Spiderflex, Spiderjaw and Spiderwrap Coupling

Brochure

RENOLD | Couplings

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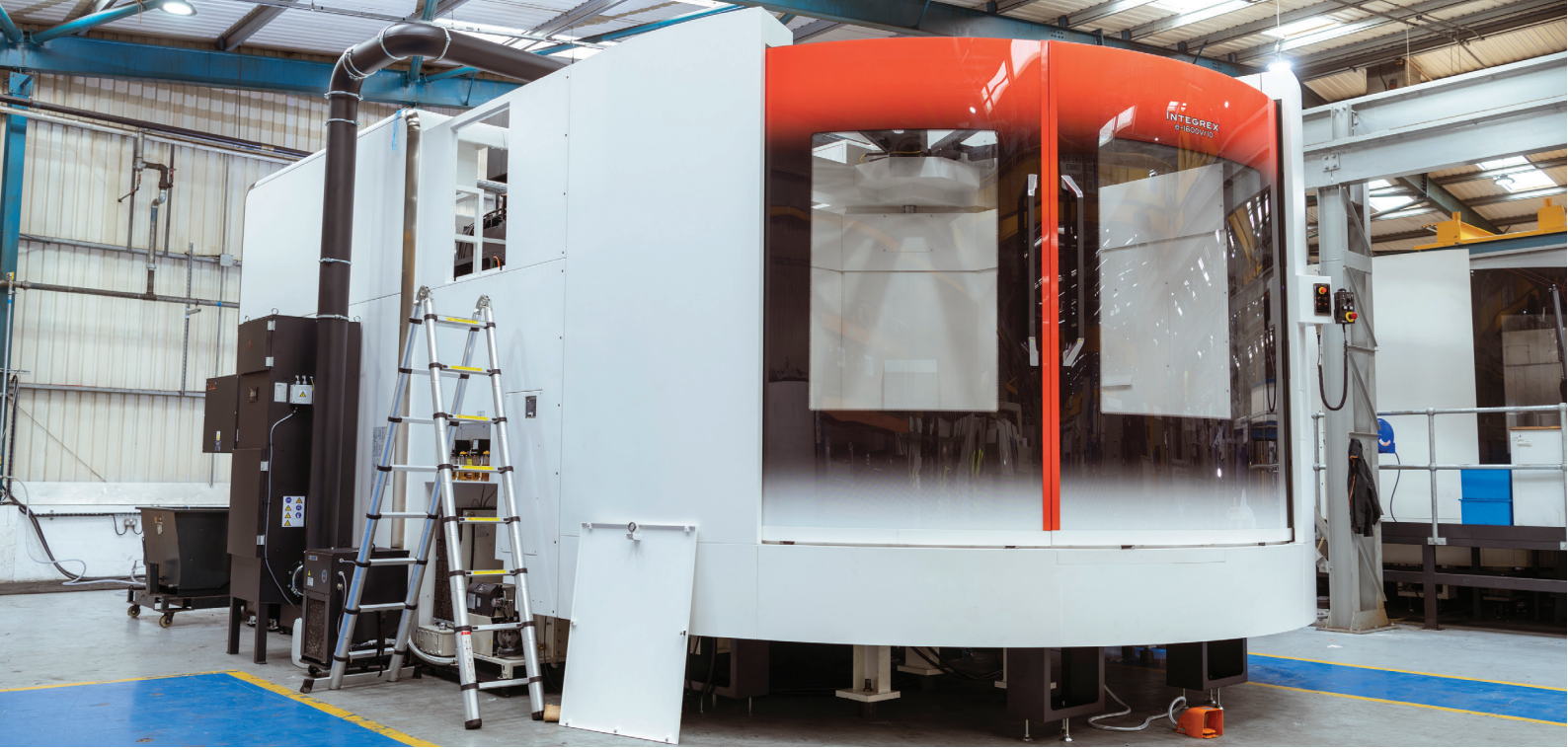


Innovation Everyday

Renold have been driving industry forward through innovation since 1879. Renold Couplings drives industry the world over, from marine, cranes and hoists to manufacture, mass transportation and the pulp and paper industry. Our couplings connect machines to machines through stock solutions and bespoke-crafted connections, all manufactured in our high-tech engineering factories.

Engineering capability

A team of in-house design engineers work to continuously improve the existing product range, introduce new products and deliver innovative new solutions to our customers challenges.

British manufacturer

Since 1946 Renold Couplings have manufactured a full range of couplings and clutches.

Based in Cardiff, UK, we control the full design and manufacture process, bringing class leading quality and complete customer peace of mind.

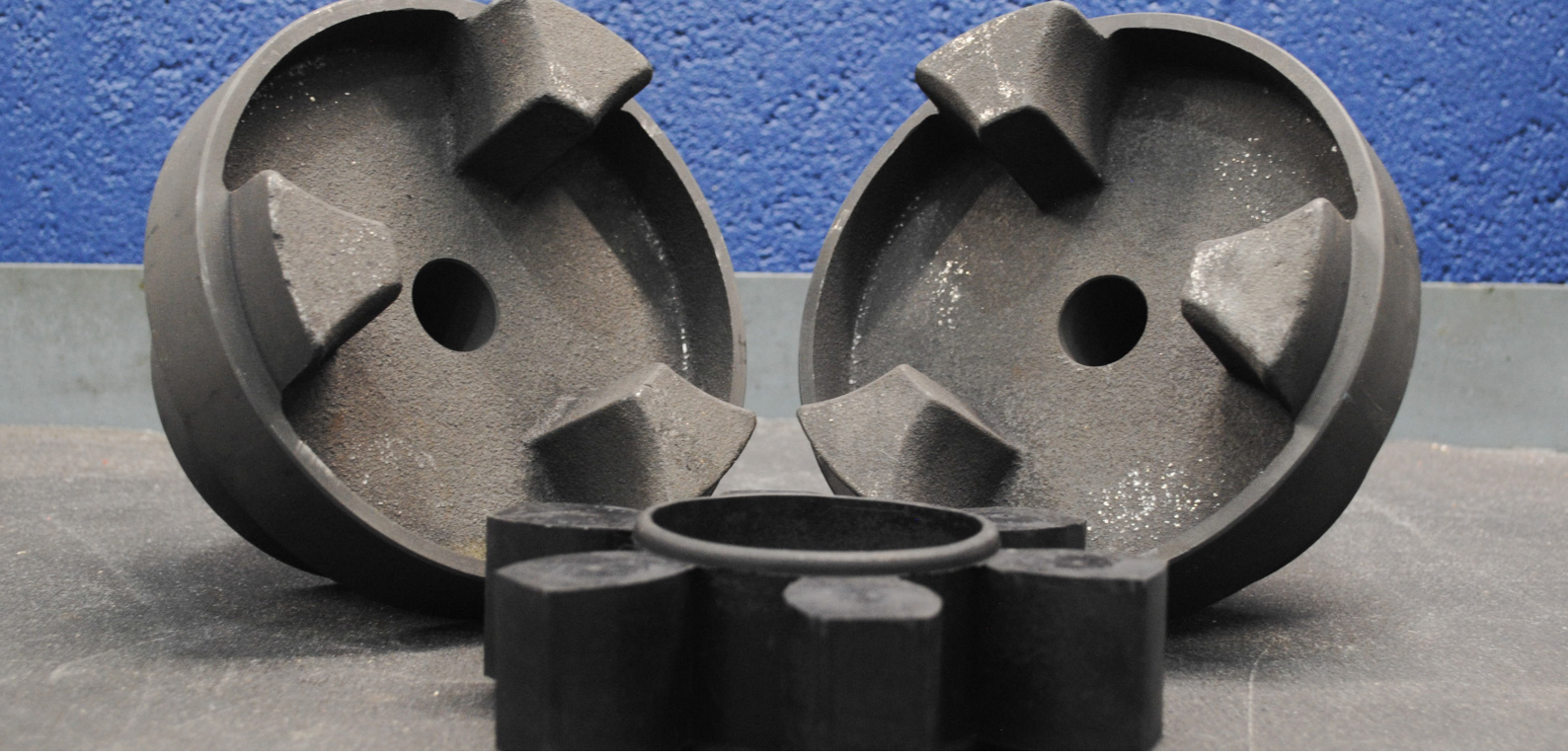
Worldwide support

With manufacturing facilities in 4 continents and support offices in over 30 countries Renold Couplings can offer service that understands the requirements and challenges of your particular market.

Availability

Renold Couplings holds significant stock of standard items and component parts both in our UK facility and with our partners around the world.

Controlling the full manufacturing process, Renold Couplings can deliver responsive lead times for manufactured parts.



Spiderflex, Spiderjaw and Spiderwrap

A medium power torsionally flexible coupling combining shock absorbing and misalignment capacity, used in the widest range of industries and applications.

The SpiderJaw and SpiderFlex both provide all the benefits of jaw couplings but are made to different dimensional standards. Please contact Renold for the relevant interchangeability information.

Coupling capacity

- Maximum power at 100RPM: 45kW
- Maximum torque: 4308Nm

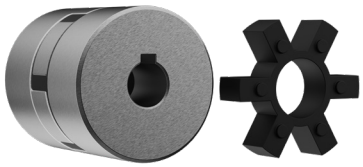
General details

Coupling materials available include:

- Cast iron half bodies
- Sintered iron half bodies
- Aluminium half bodies

Elements available include:

- Nitrile (standard)
- Urethane
- Hytrel
- Bronze



Standard range comprises

- Shaft to shaft
- Taper bush
- Pilot bored
- Bored and keyed to customers requirements

Applications

- Bulk handling
- Compressors
- Generator sets
- Metals manufacture
- Pumps
- Conveyor drives
- Paper converting
- Logging
- General industrial applications

Features and benefits

- Torsionally flexible – shock absorbing, extending machine life
- Maintenance free – minimum number of wearing parts
- Misalignment capabilities allowing flexibility in installation
- Jaw Wrap allows external fitting of elastomeric element, minimising machinery downtime and ensuring continued process
- Cost effective – offering low cost product with a high quality design
- Dimensionally interchangeable with other Spider Jaw Couplings – Lovejoy, Browning & Fenner
- Taper bush bores available for ease of maintenance
- Compact design – small, with high torque capacity

Keyway dimensions

Metric (mm)

Keyways comply with BS4235: Part 1: 1972

Shaft dia.		Keyway		
Over	Incl.	J	K	L
6	8	2	2	1.0
8	10	3	3	1.4
10	12	4	4	1.8
12	17	5	5	2.3
17	22	6	6	2.8
22	30	8	7	3.3
30	38	10	8	3.3
38	44	12	8	3.3
44	50	14	9	3.8
50	58	16	10	4.3
58	65	18	11	4.4
65	75	20	12	4.9
75	85	22	14	5.4
85	95	25	14	5.4
95	110	28	16	6.4
110	130	32	18	7.4
130	150	36	20	8.4
150	170	40	22	9.4
170	200	45	25	10.4
200	230	50	28	11.4

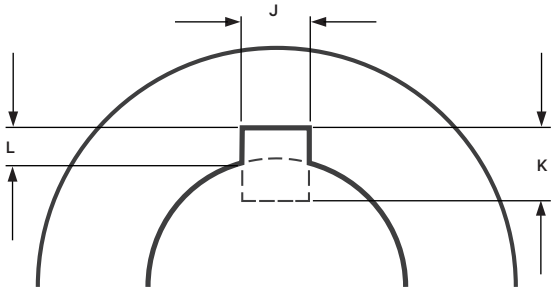
Imperial (inches)

Keyways comply with BS46: Part 1: 1958

Shaft dia.		Keyway		
Over	Incl.	J	K	L
0.25	0.05	0.125	0.125	0.060
0.50	0.75	0.187	0.187	0.088
0.75	1.00	0.250	0.250	0.115
1.00	1.25	0.312	0.250	0.090
1.25	1.50	0.375	0.250	0.085
1.50	1.75	0.437	0.312	0.112
1.75	2.00	0.500	0.312	0.108
2.00	2.50	0.625	0.437	0.162
2.50	3.00	0.750	0.500	0.185
3.00	3.50	0.875	0.625	0.245
3.50	4.00	1.000	0.750	0.293
4.00	5.00	1.250	0.875	0.340
5.00	6.00	1.500	1.000	0.384

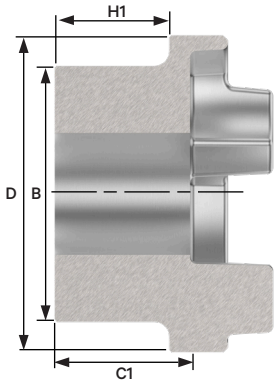
Keyway dimensions

Parallel keyways are supplied unless customer states otherwise.

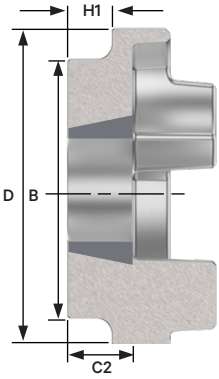


Spiderflex

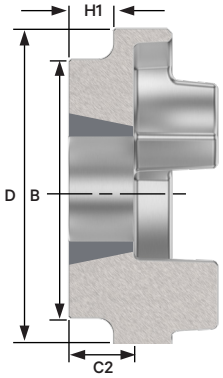
Type B



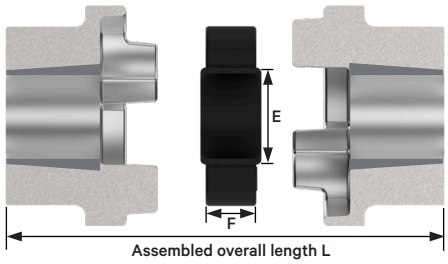
Type F



Type H



Assembled length



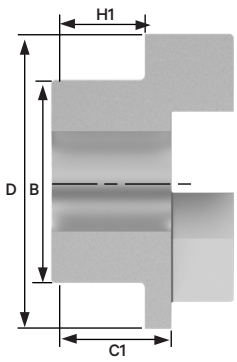
Renold ref	Power /100rpm kW	Torque nominal Nm	Speed max rpm	Type B		Type F & H			Max. misalignment		End float mm
				Bore dia		Bush size	Bore		Offset mm	Angular deg	
				Max	Min		Max	Min			
RSC70 # # #	0.33	32	7700	32	0	TB1008	25	9	0.3	0.5	+.2
RSC90 # # #	0.84	80	6300	42	0	TB1108	28	9	0.3	0.5	+.5
RSC110 # # #	1.68	160	5000	55	0	TB1610	42	14	0.3	1	+.6
RSC130 # # #	3.30	315	4100	60	0	TB1610	42	14	0.4	1	+.8
RSC150 # # #	6.28	600	3600	70	0	TB2012	50	14	0.4	1.5	+.9
RSC180 # # #	9.95	950	3000	80	0	TB2517	60	16	0.4	1.5	+1.1
RSC230 # # #	21	2000	2600	100	48	TB3020	75	25	0.5	2	+1.3
RSC280 # # #	33	3150	2200	115	60	TB3525	90	35	0.5	2.5	+1.7

Coupling size	Dimensions									Assembled overall length L		
	B mm	C1 mm	C2 mm	D mm	E mm	F mm	G mm	H1 mm	H2 mm	With half body combinations		
										BB	FF,FH,HH	FB, HB
RSC70 # # #	61	23.5	23.5	69	31	18	25	20	20.0	65	65	65
RSC90 # # #	70	30.0	23.5	85	32	22.5	30.5	26	19.5	83	70	77
RSC110 # # #	100	45.0	26.5	112	45	29	45	37	18.5	119	82	101
RSC130 # # #	105	55.5	26.5	139	50	36	53	47	18.0	147	89	118
RSC150 # # #	115	60.0	33.5	150	62	40	60	50	23.5	160	107	134
RSC180 # # #	125	70.0	46.4	180	77	49	73	73	34.5	189	142	166
RSC230 # # #	155	90.0	52.5	225	99	59.5	85.5	85.5	39.5	240	164	202
RSC280 # # #	206	105.5	66.5	275	119	74.5	105.5	105.5	51.0	285	207	246

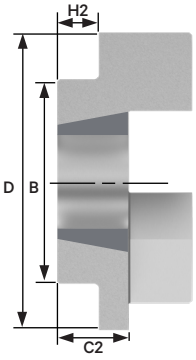
At speeds exceeding allowable maximum speed, consult Renold.
Both moment of inertia and coupling weight have been calculated assuming fitting of taper bush of medium bore size.
For information on torsional stiffness, consult Renold.

Spiderjaw

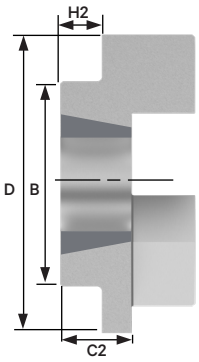
Type B



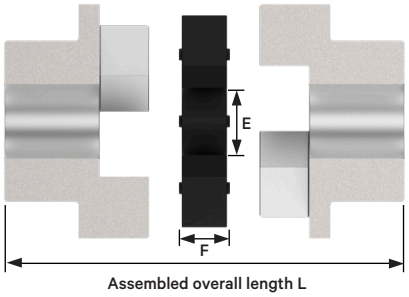
Type F



Type H



Assembled length



Renold spider ref	Renold ref	Power*1 /100rpm kW	Torque*1 nominal Nm	Speed max rpm	Type B		Type F & H			Dimensions							
					Bore		Bush size	Bore		B mm	C1 mm	C2 mm	D mm	E mm	F mm	H1 mm	H2 mm
					Max	Min		Max	Min								
	SPDR35	0.004	0.4	31000	10	4	-	-	-	-	6.6	-	16	-	7	-	-
S11	SPDR50	0.03	2.8	18000	16	6	-	-	-	-	15	-	27.4	-	12.4	-	-
S15	SPDR70	0.05	4.9	14000	20	8	-	-	-	-	19	-	34.5	-	12.9	-	-
	SPDR75	0.10	9.8	11000	22	8	-	-	-	-	21	-	44.5	18	13.2	-	-
S21	SPDR95	0.22	21.1	9000	28	12	-	-	-	49	25	-	54	22	13.5	13	-
	SPDR99	0.37	35.1	7000	30	12	1008	25	-	51	27	23.5	65	26.2	17.7	14	10.5
S30	SPDR100	0.49	46.4	7000	35	12	1108	28	-	57	35	23.5	65	26.2	17.7	22	10.5
	SPDR110	0.93	89	6000	42	16	1210	32	-	76	43	26.5	85	34.5	21.4	30	13.5
S37	SPDR150	1.49	141	5000	48	16	1210	32	-	80	45	26.5	96	31.8	25.2	30	11.5
	SPDR190	2.01	190	4400	60	20	1610	42	-	102	54	26.5	115	35	25.8	38	10.5
	SPDR225	2.76	265	4000	65	20	2012	50	-	111	64	33.5	127	45	26.2	48	17.5
	SPDR226	3.43	327	3700	70	28	2012	50	-	119	69.5	33.5	137	45	39.5	54	18
	SPDR276	5.60	532	3300	75	28	2517	60	-	127	79.5	46.5	157	45	42	61	28
	SPDR280	8.20	782	2800	80	32	2517	60	-	140	79.5	46.5	192	55	42	63	30
	SPDR295	13.40	1279	2300	95	32	3020	75	-	162	94.5	52.5	237	67.9	51.5	75	33
	SPDR300	31.90	3047	2100	105	38	3020	75	-	180	114.5	52.5	254	73	53	92	30
	SPDR350	45.00	4308	1800	115	45	-	-	-	200	127.5	89	305	87.5	53	103	64.5

Renold ref	Assembled overall length L		
	With half body combinations		
	BB	FF,FH,HH	FB, HB
SPDR35	20.2	-	-
SPDR50	42.4	-	-
SPDR70	50.9	-	-
SPDR75	55.2	-	-
SPDR95	63.5	-	-
SPDR99	71.7	64.7	68.2
SPDR100	87.7	64.7	76.2
SPDR110	107.4	74.4	90.9
SPDR7150	115.2	78.2	96.7
SPDR190	133.8	78.8	106.3
SPDR225	154.2	93.2	123.7
SPDR226	178.5	106.5	142.5
SPDR276	201	135	168
SPDR280	201	135	168
SPDR295	240.5	156.5	198.5
SPDR300	282	158	220
SPDR350	308	231	269.5

Ordering code

Half body **SPDR 110 HBDY CI**

- SPDR — Spider
- 110 — Size
- HBDY — Half body
- CI — Material
  - SI - Sintered Iron (Sizes SPDR35 – SPDR75)
  - CI – Cast iron (Sizes SPDR95 – SPDR350)
  - AL – Aluminium (Sizes SPDR70 – SPDR110)

Element kit **SPDR 110 ELMT NI**

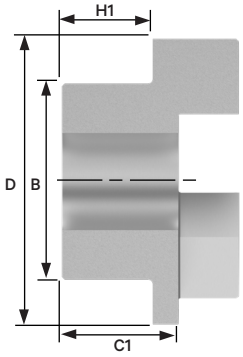
- SPDR — Spider
- 110 — Size
- ELMT — Element
- NI — Material
  - NI - Nitrile (All sizes)
  - UR - Urethane (Sizes SPDR50 – SPDR295)
  - Hy – Hytrel (Sizes SPDR50 – SPDR295)

*1 Power and Torque values quoted are for Nitrile Rubber elements (NBR).
Urethane elements have around 1.5 times the torque capacity, but provide less damping effect.
Hytrel elements offer around 2.5 times the torque capacity but have even less damping effect and are best used for continuous load applications rather than cyclic or stop/start situations.

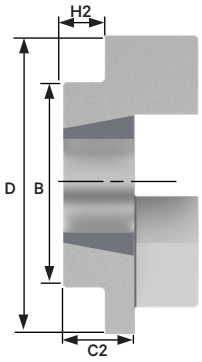
Please contact Renold technical department for more information on these alternative element materials.

Spiderwrap

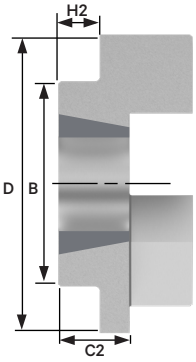
Type B



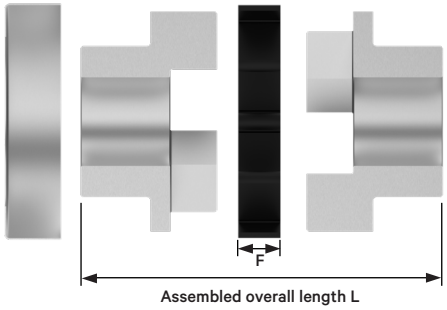
Type F



Type H



Assembled length



Renold spider ref	Renold ref	Power*1 /100rpm kW	Torque*1 nominal Nm	Speed max rpm	Type B		Type F & H			Dimensions							
					Bore		Bush size	Bore		B mm	C1 mm	C2 mm	D mm	E mm	F mm	H1 mm	H2 mm
					Max	Min		Max	Min								
S21	SPDR95	0.220	21.1	9000	28	12	-	-	-	49	25	-	65	22	13.5	13	-
	SPDR99	0.37	35.1	7000	30	12	1008	25	-	51	27	23.5	78	26.2	17.7	14	10.5
S30	SPDR100	0.49	46.4	7000	35	12	1108	28	-	57	35	23.5	78	26.2	17.7	22	10.5
	SPDR110	0.93	89	6000	42	16	1210	32	-	76	43	26.5	96	34.5	21.4	30	13.5
S37	SPDR150	1.49	141	5000	48	16	1210	32	-	80	45	26.5	111	31.8	25.2	30	11.5
	SPDR190	2.01	190	4400	60	20	1610	42	-	102	54	26.5	129	35	25.8	38	10.5
	SPDR225	2.76	265	4000	65	20	2012	50	-	111	64	33.5	142	45	26.2	48	17.5
	SPDR226	3.43	327	3700	70	28	2012	50	-	119	69.5	33.5	153	45	39.5	54	18
	SPDR276	5.60	532	3300	75	28	2517	60	-	127	79.5	46.5	173	45	42	61	28
	SPDR280	8.20	782	2800	80	32	2517	60	-	140	79.5	46.5	208	55	42	63	30
	SPDR295	13.40	1279	2300	95	32	3020	75	-	162	94.5	52.5	253	67.9	51.5	75	33
	SPDR300	31.90	3047	2100	105	38	3020	75	-	180	114.5	52.5	272	73	53	92	30
	SPDR350	45.00	4308	1800	115	45	-	-	-	200	127.5	89	323	87.5	53	103	64.5

Renold ref	Assembled overall length L		
	With half body combinations		
	BB	FF,FH,HH	FB, HB
SPDR95	63.5	-	-
SPDR99	71.7	64.7	68.2
SPDR100	87.7	64.7	76.2
SPDR110	107.4	74.4	90.9
SPDR150	115.2	78.2	96.7
SPDR190	133.8	78.8	106.3
SPDR225	154.2	93.2	123.7
SPDR226	178.5	106.5	142.5
SPDR7276	201	135	168
SPDR280	201	135	168
SPDR295	240.5	156.5	198.5
SPDR300	282	158	220
SPDR350	308	231	269.5

Coupling size	Spider flexible element
S11	644851
S15	644852
S21	644853
S30	644854
S37	644855

Ordering code

Half body **SPDR 110 HBDY CI**

- SPDR — Spider
- 110 — Size
- HBDY — Half body
- CI — Material
  - CI – Cast iron (All sizes)
  - AL – Aluminium (Sizes SPDR95 – SPDR110)

Element kit **SPDR 110 ELMT NI**

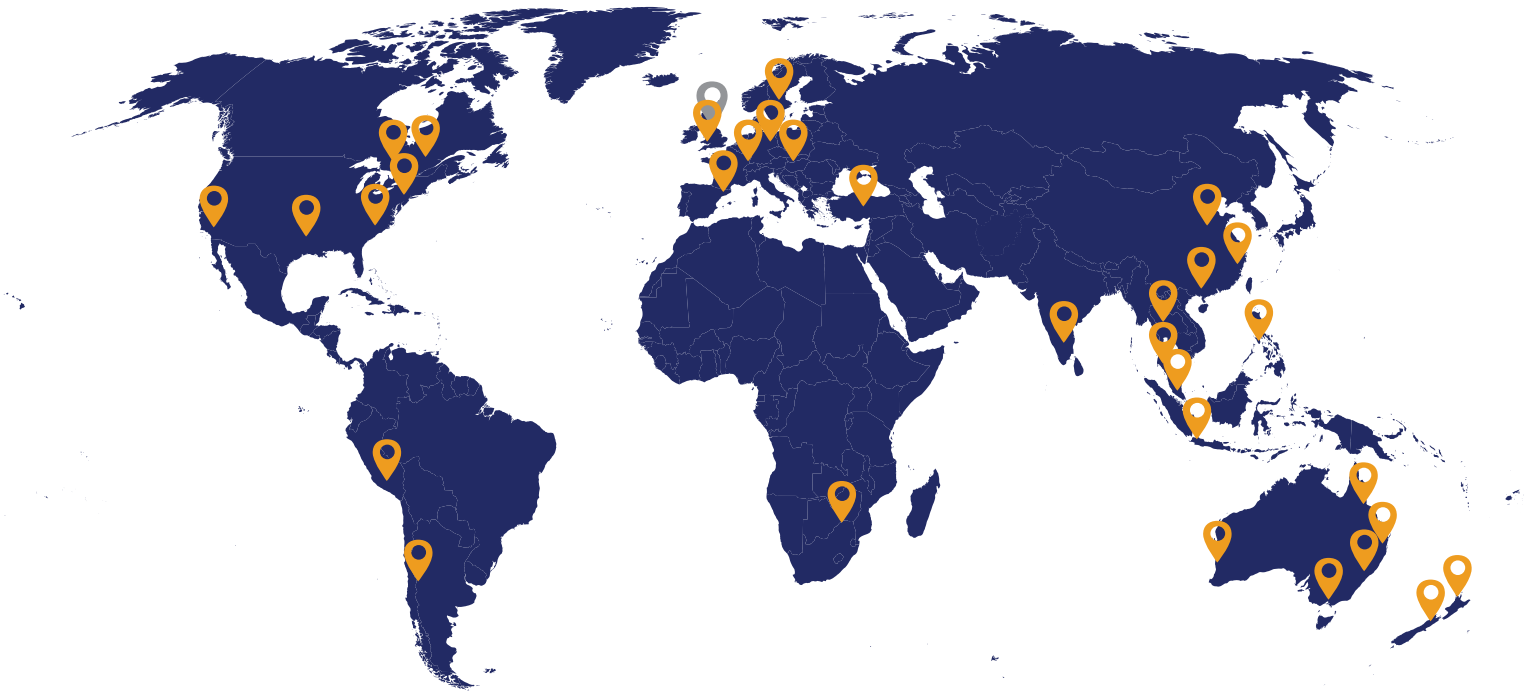
- SPDR — Spider
- 110 — Size
- ELMT — Element
- NI — Material
  - NI - Nitrile (All sizes)
  - UR - Urethane (Sizes SPDR50 – SPDR295)
  - Hy – Hytrel (Sizes SPDR50 – SPDR295)

*1 Power and Torque values quoted are for Nitrile Rubber elements (NBR).
Urethane elements have 1.5 times the torque capacity, but provide less damping effect.
Hytrel elements offer 2.5 times the torque capacity but have even less damping effect and are best used for continuous load applications rather than cyclic or stop/start situations.

Please contact Renold technical department for more information on these alternative element materials.

Statement:
When ordering a complete coupling you shoud select two half bodies and one element. If in doubt refer to Renold Sales.

Global services



Head office **Renold locations**

Internal support
Sales team embedded in the manufacturing site with unrivalled product knowledge

Worldwide Manufacture
Renold can utilise its fully owned factories across the world to ensure quality controlled, cost competitive products

Manufacturing facility
Designed and manufactured in house by Renold; giving ultimate control on our solutions

History and Longevity
Manufacturing in the UK for over 100 years and commitment in our facilities for the long term, we are here to stay

Excellent Communication
From an accessible sales team, weekly order updates and a global sales network we make it easy to communicate

Large Stock Holding
Renold holds a large stock of Industrial couplings in the UK and with our worldwide distribution network

Get in touch

For your local Renold sales and service location

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