STEERING PRODUCTS™

ReSpec™

STEMCO®
RESPEC

THREAD REPAIR THAT SAFELY AND EFFICIENTLY RESTORES THREADS WITHOUT REMOVING MATERIAL



STEMCO®
Making the Roadways Safer®
— An ENPRO Company —



WHEN THREADS FAIL, SAFETY IS AT STAKE

Stripped threads, damaged bolts, and worn-out nuts can bring your operations to a halt, and it also introduces potential safety hazards to the roadways. Traditional repair methods? They're flawed, but not STEMCO® ReSpec — the world's only patented thread repair technology that works on virtually any damaged thread to bring it back to life with precision and lasting strength. Prolong the lifetime of parts with the tool that's designed to do it right the first time, every time.

DON'T REPLACE, REPAIR

Damaged threads on critical components can result in costly replacements, extended downtime, and unnecessary maintenance expense. Applications such as axle spindles, drive pinions, and steering knuckle bores are just a few examples where ReSpec's safe and efficient thread restoration process can restore damaged threads and return components to service quickly.

ONE TOOL, ALL THREADS

Compatible with metric, imperial, fine, and coarse thread types, each tool covers an extensive diameter range, providing exceptional versatility with fewer tools. The innovative RSK-70I also enables the restoration of internal steering knuckle bore threads, solving repair challenges that were previously difficult or impossible to address.

PROVEN HIGHER ENDURANCE

Independent testing by the Material Testing Institute Hanover, Germany (MPA) confirms that ReSpec-repaired threads withstand the same static and dynamic loads as new, undamaged threads — often with an even higher fatigue endurance limit.

WORK HARDENING ADVANTAGE

Unlike traditional thread repair methods that remove material, ReSpec uses a cold-forming thread rolling process on the thread surface, increasing durability and resistance to future wear.

ENGINEERED TO THE HIGHEST STANDARDS

Through an ongoing commitment to develop groundbreaking, innovative solutions, ReSpec is built with the highest quality materials, precision manufacturing, and rigorous quality assurance.

ReSpec™

SERIES XR External Repair

RST-60X:	Ø 10-60 mm 3/8"–2 3/8"
RST-120X:	Ø 50–120 mm 2"–4 3/4"
RSSR 22-1.5X:	Ø 22 mm

SERIES IR Internal Repair

RST-70I:	~51–70 mm 2"–2-3/4"

RESPEC ADVANTAGES

VARIABILITY — ONE TOOL FITS ALL

Engineered to adjust to your needs, every ReSpec product covers a wide diameter range. These solutions deliver a cost-effective, efficient, and versatile tool that's able to seamlessly adapt to many different sizes to give you more value in a single tool.

HANDLING

XR-SERIES — QUICK OPERATING GUIDE

1. Measure the Diameter
Measure the diameter of the damaged thread to determine the correct tool size — 60 or 120 — for proper repair.

2. Use Thread Pitch Gauge to Select Roller
Place the thread pitch gauge on the damaged thread to determine the thread pitch. Match the pitch to the corresponding roller to ensure proper thread repair.

3. Select and Install Rollers
Choose the rollers matching the required thread pitch and securely mount them in the tool.

4. Lubricate the Thread
Apply a suitable lubricant to the damaged thread area and its surrounding surface to reduce friction during operation.

5. Position the Tool
Place the ReSpec over the damaged section. Using the supplied Allen key, tighten until hand-tight.

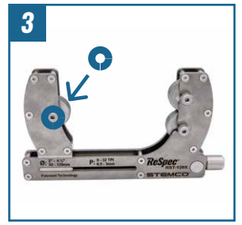
6. Restore the Thread & Repeat for Best Results
Rotate the tool around the thread, passing over the damaged section to form the material back to its original geometry.

For optimal restoration, re-tighten the tool and roll over the damaged area again. Repeat as necessary until the thread is fully restored.

7. Completed Restore















TAILORED SOLUTIONS

OFFERING CUSTOMIZED SOLUTIONS FOR THOSE WITH SPECIFIC NEEDS AND UNCONVENTIONAL SITUATIONS

In certain situations, the specified thread diameter or pitch may exceed our standard range, or the geometry of the threaded component may be incompatible with our standard tool designs.

That's where our custom-engineered solutions come in. We can adapt the patented STEMCO ReSpec technology to address any internal or external threading challenge — regardless of diameter or pitch.

Whether you need specially designed rollers for our standard tools or fully customized solutions, we will provide exactly what's required to restore your threads quickly, precisely, and permanently.

Contact the thread experts at any time — we are here to help you find the perfect solution for your unique application.

RST-60X

Thread Diameter
Minimum: Ø 10 mm / 3/8"
Maximum: Ø 60 mm / 2 3/8"

Pitch
Minimum: 0.5 mm / 32 TPI
Maximum: 4.0 mm / 6 TPI

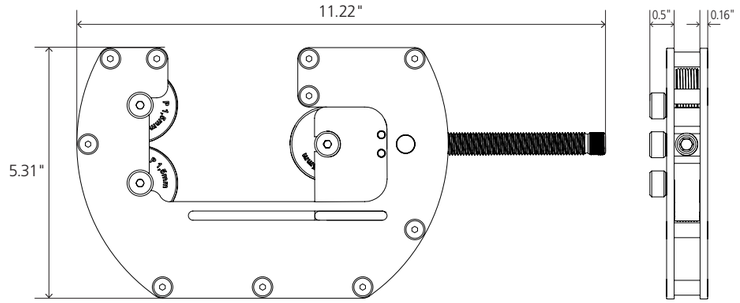
Material
Stainless Steel (partially hardened)

Maximum Radius Of Action
183 mm / 7 1/5" (while working with Ø 60 mm / 2 3/8")

Weight
1794 g / 4 lbs

Available as a kit — RSK-60X
Includes RST-60X tool, 4 sets of rollers (12 TPI, 16 TPI, 18 TPI and 1.5mm), thread gauge, RSSR22-1.5X, and injection-molded carrying case





RST-120X

Thread Diameter
Minimum: Ø 50 mm / 2"
Maximum: Ø 120 mm / 4 3/4"

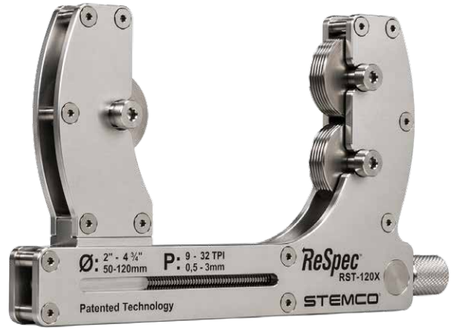
Pitch
Minimum: 0.5 mm / 32 TPI
Maximum: 3.0 mm / 9 TPI

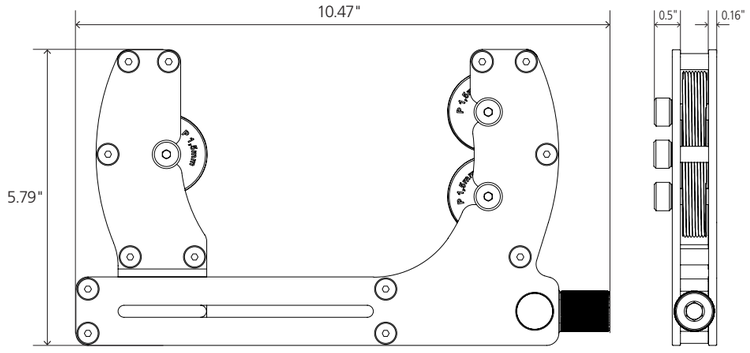
Material
Stainless Steel (partially hardened)

Maximum Radius Of Action
192 mm / 7 1/2" (while working with Ø 50 mm / 2")

Weight
1390 g / 3 lbs

Available as a kit — RSK-120X
Includes RST-120X tool, 4 sets of rollers (12 TPI, 16 TPI, 2.0mm and 1.5mm), thread gauge, RSSR22-1.5X, and injection-molded carrying case





RST-60X & RST-120X

PART NUMBER	DESCRIPTION	WEIGHT [G]	WEIGHT [LBS]
RST-60X	RST-60X (tool only*)	1,468	3.24
RST-120X	RST-120X (tool only*)	1,661	3.66
PART NUMBER	**THREAD PITCH (MM)**	**WEIGHT [G]**	**WEIGHT [LBS]**
Set of rollers (3 pcs.) Metric DIN ISO 13			
RSR-60120-1.0	1.0 MM	339	0.75
RSR-60120-1.25	1.25 MM		
RSR-60120-1.5	1.5 MM		
RSR-60120-1.75	1.75 MM		
RSR-60120-2.0	2.0 MM		
RSR-60120-2.5	2.5 MM		
RSR-60120-3.0	3.0 MM		
RSR-60120-3.5	3.5 MM		
RSR-60120-4.0	4.0 MM		
RSR-60120-1LH	1.0 MM-LH		
RSR-60120-1.25LH	1.25 MM-LH		
RSR-60120-1.5LH	1.5 MM-LH		
RSR-60120-1.75LH	1.75 MM-LH		
RSR-60120-2LH	2.0 MM-LH		
PART NUMBER	**THREAD PITCH (MM)**	**WEIGHT [G]**	**WEIGHT [LBS]**
Set of rollers (3 pcs.) American Standard, Unified Inch Thread Pitches, ANSI B1.1			
RSR-60120-28	28 TPI	339	0.75
RSR-60120-24	24 TPI		
RSR-60120-20	20 TPI		
RSR-60120-18	18 TPI		
RSR-60120-16	16 TPI		
RSR-60120-14	14 TPI		
RSR-60120-12	12 TPI		
RSR-60120-11	11 TPI		
RSR-60120-10	10 TPI		
RSR-60120-9	9 TPI		
RSR-60120-8	8 TPI		
RSR-60120-7	7 TPI		
RSR-60120-6	6 TPI		

PART NUMBER	DESCRIPTION
RSR-60120-M	Metric Thread Forming Die Set: 1.0, 1.5, 1.75, 2.0, 2.5, 3.0, 3.5, 4.0
RSR-60120M-L	Metric Thread Forming Die Set - Left Hand: 1.0LH, 1.5LH, 1.75LH, 2.0LH
RSR-60120-UN	American Standard Thread Forming Die Set (TPI): 28, 24, 20, 18, 16, 14, 12, 11, 10, 9, 8, 7, 6

*RST-60X and RST-120X do not come with rollers. Roller kit sold separately.



RSSR

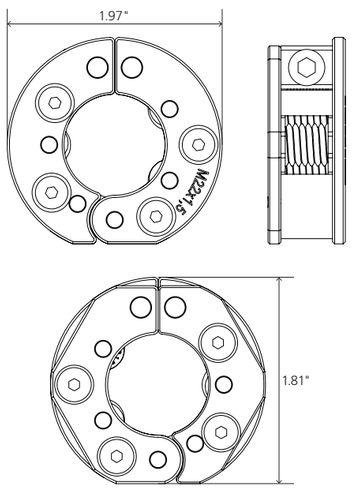
Material
Stainless Steel (partially hardened)

Maximum Radius Of Action
50 mm / 2" (while working
with Ø 22mm / 7/8")

Weight
123 g / 0.27 lbs

Includes
RSSR22-1.5X tool, allen key,
and injection-molded carrying case

PART NUMBER	PITCH	[MM]	[G]	[LBS]
RSSR22-1.5X	1.5	M22	123	0.27





RST-70I

Internal Thread Diameter
Minimum: Ø 50 mm / 2"
Maximum: Ø 70 mm / 2.75"

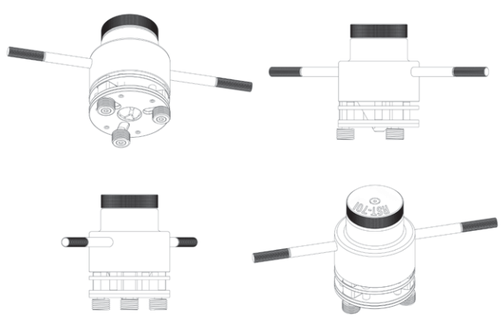
Pitch
12 TPI
16 TPI
20 TPI

Material
Stainless Steel (partially hardened)
+ Anodized Aluminum

Maximum Radius Of Action
38 mm / 1 1/2" (while working
with Ø 3 mm / 1/8")

Weight
1.05 kg / 2.3 lbs

Available as a kit — RSK-70I
Includes RST-70I tool, 3 set of rollers
(12 TPI, 16 TPI and 20 TPI) and injection-molded
carrying case



PRECISION THREAD REPAIR KITS



RSK-60X External Thread Repair Kit

Featuring the RST-60X tool, this kit repairs external threads with diameters from 10–60 mm (3/8"–2.375") and pitches from 0.5–4.0 mm (32–6 TPI). Includes RST-60X tool, 4 sets of rollers (12 TPI, 16 TPI, 18 TPI and 1.5mm), thread gauge, RSSR22-1.5X, and injection-molded carrying case.



RSK-120X External Thread Repair Kit

Featuring the RST-120X tool, this kit repairs larger external threads with diameters from 50–120 mm (2"–4.75") and pitches from 0.5–3.0 mm (32–9 TPI). Includes RST-120X tool, 4 sets of rollers (12 TPI, 16 TPI, 2.0mm and 1.5mm), thread gauge, RSSR22-1.5X, and injection-molded carrying case.



RSK-70I Internal Thread Repair Kit

Featuring the RST-70I tool, this kit repairs internal threads with diameters from 50–70 mm (2"–2.75") and pitches from 20–12 TPI. Includes RST-70I tool, 3 set of rollers (12 TPI, 16 TPI and 20 TPI) and injection-molded carrying case.



RSSR22-1.5X External Thread Repair Tool

Designed for M22 x 1.5 external threads, this partially hardened stainless steel tool features a 50 mm (2") maximum radius of action and weighs 123 g (0.27 lbs). Includes RSSR22-1.5X tool, allen key, and plastic case with sleeve.

STEMCO®

Visit **stemco.com/contact** to reach your nearest sales representative
or call the STEMCO Tech Line at **1-(800)-527-8492**

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