



Mechanical Connection

STATS LC series of mechanical Connectors & Couplings are designed for the maintenance and modification of petroleum production and process facilities. This reliable and cost effective mechanical connection method is ideal where welded or hot-worked options may be undesirable. The slipover design and mechanical locking assembly can enable a flanged connection to be installed on a straight pipe stub without the need for hot-work or specialised tools and equipment.

The Connections are configured with a dual seal assembly that enables the Connection integrity to be verified via the 300# seal verification ports at time of installation. Double block and bleed valves can be fitted to the seal verification ports to allow monitoring of integrity once installed. The seal configuration and material selection is designed to provide a reliable seal on the pipe surface following a relatively simple field preparation procedure.

The Connection assembly and components are designed in accordance with API 6H requirements, which are verified in accordance with ASME B31.3 and may be CE marked under the Pressure Equipment Directive (PED 97/23/EC). They are designed to fit standard pipe specification (ASME B36.10 & B36.19, API 5L, etc) and fire tested to API 6 FA.

- **LC-01 – 150# RF Connector**
- **LC-02 – 300# RF Connector**
- **LC-03 - 300# Coupling - Carbon Steel**
- **LC-04 - Carbon to Cunifer Pipe Couplings**

Bespoke design and manufacture of weldless connections for non-standard pipe sizes or configurations are routinely undertaken.

Operator Benefits

- Timely completion of maintenance and modification activities, no hot-work required
- Significantly reduces costs by eliminating the need for welding equipment, personnel, habitat / NDT inspection
- Mechanical Connection prevents contamination produced by welding ie. slag or oxide
- Suitable for permanent or temporary tie-in, pipework re-routing, spool repair and pipe stub termination applications
- Lightweight design reduces topside weight
- Field support and full ancillary equipment provided, client training offered
- Additional onsite services include cold cutting and bolting to provide operators a full turnkey package

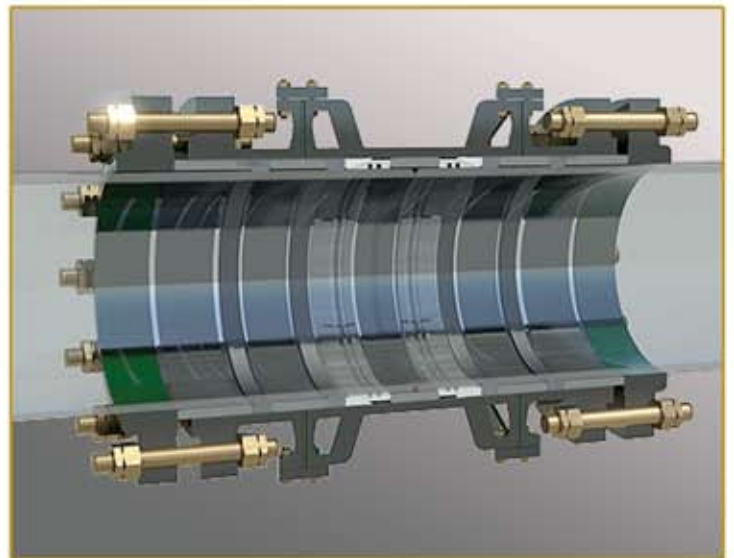
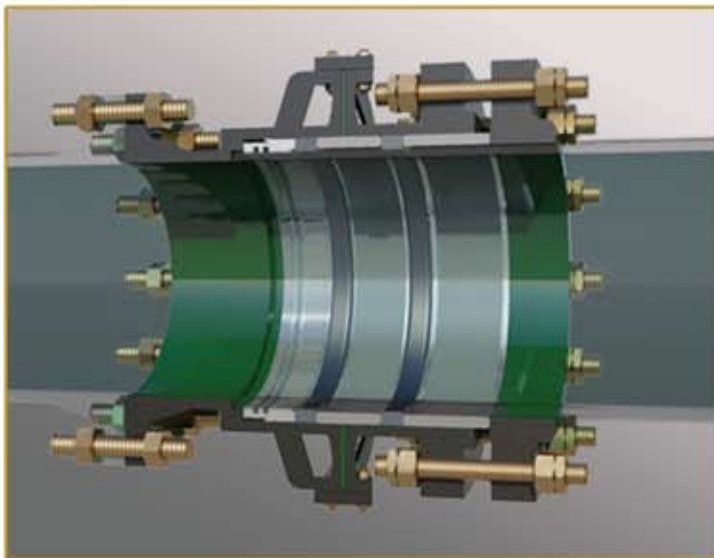




Mechanical Connection

Key Features

- Maintenance free mechanical pipe joint in accordance with API Specification 6H and certified fire safe to API 6FA (DNV approved)
- External grip Diamondlock™ assembly applies even linear and circumferential grip load around the host pipe, eliminating localised material deformity and localised stress fractures
- Easily installed and commissioned without the need for hot-work, installation requires only basic pipework preparation
- External grip, lock and seal assemblies eliminate possible flow restriction / turbulence
- Manufactured to suit specific pipe schedule to eliminate possible flow disturbance / turbulence
- Conventional design allows the unit to adopt or be included in the host system flanged joint inspection and maintenance programmes. Verification Port can be fitted with a DBB valve to comply with specific operator maintenance requirements
- Provides a mechanical pipe connection with equivalent or greater design criteria than the host pipework
- Robust construction and coating provide protection in a range of hostile operating environments
- Coating can be supplied to client specification
- Fabricated design provides a comparatively lightweight unit which is more suitable for topside applications with no need for additional pipe support requirements
- Suitable for installation in horizontal, vertical and inclined piping



Specification

- Sizes 2" to 24" as standard, sizes out with this range available on request
- Pressure range: up to ASME 300# as standard, up to ASME 1500# available on request
- Temperature range: -50°C to 180°C as standard
- Dual graphite seal arrangement with verification port enables pre-commission leak test
- LC Series compatible with a wide range of pipe materials including carbon steel and stainless steel as standard, duplex available on request

STATS comprehensive range of ancillary equipment is available on a rental basis to support our range of Couplings & Connectors, including Cold Cutting & Bolting equipment. We can also supply competent Field Technicians to provide operators a full turnkey package, delivering operators a first class maintenance solution for their assets.

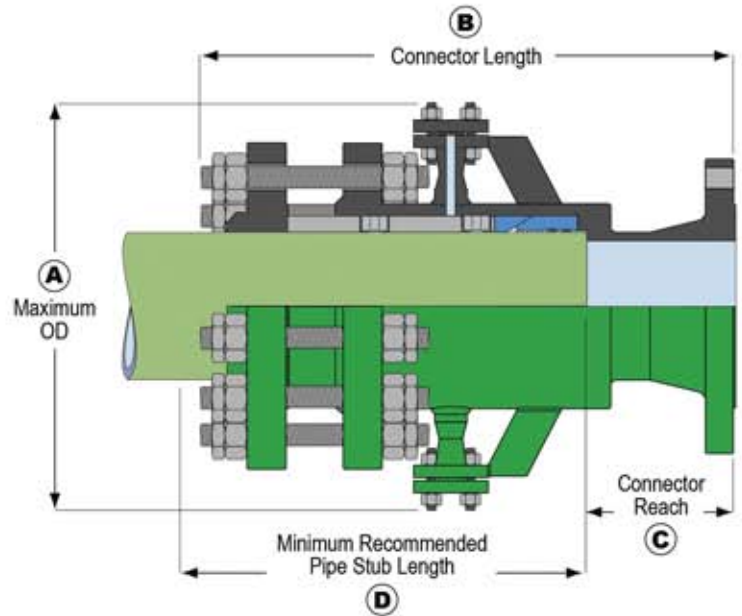
Diamondlock™ is a trade mark of STATS (UK) Ltd



Low Pressure Connectors

The LC series of mechanical Connectors are designed to slip over a prepared pipe stub to provide a RF or RTJ flange connection. Once the lock and seal assemblies have been set, seal testing through the integral ASME 300# flanged outlet is undertaken to verify integrity. Correct fitting and assembly of the connector can be easily verified visually, without requirement for special tools or equipment.

The Connector assembly and components are designed in accordance with API 6H, with design strength verified in accordance with ASME B31.3 and other codes (ASME B31.4, B31.8, ASME VIII, etc). CE marking under the Pressure Equipment Directive (PED 97/23/EC) may be applied, where applicable. Connectors are designed to fit standard pipe specification and are fire tested to API 6 FA.



LC-01 Series - Low Pressure Connectors (150#)

LC-01 Connectors - Principal Dimensions					
Nom Size (in)	A-OD (mm)	B-Length (mm)	C-Reach (mm)	D-Pipe Stub Length (mm)	Weight (kg)
2	293	335	91	224	15
3	330	374	97	261	32
4	364	480	115	327	52
6	422	497	121	354	75
8	484	538	136	385	115
10	534	609	149	418	155
12	595	656	159	467	229
14	646	699	175	502	389
16	701	723	175	521	405
18	753	785	206	554	504
24	914	881	230	606	901

Note: All dimensions shown for LC-01, 150# rated Connectors. Weight to ± 5%

LC-01 Connectors (150# rated) - Operating Parameters	
Maximum Operating Pressure: 20 Bar	System Fluid: Hydrocarbon or Fire-Safe Applications
Operating Temperature Range: -20 to 180°C	Seal Material: Graphite

LC-02 Series - Low Pressure Connectors (300#)

LC-02 Connectors - Principal Dimensions					
Nom Size (in)	A-OD (mm)	B-Length (mm)	C-Reach (mm)	D-Pipe Stub Length (mm)	Weight (kg)
2	293	347	97	224	16
3	329	387	107	261	33
4	363	490	124	327	51
6	422	506	130	354	86
8	484	548	146	385	128
10	534	621	166	414	185
12	595	675	178	467	263
14	646	715	191	501	438
16	701	742	195	522	466
18	753	804	225	552	576
24	915	898	245	611	1000

Note: All dimensions shown for LC-02, 300# rated Connectors. Weight to ± 5%

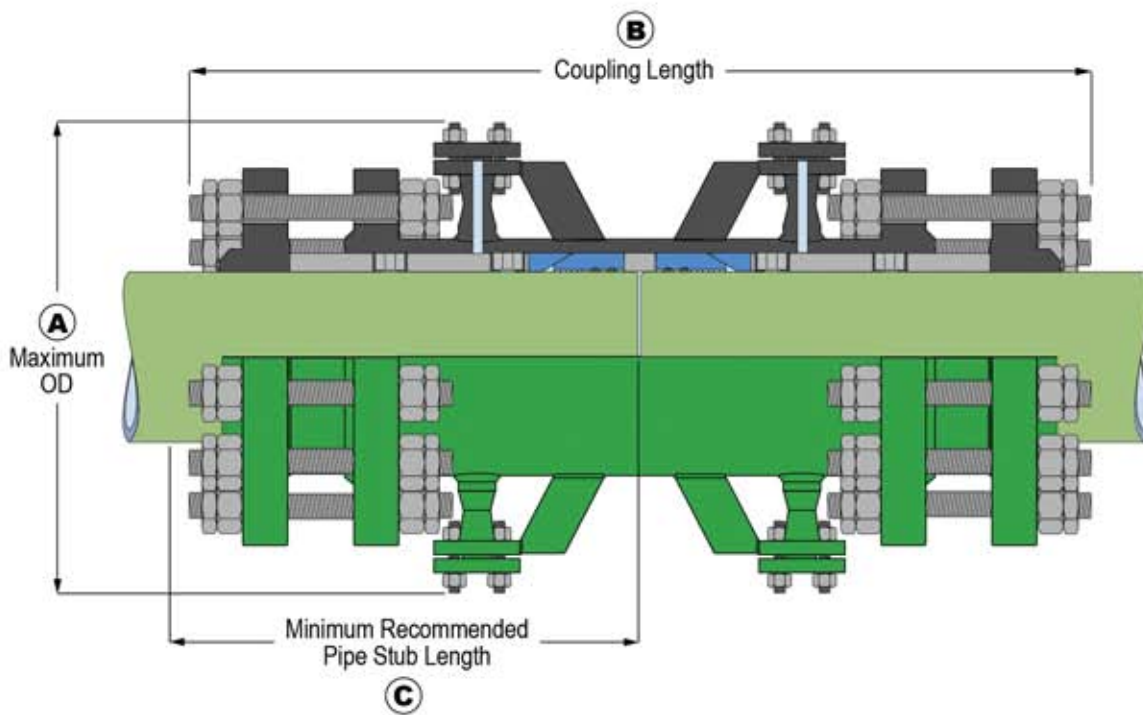
LC-02 Connectors (300# rated) - Operating Parameters	
Maximum Operating Pressure: 50 Bar	System Fluid: Hydrocarbon or Fire-Safe Applications
Operating Temperature Range: -20 to 180°C	Seal Material: Graphite



Low Pressure Couplings

The LC series of mechanical Couplings are designed to slip over prepared pipe stubs to provide a reliable pipe connection. Once the lock and seal assemblies have been set, seal testing through the integral ASME 300# flanged outlet is undertaken to verify integrity. Correct fitting and assembly of the Coupling can be easily verified visually, without requirement for special tools or equipment.

The Coupling assembly and components are designed in accordance with API 6H, with design strength verified in accordance with ASME B31.3 and other codes (ASME B31.4, B31.8, ASME VIII, etc). CE marking under the Pressure Equipment Directive (PED 97/23/EC) may be applied, where applicable. They are designed to fit standard pipe specifications and are fire tested to API 6 FA.



LC-03 & LC-04 Series - Low Pressure Couplings (300#)

LC-03 & LC-04 Couplings - Principle Dimensions				
Nom Size (in)	A-OD (mm)	B-Length (mm)	C-Pipe Stub Length (mm)	Weight (kg)
2	299	499	224	20
3	337	554	263	43
4	368	690	331	81
6	423	780	365	130
8	483	799	380	187
10	535	890	418	255
12	593	1000	470	370
14	645	1091	521	408
16	702	1138	540	682
18	745	1190	573	804

Note: All dimensions shown for LC-03 & LC-04 Couplings, weight ± 5%

LC-03 & LC-04 Couplings - Operating Parameters	
Maximum Operating Pressure: 50 Bar	System Fluid: Hydrocarbon or Fire-Safe Applications
Operating Temperature Range: -50 to 180°C	Seal Material: Graphite

FIRE TEST QUALIFICATION CERTIFICATE



Score (Europe) Ltd

Item	Pipe Connection (General Assembly)
Size	4"
Class	150
Serial No	LC-01-4-115
Body Material	A333 Grade 6
Seal	Graphite (Supergraf Premier)
Manufactured by	STATS (UK) Ltd
In accordance with job number	134986 COW
In accordance with drawing number	1A.19.0020.00.AA

The above valve was tested by **Score (Europe) Ltd** at their **Specialised Valve Research and Test Centre, Cowdenbeath, Scotland** and the results have been recorded as a **PASS**, having complied with the minimum performance requirements stated in **specification**

API6FA setup, pressures, temperatures & leakage rates

Test date	02/12/04
Other sizes qualified	4" through to 8", 100PN to 200PN
Other pressure ranges qualified	150 , 300, 100DN to 125DN

Tested by J. O'Hagan / S. Fox / R. Hepburn

Witnessed by W. Totterdell
DNV
Abcdoca



D. Vernon -
STATS (UK) Ltd

S. Gibson -
STATS (UK) Ltd

This certificate must be read in conjunction with the full
Score Test Report Number

134986-2



FIRE TEST QUALIFICATION CERTIFICATE



Score (Europe) Ltd

Item	Pipe Connection (General Assembly)
Size	10"
Class	150
Serial No	LC-01-10-101
Body Material	A333 Grade 6
Seal	Graphite (Supergraf Premier)
Manufactured by	STATS (UK) Ltd
In accordance with job number	134986 COW
In accordance with drawing number	1A.23.0020.00.AA

The above valve was tested by **Score (Europe) Ltd** at their Specialised Valve Research and Test Centre, Cowdenbeath, Scotland and the results have been recorded as a **PASS**, having complied with the minimum performance requirements stated in specification

API6FA setup, pressures, temperatures & leakage rates

Test date	02/12/04
Other sizes qualified	10" through to 20", 200PN to 500PN
Other pressure ranges qualified	150 , 300, 20DN to 50DN

Tested by J. O'Hagan / S. Fox / R. Hepburn

Witnessed by W. Tøfferdal
DNV
Abnifoca



D. Vernon -
STATS (UK) Ltd

S. Gibson -
STATS (UK) Ltd

This certificate must be read in conjunction with the full
Score Test Report Number

134986-1

