

# Helden MaxiFit

High Tolerance Mechanical Pipe Fittings



**Helden**

**CRANE**

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World leaders in pipe joint, repair & flow control products

# Helden MaxiFit

## High Tolerance Mechanical Pipe Fittings

The Helden range of MaxiFit universal pipe couplings represents the very latest in mechanical pipe coupling technology. Helden MaxiFit products are designed to accommodate plain ended pipes with different outside diameters, thus reducing stocks. One fitting is able to connect steel, ductile iron, PVCu, cast iron and asbestos cement pipes. The Helden MaxiFit range is designed and manufactured under quality management systems to BS EN ISO 9001, meets the requirements of the UK Water Regulations, the American Water Works Association specification for bolted couplings C.219 and EN 14525.

### Wide Tolerance

- Up to 34mm tolerance on pipe OD (Full details can be found in the Helden MaxiFit Technical Data Sheet)
- Cast Iron, Ductile Iron, Asbestos Cement, Steel, PVC, ABS, GRP etc all covered in one product
- Improved tolerance reduces stock holding
  - 12 Couplings
  - 10 Stepped Couplings
  - 11 Flange Adaptors
  - 12 End Caps
  - Covers the range DN40 to DN300
- One product per nominal bore is needed to effect a repair in most pipe materials

### Speed of Installation

- Pre-assembled - allows quick & efficient installation
- Gasket has "slide easy" ribs to reduce installation friction on pipes at top end of OD range
- Captive, non-rotating bolt head requiring single spanner to install
- One bolt size/torque across range DN50 to DN300

### Technical Parameters

- Angularity - 6° for Couplings/Stepped Couplings & 3° for Flange Adaptors
- Expansion/Contraction - 10mm for Coupling/Stepped Coupling & 5mm for Flange Adaptor
- Maximum working pressure = 16 bar (Water) /6 bar (Gas)
- Maximum site test pressure = 24 bar (Water) /9 bar (Gas)
- Consult the Helden MaxiFit Technical Data Sheet for full dimensions of product

### Guaranteed Sealing & Product Performance Testing

- Distinctive circumferential ribs in unique 'slide-easy' gasket provides maximum sealing on corroded, pitted pipes
- Proof testing of elastomeric sealing mechanism (gaskets)
- Mechanical and chemical relaxation of the gasket material over its 50 year design life simulated by subjecting products to working pressure test at 80°C for 1000 hours
- Design pressure rating confirmed by subjecting all sizes to type tests at top and bottom tolerance for 24 hours at:
  - 2.25-times rated working pressure
  - Full vacuum
- All products subjected to a bolt torque test, confirming that the bolt, end ring and adaptor body capable of withstanding bolt over-tightening to 1.5-times maximum recommended torque
- Design life expectancy of 50 years

### Designed in Accordance With

- American Water Works Standard AWWA/ANSI C.219
- EN 14525:2004 - Ductile Iron Wide Tolerance Couplings and Flange Adaptors for use with pipes of different materials: Ductile Iron, Grey Iron, Steel, PVC-U, Fibre Cement.

### Product Quality

- Designed & manufactured under quality management systems to BS EN ISO 9001
- Environmental Management System accredited to ISO 14001

### Materials of Construction

- All metal components (end ring, sleeve, flange adaptor body) manufactured from Ductile Iron
- Full markings (OD, Manufacturer) cast into metal components
- All water contact materials approved for use on potable water pipelines
- Full details can be found in the Helden MaxiFit Technical Data Sheet

### Product Finish Available

- Standard product offering: -
  - Coating - black Rilsan Nylon 11, a thermoplastic polymer that meets WIS 4-52-01 Part-1.
  - Rilsan has good impact resistance to accommodate rough site handling
  - Bolts - Sheraplex coated - a combination of zinc sheradising and a low friction polymeric coating that meets WIS 4-52-03
  - Sheraplex offers a consistent "torque/load" ratio thus improving the factor of safety and sensitivity to installer error
  - Sheraplex reduces galling of coating in threads, thus permitting repeated dismantling and installation of products
- Variants available:
  - Coating - Epoxy (Scotchkote)
  - Bolts - Stainless Steel
  - Gaskets - Nitrile

### Pipe Materials

- Helden MaxiFit is designed for use on the following rigid pipe materials:
  - Steel
  - Ductile Iron
  - Asbestos Cement
  - Cast Iron
  - PVC - Metric and Imperial
  - GRP
  - ABS

## Helden MaxiFit Couplings & MaxiFitXtra Long Sleeve Couplings

- Range includes:
  - Helden MaxiFit Couplings - Standard Sleeve Length
  - Helden MaxiFitXtra - Long Sleeve
- Total angular deflection = +/- 6°
- Total expansion / contraction = 10mm
- Can be used to effect a repair in rigid pipes using a polyethylene pipe with a close fit
- Support liner:
  - MaxiFit = 1m length
  - MaxiFitXtra = 2m length PE
- Working pressure = 16 bar (Water) /6 bar (Gas)
- Site test pressure = 24 bar (Water) /9 bar (Gas)
- Full details can be found in MaxiFit Technical Data Sheet

## Helden MaxiThread - Threaded End Cap

- Designed to provide a connection between plain-ended and threaded pipe
- A Helden MaxiFit coupling body with one standard end ring and one threaded end ring
- Outlets are available with 1", 1.25" and 1.5" BSP threads
- Total angular deflection = +/- 3°
- Working pressure = 16 bar (Water) /6 bar (Gas)
- Site test pressure = 24 bar (Water) /9 bar (Gas)

## Helden MaxiStep - Reducing Couplings

- Designed to provide transition between pipes of different nominal bores
- Total angular deflection = +/- 6°
- Total expansion / contraction = 10mm
- Working pressure = 16 bar (Water) /6 bar (Gas)
- Site test pressure = 24 bar (Water) /9 bar (Gas)
- Full details can be found in MaxiFit Technical Data Sheet

## Helden MaxiDaptor - Flange Adaptor

- Designed to join plain ended pipe to flanged fitting
- Total angular deflection = +/- 3°
- Total expansion/contraction = 5mm
- Working pressure = 16 bar (Water) /6 bar (Gas) (except when used on lower rated flange)
- Site test pressure = 24 bar (Water) /9 bar (Gas) (except when used on lower rated flange)
- Flanges have:
  - Partial 'S' Bore, giving greater flange sealing face
  - Multi-drilling including: ISO 7005 1:1992 (PN10/16), BS10:1962 (Table ADE), ANSI/AWWA
- Full details can be found in the Helden MaxiFit Technical Data Sheet
- Helden MaxiDaptor cannot be used with tie rods to provide restraint. If this is required please consult QuickFit product range which can accommodate tie rods

## Helden MaxiCap - End Cap

- Fits inside the end ring to the Helden MaxiFit or MaxiDaptor product
- Converts product to cap end for testing and blanking off
- Assembly must have suitable external support to prevent movement under pressure
- Can be drilled and tapped to form outlet - up to 2" depending on size
- Working pressure = 16 bar (Water) /6 bar (Gas) (except when used on lower rated flange)
- Site test pressure = 24 bar (Water) /9 bar (Gas) (except when used on lower rated flange)

## End Load

**All Helden MaxiFit products do not take end load due to the internal pressure in the pipe. Adequate external restraint must be provided to prevent pipe pull out.**

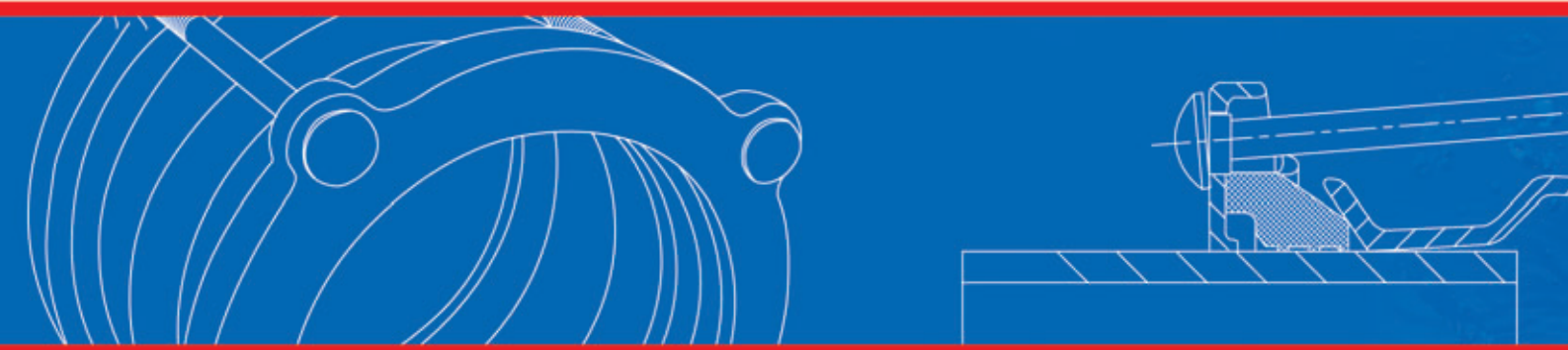


**Helden MaxiFit Coupling**

**Helden MaxiStep**

**Helden MaxiDaptor**

**Helden MaxiThread**



## Approvals

- WRAS - Approved for use on Potable Water
- Designed and manufactured under quality management systems in accordance with BS EN ISO 9001
- Environmental Management System accredited to ISO 14001

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A Crane Co. Company



Certified to  
NSF/ANSI 61

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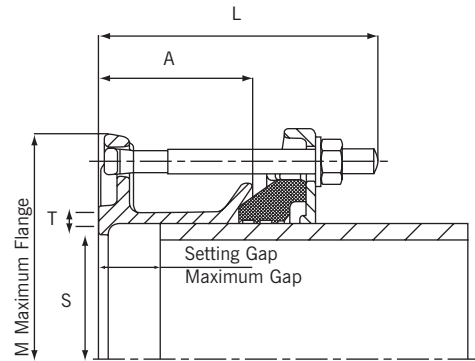
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For further information on all products  
and services contact our Marketing Department.

# Helden MaxiFit

High Tolerance Mechanical Pipe Fittings



## Flange Adaptor

Bolt torque 55-65Nm  
Spanner size A/F 19mm

Size Range (mm)		Diameter (mm)	Bores (mm)		Overall Length (mm)	Sleeve Length x Thickness	Flange Drilling	Setting Gap (mm)	Max Gap (mm)	Bolts No x Dia x Length	Gasket Mould No.	Weight (kg)
Min	Max	M	S	L	(A) x (T)							
<del>57.0</del>	<del>74.0</del>	<del>163.4</del>	<del>59.0</del>	<del>124.0</del>	<del>75.0 x 4.5</del>	<del>50 PN10:16, 2.5" BS10 Table ADE, 2" ANSI125</del>	<del>20.0</del>	<del>40.0</del>	<del>4 - M12x115</del>	<del>12392/1</del>	<del>2.7</del>	
63.0	85.0	196.9	75.0	124.0	75.0 x 4.5	60 PN10:16, 65 PN10:16, 80 PN10:16, 3" BS10 Table ADE, 2.5" ANSI125, 3" ANSI125	20.0	40.0	4 - M12x115	12392/2	3.5	
85.0	107.0	202.5	101.0	124.0	75.0 x 4.5	80 PN10:16, 3" ANSI125, 3.5" BS10 Table AD	20.0	40.0	4 - M12x115	12392/3	3.7	
107.0	132.0	228.0	121.0	134.0	75.0 x 4.5	3.5" BS10 Table E, 100 PN 10:16, 4" BS10 Table AD, 4" BS10 Table E, 4" AWWA C207 D, 100 AS2129 CD, 100 AS4087 E	20.0	40.0	4 - M12x125	12392/4	4.4	
<del>152.0</del>	<del>158.0</del>	<del>281.5</del>	<del>158.0</del>	<del>134.0</del>	<del>75.0 x 5.0</del>	<del>125 PN10:16, 150 PN10:16 5" BS10 Table A, 5" BS10 Table DE, 6" BS10 Table A, 6" BS10 Table D, 6" BS10 Table E, 6" AWWA C207 D, 125 AS2129 CD, 150 AS2129 CD, 125 AS4087 E, 150 AS4087 E</del>	<del>20.0</del>	<del>40.0</del>	<del>4 - M12x125</del>	<del>12392/6</del>	<del>5.6</del>	
158.0	184.0	281.2	173.0	134.0	75.0 x 5.0	150 PN10:16, 6" BS10 Table A, 6" BS10 Table D, 6" AWWA, C207 D, 150 AS4087 E, 150 AS2129 CD,	20.0	40.0	4 - M12x125	12392/7	6.0	
<del>189.0</del>	<del>212.0</del>	<del>336.5</del>	<del>202.0</del>	<del>133.0</del>	<del>75.0 x 5.0</del>	<del>200 PN10:16, 8" BS10 Table AD, 8" AWWA C207 D, 200 AS2129 CD, 200 AS4087 E</del>	<del>25.0</del>	<del>40.0</del>	<del>4 - M12x125</del>	<del>12392/9</del>	<del>8.3</del>	
218.0	244.0	337.8	225.0	134.0	75.0 x 5.0	200 PN10:16, 8" BS10 Table AD, 8" AWWA C207 D, 200 AS2129 CD	25.0	40.0	4 - M12x125	12392/10	8.3	
<del>243.0</del>	<del>269.0</del>	<del>401.5</del>	<del>252.0</del>	<del>144.0</del>	<del>85.0 x 5.0</del>	<del>250 PN10:16, 250 AS4087 E</del>	<del>25.0</del>	<del>50.0</del>	<del>6 - M12x135</del>	<del>12392/11</del>	<del>10.9</del>	
266.0	295.0	402.1	277.0	146.0	85.0 x 5.0	250 PN10:16, 250 AS4087 E	25.0	50.0	6 - M12x135	12392/12	11.4	
315.0	349.0	457.8	329.0	155.0	100.0 x 5.0	300 PN10:16, 12" BS10 Table D, 300 AS2129 CD	25.0	60.0	6 - M12x145	12392/14	14.8	

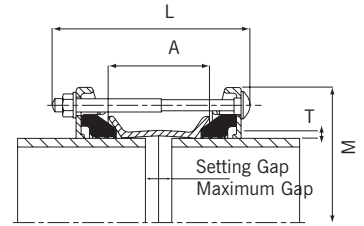


# Helden MaxiFit

## High Tolerance Mechanical Pipe Fittings

### Coupling - Standard Sleeve

Bolt torque 55-65Nm  
Spanner size A/F 19mm



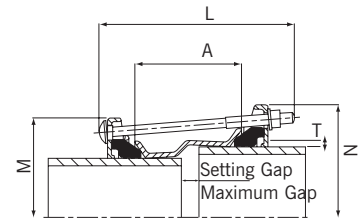
Nominal Size (mm)	Size Range (mm)		Diameter (mm)		Overall Length (mm)		Sleeve Length x Thickness (A) x (T)	Setting Gap (mm)	Max Gap (mm)	Bolts No x Dia x Length	Gasket Mould No.	Weight (kg)
	Min	Max	M	L	M	L						
DN40	47.9	59.5	149.5	190.0	100.0	149.5	20.0	40.0	2	M12x180	1637	3.1
DN50	57.0	74.0	154.5	185.0	95.0	154.5	20.0	40.0	4	M12x180	12392/1	3.0
DN65	63.0	85.0	173.5	185.0	95.0	173.5	20.0	40.0	4	M12x180	12392/2	3.6
DN80	85.0	107.0	195.5	185.0	95.0	195.5	20.0	40.0	4	M12x180	12392/3	4.1
DN100	107.0	132.0	224.5	185.0	95.0	224.5	20.0	40.0	4	M12x180	12392/4	4.8
DN125	132.0	158.0	254.5	185.0	95.0	254.5	20.0	40.0	4	M12x180	12392/6	6.0
DN150	158.0	184.0	280.5	190.0	95.0	280.5	20.0	40.0	4	M12x180	12392/7	6.9
DN175	189.0	212.0	306.5	230.0	130.0	306.5	25.0	50.0	4	M12x220	12392/9	9.4
DN200	218.0	244.0	342.5	230.0	130.0	342.5	25.0	50.0	4	M12x220	12392/10	10.9
DN225	243.0	269.0	367.5	230.0	130.0	367.5	25.0	50.0	6	M12x220	12392/11	12.4
DN250	266.0	295.0	399.5	230.0	130.0	399.5	25.0	50.0	6	M12x220	12392/12	14.6
DN300	315.0	349.0	462.5	235.0	130.0	462.5	25.0	50.0	8	M12x220	12392/14	19.4

### Coupling - Long Sleeve

DN50	57.0	74.0	154.5	285.0	200.0	154.5	20.0	140.0	4	M12x275	12392/1	4.2
DN65	63.0	85.0	173.5	285.0	190.0	173.5	20.0	130.0	4	M12x275	12392/2	4.8
DN80	85.0	107.0	195.5	285.0	200.0	195.5	20.0	140.0	4	M12x275	12392/3	5.7
DN100	107.0	132.0	224.5	285.0	190.0	224.5	20.0	130.0	4	M12x275	12392/4	6.5
DN125	132.0	158.0	254.5	285.0	190.0	254.5	20.0	130.0	4	M12x275	12392/6	8.2
DN150	158.0	184.0	280.5	285.0	190.0	280.5	20.0	130.0	4	M12x275	12392/7	9.4
DN175	189.0	212.0	306.5	285.0	190.0	306.5	25.0	110.0	4	M12x275	12392/9	11.1
DN200	218.0	244.0	342.5	285.0	190.0	342.5	25.0	110.0	4	M12x275	12392/10	12.9
DN225	243.0	269.0	367.5	350.0	250.0	367.5	25.0	165.0	6	M12x340	12392/11	16.9
DN250	266.0	295.0	399.5	350.0	250.0	399.5	25.0	165.0	6	M12x340	12392/12	19.4
DN300	315.0	349.0	462.5	350.0	240.0	462.5	25.0	155.0	8	M12x340	12392/14	24.8

### Stepped Coupling

Bolt torque 55-65Nm  
Spanner size A/F 19mm



Size Range (mm)				Diameter (mm)		Overall Length (mm)	Sleeve Length x Thickness (A) x (T)	Setting Gap (mm)	Max Gap (mm)	Bolts No x Dia x Length	Gasket Mould No.		Weight (kg)
Small End		Large End		A	B						Small End	Large End	
57.0	74.0	63.0	85.0	154.5	173.5	210.0	110.0 x 4.5	20.0	40.0	4 - M12x200	12392/1	12392/2	3.5
57.0	74.0	85.0	107.0	154.5	195.5	210.0	110.0 x 4.5	20.0	40.0	4 - M12x200	12392/1	12392/3	3.9
63.0	85.0	85.0	107.0	173.5	195.5	210.0	110.0 x 4.5	20.0	40.0	4 - M12x200	12392/2	12392/3	4.2
85.0	107.0	107.0	132.0	195.5	224.5	210.0	110.0 x 4.5	20.0	40.0	4 - M12x200	12392/3	12392/4	4.9
107.0	132.0	132.0	158.0	224.5	254.5	220.0	120.0 x 4.5	20.0	40.0	4 - M12x210	12392/4	12392/6	6.2
132.0	158.0	158.0	184.0	254.5	280.5	220.0	120.0 x 5.0	20.0	40.0	4 - M12x210	12392/6	12392/7	7.2
158.0	184.0	189.0	212.0	280.5	306.5	230.0	130.0 x 5.0	25.0	50.0	4 - M12x220	12392/7	12392/9	8.8
189.0	212.0	218.0	244.0	306.5	342.5	230.0	130.0 x 5.0	25.0	50.0	4 - M12x220	12392/9	12392/10	10.4
218.0	244.0	243.0	269.0	366.5	367.5	230.0	130.0 x 5.0	25.0	50.0	4 - M12x220	12392/10	12392/11	12.0
243.0	269.0	266.0	295.0	367.5	399.5	230.0	130.0 x 5.0	25.0	50.0	6 - M12x220	12392/11	12392/12	13.8

### Material Specification

Couplings, Stepped Couplings and Flange Adaptors

#### End Ring and Adaptor Body/Centre Sleeve

Ductile Iron to BS EN 1563:1997 Grade EN GJS-450-10

#### Gasket

EPDM compound Grade E to BS EN 681-1:1996, Type WA, WC

Nitrile compound to Grade G BS EN 682:2002, Type G

#### Tee Bolts/Bolts

Steel to BS EN ISO 898-1:1999 Property Class 4.8

#### Nuts

Steel to BS EN 4190:2001 Grade 4

#### Washers

Stainless Steel to BS 1449:Part 2: 1983 Grade 304S15 Standard

A Crane Co. Company

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