TEST CERTIFICATE

IBExU Institut für Sicherheitstechnik GmbH has carried out the following examination as a competent company in the field of explosion protection.

Manufacturer	Messer Cutting Systems GmbH
Address	Otto-Hahn-Straße 2-4 64823 Groß-Umstadt GERMANY
Product **Product description**	Safety devices and quick-action couplings Type series 100, 200, 300, 400 These products and the various versions are specified in the annex and the test report listed.
Product testing was carried out experimentally according to	EN 561:2002 EN ISO 5175-1:2018 EN ISO 9090:2020 EN ISO 9539:2014
Test report	IB2440039
Annexes	This test certificate consists of this document and an annex.
Test result	The products were successfully retested orientating/random on the basis of the BAM type tests in accordance with the standards listed under product testing and documented in separate test report. The orientating/random monitoring of the products takes place in an annual cycle.

The products may be labeled as follows in conjunction with the number of the test certificate:

IBExU® geprüft und überwacht or IBExU® tested and under surveillance

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TEST CERTIFICATE

Number of the certificate	2407 | Issue 01
Valid until	2027-11-30
Issued by	IBExU Institut für Sicherheitstechnik GmbH Fuchsmühlenweg 7 09599 Freiberg | Germany

30.01.2025

Date (checked and released) / Signature
Prüflaborleiter / Head of test laboratory

Note 1: Test certificates without a signature are not valid. Test certificates may only be reproduced in full and unchanged.

Note 2: This test certificate certifies the result of the test on the product submitted for testing. It is not applicable to other products.

Note 3: If this test certificate does not bear issue 00, it replaces the previous issue including any associated annexes.

TEST CERTIFICATE - ANNEX

Annex of test certificate 2407 | Issue 01

Description of product

Part 1: Safety devices with integrated flame arrester and multiple functions

Depending on the model, these are designed to protect tapping points on distribution lines and/or individual cylinder systems, as well as consumer appliances. The safety devices consist of a housing, a sintered flame arrester and a gas non-return valve. Depending on the model, a temperature-sensitive cut-off and/or pressure-sensitive cut-off valve are also installed.

Table 1

Type series	ID-No.	max. connectable inner tube / hose Ø in mm	max. operation pressure per gas type[1] p [MPa]					
100			A	P	M	H	Air	O
DGN	02	10	0.15	0.50	0.50	0.35	2.50	2.50
DGNDK	04	10	0.15	0.50	0.50	0.35	-	2.00
DEMAX 5N	45	25	0.15	0.50	0.50	0.30	2.50	2.50
DS1000	67	10	0.15	0.50	0.50	0.35	1.50	1.50
200			A	P	M	H	Air	O
GT	113	10	0.15	0.40	0.40	0.35	2.00	2.00
GG	114	10	0.15	0.40	0.40	0.35	2.50	2.50
TT	115	10	0.15	0.40	0.40	0.35	2.00	2.00
DKST	118	10	0.15	0.40	0.40	0.35	-	2.00
DKSG	119	10	0.15	0.40	0.40	0.35	-	2.00
GG-A	120	10	0.15	0.40	0.40	0.35	2.00	2.00
300			A	P	M	H	Air	O
DG91N	06	10	0.15	0.50	0.50	0.40	2.50	2.50
DG91-UA	07	10	0.15	0.50	0.50	0.40	2.50	2.50
DS2000	49	10	0.15	0.50	0.50	0.40	1.50	1.50
SIMAX 3N	98	25	0.15	-	-	-	2.50	2.50
SIMAX 5N			0.15	-	-	-	2.50	2.50
SIMAX 8N			0.15	-	-	-	2.50	2.50

[1] Acetylene (A); Propane (P); Methane / Natural gas (M); Hydrogen (H); Oxygen (O)

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TEST CERTIFICATE - ANNEX

The safety devices listed in Table 1 fulfil the requirements of the operating conditions specified in EN ISO 5175-1:2018.

Furthermore, the non-metallic materials used in the devices were successfully tested for use in gaseous oxygen, at the specified maximum operating pressures and the maximum oxygen temperature of 60 °C (test for reactivity with oxygen when exposed to oxygen pressure surges).

Part 2: Quick-action couplings

Quick-action couplings with automatic gas shut-off are used on equipment for welding, cutting and related processes to connect gas hoses to pressure regulators and torches. The quick-action coupling consists of a coupling pin and a coupling body. This quick-action coupling is equipped with an automatic gas lock. When disconnected, the gas lock prevents gas from escaping from the coupling body and is opened again by coupling.

Table 2

Type series	ID-No.	max. connectable inner tube / hose Ø in mm	max. operation pressure p [MPa]		
400			Acetylene	Fuel gas	Oxygen
DKT-F	122	10	0.15	2.00	-
DKT-O	123		-	-	2.00
DKG-F	125	10	0.15	2.00	-
DKG-O	126		-	-	2.00
DKD-F	127	10	0.15	2.00	-
DKD-O	128		-	-	2.00

The quick-action couplings listed in Table 2 fulfil the requirements of the operating conditions specified in EN 561:2002.

Furthermore, the non-metallic materials used in the devices were successfully tested for use in gaseous oxygen, at the specified maximum operating pressures and the maximum oxygen temperature of 60 °C (test for reactivity with oxygen when exposed to oxygen pressure surges).

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TEST CERTIFICATE - ANNEX

Specific conditions of Use

Marking and Documentation

The manufacturer is obliged:

a) to label each safety device / quick-action coupling in accordance with the standards specified under product testing and
b) to provide corresponding documentation.

Connection sizes

The types listed under "Product" may only be used with the max cable / hose diameters specified in tables 1 and 2

Limitation of use

The operator is obliged:

a) to observe and comply with the specifications in the operating instructions and labelling,
b) to ensure that the operating temperatures are between -20 °C and +60 °C and
c) to check the safety devices and quick-action couplings for soiling, damage and corrosion depending on the load and to replace them if necessary.

The safety devices / quick-action couplings may only be used if their materials are resistant to mechanical and/or chemical influences under respective operating conditions, that the function is not invalidated.

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