

STANDARD

LMC's DSP couplings are manufactured in compliance with NF S61-704 for the dimensions ND 40 and ND 65. The ND 100 dimension is manufactured in compliance with NF S61-705.

OPERATION

A DSP coupling is a self-sealing* symmetrical coupling which is secured by interconnecting two DSP couplings. The half coupling is closed by turning the locking ring beneath the triangular section of the opposed DSP coupling. Extra closure can be applied by locking the connection with LMC-Couplings patented multi wrench. The DSP coupling locking system is similar to that of the Guillemin coupling. There are however differences to the preformed serration on the locking ring and the design of the lugs. The locking ring of DSP couplings can be turned up to 45°.

*Seal available only on DSP couplings with locking rings

The DSP coupling range includes two types of coupling:

- DSP couplings in ND 40 and ND 65 are used for pressure and delivery applications
- AR couplings in ND 100 are used for suction and delivery applications

Lug positions:

Please refer to the following assembly instructions where DSP couplings are to be fitted to a fixed installation.



Figure 1: The lugs in this illustration are referred to as "top and bottom lugs". "Top and bottom lugs" are normally used for outlets and in delivery operations.



Figure 2: The lugs in this illustration are referred to as "ear lugs". "Ear lugs" are used for inlets and in suction operations.

N.B.: DSP couplings are not interchangeable with Guillemin couplings.

FEATURES



1. High-quality surface finishing
2. Extra-thick wall for longer life
3. Hole in each lug for chain attachment
4. LMC-Couplings brand name
5. Heat-treated material
6. Material composition as required by the standard



APPLICATION

Fire-fighting: ND 40 - 65 - 100
 Pressure delivery (DSP): ND 40 - 65
 Suction delivery (AR): ND 100

WORKING PRESSURE

16 bar / 230 psi

TEMPERATURE

-20°C / -4°F up to 65°C / 149°F

Hose, coupling, assembly method and seal must be chosen in relation with the desired application and temperature range.

MATERIAL

- Coupling
Heat-treated aluminium
- Seal
NBR - black

ASSEMBLY

Wire binding
 Low pressure ferrules
 Band clamps
 Worm drive clamps

THREADS

Male thread: EN ISO 228-1, BSP
 Female thread: EN ISO 228-1, BSP

TESTING

The main application of DSP couplings is fire fighting. This application causes significant impacts on the coupling during handling. DSP couplings are therefore subject to more demanding testing methods than other couplings. Like LMC's Guillemin couplings the DSP couplings undergo a number of tests executed by our Research & Development department. The following product properties are tested:

- Lugs
- Locking ring
- Material
- Dimensions
- Quality of finish

- Lugs

A fall of a hose, assembled with DSP couplings, causes an import impact on the lugs of the coupling. Therefore the mechanical strength of the lugs needs to be tested.

The mechanical strength of the lugs is tested using a conical weight falling around its axis onto the coupling lugs. This 'Chinese head' test is developed to test the internal impact of the lugs. The external impact strength of the lugs is tested using the 'pan' test, which is the opposite of the 'Chinese head' procedure. LMC's DSP couplings passed both lug tests successfully.



- Locking ring

The locking ring is tested by simulating a fall to the ground. The testing device consists of a sway arm and a weight. When the arm hits the locking ring, the ring deforms as a result of the heavy impact. This test enables us to discover whether there are any signs of post-impact deformation or fracturing. In practice, a locking ring can't deform, because it is mounted onto the body of the DSP coupling. However, if the chemical structure of the locking ring is inadequate, the locking ring will break immediately. The LMC-Couplings locking ring maintained its original shape after testing, and showed no evidence of fracture.



- Material

An in-house spectroscope is used to test the material composition of the heat treated aluminium used for DSP couplings. This test guarantees our customers DSP couplings developed in full compliance with the relevant standard.



- Dimensions

The dimensions of LMC DSP couplings comply with NF S61-704 / NF S61-705. All DSP couplings manufactured in compliance with this standard are interchangeable. All the DSP couplings are randomly checked for correct dimensions using LMC's measuring system.

Our measuring system checks if the dimensions of our DSP couplings comply with the standard. Although ordinary measuring systems are unable to give precise measurements, our measuring system is able to measure the less accessible parts and shapes of DSP couplings. This method minimizes inspection times and ensures the highest levels of product quality.



- Quality of finish

LMC's DSP couplings not only meet the high requirements of the standard NF S61-704 / NF S61-705, a lot of attention was focused on product design. The design of the lugs, the ergonomic locking ring, the special treated surface, plug with chain, branding ... and many more details guarantee a highly finished product.

DSP couplings vs Guillemin couplings

	DSP COUPLINGS	GUILLEMIN COUPLINGS
Standard	NF S61-704 / NF S61-705	EN 14420-8 / NF E 29-572
Main application	Pressure and suction purposes in fire fighting	Pressure and suction purposes in wide range of industries
Lug	Triangular (a)	Smooth (b)
Locking ring	Serrated Rotates up to 45°	Smooth Rotates up to 360°
Seal	Profiled seal	Square-section seal



N.B.: LMC's DSP couplings are not interchangeable with LMC's Guillemin couplings.



Multi wrench GY®

DSP COUPLINGS



MALE THREADED WITHOUT LOCKING RING

ND	Inch	Thread EN ISO 228-1	Material	Weight/pc Kg	Reference
DSP 40	1.1/2"	G 1.1/2	Aluminium	0.11	LDM040
DSP 40	1.1/2"	G 2	Aluminium	0.19	LDM0402
DSP 65	2.1/2"	G 2	Aluminium	0.36	LDM0702
DSP 65	2.1/2"	G 2.1/2	Aluminium	0.25	LDM070
DSP 65	2.1/2"	G 3	Aluminium	0.47	LDM0703
AR 100	4"	G 4	Aluminium	0.55	LDM100



Working pressure: 16 bar / 230 psi
Male thread: EN ISO 228-1, BSP
Profiled seal: NBR black

FEMALE THREADED WITHOUT LOCKING RING

ND	Inch	Thread EN ISO 228-1	Material	Weight/pc Kg	Reference
DSP 40	1.1/2"	G 1.1/2	Aluminium	0.09	LDF040
DSP 40	1.1/2"	G 2	Aluminium	0.18	LDF0402
DSP 65	2.1/2"	G 2	Aluminium	0.30	LDF0702
DSP 65	2.1/2"	G 2.1/2	Aluminium	0.17	LDF070
DSP 65	2.1/2"	G 3	Aluminium	0.41	LDF0703
AR 100	4"	G 4	Aluminium	0.54	LDF100



Working pressure: 16 bar / 230 psi
Female thread: EN ISO 228-1, BSP
Profiled seal: NBR black

MALE THREADED WITH LOCKING RING

ND	Inch	Thread EN ISO 228-1	Material	Weight/pc Kg	Reference
DSP 40	1.1/2"	G 1.1/2	Aluminium	0.17	LDMG040
DSP 40	1.1/2"	G 2	Aluminium	0.21	LDMG0402
DSP 65	2.1/2"	G 2	Aluminium	0.46	LDMG0702
DSP 65	2.1/2"	G 2.1/2	Aluminium	0.36	LDMG070
DSP 65	2.1/2"	G 3	Aluminium	0.61	LDMG0703
AR 100	4"	G 4	Aluminium	0.90	LDMG100



Working pressure: 16 bar / 230 psi
Male thread: EN ISO 228-1, BSP
Profiled seal: NBR black

DSP COUPLINGS



FEMALE THREADED WITH LOCKING RING

ND	Inch	Thread EN ISO 228-1	Material	Weight/pc Kg	Reference
DSP 40	1.1/2"	G 1.1/2	Aluminium	0.24	LDFG040
DSP 40	1.1/2"	G 2	Aluminium	0.29	LDFG0402
DSP 65	2.1/2"	G 2	Aluminium	0.49	LDFG0702
DSP 65	2.1/2"	G 2.1/2	Aluminium	0.44	LDFG070
DSP 65	2.1/2"	G 3	Aluminium	0.77	LDFG0703
AR 100	4"	G 4	Aluminium	1.15	LDFG100

Working pressure: 16 bar / 230 psi
 Female thread: EN ISO 228-1, BSP
 Profiled seal: NBR black



PLUG WITH LOCKING RING

ND	Inch	Material	Weight/pc Kg	Reference
DSP 40	1.1/2"	Aluminium	0.14	LDPG040
DSP 65	2.1/2"	Aluminium	0.3	LDPG070
AR 100	4"	Aluminium	0.74	LDPG100

Working pressure: 16 bar / 230 psi
 Profiled seal: NBR black
 Chain included



SERRATED HOSE SHANK WITH LOCKING RING FOR WIRE BINDING

ND	Inch	For hose mm	Material	Weight/pc Kg	Reference
DSP 40	1.1/2"	38	Aluminium	0.16	LDSG038
DSP 40	1.1/2"	40	Aluminium	0.18	LDSG040
DSP 40	1.1/2"	45	Aluminium	0.18	LDSG045
DSP 65	2.1/2"	70	Aluminium	0.41	LDSG070
AR 100	4"	110	Aluminium	1.03	LDSG110

Working pressure: 16 bar / 230 psi
 Profiled seal: NBR black
 Assembly: wire binding



MULTI-SERRATED HOSE SHANK WITH LOCKING RING FOR SWAGING

ND	Inch	For hose mm	Material	Weight/pc Kg	Reference
DSP 40	1.1/2"	45	Aluminium	0.16	LDSGK045
DSP 65	2.1/2"	70	Aluminium	0.18	LDSGK070

Working pressure: 16 bar / 230 psi
 Profiled seal: NBR black
 Assembly: swage ferrules



DSP COUPLINGS



REDUCING COUPLING DSP - DSP

ND	Inch	Material	Weight/pc Kg	Reference
DSP 40 - DSP 65	1.1/2" - 2.1/2"	Aluminium	0.55	LDVD040070
DSP 40 - AR 100	1.1/2" - 4"	Aluminium	1.18	LDVD040100
DSP 65 - AR 100	2.1/2" - 4"	Aluminium	1.27	LDVD070100



REDUCING COUPLING GUILLEMIN - DSP

ND Guillemin - DSP	Inch Guillemin - DSP	Material	Weight/pc Kg	Reference
40 - DSP 40	1.1/2" - 1.1/2"	Aluminium	0.43	LGVD038040
40 - DSP 65	1.1/2" - 2.1/2"	Aluminium	0.76	LGVD038070
50 - DSP 65	2" - 2.1/2"	Aluminium	1.09	LGVD050070
50 - AR 100	2" - 4"	Aluminium	1.75	LGVD050100
65 - DSP 65	2.1/2" - 2.1/2"	Aluminium	1.01	LGVD065070
65 - AR 100	2.1/2" - 4"	Aluminium	1.75	LGVD065100
80 - AR 100	3" - 4"	Aluminium	1.85	LGVD080100
100 - AR 100	4" - 4"	Aluminium	2.08	LGVD100100



REDUCING COUPLING DSP - STORZ

ND DSP - Storz	Inch DSP - Storz	Material	Weight/pc Kg	Reference
DSP 40 - 52C LD 66	1 1/2" - 2"	Aluminium	0.58	LDVS040066
DSP 40 - 75B LD 89	1 1/2" - 3"	Aluminium	0.64	LDVS040089
DSP 65 - 52C LD 66	2.1/2" - 2"	Aluminium	1.00	LDVS070066
DSP 65 - 75B LD 89	2.1/2" - 3"	Aluminium	1.01	LDVS070089
DSP 65 - 110A LD 133	2.1/2" - 4"	Aluminium	1.46	LDVS070113
AR 100 - 52C LD 66	4" - 2"	Aluminium	1.66	LDVS100066
AR 100 - 75B LD 89	4" - 3"	Aluminium	1.61	LDVS100089
AR 100 - 110A LD 133	4" - 4"	Aluminium	2.07	LDVS100113



Working pressure: 16 bar / 230 psi

DSP and Guillemin couplings with locking ring

DSP coupling profiled seal NBR; Guillemin square seal NBR; Storz coupling profiled seal NBR

LD: Lug distance

DSP COUPLINGS



MULTI WRENCH - GY®

ND	Inch	Material	Weight/pc Kg	Reference
40 - 100	1.1/2" - 4"	Blue coated steel	0.54	GY



WRENCH

ND	Inch	Material	Weight/pc Kg	Reference
40	1.1/2"	Red coated steel	0.54	GY040
80	3"	Red coated steel	0.88	GY080



CHAIN WITH S-HOOK

Material	Length	Weight/pc Kg	Reference
Stainless steel	200 mm	0.015	KETR200



Stainless steel AISI 304 - 1.4301

SEALS

PROFILED SEAL FOR COUPLING PART

ND	Inch	Material	Colour	Ø OD mm	Ø ID mm	Height mm	Weight/pc Kg	Reference
DSP 40	1.1/2"	NBR	Black	50.0	37.0	8.0	0.01	DXB040
DSP 65	2.1/2"	NBR	Black	79.0	63.0	10.0	0.02	DXB070
AR 100	4"	NBR	Black	117.0	100.0	12.0	0.03	DXB100



ND 40 - ND 65 and ND 100 are profiled seals but vary in execution (see chapter E)