

elcometer®



INTRODUCING

# TORNADO

AIRLESS PUMPS

*Airless Sprayers for Protective Coatings*

# TORNADO

AIRLESS PUMPS



Engineered to quietly deliver high performance in the harsh environments of the protective coatings industry.

## **Reliable Performance**

Designed to handle the toughest high volume protective and corrosion resistant coatings in almost all environments.

## **Tough Engineering**

With smooth changeovers, low pulsation, and easy onsite maintenance, the Elcometer Tornado Airless Pump has been engineered from the ground up and built to last.

## **Whisper Quiet Spraying**

The Elcometer Tornado's unique dual exhaust silencers and anti-icing technology ensure quiet and reliable operation in either hot or cold climates.

# Ready for work...

## Insulated Poppet Switches

- Incorporates aerospace technology to prevent icing
- Quick access for servicing

## Whisper Quiet Exhausts

- Eliminates internal icing
- Ensures quiet operation

## Accessible & Protected Air Controls & Filters

- Avoids accidental knocks
- Integrated moisture separator to ensure good quality air

## All Terrain Cart

- Lightweight and balanced
- Robust roller-bearing airless tyres
- Integrated spray gun and hose hooks
- Pre-fitted hopper attachment points



## Reliable & Robust Air Motor

- Smooth & crisp changeovers
- Operates in hot & cold environments
- Low pulsation even with two spray guns
- Quiet, reliable operation

## Integrated Tool Storage

- Ideal for storing essential tools, spray tips, filters and lubricating oils

## High Performance Pump Lower

- Ideal for protective & marine coatings
- Available as 71:1 and 43:1 ratio pumps
- Supports up to two spray guns
- Field replaceable elcoTOUGH™ long-life packings
- Quick release piston lower
- Easily removable with a hammer

## Rapid Change Suction Hose

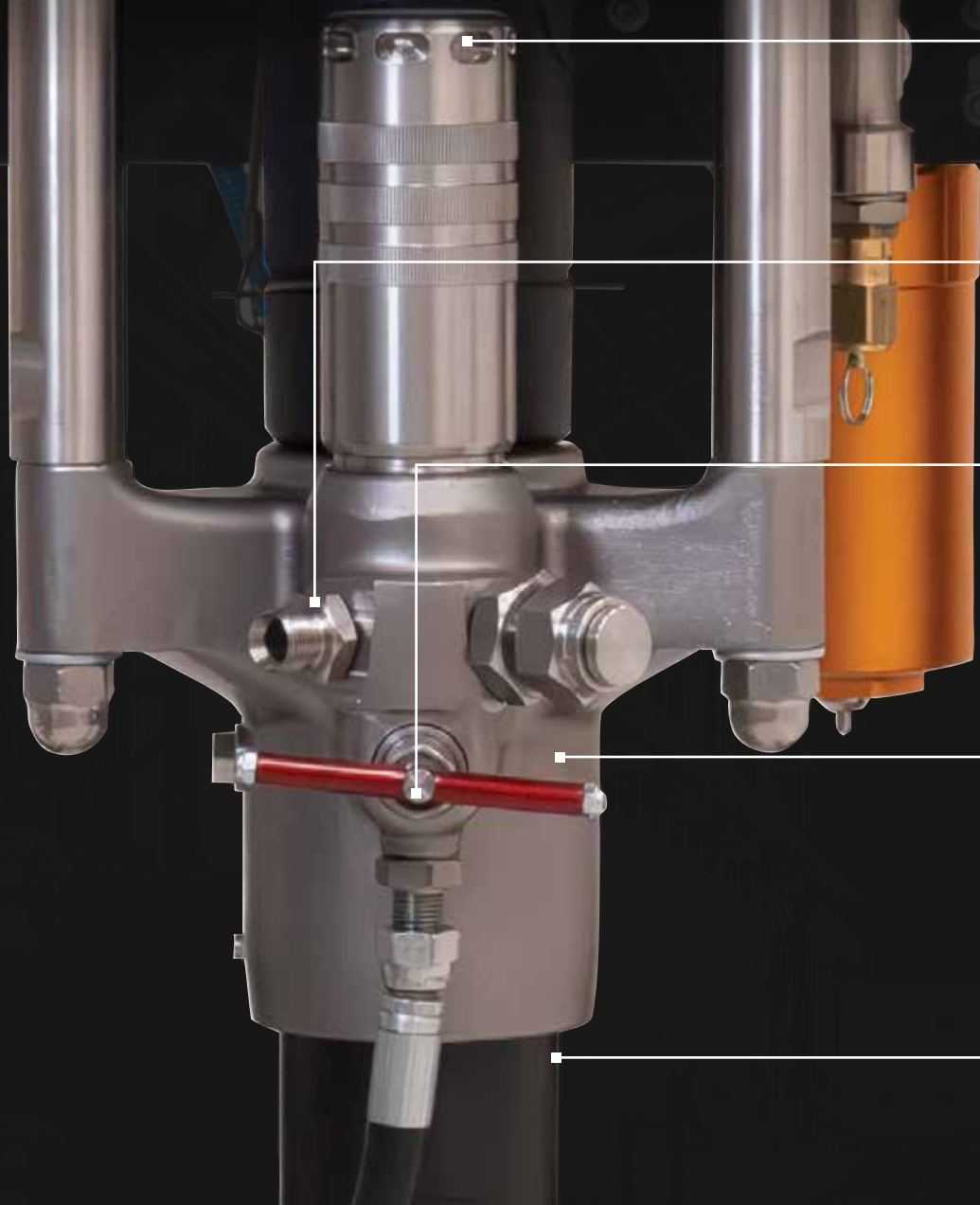
- Smooth flow elbow joint for easy cleaning
- Safe to use fluid purge hose
- User-replaceable fluid hose
- Integrated drip hook

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## Fluid Filter

- Integrated pump filter
- Accessible for easy maintenance

## Two Gun Outlets

- Supports two spray guns

## Accessible Bleed Valve

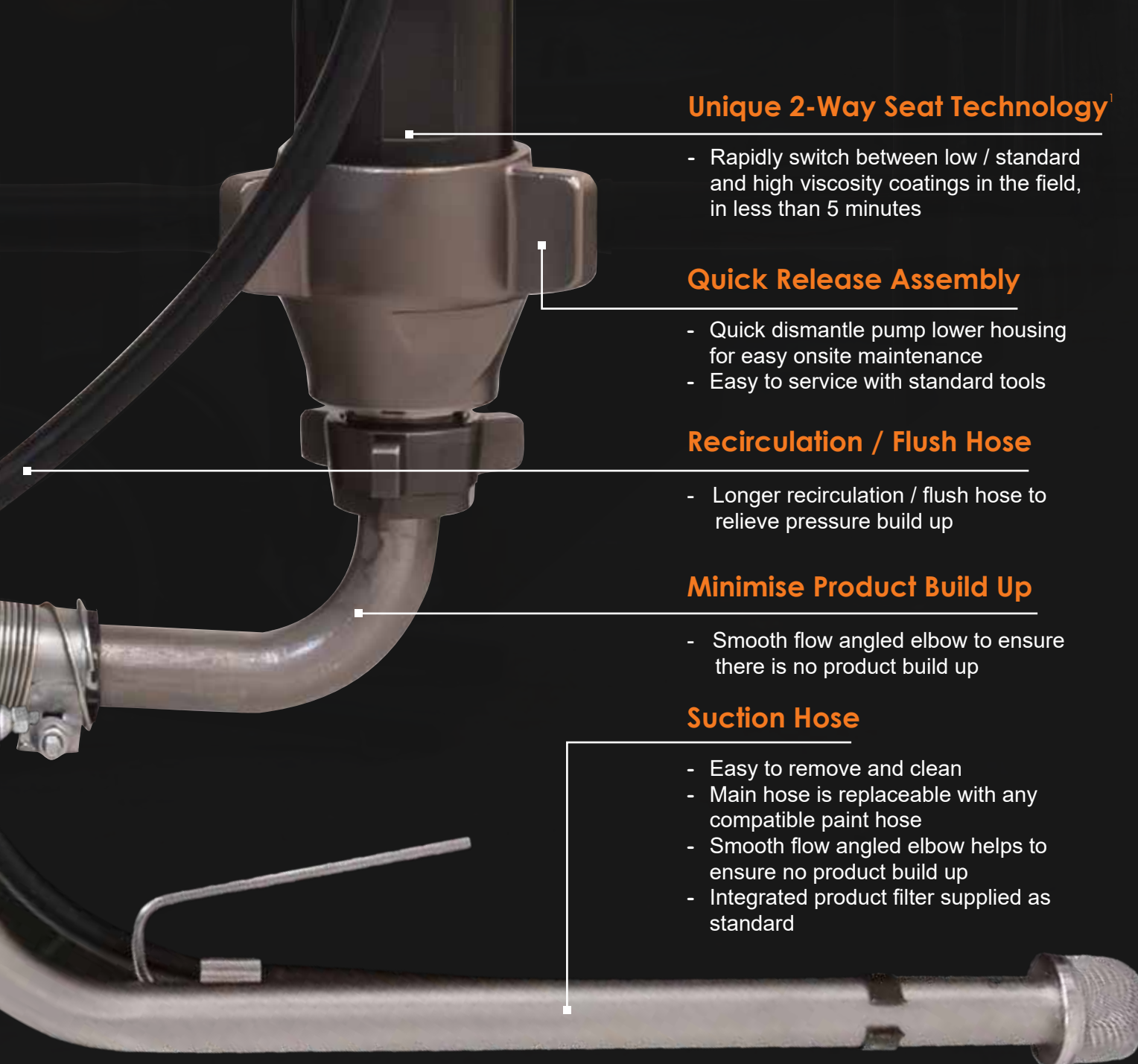
- Safe and ensures greater control when purging under high pressure

## Powerful Pump Lower

- Suitable for use with protective and marine coatings
- Long-life stainless steel balls and tungsten carbide seats

## Piston Guard

- Prevents finger trap
- Keeps debris out of the throat wet cup



### Unique 2-Way Seat Technology<sup>1</sup>

- Rapidly switch between low / standard and high viscosity coatings in the field, in less than 5 minutes

### Quick Release Assembly

- Quick dismantle pump lower housing for easy onsite maintenance
- Easy to service with standard tools

### Recirculation / Flush Hose

- Longer recirculation / flush hose to relieve pressure build up

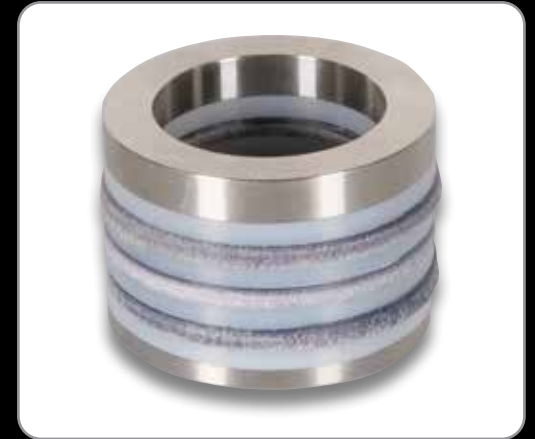
### Minimise Product Build Up

- Smooth flow angled elbow to ensure there is no product build up

### Suction Hose

- Easy to remove and clean
- Main hose is replaceable with any compatible paint hose
- Smooth flow angled elbow helps to ensure no product build up
- Integrated product filter supplied as standard

## elcoTOUGH™ Packings



Long-life elcoTOUGH™ Packings are made of leather and tough ultra-high-molecular-weight polyethylene<sup>2</sup>. Engineered to be abrasive, solvent and wear resistant, elcoTOUGH™ Packings ensure a tight pump seal for a better and consistent performance.

Easy and fast to replace onsite to minimise downtime and maximise spray time, saving you time and money.

<sup>1</sup> Patent applied for

<sup>2</sup> UHMWPE

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AIRLESS PUMPS



## Durable Stainless Steel Hoppers



The Hopper fits directly on to the Elcometer Tornado trolley mount, providing a 38 litre (10 US Gallon) gravity fed system. The secure quick lock mechanism simply clicks into the product inlet, feeding the pump.



## Sagola PSAM 500 Airless Pressure Spray Guns

Designed for airless systems up to 500bar (7,252psi), Elcometer's Sagola PSAM 500 offers fast, high product output with minimum overspray.

## Tested for Ultimate Reliability & Durability

Three years in development, over 3,640 hours of laboratory and field trials with a wide range of marine and protective coatings, in temperatures from -3 to 52°C (27 to 126°F), completing over 13.2 million pump cycles - you can have confidence in the Elcometer Tornado's reliability and durability.



## Easy Onsite Maintenance

Save time and money, with maintenance in less than 20 minutes with no special tools!



Loosen the fluid suction hose using a hammer.



Disconnect the piston collars.



Using a wrench, remove pump from tie rods.



Remove the lower to service or replace.

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## AIRLESS PUMPS

Built for durability and resilience, the Elcometer Tornado Pump is designed to handle extreme environments while delivering consistent, high-quality performance.

With its high-volume, high-pressure output, the Elcometer Tornado is available as industry standard 71:1 and 43:1 ratio pumps - to tackle the most demanding jobs efficiently and reliably, even with the toughest protective coatings.



### IDEAL FOR USE WITH:

	TORNADO 71	TORNADO 43
Solvent Based	▲	▲
Water Based	▲	▲
1K Epoxy Coats	▲	▲
Inorganic Zinc Primers		▲
100% Volume Solid Epoxy Coatings	▲	▲
Glass Filled Epoxy Coatings		▲
Anti-Fouling Marine Coatings	▲	▲
Solvent Based 1K Polyurethane Coatings	▲	▲
Solvent Based 2K (pot life 1 hour and above)	▲	
Flame Retardant Barrier Coats (Class B)	▲	▲
Coal Tar Epoxy	▲	▲

### TECHNICAL SPECIFICATION

	TORNADO 71	TORNADO 43
Ratio	71 : 1	43 : 1
Compatible product that can be sprayed	Protective Coatings	Protective Coatings
Fluid Temperature Range	4.4 to 60°C (40 to 140°F)	4.4 to 60°C (40 to 140°F)
Hydraulic Cylinder	270cc (3.57gpm)	270cc (3.57gpm)
Maximum Sound (70 psi (0.48 MPa, 4.8 bar) at 15 CPM per ISO-9614-2)	88dB	84dB
Power Source	Air	Air
COMPOSITION OF PARTS IN CONTACT WITH PRODUCT (WET)		
Seats	Tungsten Carbide	Tungsten Carbide
Balls	Stainless Steel	Stainless Steel
Pump Body / Cylinder Housing	Stainless Steel	Stainless Steel
Piston Rod	Stainless Steel	Stainless Steel
Packing Kit	PTFE, UHMWPE & Leather	PTFE, UHMWPE & Leather
AIR		
Air Pressure Operating Range	1-6 bar (14-87 psi)	1-6 bar (14-87 psi)
Maximum Air Consumption (60 cycles/min)	6894 lpm (243.46 cfm)	4187 lpm (147.86 cfm)
Air Consumption at 100bar (1450psi) & 6.5CPM	175.8 lpm (6.21 cfm)	175.6 lpm (6.2 cfm)
Maximum Air Inlet Pressure	6 bar (87 psi)	6 bar (87 psi)
Air Inlet	¾" BSP Female	¾" BSP Female
Compressor Requirements (Minimum)	175.8 lpm (6.21 cfm)	175.6 lpm (6.2 cfm)
Ambient Air Temperature Operating Range	-10 to 60°C (14 to 140°F)	-10 to 60°C (14 to 140°F)
FLUID / PRODUCT		
Maximum Fluid Outlet Working Pressure	425 bar (6164 psi)	260 bar (3771 psi)
Fluid Outlet Size	Outlet 1: ¾" BSP M Outlet 2: ½" BSP M (Supplied with adapter to reduce outlet 2 to ¾" BSP M)	
Stroke Length	120mm (4.72")	120mm (4.72")
Maximum Spray Tip Size	Dependent on product being sprayed and application	
Product Output per Cycle <sup>1</sup>	270cc (0.07 US gal)	270cc (0.07 US gal)
Free Flow Delivery @ 60 CPM <sup>2</sup>	16.2lpm (547.79 fl oz/min)	16.2lpm (547.79 fl oz/min)
Number of Guns	1-2 spray guns <sup>3</sup>	1 spray gun
DIMENSIONS		
Dimensions (Trolley Mount)	839 x 623 x 1054mm (33 x 24.5 x 41.5")	839 x 623 x 1054mm (33 x 24.5 x 41.5")
Weight (with Suction Hose)	102kg (225 lbs)	92kg (203 lbs)
Weight (with Hopper)	121kg (267 lbs)	111kg (245 lbs)

**COMPLIANCE:**  
ATEX  2 II GX

1. Product Output per Cycle = Fluid Displacement per Cycle
2. Maximum values with water as test media.
3. Supports up to 2 spray guns, contact your Elcometer Spray Equipment Representative for further information.



## Elcometer **TORNADO** Ordering Information

The Elcometer Tornado Pump is available as a complete kit with Elcometer's Sagola PSAM 500 Airless Spray Gun, reversible tip spray guard and product hose.



### PACKAGE SELECTOR

◀ Supplied as standard ◁ Optional extra

Part Number						Spray Gun
	Trolley	Suction Hose	Hopper Fed	15m (49.2ft) Product Hose with 1.5m (4.9ft) Whip Hose	Integrated Pump Filter	Sagola PSAM 500 Airless Spray Gun with Reversible Tip Spray Guard & Reversible Airless Spray Tip: 19/40: 0.019"/0.48mm, 40 Deg
<b>TORNADO 43</b> Airless Pump						
TN43-PS500-15	◀	◀	◁	◀	◀	◀
PSP43AL-T	◀	◀	◁	◀	◀	
<b>TORNADO 71</b> Airless Pump						
TN71-PS500-15	◀	◀	◁	◀	◀	◀
PSP71AL-T	◀	◀	◁	◀	◀	

### PUMP ONLY PART NUMBERS

◀ Supplied as standard ◁ Optional extra

Part Number	Description	Trolley	Product & Whip Hose	Suction Hose	Hopper
PSP43AL-TZ	Elcometer Tornado (43:1) Airless Piston Pump	◀		◀	◁
PSP71AL-TZ	Elcometer Tornado (71:1) Airless Piston Pump	◀		◀	◁

## Elcometer **Tornado** Accessories

### Stainless Steel Product Hopper Kit

Large 38 litre (10 US Gallon) gravity product tank and filter for use with Elcometer Tornado airless pumps.



Part Number	Description
PT30090389	Hopper Kit 38 litre (10 US Gallon)

### Airless Product Hose

**High pressure airless product hose:** Working pressure: 6,164 psi (425 bar). ID: 9.6mm (0.38") x OD: 17.5mm (0.69") with 1/4" swivel couplings.

**High pressure airless whip hose:** Working pressure: 6,527 psi (450 bar). ID: 6mm (0.236") x OD: 13.5mm (0.354") with 1/4" swivel couplings.



Part Number	Description
PT56414131	High Pressure Airless Product Hose Set (includes 15m (49.2ft) High Pressure Airless Product Hose, 1.5m (4.9ft) Whip Hose and 1/4" to 3/8" Adapter)
PT86463831	High Pressure Airless Product Hose 15m (49.2ft)
PT56414110	High Pressure Airless Whip Hose 1.5m (4.9ft)
PT55750311	1/4" to 3/8" Adapter
PT85761110	3/8" M-M Stainless Steel Connector for High Pressure Hose

### Airless Spray Guns

Elcometer's Sagola PSAM 500 Airless Spray Gun with reversible tip spray guard. Maximum pressure 7,252psi (500 bar).

A comprehensive range of fixed and reversible airless spray tips are available - visit [www.elcometer.com](http://www.elcometer.com) for more information.



Part Number	Description
PG30170111	Sagola PSAM 500 Airless Spray Gun with Reversible Tip Spray Guard
PG30170108	Sagola PSAM 500 Airless Spray Gun with Fixed Tip Spray Guard

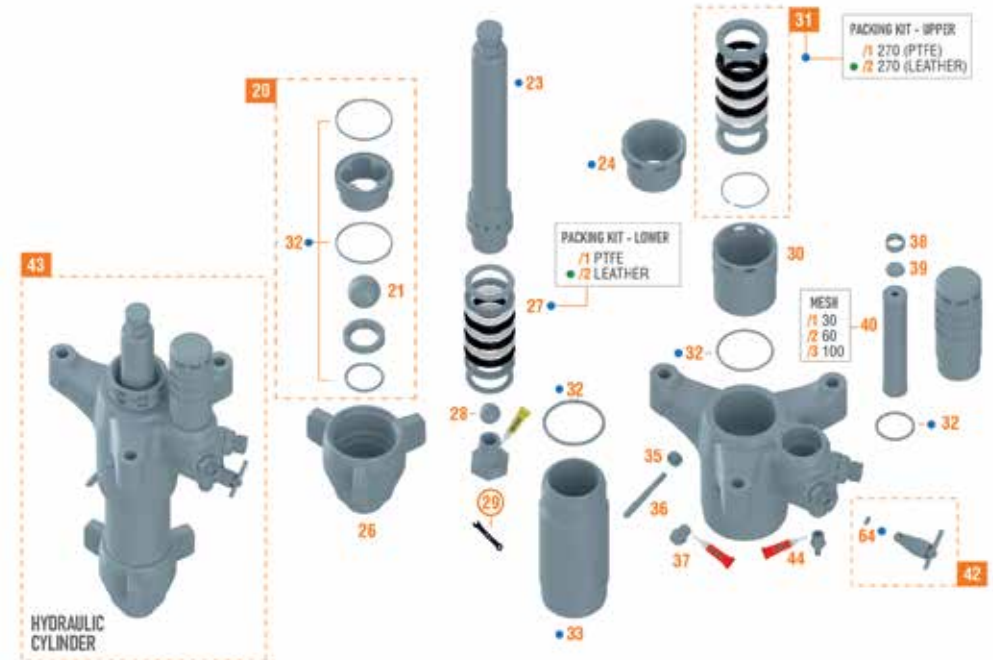
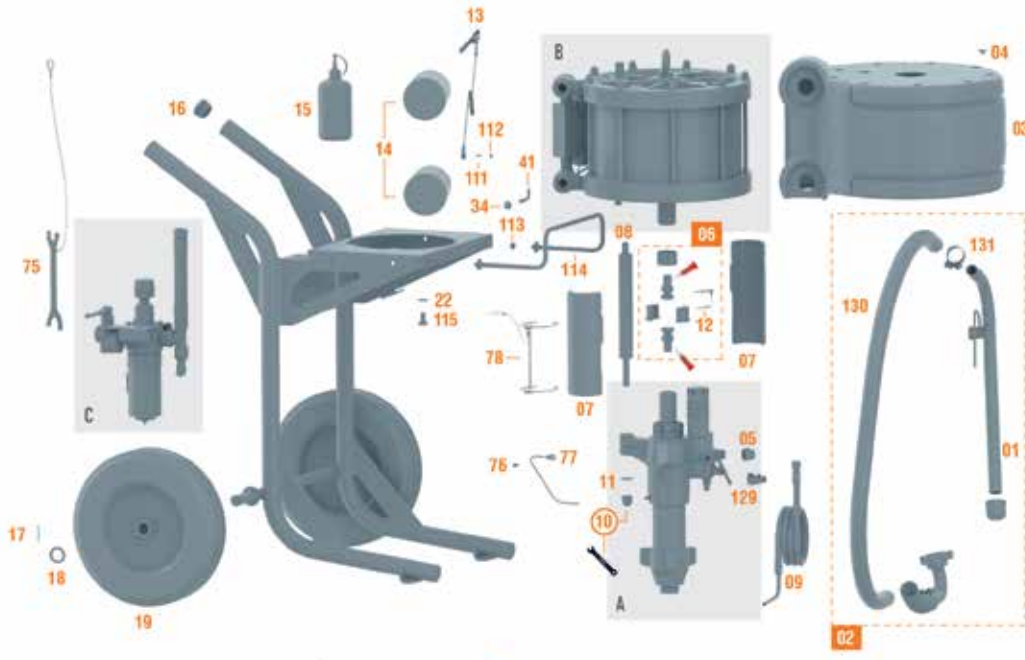
### elcoTOUGH™ Packings

Engineered to be abrasive, solvent and wear resistant, ensuring a tight pump seal for a better and more consistent performance.



Part Number	Description
PT56418753	elcoTOUGH™ Upper Packing Kit: UHMWPE, PTFE & Graphite Filled PTFE
PT56418754	elcoTOUGH™ Upper Packing Kit: UHMWPE & Leather
PT56418749	elcoTOUGH™ Lower Packing Kit: UHMWPE, PTFE & Graphite Filled PTFE
PT56418750	elcoTOUGH™ Lower Packing Kit: UHMWPE & Leather

## Section A Hydraulic Cylinder

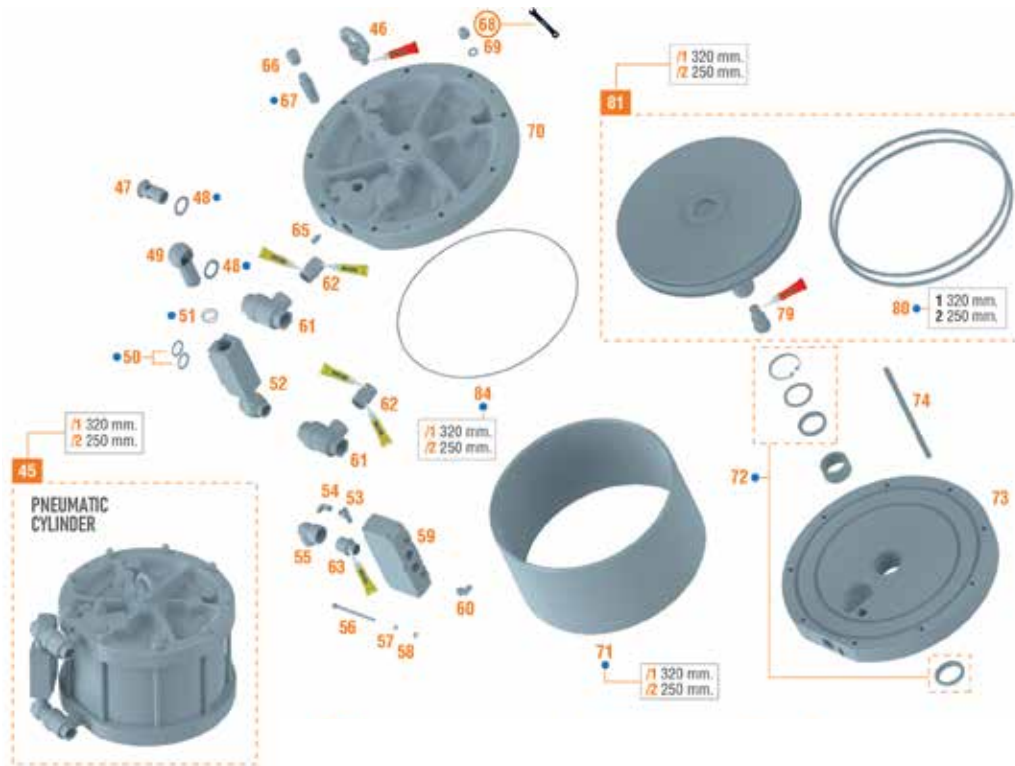


(\*) min. 5 u. **10** 70 Nm:51.6 ft.lb Applying consistent grease High Resistance Adhesive  
 Soaking with throat seal liquid Low Resistance Adhesive

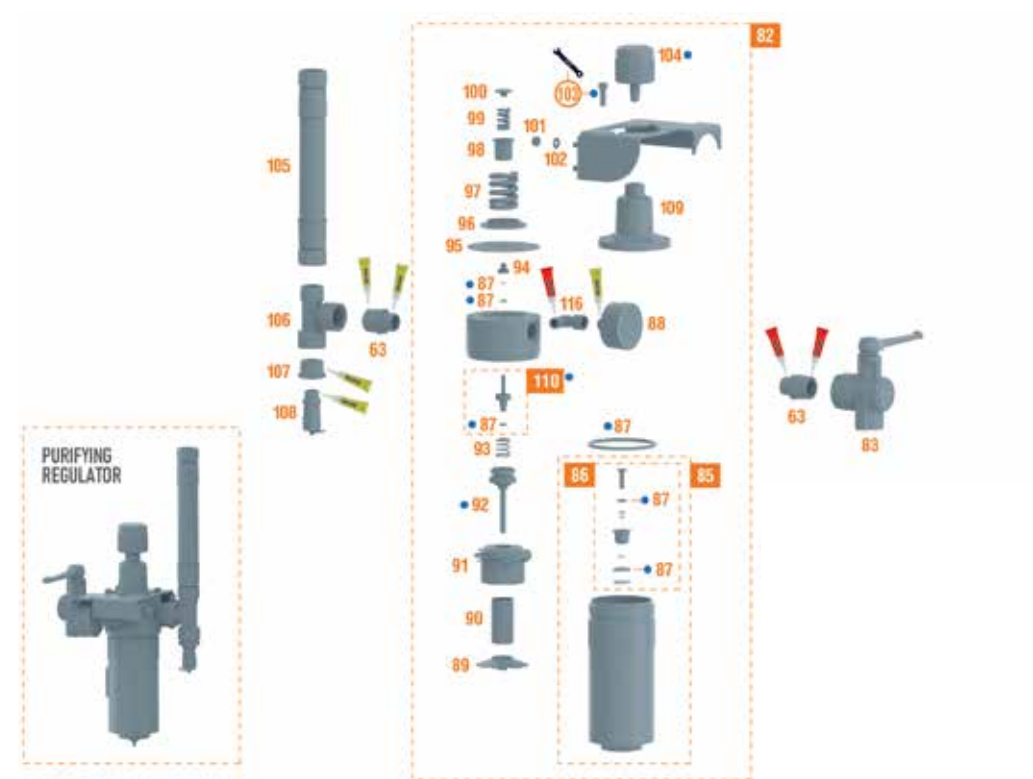
No.	Part No.	QTY	No.	Part No.	QTY	No.	Part No.	QTY	No.	Part No.	QTY	No.	Part No.	QTY	No.	Part No.	QTY	No.	Part No.	QTY	No.	Part No.	QTY						
01	PT30090024	1	14	PT56417138	2	27/2	PT56418750	1	39	PT50710020	1	49	PT55710006	1	61	PT57510017	1	73	PT57110594	1	84/1	PT54250816	1	96	50810016	1	109	PT57110202	1
02	PT56415907	1	15	PT30099100	1	28	PT51250120	1	40/1	85660505	1	50	84250950	2	62	PT55710516	1	74	PT57211917	9	84/2	PT54250817	1	97	54710263	1	110	56417405	1
03	PT57110036	1	16	PT85762144	4	29	PT56417217	1	40/2	PT83660030	1	51	PT54250815	1	63	PT55710251	1	75	PT56410154	1	85	PT56417715	1	98	56310011	1	111	57250702	1
04	PT57250416	9	17	PT54850102	2	30	PT51910809	1	40/3	PT83660029	1	52	PT52210803	1	64	PT50810260	1	76	87269404	1	86	56418533	1	99	54710245	1	112	PT52310008	1
05	PT55712189	1	18	80860403	2	31/1	PT56418753	1	41	PT55310054	1	53	85762016	1	65	PT85760315	1	77	PT52410023	1	87	56418532	1	100	PT51911518	1	113	PT57450909	2
06	PT56410114	1	19	PT56250205	2	31/2	PT56418754	1	42	PT56417509	1	54	PT55751012	1	66	PT85762138	1	78	PT56410155	1	88	54850016	1	101	PT57450904	3	114	PT56310050	1
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13	PT56411450	1	27/1	PT56418749	1	38	PT54710285	1	48	PT54250030	2				72	PT56418763	1	83	PT57510018	1	95	54610302	1	108	PT57511107	1			

# Elcometer **TORNADO** Spares

## Section B Pneumatic Cylinder



## Section C Air Regulator and Filter Assembly



(\*) min. 5 u. 25 Nm:18.4 ft.lb  
 4 Nm:2.95 ft.lb

Applying consistent grease High Resistance Adhesive  
 Soaking with throat seal liquid Low Resistance Adhesive

No.	Part No.	QTY	No.	Part No.	QTY	No.	Part No.	QTY	No.	Part No.	QTY	No.	Part No.	QTY	No.	Part No.	QTY	No.	Part No.	QTY	No.	Part No.	QTY						
01	PT30090024	1	14	PT56417138	2	27/2	PT56418750	1	39	PT50710020	1	49	PT55710006	1	61	PT57510017	1	73	PT57110504	1	84/1	PT54250816	1	96	50810016	1	109	PT57110202	1
02	PT56415907	1	15	PT30090100	1	28	PT51250120	1	40/1	85660505	1	50	54250850	2	62	PT55710516	1	74	PT57211917	9	84/2	PT54250817	1	97	54710263	1	110	56417405	1
03	PT57110036	1	16	PT85762144	4	29	PT56417217	1	40/2	PT83660030	1	51	PT54250815	1	63	PT55710251	1	75	PT56410154	1	85	PT56417715	1	98	56310011	1	111	57250702	1
04	PT57250416	9	17	PT54850102	2	30	PT51910809	1	40/3	PT83660029	1	52	PT52710803	1	64	PT50910260	1	76	37260404	1	86	56418533	1	99	54710245	1	112	PT52310000	1
05	PT55712189	1	18	80860403	2	31/1	PT56418753	1	41	PT55310054	1	53	85762016	1	65	PT85760315	1	77	PT52410023	1	87	56418532	1	100	PT51911518	1	113	PT57450909	2
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07	PT52710319	2	20	PT56418764	1	32	PT56418765	1	43	PT56416817	1	55	PT55750819	1	67	PT56417219	1	79	PT53110029	1	89	57411202	1	102	50850402	3	115	PT87261010	4
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# Local support... Globally



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