

Meggitt Fuelling Products

Avery-Hardoll Whittaker Controls

HU4000M2 series hose end pressure refuelling coupling



Proven Design Features Retained

Safety in refuelling is of paramount importance. Avery Hardoll's unique internal safety interlock utilises the poppet as an integral part of the interlock system and is therefore not reliant on secondary interlock components. The coupling is unaffected by wear in the aircraft unit slots and tolerates a high level of wear to the lugs. In addition the design of the HU4000M2 does not cause excessive wear to the aircraft unit.

The design includes a wider range of hose adaptor designs, relocation of the swivels, three handle types, and new operating lever design.

Spares and service requirements are also important in this change of design. Ease of maintenance and spares compatibility with its predecessor has been retained.

- Unique internal safety interlock integral to the poppet
- Six slot engagement for easier coupling location
- Independent swivel improves ease of coupling
- Improved choice of operation with three handle options
- Improved nose seal design
- Well proven Mk 6 pressure controller
- Suitable for all current aircraft types
- Robust, lightweight construction



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1. CODES P. X AND Y ARE NOT APPLICABLE WHEN SURGE CONTROLLER/ADAPTOR CODE ENDS IN 0. I.E CODE 30 IS SELECTED.

CODE PIS NOT REQUIRED IF RING HANDLES (CODE R) IS FITTED.
CODE PIS NOT REQUIRED IF RING HANDLES (CODE R) IS FITTED.
CODE PIS NOT APPLICABLE IF SURGE CONTROLLER/IADAPTOR CODE STARTS WITH A 0, I.E CODE as IS SELECTED (NO SURGE CONTROLLER/IADAPTOR CODE ENDS WITH A 0 OR 3, I.E. CODE X OR Y IS NOT APPLICABLE IF SURGE CONTOLLER/IADAPTOR CODE ENDS WITH A 0 OR 3, I.E. CODE X OR Y IS NOT APPLICABLE IF SURGE CONTOLLER/IADAPTOR CODE STARTS WITH A 0 OR 3, I.E. CODE VOR 351 SELECTED (NO ADAPTOR FITTED).
SURGE CONTROLLER/IADAPTOR CODES ENDING IN 5, 6 OR 7 (I.E. CODE 35) SHOULD BE CONTOLLER/IADAPTOR CODES ENDING IN 5, 6 OR 7 (I.E. CODE 35) SHOULD BE CONTIGUERED AS SPECIAL SURGE CONTROLLERS/IADAPTORS.

ANCILLARIES

NOZZLE STRUCTURE

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	NS	RGE CON	1 E	DLLER/ADAPTOR	
8	DESCRIPTION	PART No.	COD	DESCRIPTION	.RT No.
8	NO SURGE CONTROLLER/NO ADAPTOR	NOT AVAIL	33	30psi MAX. SURGE CONTROLLER/A-H 90° ELBOW ADAPTOR HUN	MZ4554
5	NO SURGE CONTROLLER/A-H STANDARD ADAPTOR	HUMZ4400	43	45psi MAX. SURGE CONTROLLER/A-H 90° ELBOW ADAPTOR HUN	MZ4555
02	NO SURGE CONTROLLER/A-H 45° ELBOW ADAPTOR	HUMZ4402	23	50psi MAX. SURGE CONTROLLER/A-H 90° ELBOW ADAPTOR HUN	MZ4556
03	NO SURGE CONTROLLER/A-H 90° ELBOW ADAPTOR	HUMZ4403	63	55psi MAX. SURGE CONTROLLER/A-H 90° ELBOW ADAPTOR	MZ4557
4	NO SURGE CONTROLLER/FLIGHT REFUELLING ADAPTOR	HUMZ4401	5	30psi MAX. SURGE CONTROLLER/FL-R STANDARD ADAPTOR HUN	MZ4530
02	NO SURGE CONTROLLER/THIEM PROFILE ADAPTOR (N/D)	(HUMZ4404)	44	45psi MAX. SURGE CONTROLLER/FL-R STANDARD ADAPTOR HUN	MZ4531
90	NO SURGE CONTROLLER/CARTER PROFILE ADAPTOR (NID)	(HUMZ4405)	54	50psi MAX. SURGE CONTROLLER/FL-R STANDARD ADAPTOR	MZ4532
07	NO SURGE CONTROLLER/45° CARTER PROFILE ADAPTOR (N/D)	(HUMZ4406)	5	55pei MAX. SURGE CONTROLLER/FL-R STANDARD ADAPTOR HUN	MZ4533
30	30psi MAX. SURGE CONTROLLERINO ADAPTOR	HUMZ4500	35	30psi MAX. SURGE CONTROLLER/THIEM PROFILE ADAPTOR (N/D) (HUI	IMZ4500 & HUMZ4404)
40	45psi MAX. SURGE CONTROLLER/NO ADAPTOR	HUMZ4501	45	45psi MAX. SURGE CONTROLLER/THIEM PROFILE ADAPTOR (N/D) (HUI	IMZ4501 & HUMZ4404)
50	50psi MAX. SURGE CONTROLLER/NO ADAPTOR	HUMZ4502	55	50psi MAX. SURGE CONTROLLER/THIEM PROFILE ADAPTOR (N/D) (HUI	IMZ4502 & HUMZ4404)
60	55psi MAX. SURGE CONTROLLER/NO ADAPTOR	HUMZ4503	69	55psi MAX. SURGE CONTROLLER/THIEM PROFILE ADAPTOR (N/D) (HUI	IMZ4503 & HUMZ4404)
2	55psi MAX. DOUBLE SURGE CONTROLLER/A-H STANDARD ADAPTOR	HUMZ4546	36	30psi MAX. SURGE CONTROLLER/CARTER PROFILE ADAPTOR (N/D) (HUI	IMZ4500 & HUMZ4405)
31	30psi MAX. SURGE CONTROLLER/A-H STANDARD ADAPTOR	HUMZ4504	46	45psi MAX. SURGE CONTROLLER/CARTER PROFILE ADAPTOR (N/D) (HUI	IMZ4501 & HUMZ4405)
4	45psi MAX. SURGE CONTROLLER/A-H STANDARD ADAPTOR	HUMZ4505	26	50psi MAX. SURGE CONTROLLER/CARTER PROFILE ADAPTOR (N/D) (HUI	IMZ4502 & HUMZ4405)
51	50psi MAX, SURGE CONTROLLER/A-H STANDARD ADAPTOR	HUMZ4506	99	55psi MAX. SURGE CONTROLLER/CARTER PROFILE ADAPTOR (N/D) (HUI	IMZ4503 & HUMZ4405)
61	55psi MAX. SURGE CONTROLLER/A-H STANDARD ADAPTOR	HUMZ4507	37	30psi MAX. SURGE CONTROLLER/45° CARTER PROFILE ADAPTOR (N/D) (HUI	IMZ4500 & HUMZ4405)
32	30psi MAX. SURGE CONTROLLER/A-H 45° ELBOW ADAPTOR	HUMZ4550	47	45psi MAX. SURGE CONTROLLER/45° CARTER PROFILE ADAPTOR (N/D) (HUI	IMZ4501 & HUMZ4406)
42	45psi MAX: SURGE CONTROLLER/A-H 45° ELBOW ADAPTOR	HUMZ4551	57	50psi MAX. SURGE CONTROLLER/45° CARTER PROFILE ADAPTOR (N/D) (HUI	IMZ4502 & HUMZ4406)
52	50psi MAX. SURGE CONTROLLER/A-H 45° ELBOW ADAPTOR	HUMZ4552	67	55psi MAX. SURGE CONTROLLER/45° CARTER PROFILE ADAPTOR (N/D) (HUI	IMZ4503 & HUMZ4406)
63	55psi MAX. SURGE CONTROLLER/A-H 45° ELBOW ADAPTOR	HUMZ4553			

	HOSE CON	INECTO	RS					
			THRE	AD OPTIONS A	ND CODES			
		-	2	3	9	2	8	
CODE	DESCRIPTION	2" BSP	2.5" BSP	3" BSP	2" NPT	2.5" NPT	3" NPT	
۲	LIGHT WEIGHT QUICK DISCONNECT		HUMZ4561	HUMZ4562		HUMZ4563	HUMZ4564	
_	QUICK DISCONNECT ISOLATING VALVE LOCKING SCREW TYPE	173671H	HUMZ3670		HUMZ3673	HUMZ3672		
σ	QUICK DISCONNECT - STANDARD		HUMZ4412	HUMZ4413		HUMZ4414	HUMZ4415	
s	SWIVEL	\setminus	HUMZ4416	HUMZ4417		HUMZ4418	HUMZ4419	
>	QUICK DISCONNECT ISOLATING VALVE PUSH BUTTON TYPE	73667 7	HUMZ3566		HUMZ3669	HUMZ3668		
NOTE	INCLUDE THESE COLUMNS ONLY WHEN SURGE CONTROLLER/ADAPTOR CC	DDES ENDS IN	1, 2 OR 3 (I.E C	:0DE 31)				

		ANCILLAR	IES	
ADC) LETTERS ONLY IF ANCILLARY (DPTIONS ARE	E REQUIRED (PLACE IN ORDE	R AS LISTED)
CODE	DESCRIPTION	PART ND.	REMARKS	
в	BONDING CABLE	HUMZ1366		
۵	DUST CAP - STANDARD	HUMZ4362	ALL BUILDS (EXTERNAL & INTERNAL - SELECTIVE AND NON-SELECTIVE.)	
σ	GAMMON JET TEST ADAPTOR AND VENT PORT ADAPTOR	HUMZ4542	FITTED AS ALTERNATIVE TO A PLUG IN THE HOSE UNIT & VENT PORT IN THE SURGE CC	NTR.
тÇ	VACUUM RELIEF VALVE 10"Hg	HUMZ3635-1		
5 - 8	VACUUM RELIEF VALVE 15"Hg	HUMZ3635-2		
ś×	VACUUM RELIEF VALVE 22"Hg	HUMZ3635-3		
≥C	SELECTIVITY, POSITIONS 1, 2 & 3	HUMZ4331	FACTORY SET TO POSITION 1	
śΖ	SELECTIVITY, POSITIONS 4 & 5	HUMZ4332	FACTORY SET TO POSITION 4	
۵.	PROTECTION RING	HUPZ3580	NOT REQUIRED IF RING HANDLES ARE FITT CANNOT BE USED ON BUILDS WITH NO SUF CONTROLLER.	ED. GE
αð	RING HANDLE	HUAZ4357		
5 - 1	STIRRUP HANDLE	HUAZ4358	FILLED IN PLACE OF STANDARD STICK HAN	CLES
ĕ≥	NO HANDLES FITTED			
ο	STICK HANDLE (FIT AS STANDARD)	HUMZ4353	FITTED AS STANDARD	
>	60 MESH STRAINER	HUSZ4422	(SHORT) NO SURGE/CONTR.	NO STRAINER
<	(INSTEAD OF 100 MESH STRAINER)	HUSZ4423	(LONG) WITH SURGE/CONTR.	WITH
>	100 MESH STRAINER	HUSZ4421	(SHORT) NO SURGE/CONTR. REF.	TYPE 0 OR 3
-	(FITTED AS STANDARD)	HUSZ3312	(LONG) WITH SURGE/CONTR. ONLY	ADAPTOR
Z	EXTREME COLD WEATHER SEALS	PHHL4010	FLUORO-SILICON SEALS REPLACING STAND FLUOROCARBON SEALS (FITTED AS KIT-SET	ARD

HUMY4000M2 series hose unit - coding chart



Pressure rating

Max Working Pressure:	10.3 bar(150psi)
Test Pressure:	15.5 bar (225 psi)
Max. Flow Rate:	2275 lpm
	500 lgpm
	600 US gpm

Pressure drop (including aircraft adaptor)

Nozzle with Quick-Disconnect and 100 mesh strainer at 1895 lpm 1.03 bar (14.9 psi)

As above plus Surge-Controller 1.79 bar (26.0 psi)

Strength

Although over a kilo lighter than its predecessor the HU4000 retains its basic strength and has been rigorously tested to ensure safe operation under normal operating conditions.

Compatibility

British Standard Aerospace Specification 4C14International Standards Organisation ISO R45NATO Stanag 3105Designed to meet the requirements of MIL-N-5877E

Length

Complete nozzle, surge controller and quick disconnect 370 mm (14.6 in.)

Materials

Those in contact with the fuel are anodised aluminium alloy, stainless steel, PTFE Viton and high nitrile rubber.

Operating temperatures

-20 deg C to 60 deg C (-4 deg F to +140 deg F)

Cold weather conditions

Special seal kits available for temperatures down to -40°C.

Weights

COMPLETE NOZZLE, SURGE CONTROLLER AND LIGHT WEIGHT QUICK DISCONNECT NOZZLE ASSY HOSE CONNECTOR ASSY SURGE CONTROL/ADAPTOR

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PR0 CPL 51- Issue 1

Typical performance curves





	6900
STICK HANDLE ASST (I SET)	0009
DUST CAP ASSY	200g
PROTECTION RING	360g
VACUUM RELIEF VALVE	60g

5.3Kg (11.6lb)

2Kg 50g

1Kg 570g

640g

