Appraisal Documents COV1613827 O-33199/DH, COV1	1713761 O-34016/DH,	
COV1713837 O-34723/DH, PRJ11100398745 O-39903/PKC, PRJ11100430846 O-4101	2/PKC in conjunction	
with all supplementary Type Approval Terms & Conditions form part of this Certificate	e.	LRQA

"This Certificate is not valid for equipment, the design, ratings or operating parameters of which have been varied from the specimen tested. The manufacturer should notify LRQA Verification Limited of any modification or changes to the equipment in order to obtain a valid certificate."

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clause as 'LRQA'. LRQA assumes no responsibility and shall not be liable information or advice in this document or howsoever provided, unless that of this information or advice and in that case any responsibility or liability i Form 6438IS (2021-12)	e to any person for any loss, damage or expense caused by reliance t person has signed a contract with the relevant LRQA entity for the pro s exclusively on the terms and conditions set out in that contract.	on the ovision LRQA