

# *Richman*

*-SR Series*

**PLAIN GAUGE  
REINFORCE  
AERO  
BUTTED  
NIPPLE**

# History



*Richman*

Since 1984

*For over 30 years, Sha-Dar has been pioneering spoke development throughout the world. With specialist manufacturing operations in Taiwan, coupled to the latest research and development facilities, Sha-Dar has become the number one choice for spokes and nipples amongst the finest brands in the bicycle world today.*

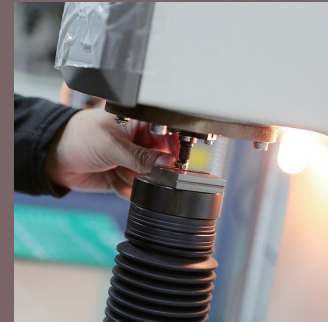
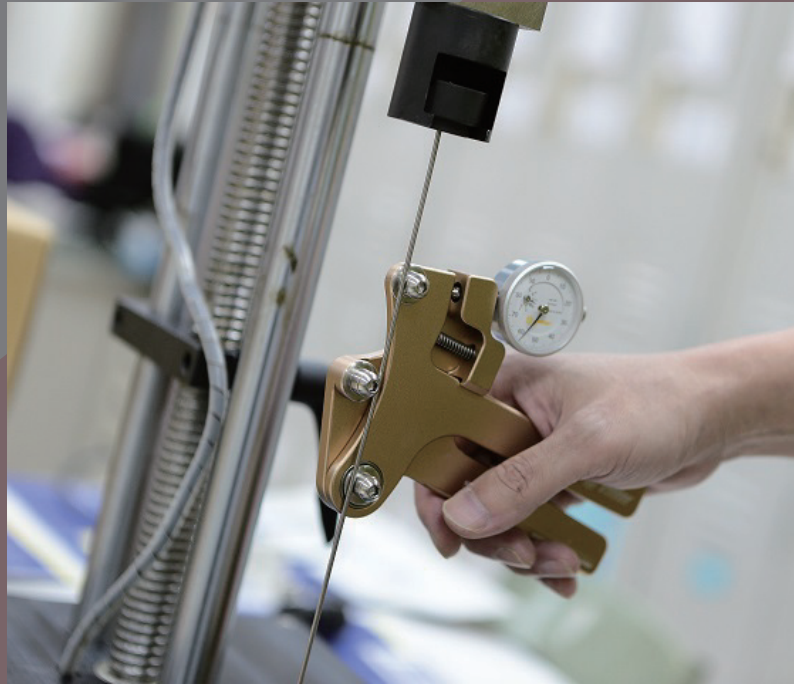
*Production runs at well in excess of 1.5 million sets a month and our success is due to the clear lines of communication we maintain with each and everyone of our customers, linked to developing personal relationships by spending time at our customers locations in order to understand every, exact need they have.*

*Sha-Dar holds countless patents on the technology and products it has developed over the years and will continue to lead the way to other manufacturers around the world. The continuous development of new and exciting materials will ensure that Sha-Dar is the only choice of people in the know.*

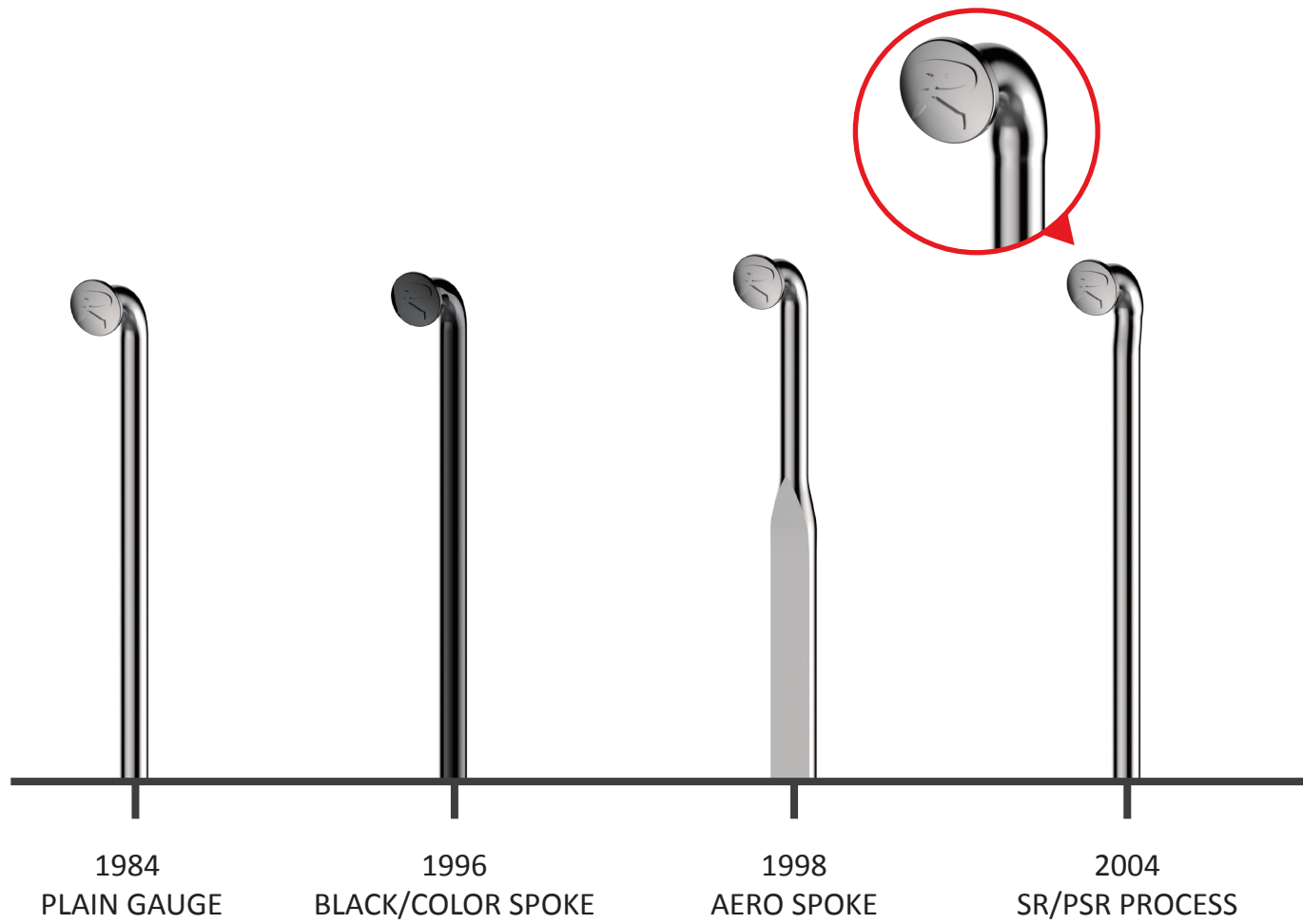
*Contact us with the peace of mind there is no other spoke manufacturer in the world today that can cater for your needs, no matter how large or small.*

# Learning & Development

*- Richman*



# A Briefer History of SHA-DAR Spoke



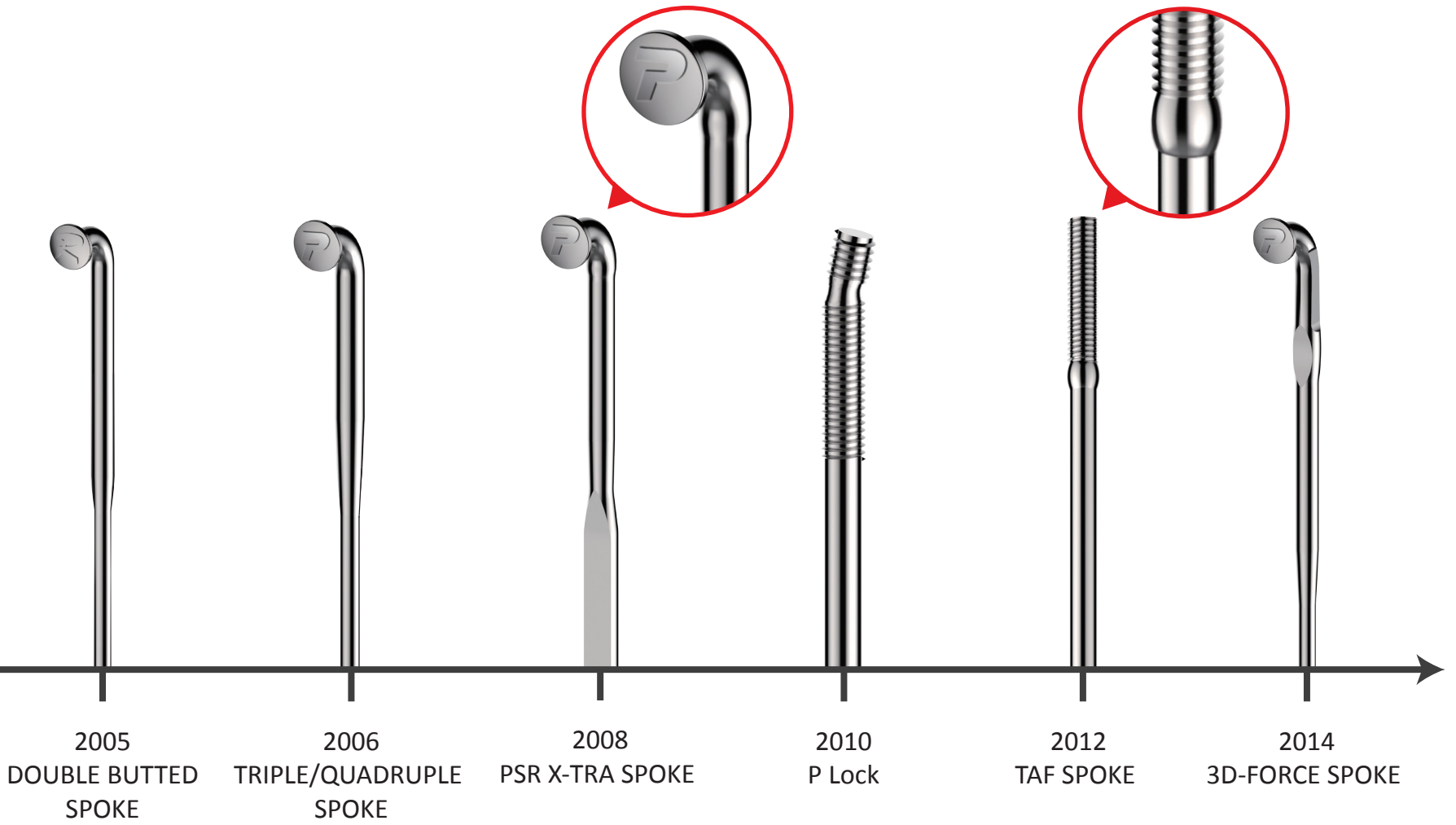
*Richman*  
-SR Series

*Richman*  
-SR Series

*Richman*  
-SR Series

*Richman*  
-SR Series





*Richman*  
SR Series

*Pillar*  
Racing Spoke

*Pillar*  
Racing Spoke

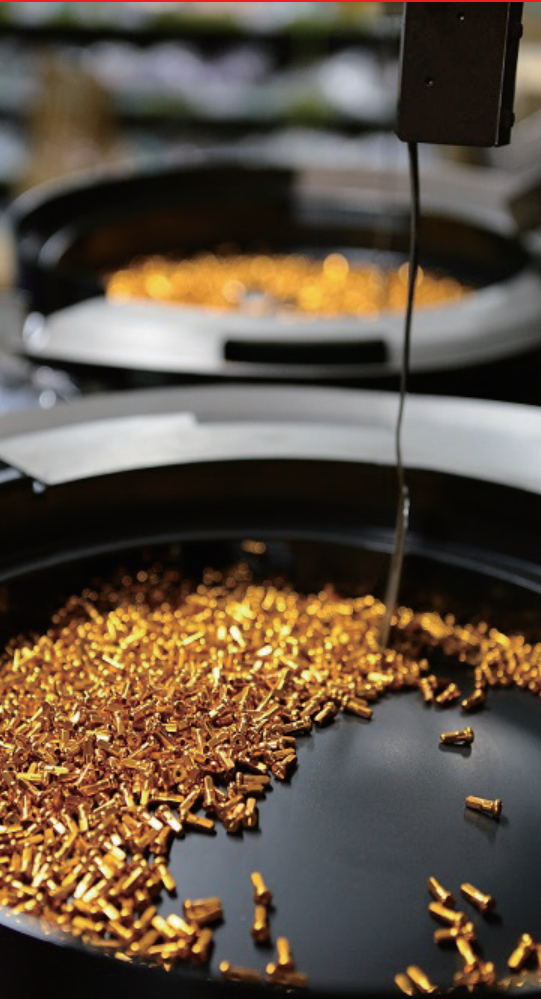
*Pillar*  
Racing Spoke

*Pillar*  
Racing Spoke

*Pillar*  
Racing Spoke

*Pillar*  
Racing Spoke

# A Briefer History of SHA-DAR Nipple



1984

1990

2003

2006



STANDARD NIPPLE  
ALLOY NIPPLE



DOUBLE SQUARE  
NIPPLE



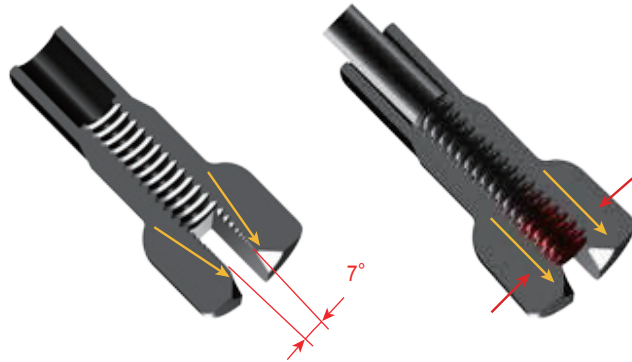
MV NIPPLE / HS NIPPLE



2010  
TG NIPPLE



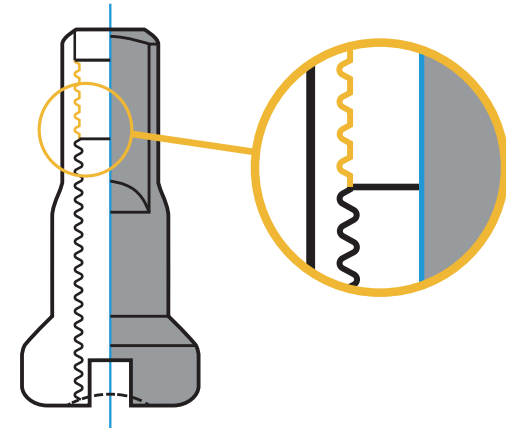
2012  
TAF NIPPLE



## Taper Grip Nipple

PATENTEND

Taper Grip Nipples are designed to attain maximum grip without the use of adhesives. the TG nipple will lock itself to the spoke threads as the tension is increased and due to its unique design, will not come loose during its use.



## Thread Angle Fixed

PATENTEND PENDING

The nipple with thread angle fixed system, has a special design inner thread to keep the spoke thread always straight forward in the nipple.

This design can reduce the break down of the spoke thread, applies on the wheel sets that the spokes not vertical to the rim.



# Plain Gauge

Spoke



# Plain Gauge

## MATERIAL

SUS304  
Standard size.  
Available for all type of bikes.

## THREAD

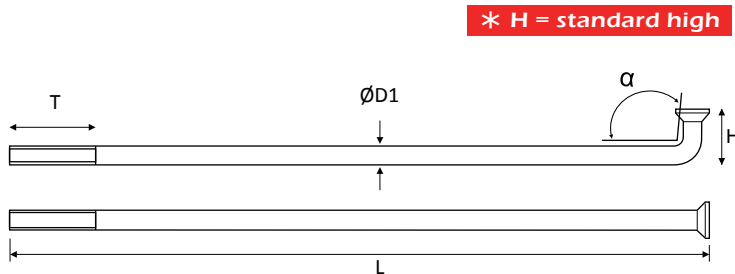
Rolled (BC 56, DIN 79012)  
S 15: BC 1.8 , 56 TPI  
S 14: BC 2.0 , 56 TPI  
S 13: BC 2.3 , 56 TPI  
S 12: BC 2.6 , 56 TPI

## APPLICATION

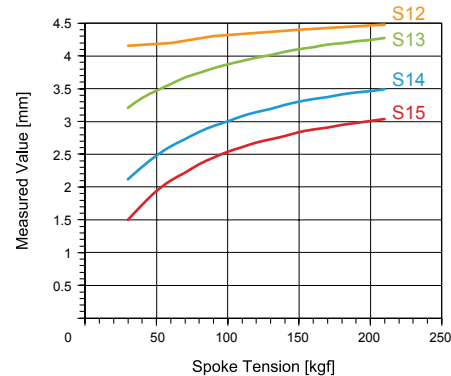
Trekking/ City/ MTB

## COLOUR

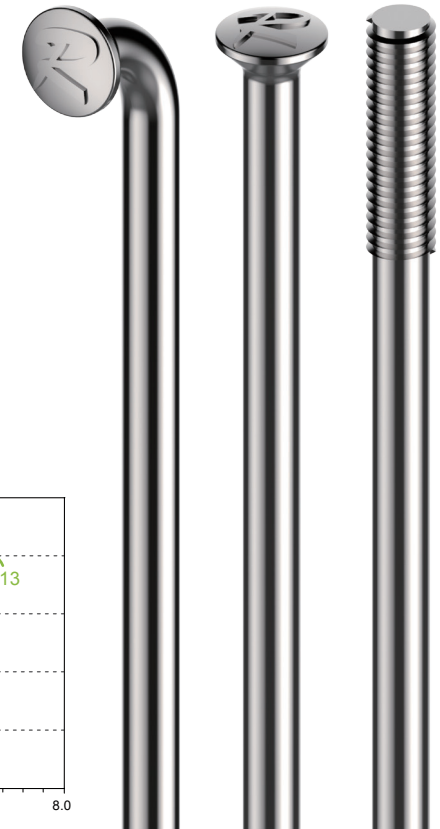
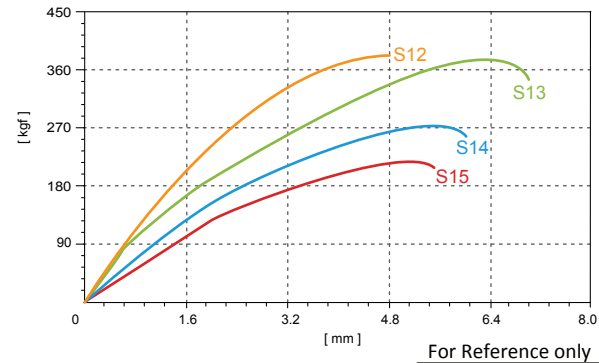
 COLOUR NCC  COLOUR PC  Black



## Spoke Tension



## Breaking Strength



Model	T	ØD1	α	H	L	Weight(260 mm)
<b>S 15</b>	9.0 mm	1.8 mm	95°	6.0/6.5*	70-310 mm	5.5 g
<b>S 14</b>	9.0 mm	2.0 mm	95°	6.2/6.6*/8.0	70-310 mm	6.5 g
<b>S 13</b>	9.0 mm	2.3 mm	95°	7.0/7.8*	70-310 mm	8.5 g
<b>S 12</b>	10.0 mm	2.6 mm	100°	8.0*	160-310 mm	10.9 g

# Plain Gauge

## MATERIAL

High Carbon Steel  
Standard size.  
Available for all type of bikes.

## THREAD

Rolled (BC 56, DIN 79012)  
C 15: BC 1.8 , 56 TPI  
C 14: BC 2.0 , 56 TPI  
C 13: BC 2.3 , 56 TPI  
C 12: BC 2.6 , 56 TPI

## APPLICATION

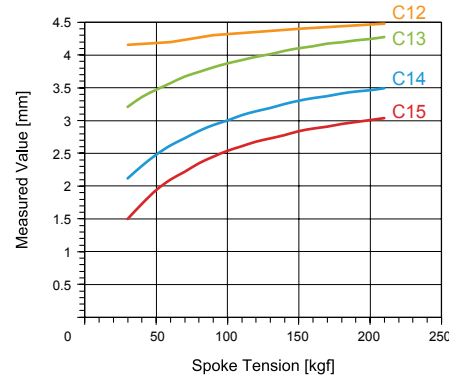
Trekking/ City/ MTB

## COLOUR

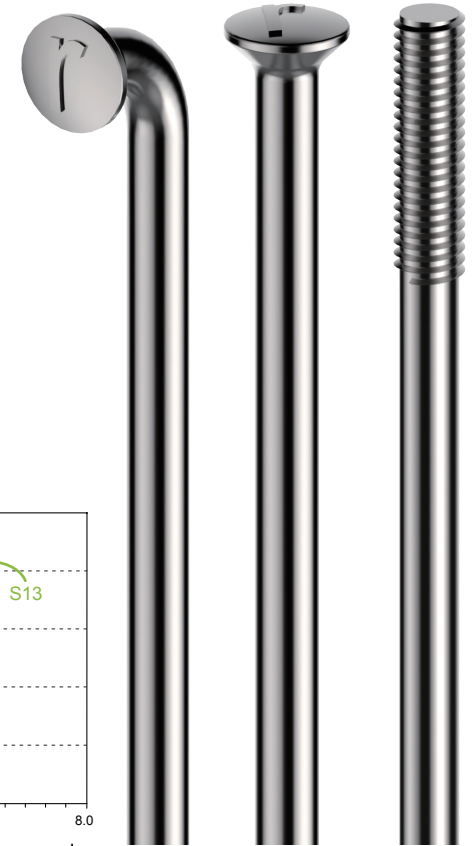
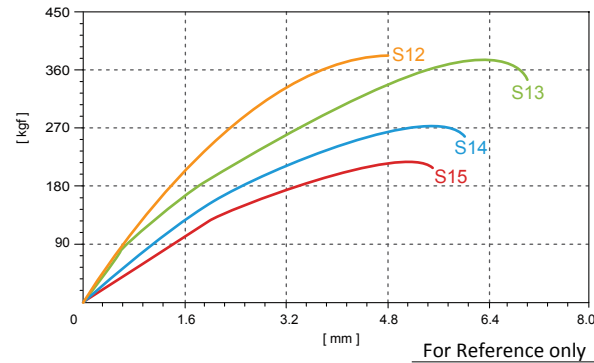
 ZINCPLATING  COLOURPC  Black



## Spoke Tension



## Breaking Strength



Model	T	ØD1	α	H	L	Weight(260 mm)
<b>C 15</b>	9.0 mm	1.8 mm	95°	6.0/6.7*	70-310 mm	5.5 g
<b>C 14</b>	9.0 mm	2.0 mm	95°	6.2/6.6/6.9*/8.0	70-310 mm	6.5 g
<b>C 13</b>	9.0 mm	2.3 mm	95°	7.0/7.8*	70-310 mm	8.5 g
<b>C 12</b>	10.0 mm	2.6 mm	100°	8.0*	160-310 mm	10.9 g



**Reinforce**

Spoke

# SR Standard

**MATERIAL** SUS304 / High Carbon Steel

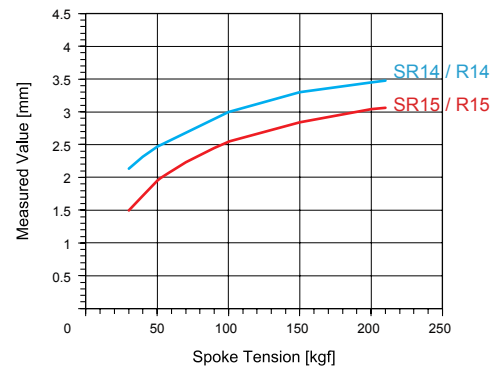
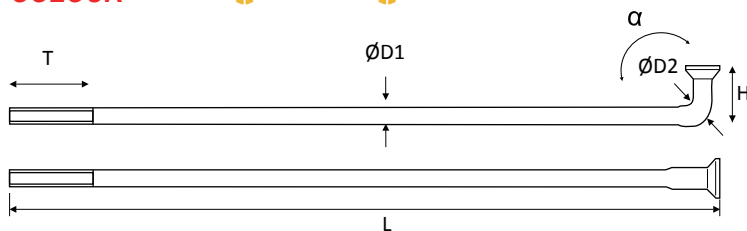
**ADVANTAGE** Richman patented cold forge technology Up to 20% more strength without increasing weight

**PATENT** Taiwan: 220417  
America: US7181844B2  
Europe: 1479532

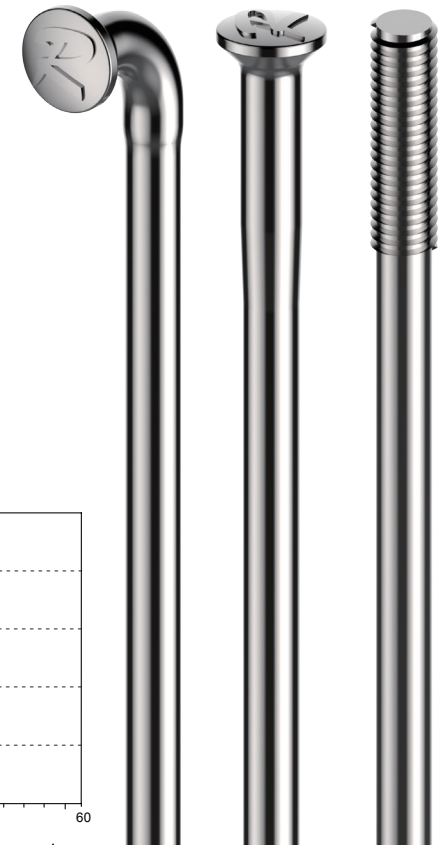
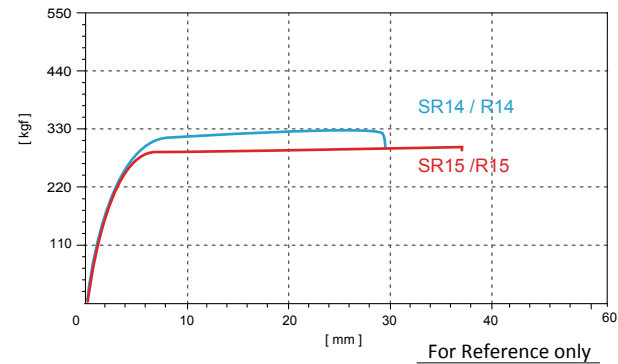
**THREAD** Rolled (BC 56, DIN 79012 )  
R 15: BC 1.8 , 56 TPI  
R 14: BC 2.0 , 56 TPI  
SR 15: BC 1.8 , 56 TPI  
SR 14: BC 2.0 , 56 TPI

**APPLICATION** Trekking/ MTB/ Free Ride/ Down Hill

**COLOUR**  



Breaking Strength



Model	T	ØD1	ØD2	α	H	L	Weight(260 mm)
<b>R 15</b>	9.0 mm	1.8 mm	2.0 mm	95°	6.5 mm	160-310 mm	5.5 g (High Carbon Steel)
<b>R 14</b>	9.0 mm	2.0 mm	2.2 mm	95°	6.6 mm	160-310 mm	6.5 g (High Carbon Steel)
<b>SR 15</b>	9.0 mm	1.8 mm	2.0 mm	95°	6.5 mm	160-310 mm	5.5 g (SUS304)
<b>SR 14</b>	9.0 mm	2.0 mm	2.2 mm	95°	6.6 mm	160-310 mm	6.5 g (SUS304)



**Aero** Spoke

# Aero

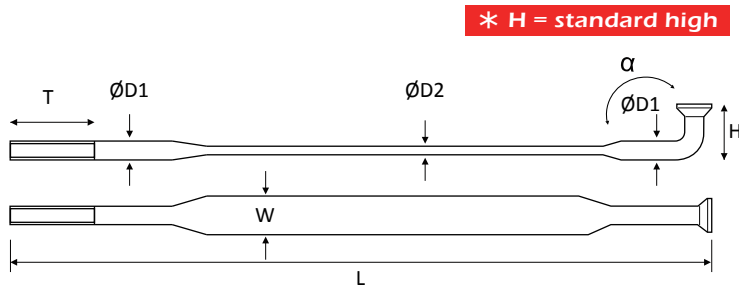
**Material** SUS304

**Advantage** Richman cold forge technology Aero shape, high elasticity and low drag coefficient

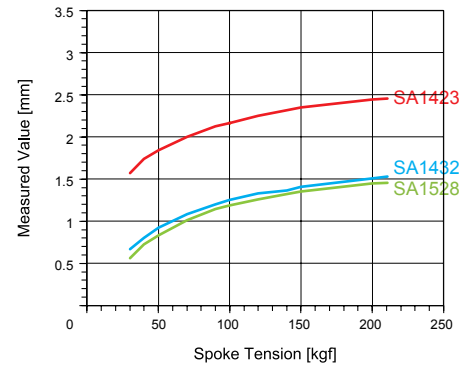
**Thread** Rolled (BC 56, DIN 79012)  
 SA 1528: BC 1.8, 56 TPI  
 SA 1423: BC 2.0, 56 TPI  
 SA 1432: BC 2.0, 56 TPI

**Application** Race/MTB

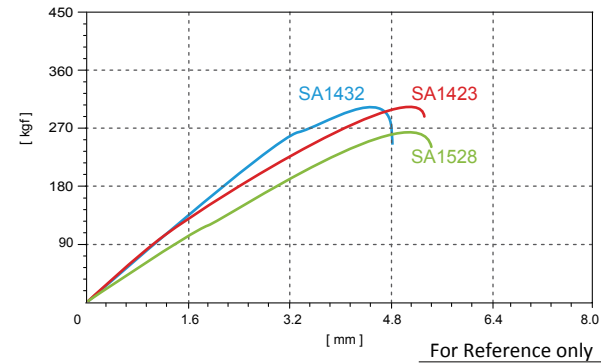
**Colour**   



Spoke Tension



Breaking Strength



Model	T	ØD1	W	ØD2	α	H	L	Weight(260 mm)
SA 1528	9.0 mm	1.8 mm	2.8 mm	1.0 mm	95°	6.0/6.5*	170-310 mm	5.5 g
SA 1423	9.0 mm	2.0 mm	2.3 mm	1.5 mm	95°	6.2/6.6*	170-310 mm	6.5 g
SA 1432	9.0 mm	2.0 mm	3.2 mm (Special Hobs)	1.0 mm	95°	6.2/6.6*	170-310 mm	6.5 g

# Aero

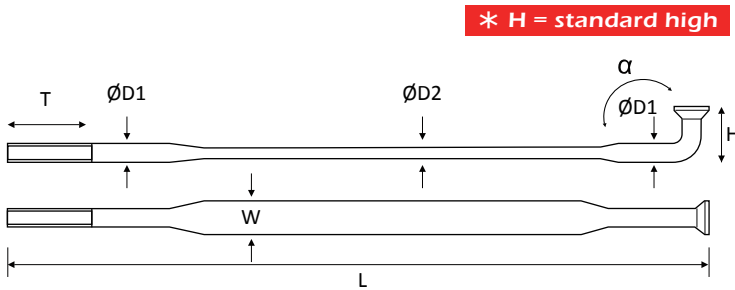
**Material** High Carbon Steel

**Advantage** Richman cold forge technology Aero shape, high elasticity and low drag coefficient

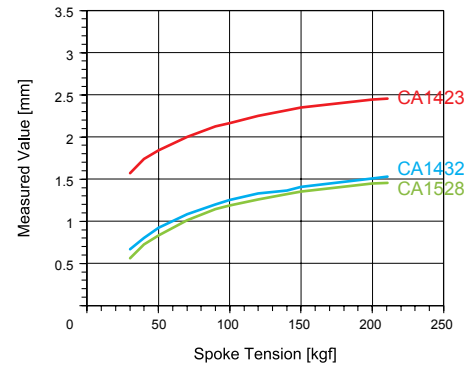
**Thread** Rolled (BC 56, DIN 79012)  
 CA 1528: BC 1.8, 56 TPI  
 CA 1423: BC 2.0, 56 TPI  
 CA 1432: BC 2.0, 56 TPI

**Application** Race/MTB

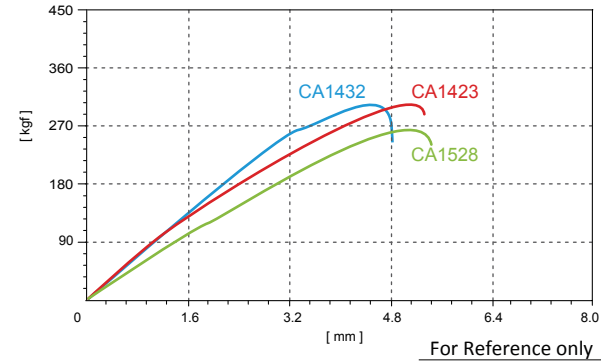
**Colour**   



Spoke Tension



Breaking Strength



Model	T	ØD1	W	ØD2	α	H	L	Weight(260 mm)
CA 1528	9.0 mm	1.8 mm	2.8 mm	1.0 mm	95°	6.0/6.7*	170-310 mm	5.5 g
CA 1423	9.0 mm	2.0 mm	2.3 mm	1.5 mm	95°	6.2/6.6*/6.9/8.0	170-310 mm	6.5 g
CA 1432	9.0 mm	2.0 mm	3.2 mm (Special Hobs)	1.0 mm	95°	7.0/7.8*	170-310 mm	6.5 g

# SR Aero

## MATERIAL

SUS304

## ADVANTAGE

Richman patented cold forge technology, Up to 20% more Strength  
Perfect Aero shape, high elasticity and low drag coefficient

## PATENT

Taiwan: 220417

America: US7181844B2

Europe: 1479532

## THREAD

Rolled (BC 56, DIN 79012)

SR 1528: BC 1.8 , 56 TPI

SR 1423: BC 2.0 , 56 TPI

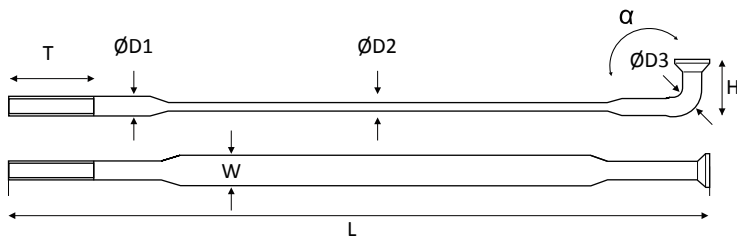
SR 1432: BC 2.0 , 56 TPI

## APPLICATION

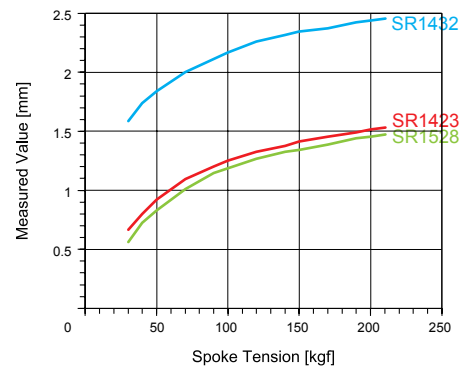
Race/MTB/Down Hill/Free Ride

## COLOUR

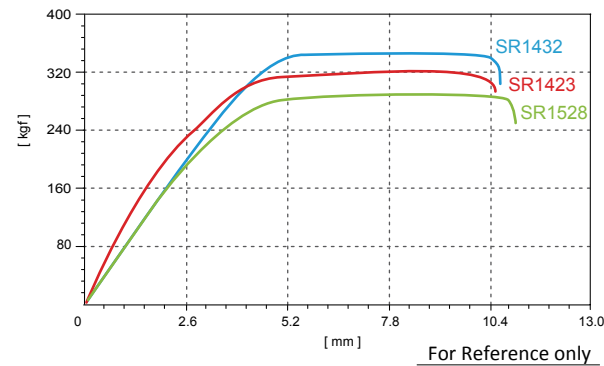
 COLOUR NCC  Black



## Spoke Tension



## Breaking Strength



Model	T	ØD1	W	ØD2	ØD3	α	H	L	Weight(260 mm)
SR 1528	9.0 mm	1.8 mm	2.8 mm	1.0 mm	2.0 mm	95°	6.5 mm	170-310 mm	5.5 g
SR 1423	9.0 mm	2.0 mm	2.3 mm	1.5 mm	2.2 mm	95°	6.6 mm	170-310 mm	6.5 g
SR 1432	9.0 mm	2.0 mm	3.2 mm (special hobs)	1.0 mm	2.2 mm	95°	6.6 mm	170-310 mm	6.5 g





**Butted** Spoke

# Single Butted

**MATERIAL** SUS304

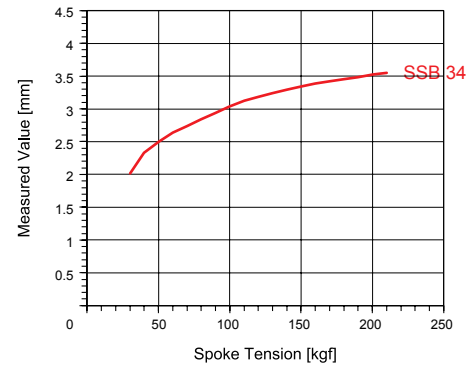
**ADVANTAGE** Richman cold drawn technology, extra strength =20%

**THREAD** Rolled (BC 56, DIN 79012)  
BC 2.0 , 56 TPI

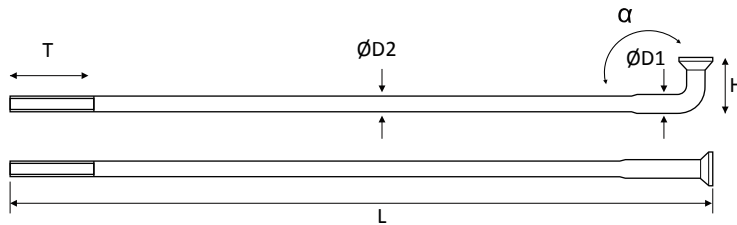
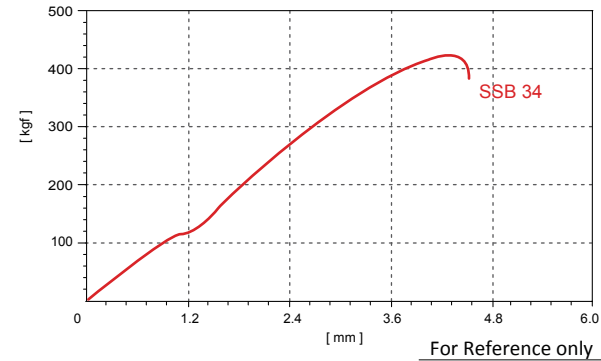
**APPLICATION** City/ Trekking

**COLOUR**  COLOUR NCC  COLOUR PC  Black

Spoke Tension






Breaking Strength

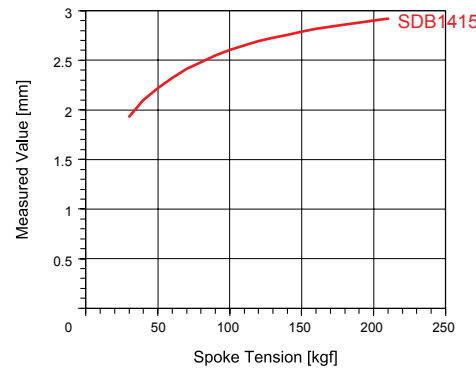


Model	T	ØD1	ØD2	α	H	L	Weight(260 mm)
SSB 34	9.0 mm	2.3 mm	2.0 mm	95°	7.0 mm	160-310 mm	6.8 g

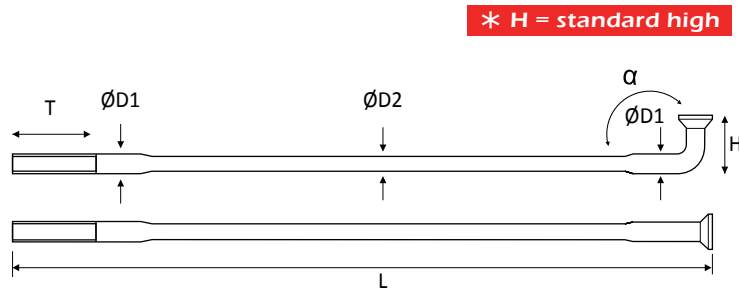
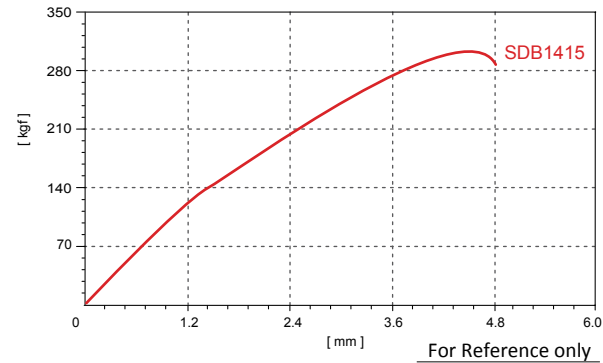
# ► Double Butted

<b>MATERIAL</b>	SUS304
<b>ADVANTAGE</b>	Richman cold drawn technology Weight saving up to 30%
<b>THREAD</b>	Rolled (BC56, DIN 79012) BC 2.0 , 56 TPI
<b>APPLICATION</b>	Race/MTB/Trekking
<b>COLOUR</b>	 COLOUR NCC  COLOUR PC  Black

Spoke Tension



Breaking Strength



Model	T	ØD1	ØD2	α	H	L	Weight(260 mm)
<b>SDB 1415</b>	9.0 mm	2.0 mm	1.8 mm	95°	6.2/6.6* mm	160-310 mm	5.7 g

# SR Butted

## MATERIAL

SUS304

## ADVANTAGE

Richman patented cold forge with our new drawn technology.  
Save up to 30% weight, without compromising strength

## PATENT

Taiwan: 220417  
America: US7181844B2  
Europe: 1479532

## THREAD

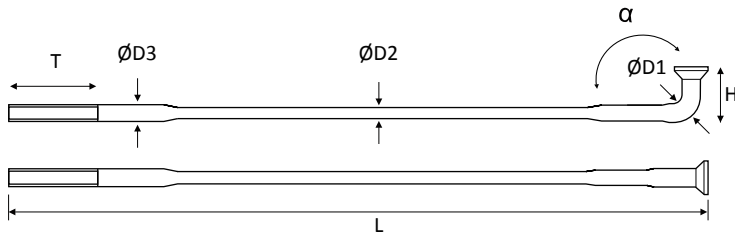
Rolled (BC 56, DIN79012)  
BC 2.0, 56 TPI

## APPLICATION

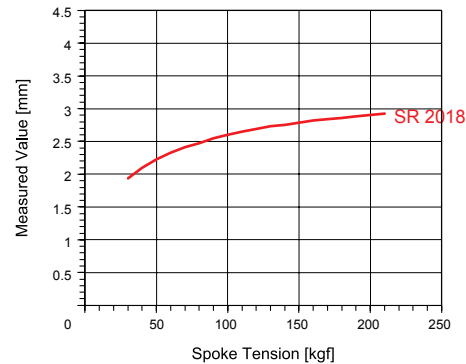
Race/MTB/Trekking

## COLOUR

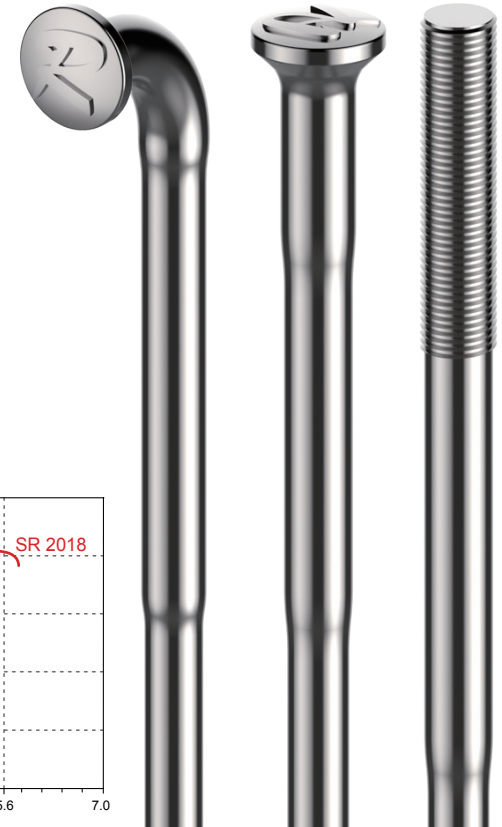
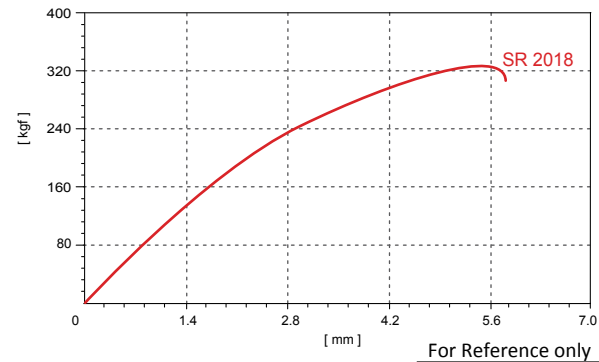
 COLOUR NCC  Black



## Spoke Tension



## Breaking Strength



Model	T	ØD1	ØD2	ØD3	α	H	L	Weight(260 mm)
SR 2018	9.0 mm	2.2 mm	1.8 mm	2.0 mm	95°	6.6 mm	160-310 mm	5.7 g



**Nipple** Series

# ▶ Standard Nipple

## Brass Nipple

Type	12G	13G	14G	15G
Material	Brass	Brass	Brass	Brass
Length	13 , 16 mm	12.5 , 16 mm	12 , 14 , 16 mm	

## Steel Nipple

Type	12G	13G	14G	15G
Material	Steel	Steel	Steel	Steel
Length	13 , 16 mm	12.5 , 16 mm	12 , 14 , 16 mm	

## Alloy Nipple

Type	13G	14G	15G
Material	Alloy	Alloy	Alloy
Length	12.5 , 16 mm	12 , 14 , 16 mm	

## Lead Free Brass

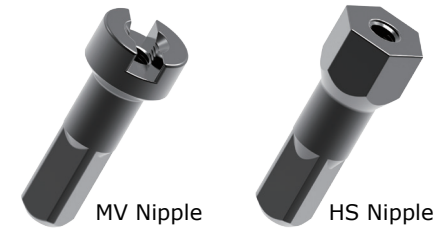
Type	13G	14G	15G
Material	Brass	Brass	Brass
Length	12.5 , 14 , 16 mm	12 , 14 , 16 mm	



# ► Professional Nipple

## Strong Series

Type	MV14	MV15	HS14	HS15
Thread	14G	15G	14G	15G
Material	Alloy Pro 7	Alloy Pro 7	Alloy Pro7	Alloy Pro 7
Weight	0.35g		0.4g	
Length	12 , 14 , 16 mm		14 , 16 mm	



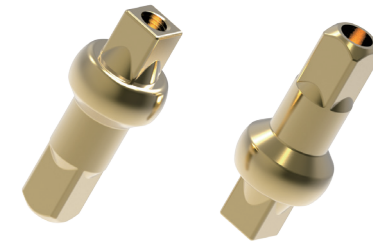
## Hex Series

Type	PB 14 H	PB 15 H	PT 734 H	PT 735 H
Thread	14G	15G	14G	15G
Material	Brass	Brass	Alloy Pro 7	Alloy Pro 7
Weight	0.95g	0.95g	0.32g	0.32g
Length	12 , 14 , 16 mm			



## Double Square Series

Type	DSN	
Thread	14G or 15G	
Material	Brass	Alloy Pro 7
Weight	1.2g	0.4g
Length	14.4 , 16 , 18 mm	



# ► TG Nipple / Thread Lock System

Type	TG Brass	TG-H Brass	TG Alloy	TG-H Alloy
Thread	14G or 15G			
Material	Brass	Brass	Alloy Pro 7	Alloy Pro 7
Weight	1.2g	1.2g	0.4g	0.4g
Length	14 , 16 mm			





**Colour** Series

&

**Tools** Accessories



# ► Colour \*colour for Reference only

## Spoke

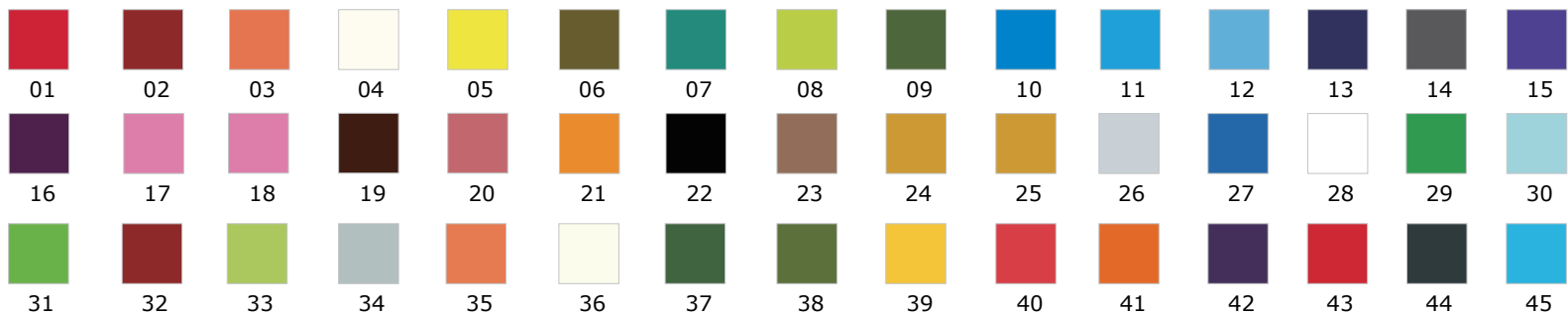
**Nanometer ColourFul Coat / For Stainless Steel** 

### SD-NCC



**Powder Coating / For Any Material** 

### SD-PC



# ► Colour \*colour for Reference only

## Nipple

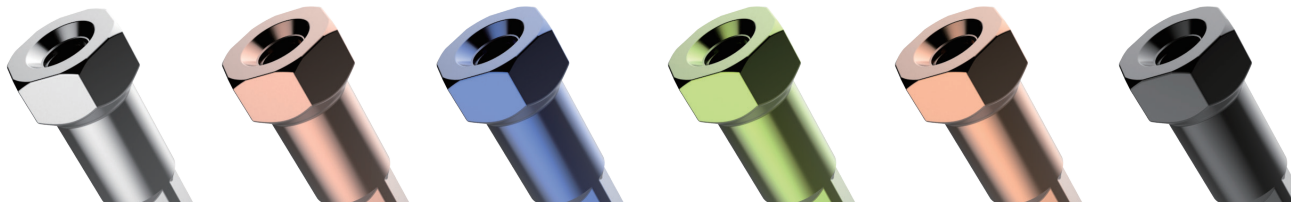
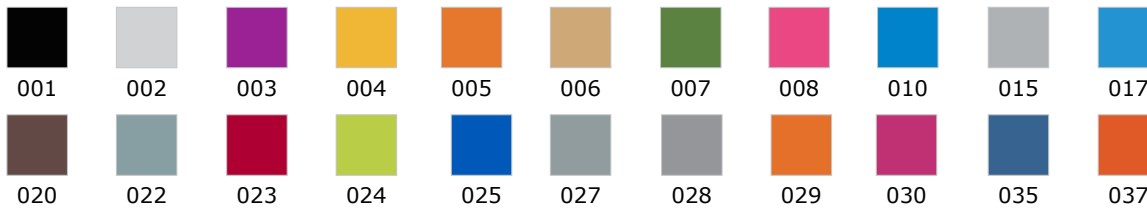
**Nanometer ColourFul Coat / For Brass Nipple** 

SD-NCC



**Anodize Colour / For Alloy Nipple** 




JY




# ▶ Tools Accessories

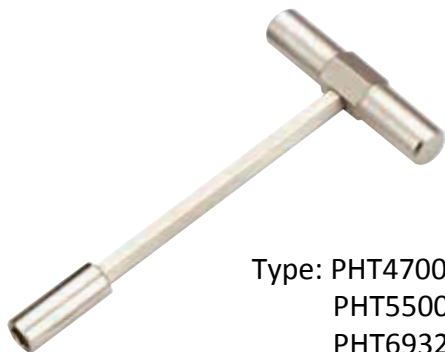
## Hand Tool






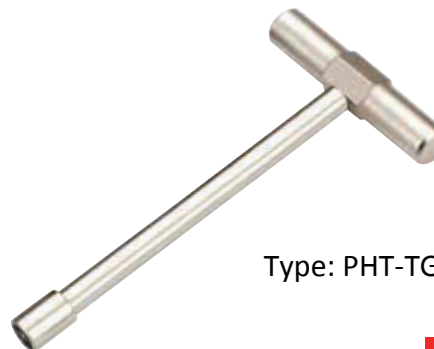
Type: PHT4732  4.7mm  
PHT5532  5.5mm  
PHT3232  3.2mm





Type: PHT1532  3.2mm



Type: PHT4700  4.7mm  
PHT5500  5.5mm  
PHT6932  3.2mm



Type: PHT-TG  6.0mm  
 5.5mm

For TG Nipple

# ▶ Tools Accessories

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## Spoke Wrench



## Aero Spoke Holder



## Washer



For External Nipple  
Type: PW 7048



For Internal Nipple  
Type: PW 6035

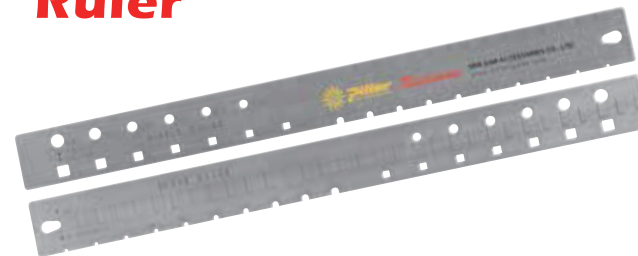


For Internal Nipple  
Type: PW 8630

## Box



## Ruler





*Learning & Development*

*- Richman*