

efficiency vs safety...
Why choose ?



**PORTABLE
VALVE
ACTUATORS
CATALOGUE**



modtec
portable valve actuators

WELCOME TO THE

modec WORLD



modec products have been used for more than 30 years for many heavy duty applications, particularly in the water, oil & gas and power industries.



Our team's technical expertise and commercial flexibility enable us to develop and provide innovative, robust and powerful solutions such as air motors, portable valve actuators, tapping machines and nut runners in a short and reliable time frame.



Carefully assembled by our experienced workers in our factory based in Valence (South East of France), made of parts designed by our engineers and manufactured by thoroughly selected French and European suppliers, our products offer the highest quality standards.



Our technical team is at your disposal for any definition, design and realization of solution that will meet your specific needs and requirements.



Welcome to a world of innovation, expertise and flexibility.
Welcome to the modec world !





➤ Plug & Play



➤ Comfort



➤ Safety



➤ Anywhere



➤ Efficiency



➤ ATEX



➤ A comprehensive
and modular range

1 CHOOSE YOUR POWER SUPPLY

PNEUMATIC



No heat, spark or smoke
ATEX certified
High torque and speed
Light & compact
Jam & blockage resistant

Maximum torque :
1000 Nm (740 lb.ft)

PETROL



Unlimited autonomy
Ideal for remote environments

Maximum torque :
1000 Nm (740 lb.ft)

BATTERY



Excellent autonomy
Smoke free
Easy implementation
Integrated electronic torque
& power limiter

Maximum torque :
1000 Nm (740 lb.ft)

KIT H₂O



The perfect kits for underground
water distribution valves.
Easy transport. Simple setup.
Safe operation.

Maximum torque :
850 Nm (630 lb.ft)

1 CHOOSE YOUR OPTIONS AND ACCESSORIES

OPTIONS

P.22 REVOLUTION COUNTER

Digital display
Two ways rev. counter +
cumul and speed.
Memory



P.22 TORQUE LIMITER

Mechanical torque
limiter, manual re-engage
Adjustable torque limit



P.29 TORQUE MULTIPLIER

Multiplies the torque and
divides the speed by 3,71.
Very lightweight and compact



P.26 MODEC CONNECT SMART SENSOR

Collects data : torque, speed,
number of revolutions,
location ... For simple valve
monitoring



ACCESSORIES

P.29 RIGHT ANGLE

RA30

The right angle head connects
directly on any portable actuators
and allows an optimal positioning for
operators as well as a better access
to the valves handwheels / output
shafts. It is suitable for high torques,
up to 600 Nm (442 lb.ft)



P.28 BANJO

(for rising stem valves)

STANDARD DUTY BANJO HEAD:
Multiplies the torque and
divides the speed by 4



HEAVY DUTY BANJO HEAD:
Multiplies the torque and
divides the speed by 3



P.32 TRANSPORTATION AND STORAGE CASES & BAGS

Protection case for
transport and storage
Convenient and sturdy
with foam prints inside



BATTERIES

Long-life battery
Backpack



P.30-31 AIR TREATMENT AND SAFETY UNITS

For HL83 pneumatic portable
actuators



2 CHOOSE YOUR ADAPTOR

P.33 STANDARD FIXED FINGERS ADAPTORS



P.34 SELF-ADJUSTING AND SELF-CENTERING FINGERS ADAPTORS



P.35 SPOKE ADAPTORS FOR FLAT HANDWHEELS



P.36 SPOKE ADAPTORS FOR TAPERED HANDWHEELS



P.37 FIXED UNIVERSAL ADAPTORS

(To be installed on the hand wheel)



P.39 SQUARE DRIVES & STANDARD SOCKETS



P.39 EXTENSION BARS AND UNIVERSAL JOINT

200 / 400 / 600 mm
(7.9 / 15.7 / 23.6 in)

Telescopic « Tee-key » for buried valve
Universal joints available



3 CHOOSE YOUR TORQUE REACTION MANAGEMENT SYSTEM

P.41 TORQUE REACTION ARM

(simple or double)



P.42 TORQUE REACTION FINGER



P.42 ARTICULATED REACTION ARMS



P.43 TELESCOPIC BIPOD



P.43 MAKE TO ORDER SPECIAL FLANGES

(to be installed on the valve)



CUSTOM DESIGN



REDUCTION RATIO

(3 digits)
see table overleaf

H L 8 3 X X X X X X

E = Easy duty
S = Standard duty

OPTION

(2 digits)
see table overleaf



modtec pneumatic portable valve actuators **HL83** are the most **powerful**. They offer a wide choice in terms of power and **can be used in all environments**, even the very difficult ones.

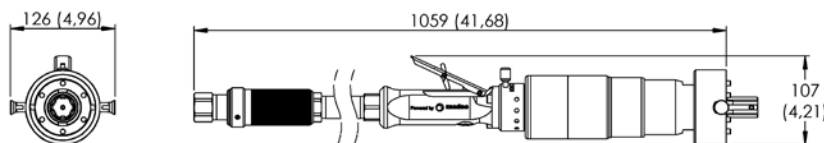
They come with the **ATEX II 2 GD c IIC T6 to T4** certification (except when equipped with the revolution counter).

The maximum torque can be set by simply adjusting air supply pressure : No risk for your valves.

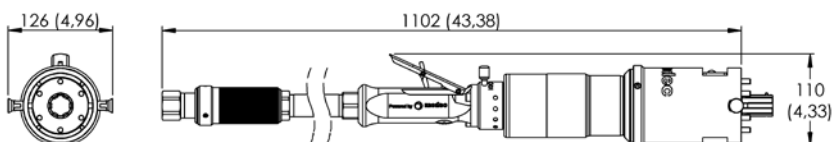
LAYOUT

LAYOUT	Weight (kg (lb))
HL83S	6,5 (14,3)
HL83H	8,4 (18,5)

HL83S



HL83H



Watt → Horse power

W x 0,001341 = cv

Newton meter → Foot pound

Nm x 0,7376 = lb.ft

Millimeter → inch

mm x 0,03937 = in

Kv → Cv

Kv x 0,07 = Cv

Bar → pound / square inch

Bar x 14,5 = psi

Normo liter / minute → Standard cube feet / minute

NL / min x 0,03531 = scfm

Kilogramme → Pound

Kg x 2,205 = lb

OPTIONS AND ACCESSORIES

OPTIONS (page 22)		
Digital revolution counter*		➡
CODE	00	02

*digital revolution counter can't be ATEX certified.

Not all options are available for all models. See below for availability.

ACCESSORIES	Page
Drive head	28-29
Adaptors and interfaces	33-40
Torque reaction systems	41-43
Air management	30-31
Other accessories	32

! Check the technical data sheet to see which options and accessories are capable of withstanding the torque created by the actuator !

CONNECTION AND LUBRICATION

CONNECTION & LUBRICATION	Air consumption at 6,2 bars NL/min (scfm)	Connection	Minimum Ø for fittings mm (in)	Minimum Ø for pipes mm (in)	Lubrication (Drops/min)	FRL unit	SAT Box
HL83S/H	1800 (64)	G 3/4	8,2 (0,32)	12 (0,47)	6	AC107	AC118

Make sure you use a good quality FRL unit (Filtration, Pressure Regulation and Lubrication), capable of filtering air at 40µm.

PERFORMANCE

Straight	Free speed (rpm)			Max torque (Nm (lb.ft))			Options available
	4 bars (58 psi)	5 bars (72 psi)	6,2 bars (90 psi)	4 bars (58 psi)	5 bars (72 psi)	6,2 bars (90 psi)	
HL83S-035	230	250	270	100 (74)	120 (89)	145 (107)	➡
HL83S-060	130	140	150	170 (125)	200 (150)	250 (180)	➡
HL83H-111	70	76	83	250 (180)	300 (220)	370 (270)	➡
HL83H-169	46	50	54	380 (280)	450 (330)	570 (420)	➡
HL83H-321	24	26	29	720 (530)	860 (640)	1070 (790) **	➡
With RA30	Free speed (rpm)			Max torque (Nm (lb.ft))			Options available
	4 bars (58 psi)	5 bars (72 psi)	6,2 bars (90 psi)	4 bars (58 psi)	5 bars (72 psi)	6,2 bars (90 psi)	
HL83S-035	230	250	270	100 (74)	120 (89)	145 (107)	➡
HL83S-060	130	140	150	170 (125)	200 (150)	250 (180)	➡
HL83H-111	70	76	83	250 (180)	300 (220)	370 (270)	➡
HL83H-169	46	50	54	380 (280)	450 (330)	570 (420)	➡
HL83H-321	Not available						
With BJH01	Free speed (rpm)			Max torque (Nm (lb.ft))			Options available
	4 bars (58 psi)	5 bars (72 psi)	6,2 bars (90 psi)	4 bars (58 psi)	5 bars (72 psi)	6,2 bars (90 psi)	
HL83S-035	57	62	67	400 (290)	480 (350)	580 (420)	➡
HL83S-060	Not available						
HL83H-111							
HL83H-169							
HL83H-321							
With BJH02	Free speed (rpm)			Max torque (Nm (lb.ft))			Options available
	4 bars (58 psi)	5 bars (72 psi)	6,2 bars (90 psi)	4 bars (58 psi)	5 bars (72 psi)	6,2 bars (90 psi)	
HL83S-035	75	82	90	300 (220)	360 (260)	430 (320)	➡
HL83S-060	44	48	52	510 (375)	600 (440)	750 (550)	➡
HL83H-111	23	25	28	750 (550)	900 (660)	NA	➡
HL83H-169	Not available						
HL83H-321							
With TMO04	Free speed (rpm)			Max torque (Nm (lb.ft))			Options available
	4 bars (58 psi)	5 bars (72 psi)	6,2 bars (90 psi)	4 bars (58 psi)	5 bars (72 psi)	6,2 bars (90 psi)	
HL83S-035	62	67	72	370 (270)	440 (320)	530 (400)	➡
HL83S-060	Not available						
HL83H-111							
HL83H-169							
HL83H-321							

** Warning ! Do not use the actuator when the torque is higher than 1000 Nm (740 lb.ft) or 600 Nm (440 lb.ft) with RA30, BJH01 and TMO04. Use pressure to limit torque

IMPORTANT

For your comfort and safety, please carefully read the instruction manual before using the portable valve actuator.



REDUCTION RATIO

(3 digits)
see table overleaf

H L 8 3 C X X X X X X

E = Easy duty
S = Standard duty
H = Heavy duty

OPTION

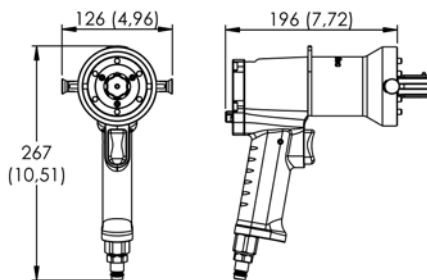
(2 digits)
see table overleaf

Modtec pneumatic portable valve actuators **HL83C** are the **most compact and lightweight**. Despite their **small size**, they offer a wide range of power options and can perform in **any environment**, including the most challenging ones.

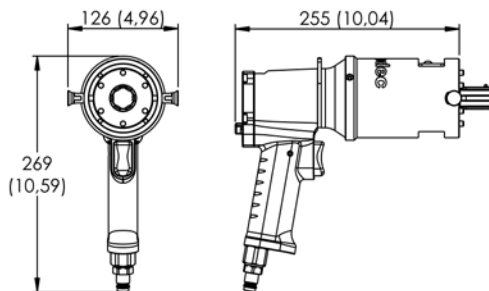
They are certified **ATEX II 2 GD c IIC T6 to T4** (except when fitted with a revolution counter). Additionally, the maximum torque can be easily controlled by adjusting the air supply pressure, ensuring safe operation for your valves.

LAYOUT

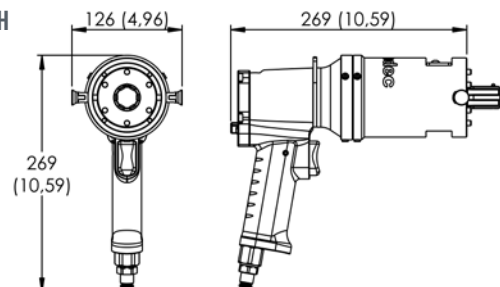
HL83CE



HL83CS



HL83CH



LAYOUT	Weight (kg (lb))
HL83CE-077	3,2 (7)
HL83CS-258	5,6 (12,3)
HL83CH-564	6,3 (13,9)

Watt → Horse power

W x 0,001341 = cv

Newton meter → Foot pound

Nm x 0,7376 = lb.ft

Millimeter → inch

mm x 0,03937 = in

Kv → Cv

Kv x 0,07 = Cv

Bar → pound / square inch

Bar x 14,5 = psi

Normo liter / minute → Standard cube feet / minute

NL / min x 0,03531 = scfm

Kilogramme → Pound

Kg x 2,205 = lb

OPTIONS AND ACCESSORIES

OPTIONS (page 22)		
Digital revolution counter*		►
CODE	00	02

*digital revolution counter can't be ATEX certified.

Not all options are available for all models. See below for availability.

ACCESSORIES	Page
Drive head	28-29
Adaptors and interfaces	33-40
Torque reaction systems	41-43
Air management	30-31
Other accessories	32

! Check the technical data sheet to see which options and accessories are capable of withstanding the torque created by the actuator !

CONNECTION AND LUBRICATION

CONNECTION & LUBRICATION	Air consumption at 7 bars NL/min (scfm)	Connection	Minimum Ø for fittings mm (in)	Minimum Ø for pipes mm (in)	Lubrication (Drops/min)	FRL unit	SAT Box
HL83CE-077	1200 (42)	G 1/2	8,2 (0,32)	12 (0,47)	6	AC107	AC118
HL83CS-258	1200 (42)	G 1/2	8,2 (0,32)	12 (0,47)	6	AC107	AC118
HL83CH-564	1200 (42)	G 1/2	8,2 (0,32)	12 (0,47)	6	AC107	AC118

Make sure you use a good quality FRL unit (Filtration, Pressure Regulation and Lubrication), capable of filtering air at 40µm.

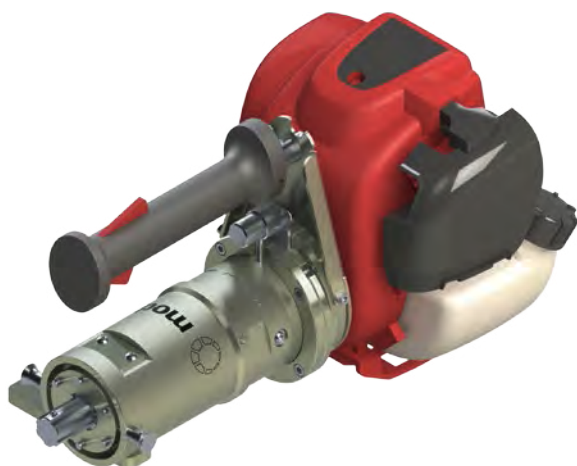
PERFORMANCE

Straight	Free speed (rpm)				Max torque (Nm (lb.ft))				Options available
	4 bars (58 psi)	5 bars (72 psi)	6 bars (87 psi)	7 bars (101 psi)	4 bars (58 psi)	5 bars (72 psi)	6 bars (87 psi)	7 bars (101 psi)	02
HL83CE-077	150	160	170	180	90 (66)	110 (81)	130 (96)	150 (111)	
HL83CS-258	45	48	51	54	302 (222)	369 (272)	436 (321)	503 (371)	▶
HL83CH-564	20	22	23	NA	659 (486)	806 (594)	952 (702)	NA	▶
With RA30	Free speed (rpm)				Max torque (Nm (lb.ft))				Options available
	4 bars (58 psi)	5 bars (72 psi)	6 bars (87 psi)	7 bars (101 psi)	4 bars (58 psi)	5 bars (72 psi)	6 bars (87 psi)	7 bars (101 psi)	02
HL83CE-077	150	160	170	180	90 (66)	110 (81)	130 (96)	150 (111)	
HL83CS-258	45	48	51	54	302 (222)	369 (272)	436 (321)	503 (371)	▶
HL83CH-564	Not available								
With BJH01	Free speed (rpm)				Max torque (Nm (lb.ft))				Options available
	4 bars (58 psi)	5 bars (72 psi)	6 bars (87 psi)	7 bars (101 psi)	4 bars (58 psi)	5 bars (72 psi)	6 bars (87 psi)	7 bars (101 psi)	02
HL83CE-077	38	40	43	45	360 (266)	440 (325)	520 (384)	600 (440)	
HL83CS-258	Not available								
HL83CH-564	Not available								
With BJH02	Free speed (rpm)				Max torque (Nm (lb.ft))				Options available
	4 bars (58 psi)	5 bars (72 psi)	6 bars (87 psi)	7 bars (101 psi)	4 bars (58 psi)	5 bars (72 psi)	6 bars (87 psi)	7 bars (101 psi)	02
HL83CE-077	50	53	57	60	270 (199)	330 (243)	390 (288)	450 (332)	
HL83CS-258	45	Not available			905 (667)	Not available			▶
HL83CH-564	Not available								
With TM004	Free speed (rpm)				Max torque (Nm (lb.ft))				Options available
	4 bars (58 psi)	5 bars (72 psi)	6 bars (87 psi)	7 bars (101 psi)	4 bars (58 psi)	5 bars (72 psi)	6 bars (87 psi)	7 bars (101 psi)	02
HL83CE-077	41	43	46	49	333 (246)	407 (300)	481 (355)	555 (409)	
HL83CS-258	Not available								
HL83CH-564	Not available								

** Warning ! Do not use the actuator when the torque is higher than 1000 Nm (740 lb.ft) or 600 Nm (440 lb.ft) with RA30, BJH01 and TM004. Use pressure to limit torque

IMPORTANT

For your comfort and safety, please carefully read the instruction manual before using the portable valve actuator.



REDUCTION RATIO

(3 digits)
see table overleaf

P Y 6 8 X X X X X X

E = Easy duty
S = Standard duty
H = Heavy duty

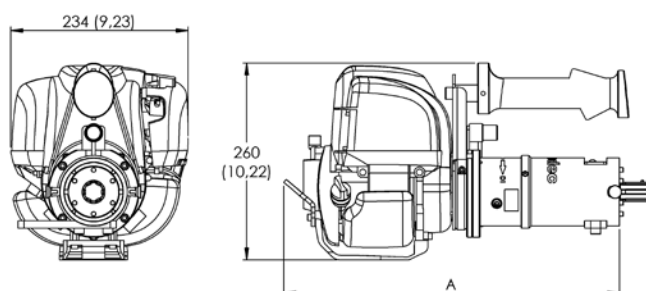
OPTION

(2 digits)
see table overleaf

modtec petrol portable valve actuators can be used in **total autonomy** – the only limit being the available petrol supply. They are particularly suitable for use in **isolated outdoor places**.

Extremely robust, they have an **integrated clutch system which protects the operator and the equipment**, even if a valve is completely blocked.

LAYOUT



PY68		
LAYOUT	Weight (kg (lb))	Lenght «A» (mm (in))
PY68E-031	10 (22)	444 (17,48)
PY68S-087	10,3 (22,7)	
PY68S-148		
PY68H-192		
PY68H-293		
PY68H-641	10.6 (23.4)	457 (17.99)

Watt → Horse power

W x 0,001341 = cv

Newton meter → Foot pound

Nm x 0,7376 = lb.ft

Millimeter → inch

mm x 0,03937 = in

Kv → Cv

Kv x 0,07 = Cv

Bar → pound / square inch

Bar x 14,5 = psi

Normo liter / minute → Standard cube feet / minute

NL / min x 0,03531 = scfm

Kilogramme → Pound

Kg x 2,205 = lb

OPTIONS AND ACCESSORIES

OPTIONS (page 22)				
Digital revolution counter		02	03	05
Torque limiter*			03	05
CODE	00	02	03	05

*see torque and speed values page 22 : « Options »

Not all options are available for all models.

See below for availability.

ACCESSORIES	Page
Drive head	28-29
Adaptors and interfaces	33-40
Torque reaction systems	41-43
Other accessories	32

! Check the technical data sheet to see which options and accessories are capable of withstanding the torque created by the actuator !

PERFORMANCE

Straight	Free speed (rpm)	Max torque (Nm (lb.ft))	Starting torque (Nm (lb.ft))	Options available		
				02	03*	05*
PY68E-031	305	55 (41)	41 (30)			
PY68S-087	100	150 (110)	115 (85)			
PY68S-148	64	260 (190)	195 (145)			
PY68H-192	50	340 (250)	250 (180)			
PY68H-293	32	520 (380)	390 (290)			
PY68H-641	15	1140 (840)**	850 (630)**			
With RA30	Free speed (rpm)	Max torque (Nm (lb.ft))	Starting torque (Nm (lb.ft))	Options available		
				02	03*	05*
PY68E-031	305	55 (41)	41 (30)			
PY68S-087	100	150 (110)	115 (85)			
PY68S-148	64	260 (190)	195 (145)			
PY68H-192	50	340 (250)	250 (180)			
PY68H-293	32	520 (380)	390 (290)			
PY68H-641	Max 600 Nm (440 lb.ft). Use torque limiter (see values p.22)					
With banjo head BJH01	Free speed (rpm)	Max torque (Nm (lb.ft))	Starting torque (Nm (lb.ft))	Options available		
				02	03*	05*
PY68E-031	75	220 (160)	160 (120)			
PY68S-087	25	600 (440)	460 (340)			
PY68S-148	Max 600 Nm (440 lb.ft). Use torque limiter (see values p.22)					
PY68H-192						
PY68H-293						
PY68H-641						
With banjo head BJH02	Free speed (rpm)	Max torque (Nm (lb.ft))	Starting torque (Nm (lb.ft))	Options available		
				02	03*	05*
PY68E-031	100	165 (120)	120 (90)			
PY68S-087	36	460 (340)	350 (260)			
PY68S-148	21	790 (580)	590 (440)			
PY68H-192	16	1000 (740)**	760 (560)			
PY68H-293	Not available					
PY68H-641						
With torque multiplier TM004	Free speed (rpm)	Max torque (Nm (lb.ft))	Starting torque (Nm (lb.ft))	Options available		
				02	03*	05*
PY68E-031	82	204 (150)	152 (112)			
PY68S-087	27	557 (411)	427 (315)			
PY68S-148	Not available					
PY68H-192						
PY68H-293						
PY68H-641						

** Warning ! Do not use the actuator when the torque is higher than 1000 Nm (740 lb.ft) or use a torque limiter
See torque and speed values page 22 : « Options »

IMPORTANT

For your comfort and safety, please carefully read the instruction manual before using the portable valve actuator.



REDUCTION RATIO

(3 digits)
see table overleaf

M C 8 9 X X X X X X

E = Easy duty
S = Standard duty

OPTION

(2 digits)
Vsee table overleaf

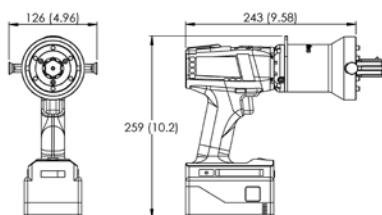
Although it is **super light and compact**, the MC89 Portable Valves Actuator delivers a **850 Nm** (630 lb.ft) maximum torque. This makes it the perfect tool for any « **Easy** » or « **Standard** » duty job, for any valve type, indoor or outdoor, with a great autonomy. Its two **18V Lithium-Ion batteries** allow to use it continuously during **up to one hour**. For an even more intensive usage, use the **main power connection kit** that plugs on the actuator just like a battery and provides an **unlimited autonomy**.

Designed for any type of operation, the MC89 comes with 3 models only that cover a **0 to 450 rpm speed** range and a **850 Nm maximum torque**. No need to say that even the most stubborn valves can be operated! No worry though, the **integrated electronic torque limiter** will easily prevent any damages for your valve or the tool itself.

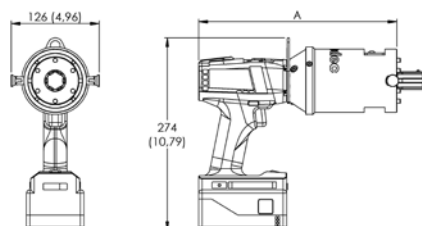
Ingress protection marking : IP20 equivalent

LAYOUT

MC89E



MC89S



MC89		
LAYOUT	Weight (kg (lb))	Lenght «A» (mm (in))
MC89E-011	3,5 (7,7)	243 (9,57)
MC89S-035	5,1 (11,2)	283 (11,14)
MC89S-054	5,4 (11,9)	296 (11,65)
Battery	0,7 (1,5)	

Watt → Horse power

W x 0,001341 = cv

Newton meter → Foot pound

Nm x 0,7376 = lb.ft

Millimeter → inch

mm x 0,03937 = in

Kv → Cv

Kv x 0,07 = Cv

Bar → pound / square inch

Bar x 14,5 = psi

Normo liter / minute → Standard cube feet / minute

NL / min x 0,03531 = scfm

Kilogramme → Pound

Kg x 2,205 = lb

BATTERIES AND CHARGERS

Batteries technical data	BAT143	BAT154
Voltage	18V	
Capacity	5 Ah	8 Ah
Autonomy*	24 min	37 min
Charging times with standard charger BAT 145	45 min	87 min
Charging times with quick charger 156	33 min	34 min
Weight	0,7 kg (1,5 lbs)	1 kg (2,2 lbs)



Charger technical data	BAT145	BAT156
Power supply (input)	220-240V AC	
Mains frequency	50 / 60 Hz	
Charging voltage (output)	10,8 - 18 V DC	
Quick charging	Max 6A	Max 16A
Charging temperature range	0°C à +40°C (32- 104°F)	
Safety class	II	
Weight (kg)	0,8 kg (1,7 lbs)	1,1 kg (2,4 lbs)



*Autonomy measured at 50% of the maximum load

The main power connection kit (ref BAT147) connects any main power plug to the actuator (in place of the battery) and provides an unlimited autonomy.

SPEED CONTROLLER & ELECTRONIC TORQUE LIMITER (See details on page 22)

The MC89 comes with an built-in **speed control and torque limiter electronic system** for an optimal **people and material protection** as well as a **perfect adaptation** to different constraints and environments. By adjusting the speed control trigger (4 positions) and the max torque scroll wheel (13 po-

sitions), you can set the required torque limit and / or rotation speed. When reaching the torque limit, the actuator will stop and sound a beep.

See page 23-24 to get the speed and torque values for each settings.



OPTIONS* (page 22)		
Digital revolution counter		➡
CODE	00	02

*Except MC89E-011



Check the technical data sheet to see which options and accessories are capable of withstanding the torque created by the actuator !

ACCESSORIES	Page
Drive head	28-29
Adaptors and interfaces	33-40
Torque reaction systems	41-43
Other accessories	32

PERFORMANCE

Straight	Free speed (rpm)	Max torque (Nm (lb.ft))	Options available
MC89E-011	314	167 (121)	02
MC89S-035	94	550 (400)	➡
MC89S-054	61	850 (630)	➡
With RA30	Free speed (rpm)	Max torque (Nm (lb.ft))	Options available
MC89E-011	314	167 (121)	02
MC89S-035	94	550 (400)	➡
MC89S-054	Max 600 Nm. Use torque limiter (see values p.22)		➡
With banjo head BJH01	Free speed (rpm)	Max torque (Nm (lb.ft))	Options available
MC89E-011	79	600* (440)*	02
MC89S-035	Max 600 Nm. Use torque limiter (see values p.22)		➡
MC89S-054	Max 600 Nm. Use torque limiter (see values p.22)		➡
With banjo head BJH02	Free speed (rpm)	Max torque (Nm (lb.ft))	Options available
MC89E-011	104	495 (365)	02
MC89S-035	Max 1000 Nm. Use torque limiter (see values p.22)		➡
MC89S-054	Max 1000 Nm. Use torque limiter (see values p.22)		➡
With torque multiplier TM004	Free speed (rpm)	Max torque (Nm (lb.ft))	Options available
MC89E-011	85	612* (451)*	02
MC89S-035	Max 600 Nm. Use torque limiter (see values p.22)		➡
MC89S-054	Max 600 Nm. Use torque limiter (see values p.22)		➡



* Warning !

Do not use the RA30 right angle head when the torque is higher than 600 Nm (440 lb.ft) or set the torque limit to 600 Nm before use. Read user's manual for more information.

* Warning ! The maximum acceptable torque for the BJH01 is 600 Nm (440 lb.ft). Do not use the BJH01 if the torque required is higher than 600 Nm (440 lb.ft), use the torque limiter to limit the input torque to 150 Nm (110 lb.ft) (see stickers on the actuator and table hereafter).

* Warning ! The maximum acceptable torque for the BJH02 is 1000 Nm (740 lb.ft). Do not use the BJH02 if the torque required is higher than 1000 Nm (740 lb.ft), use the torque limiter to limit the input torque to 330 Nm (240 lb.ft) (see stickers on the actuator and table hereafter).

* Warning ! The maximum acceptable torque for the TM004 is 600 Nm (440 lb.ft). Do not use the TM004 if the torque required is higher than 600 Nm (440 lb.ft), use the torque limiter to limit the input torque to 160 Nm (110 lb.ft) (see table (p.22)).



IMPORTANT

For your comfort and safety, please carefully read the instruction manual before using the portable valve actuator.



REDUCTION RATIO

(3 digits)
see table overleaf

J A 7 3 X X X X X X

E = Easy duty
S = Standard duty
H = Heavy duty

OPTION

(2 digits)
see table overleaf

Dedicated to the most demanding applications!

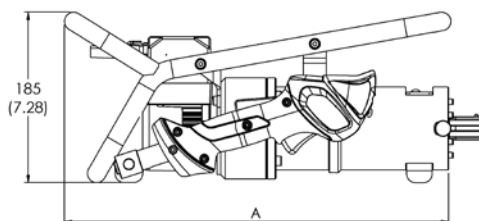
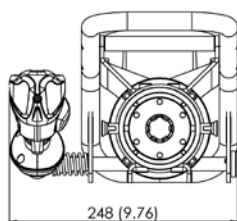
Thanks to its **robustness** and high autonomy batteries, the **JA73 modtec electric portable valve actuator** is able to deliver a **high power** for **more than one hour** continuously. It does not depend on any energy source (electric plug or compressed air network) and can operate freely anywhere. Much more **powerful** than its little brother (MC89), it can deliver **high speed** and **high torque** simultaneously, which makes it **the perfect tool for Heavy duty jobs**. Extremely robust, it has got an **integrated clutch system** which protects the operator and the equipment, even if a valve is completely blocked.

The **ergonomic control handle** allows the display and control of the many actuator and battery's functions and parameters in a **simple and intuitive way**.

The **integrated electronic torque limiter** (available as standard on all models) allows to adapt to any configuration and further improve the **safety of the user and the equipment**.

Ingress protection marking : IP20 equivalent

LAYOUT



JA73		
LAYOUT	Weight (kg (lb))	Lenght «A» (mm (in))
JA73E-023	8,7 (19,2)	408 (16,06)
JA73S-077		
JA73S-132		
JA73H-169		
JA73H-309	9 (19,8)	425 (16,73)
JA73H-564		

Watt → Horse power

W x 0,001341 = cv

Newton meter → Foot pound

Nm x 0,7376 = lb.ft

Millimeter → inch

mm x 0,03937 = in

Kv → Cv

Kv x 0,07 = Cv

Bar → pound / square inch

Bar x 14,5 = psi

Normo liter / minute → Standard cube feet / minute

NL / min x 0,03531 = scfm

Kilogramme → Pound

Kg x 2,205 = lb

BATTERIES

Technical data	BAT520	BAT750	BAT1200	BAT1500
Type	Li-ion	Li-ion	Li-ion	Li-ion
Output voltage	43.2 V	43.2 V	43.62 V	43.62 V
Capacity	12 Ah	17.25 Ah	28 Ah	35 Ah
Stored energy	520 Wh	745 Wh	1221 Wh	1527 Wh
Maximum power	2 kW	2 kW	2 kW	2 kW
Autonomy*	25 min	35 min	60 min	90 min
Charging time	6h30	9h	10h	12h
Average life (number of cycles)**	up to 800	up to 1200	up to 1300	up to 1300
Weight (kg (lb))	3,6 (7,9)	4,5 (9,9)	6,3 (13,9)	7,5 (16,5)



The electric portable actuators use high performance batteries for greater autonomy. Both battery and charger need to be ordered separately.

These batteries come with a light, comfortable harness for use during transport or when using the actuator.

* Autonomy is measured for an equivalent torque of 50% of maximum torque.

** One cycle means one complete battery charge and discharge.

ELECTRONIC TORQUE LIMITER & DIGITAL REVOLUTION COUNTER (See details on page 22)


The JA73 comes with an embedded electronic torque limiter for an optimal people and material protection as well as a perfect adaptation to different constraints and environments. By adjusting the power level (4 positions) you can set the required torque limit. When reaching the torque limit, the actuator will stop. Electronic torque limiter and revolution counter for the different settings and torque values available. Additionally, the handle includes a built-in revolution counter for precise monitoring.



ACCESSORIES

ACCESSORIES	Page
Drive head	28-29
Adaptors and interfaces	33-40
Torque reaction systems	41-43
Other accessories	32

PERFORMANCE

Straight	Free speed (rpm)	Max torque (Nm (lb.ft))	Starting torque (Nm (lb.ft))		With RA30	Free speed (rpm)	Max torque (Nm (lb.ft))	Starting torque (Nm (lb.ft))
JA73E-023	360	44 (32)	35 (26)		JA73E-023	360	44 (32)	35 (26)
JA73S-077	110	150 (110)	120 (89)		JA73S-077	110	150 (110)	120 (89)
JA73S-132	63	250 (180)	200 (150)		JA73S-132	63	250 (180)	200 (150)
JA73H-169	49	325 (240)	260 (190)		JA73H-169	49	325 (240)	260 (190)
JA73H-309	27	590 (435)	470 (350)		JA73H-309	27	590 (435)	470 (350)
JA73H-564	15	1080* (800)*	860 (640)		JA73H-564	Max 600 Nm. Use torque limiter (see values)		
With banjo head BJH01		Free speed (rpm)		Max torque (Nm (lb.ft))		Starting torque (Nm (lb.ft))		
JA73E-023		90		180 (130)		140 (100)		
JA73S-077		27		590 (435)		470 (350)		
JA73S-132		Max 600 Nm (440 lb.ft). Use torque limiter (see values p.22)						
JA73H-169								
JA73H-309								
JA73H-564								
With banjo head BJH02		Free speed (rpm)		Max torque (Nm (lb.ft))		Starting torque (Nm (lb.ft))		
JA73E-023		120		135 (100)		105 (77)		
JA73S-077		36		440 (320)		350 (260)		
JA73S-132		21		760 (560)		600 (440)		
JA73H-169		16		975 (720)		780 (580)		
JA73H-309		Max 1000 Nm (740 lb.ft). Use torque limiter (see values p.22)						
JA73H-564								
with torque multiplier TM004		Free speed (rpm)		Max torque (Nm (lb.ft))		Starting torque (Nm (lb.ft))		
JA73E-023		97		163 (120)		130 (96)		
JA73S-077		30		557 (411)		445 (328)		
JA73S-132		Max 600 Nm (440 lb.ft). Use torque limiter (see values p.22)						
JA73H-169								
JA73H-309		Not available						
JA73H-564								

* Warning ! Do not use the actuator when the torque is higher than 1000 Nm (740 lb.ft) or use a torque limiter

Some electric portable actuator manufacturers give torque and speed performance without reference to the length of operating time.

This can suggest a high performance level when in reality the level can only be achieved for a few seconds and with significant risk of damage to the actuator's motor.

Portable actuators using a modex battery are designed and tested to deliver the stated performance level with no time limit other than the length of the battery life.

IMPORTANT

For your comfort and safety, please carefully read the instruction manual before using the portable valve actuator.

**MAKE UNDERGROUND
VALVES OPERATIONS
SAFE AND EFFICIENT**



**BUILD
YOUR OWN KIT**



- . Easy transport
- . Simple setup
- . Safe Operations

CHOOSE YOUR MC89 (see page 14)

N°1

MC89

PORTABLE VALVE ACTUATOR

Compact and lightweight
 Maximum torque : 850 Nm (630 lb.ft)
 Maximum speed : 450 rpm
 Autonomy : 20/30 mins continuously per battery
 Speed controller
 Integrated revolution counter *(except Easy Duty)*

N°2

BA012

FOOT HELD ARTICULATED REACTION ARM

Max. torque : 250 Nm (185 lb.ft)
 Does not require any special
 attachment point

N°6

BAT143 & BAT145

2 BATTERIES & 1 CHARGER

Voltage : 18 DC & 220-240V AC
 Capacity : 5 Ah
 Charging time : 45 min

N°3

BR001

REACTION ARM

Max torque : 1 000 Nm (740 lb.ft)

N°7

VT005

TRANSPORT AND STORAGE SUITCASE

Allows you to check at
 a glance that everything
 is there.
 Weight of the complete kit : less
 than 25 Kg (55 lbs)

N°4

EB002

TELESCOPIC VALVE KEY

Max torque : 1 000 Nm (740 lb.ft)
 Length : 0.6 to 0.9 m (23,6 - 35,4 in)

N°8

DCxxx

CHOOSE YOUR SOCKET

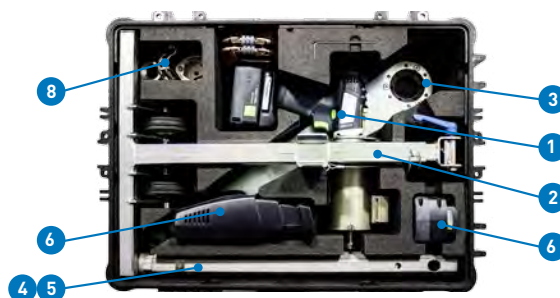
Go page 40

N°5

EB012

EXTENSION FOR TELESCOPIC VALVE KEY

Max. torque : 1 000 Nm
 (740 lb.ft)
 Length 0.5 m (19,7 in)



Actuator	MC89E-011-00	MC89S-035-02	MC89S-054-02
Socket	Without revolution counter		
DC020	H20100	H20500	H20600
DC027	H20101	H20501	H20601
DC030	H20102	H20502	H20602
DC040	H20103	H20503	H20603
DC050	H20104	H20504	H20604
DC012-025	H20105	H20505	H20605
DC031-035	H20106	H20506	H20606
DC025	H20107	H20507	H20607
DP040-044	H20108	H20508	H20608

In case you don't want batteries and charger in your kit, add « -NB » to the reference

MAKE UNDERGROUND
VALVES OPERATIONS
SAFE AND EFFICIENT



MINI H₂O KIT

The lightweight
and **functional kit**
to simplify your operations



- . Easy transport less than 15kg
- . Simple set up
- . Safe operations



CHOOSE YOUR MC89 (see page 14)

N°1



MC89

PORTABLE VALVE ACTUATOR

Compact and lightweight
 Maximum torque : 850 Nm (630 lb.ft)
 Maximum speed : 450 rpm
 Autonomy : 20/30 mins continuously per battery
 Speed controller
 Integrated revolution counter *(except Easy Duty)*

N°2



BR001

REACTION ARM
 Max. torque 1000 Nm (740 lb.ft)

N°6



DCxxx

**CHOOSE
YOUR SOCKET**
 Go page 40

N°3



EB002

TELESCOPIC VALVE KEY
 Max torque 1000 Nm (740 lb.ft)
 Length : 0.6 to 0.9 m (23,6 to 35,6 in)

N°4



BAT143 & BAT145

**2 BATTERIES &
1 CHARGER**
 Voltage : 18DC & 220-240V AV
 Capacity : 5Ah
 Charging time 45min

N°5



VT009

BACK PACK
 Enables you to fit only the necessary
 Pre-cutted protective foam
 PVC fabric bag with double reflective
 striping
 Weight of the complete kit Less than 15 kg



Actuator	MC89E-011-00	MC89S-035-02	MC89S-054-02
Socket	Without revolution counter		
DC020	H20110	H20510	H20610
DC027	H20111	H20511	H20611
DC030	H20112	H20512	H20612
DC040	H20113	H20513	H20613
DC050	H20114	H20514	H20614
DC012-025	H20115	H20515	H20615
DC031-035	H20116	H20516	H20616
DC025	H20117	H20517	H20617
DP040-044	H20118	H20518	H20618

In case you don't want batteries and charger in your kit, add « -NB » to the reference

Options are built into the actuator during factory assembly and cannot be added or removed at a later stage.

DIGITAL REVOLUTION-COUNTER



The **digital revolution counter** adds up the turns in one direction and subtracts them in the other direction so that the operator always knows where he is in relation to the starting point. **It also measures and indicates the rotating speed.**

It can be **easily configured** to adapt to the different actuator heads available (right angle or ring-type).
not available for ATEX certified actuators.

TORQUE LIMITER



All our portable valve actuators are equipped, or can be equipped as an option, with an adjustable torque limiter to protect equipment and operators from the risks associated with applying too much torque. This also ensures that a minimum torque has been applied by the device.

On the JA73

As the JA73 rotational speed is constant, a change in power results in a proportional change in maximum torque. Therefore, by setting the power to one of the 4 available levels, the maximum torque of the actuator is adjusted to a limit.

The following table shows the maximum torque values for the different JA73 models depending on the selected power level:

Without drive head	Torque limit setting (Nm (lb.ft))			
	1	2	3	4
JA73E-023	6 (4,4)	16 (12)	30 (22)	44 (32)
JA73S-077	20 (15)	55 (40)	100 (70)	150 (110)
JA73S-132	35 (26)	95 (70)	170 (125)	250 (180)
JA73H-169	45 (33)	120 (90)	220 (160)	320 (240)
JA73H-309	80 (59)	220 (160)	400 (300)	590 (430)
JA73H-564	140 (100)	390 (290)	720 (530)	1080 (800)*

* Max 1000 Nm (740 lb.ft)

With RA30 right angle head	Torque limit setting (Nm (lb.ft))			
	1	2	3	4
JA73E-023	6 (4,4)	16 (12)	30 (22)	44 (32)
JA73S-077	20 (15)	55 (40)	100 (70)	150 (110)
JA73S-132	35 (26)	95 (70)	170 (125)	250 (180)
JA73H-169	45 (33)	120 (90)	220 (160)	320 (240)
JA73H-309	80 (59)	220 (160)	400 (300)	590 (430)
JA73H-564	140 (100)	390 (290)		

** Max 600Nm (440 lb.ft)

With banjo head BJH01	Torque limit setting (Nm (lb.ft))			
	1	2	3	4
JA73E-023	25 (18)	65 (48)	120 (90)	175 (130)
JA73S-077	80 (60)	220 (160)	400 (300)	600 (440)
JA73S-132	140 (100)	380 (280)		
JA73H-169	180 (130)	480 (350)		
JA73H-309	320 (240)			
JA73H-564	560 (410)			

* Max 600Nm (440 lb.ft)

With banjo head BJH02	Torque limit setting (Nm (lb.ft))			
	1	2	3	4
JA73E-023	20 (15)	50 (37)	90 (66)	130 (95)
JA73S-077	60 (44)	160 (120)	300 (220)	450 (330)
JA73S-132	100 (70)	280 (210)	510 (380)	750 (550)
JA73H-169	130 (95)	360 (270)	660 (490)	970 (720)
JA73H-309	240 (180)	660 (490)		
JA73H-564	420 (310)			

* Max 1000 Nm (740 lb.ft)

With torque multiplier TM004	Torque limit setting (Nm (lb.ft))			
	1	2	3	4
JA73E-023	22 (16)	59 (45)	111 (82)	163 (119)
JA73S-077	74 (56)	204 (148)	371 (260)	557 (408)
JA73S-132	130 (97)	353 (260)	631* (464)*	
JA73S-169				
JA73H-309				
JA73H-564				

* Max 600Nm (440 lb.ft)

IMPORTANT

For your comfort and safety, please carefully read the instruction manual before using the portable valve actuator.

OPTIONS



On the MC89

For each of the four speed levels (selected by the button on the top of the unit), the maximum torque can be set with the knob at the foot of the handle at the back of the actuator.

The tables below show the maximum speed and torque values for each of the selected combinations.

An audible signal (two beeps) sounds and the actuator stops when the set torque is reached. The tool will restart only after the on/off switch is released and pressed again.

Torque / Speed matrix : MC89E-011 without BJH, with or without RA30

Speed setting	Torque limit setting	1	2	3	4	5
1	max speed (rpm)	26	29	34	37	41
	max torque (Nm (lb.ft))	17 (12)	54 (40)	89 (65)	129 (95)	165 (122)
2	max speed (rpm)	41	46	52	57	61
	max torque (Nm (lb.ft))	16 (12)	49 (36)	82 (60)	116 (85)	153 (113)
3	max speed (rpm)	126	147	168	188	209
	max torque (Nm (lb.ft))	4 (3)	16 (12)	29 (21)	40 (29)	53 (39)
4	max speed (rpm)	195	223	258	279	314
	max torque (Nm (lb.ft))	3 (2)	11 (8,1)	19 (14)	29 (21)	37 (27)

Torque / Speed matrix MC89S-035 without BJH, with or without RA30

Speed setting	Torque limit setting	1	2	3	4	5
1	max speed (rpm)	8,0	9,0	10	11	12
	max torque (Nm (lb.ft))	60 (44)	180 (132)	300 (221)	430 (317)	550 (410)
2	max speed (rpm)	12	14	15	17	18
	max torque (Nm (lb.ft))	50 (37)	160 (118)	270 (199)	390 (287,5)	515 (380)
3	max speed (rpm)	38	44	51	57	63
	max torque (Nm (lb.ft))	13 (9)	50 (37)	100 (73)	140 (103)	175 (130)
4	max speed (rpm)	58	67	77	84	94
	max torque (Nm (lb.ft))	10 (7)	35 (26)	65 (48)	95 (70)	125 (92)

Torque / Speed matrix : MC89E-011 with BJH01

Speed setting	Torque limit setting	1	2	3	4	5
1	max speed (rpm)	6,5	7,3	8,4	9,2	
	max torque (Nm (lb.ft))	69 (50)	218 (153)	355 (262)	516 (381)	
2	max speed (rpm)	10	12	13	14	15
	max torque (Nm (lb.ft))	63 (46)	195 (144)	327 (241)	464 (342)	613 (450)
3	max speed (rpm)	31	37	42	47	52
	max torque (Nm (lb.ft))	17 (13)	63 (46)	115 (85)	160 (118)	212 (156)
4	max speed (rpm)	49	56	65	70	79
	max torque (Nm (lb.ft))	11 (8)	43 (32)	77 (57)	115 (85)	149 (110)

Torque / Speed matrix MC89S-035 with BJH01

Speed setting	Torque limit setting	1	2	3	4	5
1	max speed (rpm)	2				
	max torque (Nm (lb.ft))	240 (180)				
2	max speed (rpm)	3				
	max torque (Nm (lb.ft))	200 (150)				
3	max speed (rpm)	10	11	13	14	
	max torque (Nm (lb.ft))	52 (38)	200 (147)	400 (295)	560 (410)	
4	max speed (rpm)	15	17	19	21	24
	max torque (Nm (lb.ft))	40 (29)	140 (103)	260 (192)	380 (280)	500 (369)

Torque / Speed matrix : MC89E-011 with BJH02

Speed setting	Torque limit setting	1	2	3	4	5
1	max speed (rpm)	9	10	11	12	14
	max torque (Nm (lb.ft))	52 (38)	163 (120)	266 (196)	387 (285)	490 (360)
2	max speed (rpm)	14	15	17	19	20
	max torque (Nm (lb.ft))	47 (35)	146 (108)	245 (180)	348 (257)	460 (340)
3	max speed (rpm)	42	49	56	63	70
	max torque (Nm (lb.ft))	12 (9)	47 (35)	86 (63)	120 (88)	159 (117)
4	max speed (rpm)	65	74	86	93	105
	max torque (Nm (lb.ft))	8, (6)	32 (24)	58 (43)	86 (63)	112 (83)

Torque / Speed matrix MC89S-035 with BJH02

Speed setting	Torque limit setting	1	2	3	4	5
1	max speed (rpm)	3	3	3		
	max torque (Nm (lb.ft))	180 (132)	540 (398)	900 (660)		
2	max speed (rpm)	4	5	5		
	max torque (Nm (lb.ft))	150 (110)	480 (354)	810 (600)		
3	max speed (rpm)	13	15	17	19	21
	max torque (Nm (lb.ft))	39 (28)	150 (110)	300 (221)	420 (310)	525 (390)
4	max speed (rpm)	19	22	26	28	31
	max torque (Nm (lb.ft))	30 (22)	105 (77)	195 (144)	285 (210)	375 (280)

Torque / Speed matrix : MC89E-011 with torque multiplier TM004

Speed setting	Torque limit setting	1	2	3	4	5
1	max speed (rpm)	7	7,9	9,0	10	11
	max torque (Nm (lb.ft))	64 (47)	202 (149)	329 (243)	478 (353)	611 (450)
2	max speed (rpm)	11	12	14	15	17
	max torque (Nm (lb.ft))	58 (43)	181 (133)	303 (223)	430 (317)	569 (419)
3	max speed (rpm)	34	40	45	51	56
	max torque (Nm (lb.ft))	15 (11)	58 (43)	106 (78)	149 (110)	197 (145)
4	max speed (rpm)	53	60	70	75	85
	max torque (Nm (lb.ft))	11 (8)	40 (29)	72 (53)	106 (78)	138 (102)

Torque / Speed matrix MC89S-035 with torque multiplier TM004

Speed setting	Torque limit setting	1	2	3	4	5
1	max speed (rpm)	2				
	max torque (Nm (lb.ft))	223 (163)				
2	max speed (rpm)	3	4			
	max torque (Nm (lb.ft))	186 (137)	594 (438)			
3	max speed (rpm)	10	12	14	15	
	max torque (Nm (lb.ft))	48 (35)	186 (137)	371 (272,7)	519 (383)	
4	max speed (rpm)	16	18	21	23	25
	max torque (Nm (lb.ft))	37 (27)	130 (96)	241 (178)	352 (259)	464 (342)

IMPORTANT

For your comfort and safety, please carefully read the instruction manual before using the portable valve actuator.

Torque / Speed matrix : MC89S-054 without drive head

Speed setting	Torque limit setting	1	2	3	4	5
1	max speed (rpm)	5	6	7	7	8
	max torque (Nm (lb.ft))	90 (66)	280 (206)	460 (340)	660 (487)	850 (630)
2	max speed (rpm)	8,0	9,0	10	11	12
	max torque (Nm (lb.ft))	80 (59)	250 (184)	420 (309)	600 (440)	790 (580)
3	max speed (rpm)	25	29	33	37	41
	max torque (Nm (lb.ft))	20 (14)	80 (60)	150 (110)	210 (155)	270 (200)
4	max speed (rpm)	38	44	50	55	61
	max torque (Nm (lb.ft))	15 (11)	55 (40)	100 (74)	145 (107)	190 (140)

Torque / Speed matrix : MC89S-054 with RA30 right angle head

Speed setting	Torque limit setting	1	2	3	4	5
1	max speed (rpm)	5,0	5,8	7		
	max torque (Nm (lb.ft))	90 (66)	280 (206)	460 (340)		
2	max speed (rpm)	8	9	10	11	
	max torque (Nm (lb.ft))	80 (59)	250 (184)	420 (309)	600 (440)	
3	max speed (rpm)	25	29	33	37	41
	max torque (Nm (lb.ft))	20 (14)	80 (60)	150 (110)	210 (155)	270 (200)
4	max speed (rpm)	38	44	50	55	61
	max torque (Nm (lb.ft))	15 (11)	55 (40)	100 (74)	145 (107)	190 (140)

Torque / Speed matrix MC89S-054 with BJH01

Speed setting	Torque limit setting	1	2	3	4	5
1	max speed (rpm)	1				
	max torque (Nm (lb.ft))	360 (265)				
2	max speed (rpm)	2				
	max torque (Nm (lb.ft))	320 (240)				
3	max speed (rpm)	6	7	8		
	max torque (Nm (lb.ft))	80 (59)	320 (236)	600 (440)		
4	max speed (rpm)	10	11	13	14	
	max torque (Nm (lb.ft))	60 (45)	220 (162)	400 (295)	580 (430)	

Torque / Speed matrix MC89S-054 with BJH02

Speed setting	Torque limit setting	1	2	3	4	5
1	max speed (rpm)	2	2			
	max torque (Nm (lb.ft))	270 (199)	840 (620)			
2	max speed (rpm)	3	3			
	max torque (Nm (lb.ft))	240 (177)	750 (553)			
3	max speed (rpm)	8	10	11	12	14
	max torque (Nm (lb.ft))	60 (44)	240 (177)	450 (332)	630 (465)	810 (600)
4	max speed (rpm)	13	15	17	18	20
	max torque (Nm (lb.ft))	45 (33)	165 (122)	300 (221)	435 (321)	570 (421)

Torque / Speed matrix MC89S-054 with torque multiplier TM004

Speed setting	Torque limit setting	1	2	3	4	5
1	max speed (rpm)	1				
	max torque (Nm (lb.ft))	330 (240)				
2	max speed (rpm)	2				
	max torque (Nm (lb.ft))	300 (220)				
3	max speed (rpm)	7	8	9		
	max torque (Nm (lb.ft))	74 (52)	297 (23)	550 (405)		
4	max speed (rpm)	10	12	13	15	
	max torque (Nm (lb.ft))	56 (41)	204 (148)	371 (274)	540 (400)	

IMPORTANT

For your comfort and safety, please carefully read the instruction manual before using the portable valve actuator.

OPTIONS

On the PY68

On this actuator, the torque limiter is an option that disconnects the motor from the gearbox when the torque limit is reached. The actuator head then has no residual torque applied.

The operator can change the torque limit over a range of +/- 40% of the median value. The following tables show the maximum torque setting ranges for each actuator model selected :

Without drive head	Reduction ratio	Free speed (rpm)	Torque limit setting range (Nm (lb.ft))	
			min	Max
PY68E-031-03/05	1:31	305	20 (15)	45 (33)
PY68S-087-03/05	1:40	218	25 (18)	60 (44)
PY68S-148-03/05	1:61	155	40 (30)	90 (66)
PY68H-192-03/05	1:227	42	140 (103)	340 (251)
PH68H-293-03/05	1:293	32	180 (133)	440 (325)
PY68H-641-03/05	1:641	15	400 (295)	960 (708)

With banjo head BJO1	Reduction ratio	Free speed (rpm)	Torque limit setting range (Nm (lb.ft))	
			min	Max
PY68E-031-03/05	1:124	76	80 (60)	180 (132)
PY68S-087-03/05	1:160	54	100 (72)	240 (176)
PY68S-148-03/05	1:244	38	160 (120)	360 (264)
PY68H-192-03/05	1:908	10		
PH68H-293-03/05	1:1172	8		
PY68H-641-03/05	1:2564	4		

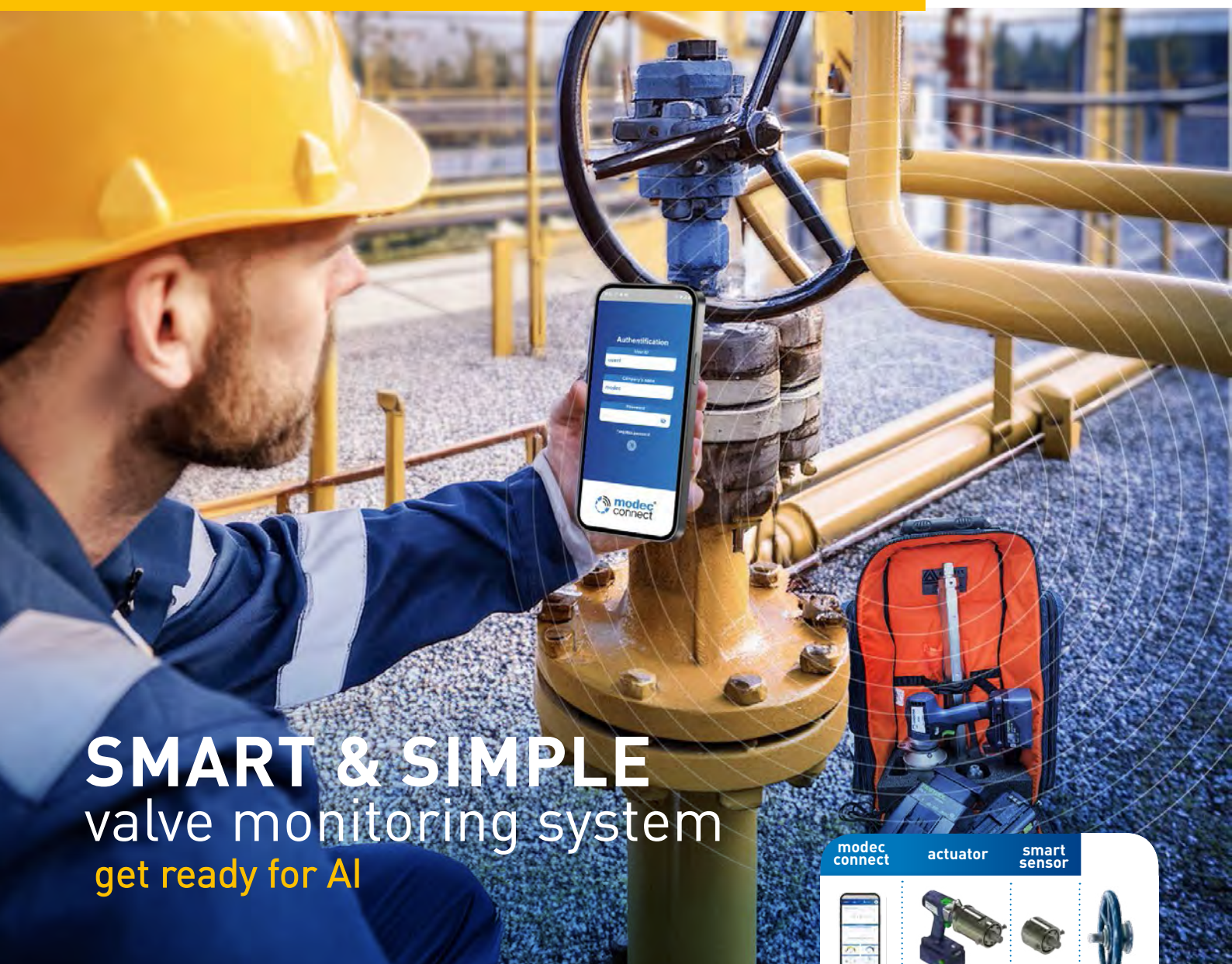
With RA30 right angle head	Reduction ratio	Free speed (rpm)	Torque limit setting range (Nm (lb.ft))	
			min	Max
PY68E-031-03/05	1:31	305	20 (15)	45 (33)
PY68S-087-03/05	1:40	218	25 (18)	60 (44)
PY68S-148-03/05	1:61	155	40 (30)	90 (66)
PY68H-192-03/05	1:227	42	140 (103)	340 (251)
PH68H-293-03/05	1:293	32	180 (133)	440 (325)
PY68H-641-03/05	1:641	15	400 (295)	

With banjo head BJO2	Reduction ratio	Free speed (rpm)	Torque limit setting range (Nm (lb.ft))	
			min	Max
PY68E-031-03/05	1:162	101	60 (45)	135 (100)
PY68S-087-03/05	1:381	72	75 (54)	180 (132)
PY68S-148-03/05	1:597	51	120 (90)	270 (198)
PY68H-192-03/05	1:774	14	420 (310)	
PH68H-293-03/05	1:879	10	540 (399)	
PY68H-641-03/05	1:1692	5		

With torque multiplier TM004	Reduction ratio	Free speed (rpm)	Torque limit setting range (Nm (lb.ft))	
			min	Max
PY68E-031	115	82	74	167
PY68S-087	148	59	93	223
PY68S-148	226	42	148	334
PY68H-192	842	11		
PY68H-293	1087	9		
PY68H-641	2378	4		

IMPORTANT

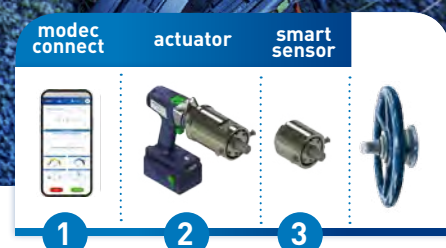
For your comfort and safety, please carefully read the instruction manual before using the portable valve actuator.



SMART & SIMPLE

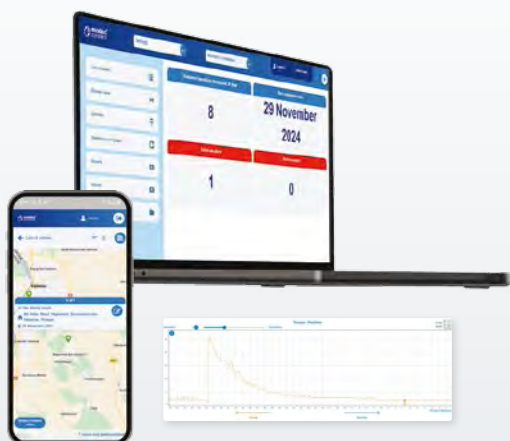
valve monitoring system

get ready for AI



Why modec connect

- **Characterize your valves**
Get to know your valve network better by collecting key data
- **Anticipate maintenance**
Prevent and decrease the number of unexpected shutdowns & Expand your equipment lifetime
- **Follow up Operations**
Keep tracks of every operation and enhance teamwork
- **Get ready for AI**
Build a solid and appropriate database for future AI analysis (Predictive maintenance, operations & investment optimization)



What it does

1. Collects data during operations :

- Torque
- Speed
- Number of rotation
- Rotation direction

2. Generates report of your operation

Gather key data and share it with the rest of your team to keep track of your work

3. Enables you to analyse data

Create guided operation in order to be able to perform effective analyses thanks to an intuitive interface

How it works

The Modec Connect sensor seamlessly collects data during operation by connecting to the Modec portable valve actuator, transmitting the information via Bluetooth.

- **No modification of your installation**
- **Compatible with every modec actuators**
- **Plug and play set up**

How to begin

1 Get the "modec connect" smart sensor



The modec connect sensor needs to be connected to a modec portable valve actuator before the operation. It will then record real-time data including torque, speed, number of turns, and direction. Data will be transmitted to the phone app by Bluetooth.

TECHNICAL DATA	
Weight kg (lb)	1,8 (4)
Protection class	IP44 équivalent
Charging time	5h
Operating Temperature °C (°F)	-30 - +50°C (22 - 122 °F)
Autonomy min	Until 40 (hours)
Measuring range Nm (lb.ft)	0 -1000 (0-740)

2 Choose your app subscription



STANDARD	PREMIUM
Enter industry 4.0 and start to digitize valve operations on budget	Access all premium features, extra storage, and a web app for full monitoring
<ul style="list-style-type: none"> • Access mobile app • Capture real-time data • Generate pdf reports of your operation 	<ul style="list-style-type: none"> • Access mobile app & web app • Guided operations • Other software's data import & export • More storage • Build your team
	EXTENSION
	Extend your storage capacity to meet larger needs
	<ul style="list-style-type: none"> • More valves storage • More operations storage • More users

! Extensions are only valid in case of premium subscriptions

Details

	STANDARD	PREMIUM	EXTENSION
Cost	Free	\$	\$\$
Mobile App			
Nb of valves stored	1	100	+100
Nb of measures per valve stored	1	5	-
Géolocalization	-	Yes	-
Data display pdf	Yes	Yes	-
Graph display pdf	Yes	Yes	-
Valves QR code	-	Yes	-
Web App			
Nb of valves stored on the web App	-	100	+100
Nb of measures/valves stored web App	-	10	+10
Nb of scenarii/valves	-	5	+10
Operation PDF export	-	Yes	-
CSV & JSON data export	-	Yes	-
History and comparison	-	Yes	-
Accounts			
Admin	-	1	1
Super-user accounts	-	1	+3
User accounts	1	5	+15

The actuator heads are compatible with all **modtec** portable valve actuators.

STANDARD DUTY RING-TYPE DRIVE HEAD ("BANJO HEAD")

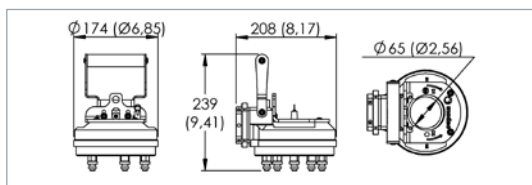


Maximum allowed torque: 600 Nm (440 lb.ft)
Weight: 5kg (11 lb)

Essential for all **rising stem handwheels**, the **Standard duty banjo drive head** caters for all stems up to a **maximum diameter of 63mm (2.48")**. It can also operate all clamping systems for handwheel and other interfaces. What's more, it brings additional reduction which means you can **multiply the actuator's torque by 4** and reduce the speed by the same factor. **Perfect for difficult or stiff handwheels.**

With a **maximum torque of 600 Nm (440 lb.ft)**, the Standard duty banjo head can be mounted quickly and easily on all **Easy duty actuators** and on some **Standard duty actuators** (see product files).

Reference : BJH01



HEAVY DUTY RING-TYPE DRIVE HEAD ("BANJO HEAD")

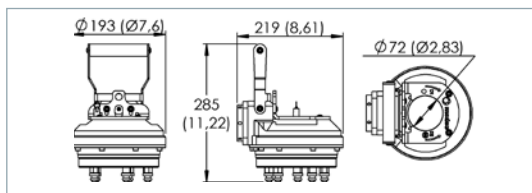


Maximum allowed torque: 1000 Nm (740 lb.ft)
Weight: 8.6 kg (19 lb)

The **Heavy duty banjo drive head** should be used for **very high torques**. It caters for **rising stems up to a maximum diameter of 70mm (2.75")** and is compatible with all clamping systems for handwheel and other interfaces. It brings additional reduction which means you can **multiply the actuator's torque by 3** and reduce the speed by the same factor.

With a **maximum torque of 1000 Nm (740 lb.ft)**, the Heavy duty banjo head can be mounted quickly and easily on **all Easy and Standard duty actuators, as well as some Heavy duty ones** (see product files).

Reference : BJH02



IMPORTANT

For your comfort and safety, please carefully read the instruction manual before using the portable valve actuator.

ACCESSORIES

ACTUATOR'S DRIVE HEADS

RIGHT-ANGLE DRIVE HEAD RA30



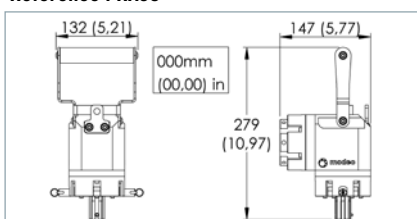
Maximum allowed torque : 600 Nm (440 lb.ft)
Weight : 4.2 kg (9.3 lb)

The RA30 right angle drive head can be positioned at 90° to the actuator providing **optimal positioning for the operator**.

It is suitable for **high torques** (up to 600 Nm (465 lb.ft)).

The right angle drive head RA30 can be mounted quickly and easily on all our actuators. It brings no change in the speed and the torque as the reduction ratio is 1:1.

Reference : RA30



TORQUE MULTIPLIER

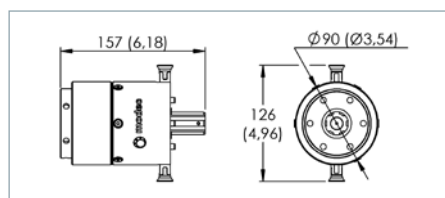


Maximum allowed torque : 600 Nm (440 lb.ft)
Weight : 2,6 kg (5,7 lb)

The Torque Multiplier TM004 is a **light and sturdy additional gearbox that simply connects to the PVA** when torque needs to be increased. The Torque Multiplier increases torque by 3,7 and reduces speed by the same. It constitutes a **perfect way to keep using a light and fast portable actuators** for most of the valves and change them into "high torque tools" only when required.

With a **maximum output torque capacity of 600 Nm (442 lb.ft)**, the TM004 is compatible with all Easy Duty actuators and some Standard Duty actuators (see product specifications for details). The Torque Multiplier is compatible with the same modex adapters and interfaces than the portable actuator itself.

Reference : TM004



IMPORTANT

For your comfort and safety, please carefully read the instruction manual before using the portable valve actuator.

We have a range of accessories specifically for pneumatic portable actuators designed to improve user comfort as well as the protection of both operator and equipment.

AIR FILTRATION, PRESSURE REGULATION AND LUBRICATION UNITS

Pneumatic portable valve actuators (HL83) require **dry, clean** and **properly lubricated air** in order to work effectively. The FRL unit filters, dries and lubricates the compressed air, guaranteeing that the motor operates as required. It also controls the air supply pressure, which in turn controls the actuator's performance (maximum torque).

The FRL should be positioned **less than 5 meters away from the tool**. When selecting the FRL, check that it has a flow capacity suitable for the actuator's requirement.

modec offers a complete range of FRL units that are compact, robust, adapted to the constraints of work sites and easy to connect. A **connection kit** between the FRL and the actuator is available (ref **AC051**) with a quick connector for more comfort.

Self-relieving regulator. Lubrication with selective oil fog. Metal bowl with oil level viewing window.

Automatic oil tank fill-in system

Recommended oil type : MODEC Co-16 oil (reference **AC149**).

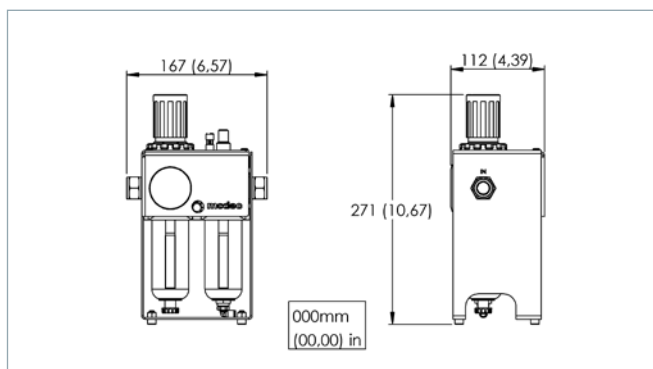
Reference	AC107
Max inlet pressure (23°C / 50°C)	16 / 10 bars 232 / 145 psi
Pressure gauge	0 / 10 bars 0 / 145 psi
Controlled pressure	0,5 / 8 bars 7 / 116 psi
Ambient temperature	0 à +50°C 0 / 122°F
Oil bowl capacity	80 cm ³ 0,003 cfm
Filtration	5 µm
Purge system	Semi-auto
Connection	G ½
Dimensions	271 x 167 x 112 mm 10,7 x 6,6 x 4,4 in
Weight (empty)	2,9 kg / 6,4 lb



AC107



AC051



IMPORTANT

For your comfort and safety, please carefully read the instruction manual before using the portable valve actuator.

ACCESSORIES

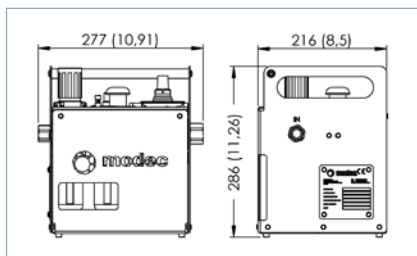
for pneumatic portable actuators 2/3

We have a range of accessories specifically for pneumatic portable actuators designed to improve user comfort as well as the protection of both operator and equipment.

SAFETY AIR TREATMENT BOX (SAT BOX)



AC118



AC052

The **SAT Box** (Safety Air Treatment box) is a **safety device** that protects the user and the equipment.

The SAT Box provides numerous important safety features:

- Emergency kill switch
- Key safety lock (optional)
- Downstream automatic air-bleed
- Automatic switch off when air pressure drop detected

Reference: AC118

Reference	AC118
FRL Type	AC107
Emergency kill switch	YES
Automatic downstream air bleed	YES
Pressure gauge	0 / 10 bars 0 / 145 psi
Filtration	5 µm
Oil bowl capacity	80 cm ³ / 0,003 cfm
Connections	input : G½ / output : G¾
Min & max inlet pressure	2 / 8 bars 29 / 174 psi
Dimensions	277 x 216 x 286 mm 10,9 x 8,5 x 11,3 in
Weight (empty)	7,6 kg / 16,8 lb
Ambient temperature	-10 / +50 °C 14 / 122 °F

Those Safety devices ensure an instantaneous air bleed in the downstream circuit when the emergency kill switch is hit and/or when air supply stops. As a consequence, no residual energy may create an accidental motion after the stop. All these safety features are energized by air pressure, without any other source of energy required.

If the air feed pressure falls below 2 bars, the SAT box will automatically shut down in order to prevent the actuator inadvertently restarting if the pressure climbs back up (if the compressor stops and then restarts for example).

All of these functions are operational with the air supply pressure - there's no need for another energy source.

Finally, the SAT box integrates the FRL unit (Filtration, air pressure Regulation and Lubrication) in order to ensure that the air feed is clean and correctly lubricated.

A **connection kit** between the SAT Box and the actuator is available (ref AC052) with a quick connector for more comfort.

EXHAUST COLLECTOR AND SILENCER

It is recommended to use a **silencer** with pneumatic portable actuators. It fixes to the actuator's exhaust vent and **reduces the sound level**. We have silencers of varying sizes and performance levels for different applications and constraints of use of the actuators.

> **Heavy duty exhaust silencers:** Extremely robust and compact, this stainless steel silencer reduces the noise level and protects against foreign bodies getting into the motor via the exhaust vent.

References: AC155 for Easy Duty actuators

AC156 for Standard Duty and Heavy Duty actuators

> **High flow exhaust silencer:** Constructed with a unique expansion chamber, completely free of obstruction, exhaust air softly flows to the atmosphere with significant noise and oil fog reduction, providing a clean comfortable productive work environment. Composed entirely of corrosion-resistant material for long life and maintenance-free performance, this model is especially recommended for Standard Duty and Heavy Duty actuators.

References: AC159 for Standard Duty and Heavy Duty actuators only

> **The exhaust collector** must be assembled on Standard duty and Heavy duty actuators radial exhaust to accommodate the silencer. For Easy duty actuators, the silencer can be directly fixed to the exhaust vent at the back of the motor.

IMPORTANT

For your comfort and safety, please carefully read the instruction manual before using the portable valve actuator.

To maintain optimum performance and durability, your portable valve actuator needs to be stored in the right conditions. We have two types of box for storing and transporting actuators and their accessories.

As well as providing protection, these boxes are also ideal for transporting all the equipment to sites and minimizing the risk of misplacing any parts.

TRANSPORT CASES



Extremely robust, with wheels and handles, these transport and storage cases are **designed to order** so that all the equipment fits snugly into **a thick, pre-cut protective foam**.

Available in five sizes, the cases are adapted to accommodate the required equipment by cutting the protective foam to measure.

Dimensions	VT001	VT002	VT004*	VT005	VT009
Length mm (in)	1200 (47,2)	860 (33,9)	630 (24,8)	670 (26,4)	300 (11,8)
Height mm (in)	420 (16,5)	560 (22,0)	500 (19,7)	510 (20,1)	700 (27,7)
Width mm (in)	234 (9,2)	355 (14,0)	370 (14,6)	262 (10,3)	200 (7,8)

* No foam included



«MODEC KIT BOX»

For **regular professional use**, the **modtec kit box** is a metal case that can hold all the equipment necessary for various operations (actuators, adaptors, torque management systems, batteries, chargers, FRL unit, air feed pipes etc). With the kit box, you can transport all the equipment to the work site **without difficulty** and **get started quickly and simply**.

The Kit box can be positioned vertically or horizontally and comes with 2x3 wheels so it can be easily moved around, even up and down stairs. The interior has compartments so the different parts can be stored easily and efficiently, and, more importantly, can be put together quickly.

In the case of a pneumatic actuator, for example, it can hold the FRL unit and an air feed pipe on a reel.

Once again, the **modtec kit box** can be modified to order and **adapted to your needs**.



IMPORTANT

For your comfort and safety, please carefully read the instruction manual before using the portable valve actuator.

FINGERS TYPE ADAPTORS

This **exclusive patented system** is the **simplest** and **most effective** for clamping on to **flat or slightly tapered handwheels**.

No need to pre-install drive plates on the handwheel before use. The fingers type adaptors fix simply on to the portable actuator head, and can then be used to turn every handwheel that has the same number of spokes. It takes less than a minute to change the adaptor. It can also be used for rising stem valves (if used with a banjo head).

These adaptors **save a significant amount of time and money** as there's no need to buy and install a drive plate for each handwheel.

FIXED FINGERS ADAPTORS (SUAxxx)

The fixed fingers adaptors should be used for **flat or slightly tapered handwheels** (spokes at an angle $< 30^\circ$ in relation to the wheel's plane) and are composed of a **drive plate** on which one can screw up to **7 removable fingers** according to the number of spokes on the handwheel you want to turn.

If used with a **banjo head**, fingers can also be screwed directly on to the head (maximum 5 fingers in that case), leaving space for the **rising stem** to pass through. If used with a **straight or right angle head**, the **KPA004 interface** is required to fix the drive plate on to the actuator head (see page 38).

For **small diameters** handwheels, one can use the standard drive plate and place three or four fingers on the small diameter (150 mm) or use the **SUA034** drive plate with shorter and smaller fingers placed on a 75 mm diameter.

FINGERS USED DIRECTLY ON A BANJO HEAD :



3 X SUA001 FIXED ON THE BANJO HEAD



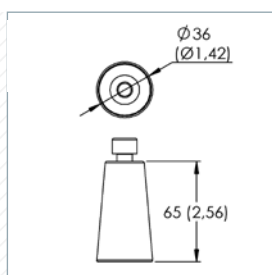
4 X SUA001 FIXED ON THE BANJO HEAD



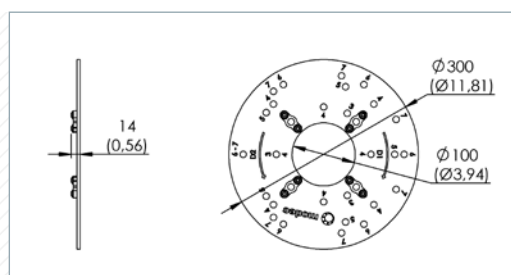
5 X SUA001 FIXED ON THE BANJO HEAD

FINGERS USED ON A DRIVE PLATE :

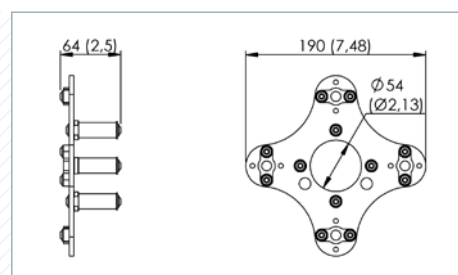
Requires KPA004 interface with a straight or right angle drive head



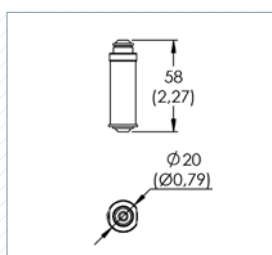
SUA001/ SUA901
(FINGER FOR BJH OR SUA002)



SUA002 (300 MM DRIVE PLATE)



SUA034 (190 MM DRIVE PLATE)



SUA801 (SINGLE FINGER FOR
SUA034 DRIVE PLATE)



SUA007
(1 DRIVE PLATE + 7 FINGERS)



SUA034
(1 DRIVE PLATE + 4 FINGERS)

	Weight (kg (lb))	«A» (mm (in))	Max torque (Nm (lb.ft))
SUA001	0,3 (0,7)	65 (3)	3 fingers: 350 (260)
SUA901	0,2 (0,4)	45 (1,8)	4 to 7 fingers: 1000 (740)
SUA002	2,5 (5,5)	N/A	
SUA801	0,1 (0,2)	45 (1,8)	3 or 4 fingers: 150 (110)
SUA034	0,8 (1,8)	N/A	
SUA007	5,2 (11,5)	N/A	1000 (740)

IMPORTANT

For your comfort and safety, please carefully read the instruction manual before using the portable valve actuator.

SELF-ADJUSTING AND SELF-CENTERING FINGERS ADAPTORS (SAxxx)



Thanks to its **patented system**, these adaptors clamp instantly on to the handwheel and **the actuator automatically centres itself giving greater ease and efficiency.**

This adaptor should be selected for **flat or slightly tapered handwheels** (spokes at an angle of $< 10^\circ$ in relation to the wheel's plane). It fixes directly on to the banjo head, and via a **KPA003, KPA004 or KPA005** interface on the standard splined shaft of the **straight and right angle actuators** (see page 38).

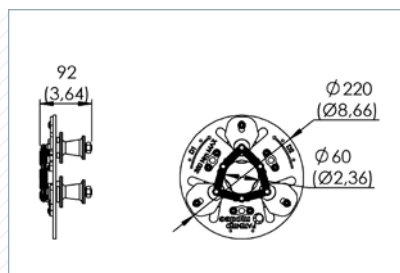
These adaptors **save a significant amount of time and money** as there's no need to buy and install a drive plate for each handwheel.



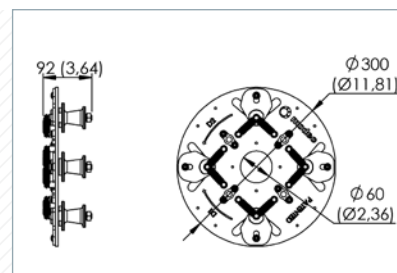
SA003



SA004



FOR 3 OR 6 SPOKES HANDWHEELS



FOR 2 OR 4 SPOKES HANDWHEELS

	Weight (kg (lb))	Max torque (Nm (lb.ft))	Interface for straigh or right angle head
SA003	2,3 (5,1)	350 (260)	KPA003
SA004	4,1 (9)	1000 (740)	KPA004
SA005	4,4 (9,7)	1000 (740)	KPA005
SA006	5,6 (12,4)	1000 (740)	KPA005
SA007	5,9 (13)	1000 (740)	KPA005



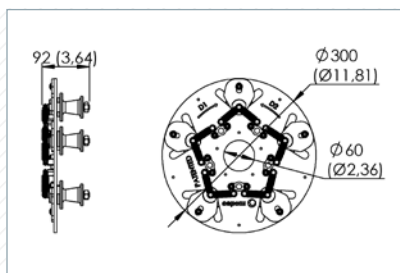
SA005



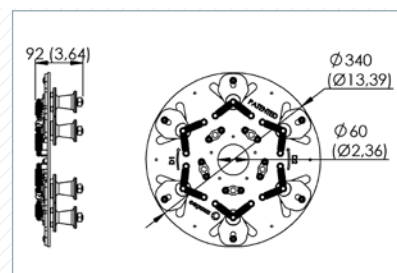
SA006



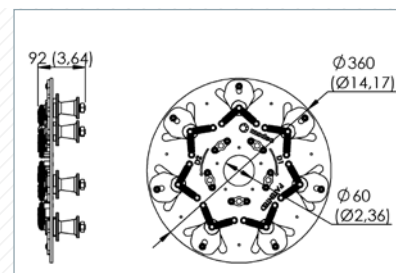
SA007



FOR 5 SPOKES HANDWHEELS



FOR 6 SPOKES HANDWHEELS



FOR 7 SPOKES HANDWHEELS

IMPORTANT

For your comfort and safety, please carefully read the instruction manual before using the portable valve actuator.

SPOKE ADAPTORS

The **spoke adaptors** clamp **solidly** and **quickly** to the handwheel and can turn in both directions, **with or without a rising** stem. It is available in two versions – one that adapts to flat or slightly tapered ($< 30^\circ$) handwheels; a second for tapered handwheels ($> 30^\circ$).

The adaptor has a strong hold on the handwheel and also fixes firmly to the actuator, providing complete **safety** during manoeuvres, even in difficult positions.

These adaptors **save a significant amount of time and money** as there's no need to buy and install a drive plate for each handwheel.

SPOKE ADAPTORS FOR FLAT HANDWHEELS (FSB)

These adaptors should be used for **flat or slightly tapered handwheels** (spokes at an angle $< 30^\circ$ in relation to the wheel's plane).

A choice of two models are available according to the **number of spokes** in the handwheel you want to turn.

These adaptors can be used with a **straight or right angle actuator** using the **KTA3/4** interface, and with a **banjo head** in conjunction with the **TTA002** (see page 40).

FSB		
LAYOUT	Weight (kg (lb))	Length «A» (mm (in))
FSBxxx-20	5,2 (11,5)	242 (9,5)
FSBxxx-40	6,4 (14,1)	442 (17,4)
FSBxxx-60	7,6 (16,8)	642 (25,3)



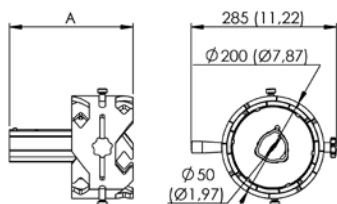
FSB245

For 2, 4 or 5 spokes
handwheels

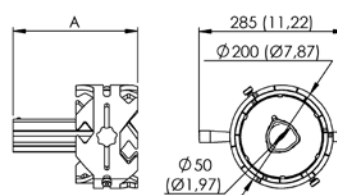


FSB356

For 3, 5 or 6 spokes
handwheels



Weight : 5.2 kg (11.5 lb)
Maximum allowed torque: 1000
Nm (740 lb.ft)



FSB adaptors require the KTA3/4 interface with a straight or right angle drive head, and the TTA002 interface with a banjo head.

IMPORTANT

For your comfort and safety, please carefully read the instruction manual before using the portable valve actuator.

► SPOKE ADAPTORS FOR TAPERED HANDWHEELS (CSB)

These adaptors should be used for **tapered handwheels** with spokes at an angle greater than 30° in relation to the wheel's plane. A choice of three models is available according to **the number of spokes in the handwheel you want to turn**.

These adaptors can be used with a **straight or right angle actuator** due to the **KTA3/4**, and with a **banjo head** in conjunction with the **TTA002 interface** (see page 40).

These adaptors **save a significant amount of time and money** as there's no need to buy and install a drive plate for each handwheel.

CSB		
LAYOUT	Weight (kg (lb))	Length «A» (mm (in))
CSBxxx-20	4,2 (9,3)	201 (7,91)
CSBxxx-40	5,4 (11,9)	401 (15,79)
CSBxxx-60	6,6 (14,6)	601 (23,66)



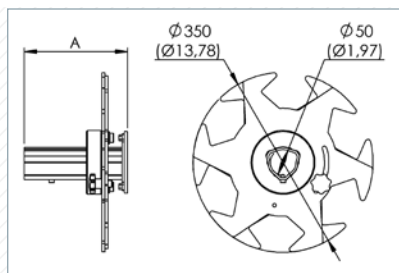
CSB003



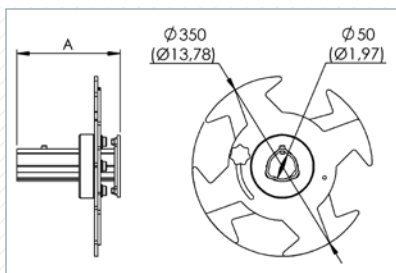
CSB004



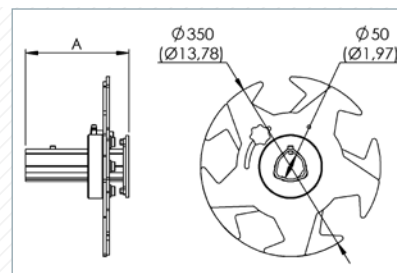
CSB005



FOR 3 OR 6 SPOKES HANDWHEELS

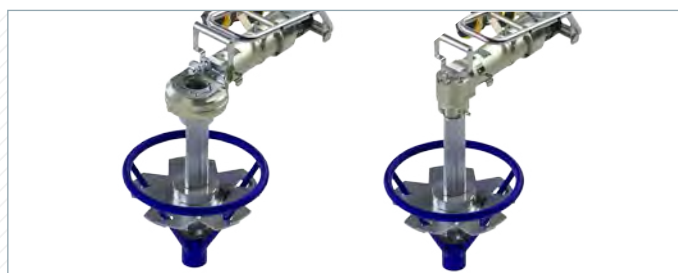


FOR 2 OR 4 SPOKES HANDWHEELS



FOR 5 SPOKES HANDWHEELS

Maximum allowed torque: 1000 Nm (740 lb.ft)
Weight : 4.2 kg (9.3 lb)



CSB adaptors require the KTA3/4 interface with a straight or right angle drive head, and the TTA002 interface with a banjo head.

IMPORTANT

For your comfort and safety, please carefully read the instruction manual before using the portable valve actuator.

FIXED UNIVERSAL ADAPTORS (FUAxxx)

These adaptors must be **fixed to the handwheel before use**. Thanks to their multiple "U" clamps that catch the handwheel's spokes, they can fix on to almost every type of handwheel.

The FUA adaptor is available in 4 versions, all in stainless steel :

FUA003 : for flat or slightly tapered handwheels with spokes inclined up to 30° in relation to the wheel's plane without rising stem

FUA004 : for tapered handwheels with spokes inclined from 30° to 40° in relation to the wheel's plane, without rising stem

FUA005 : for flat or slightly tapered handwheels with spokes inclined up to 30° in relation to the wheel's plane WITH rising stem

FUA006 : for tapered handwheels with spokes inclined from 30° to 40° in relation to the wheel's plane, WITH rising stem

FUA003 and FUA004 can be used directly with the actuator shaft.

All these drive plate adaptors can be used **directly on a banjo head**.

All these drive plate adaptors can be used with an EBX04 extension with the TTA002 interface (see page 39-40).



FUA003 FOR FLAT OR SLIGHTLY TAPERED HANDWHEELS (<30°) WITHOUT RISING STEM



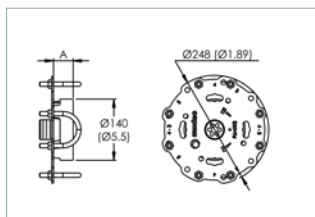
FUA004 FOR TAPERED HANDWHEELS (30° TO 40°) WITHOUT RISING STEM



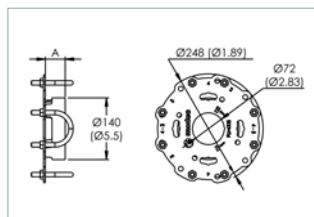
FUA005 FOR FLAT OR SLIGHTLY TAPERED HANDWHEELS (<30°) WITH RISING STEM



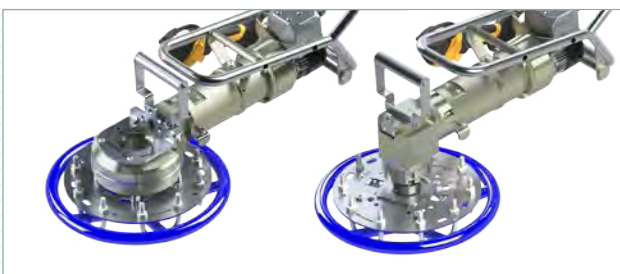
FUA006 FOR TAPERED HANDWHEELS (30° TO 40°) WITH RISING STEM



FUA003 / FUA004



FUA005 / FUA006



	Lenght «A» (mm (in))	Weight (kg (lb))
FUA003	45 (1,77)	2,7 (5,9)
FUA004	65 (2,56)	3 (6,6)
FUA005	45 (1,77)	2,4 (5,3)
FUA006	65 (2,56)	2,6 (5,7)

Maximum allowed torque: 1000 Nm (740 lb.ft)

IMPORTANT

For your comfort and safety, please carefully read the instruction manual before using the portable valve actuator.

Thanks to the various interfaces, the adaptors can be used with any portable valve actuator and any head (straight, right angle or banjo). They also enable you to use the actuators for applications other than activating valves and on many types of interface other than handwheels.

INTERFACES FOR ADAPTORS SAxxx AND SUAxxx WITHOUT A BANJO HEAD

Using the **KPA** interface, you can manipulate the **SAxxx and SUAxxx** adaptors without a banjo head. Please note, this configuration is not compatible with handwheels that have a rising stem.

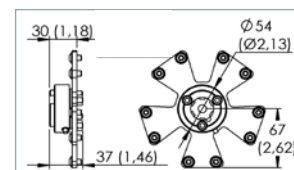
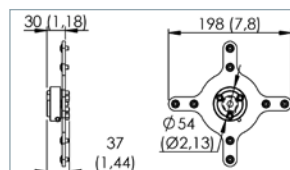
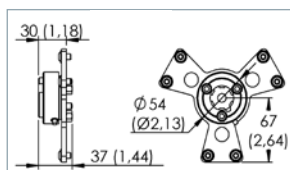
The KPA interface is available in 3 versions:

KPA003 for the SA003 adaptor

KPA004 for the SA004 and SUA adaptors

KPA005 for the SA005, SA006 and SA007 adaptors

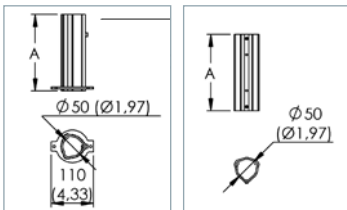
Reference	Weight (kg (lb))	Max torque (Nm (lb.ft))
KPA003	0.6 (1,3)	350 (260)
KPA004	0.8 (1,8)	1000 (740)
KPA005	0.7 (1,5)	1000 (740)



IMPORTANT

For your comfort and safety, please carefully read the instruction manual before using the portable valve actuator.

EXTENSION BARS

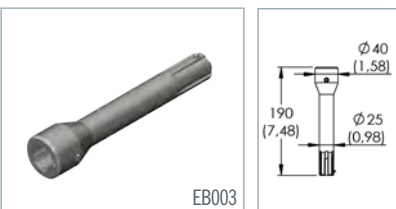


EBx02

EBx04



EB001 / EB002



EB003

We have a wide range of **extension bars** which enable operators to move away from the handwheel or valve, notably in the case of tapered handwheels and underground / buried valves. **Light** and **robust**, they can be used on **rising stems** up to a 48 mm maximum diameters.

The **EBX02** extension bars fix directly on to the **CSB** adaptors.

The **EBX04** extension bars fix on to the **FUA** adaptors using the **TTA** interface, or directly onto the **FSB**.

All the extension bars can connect to our actuators using the **TTA** interface **for the banjo heads** and the **KTA** interface **for straight and right angle heads** (See technical sheet page 41).

The **EB00X telescopic extension bars** are specifically adapted for manipulating **underground / buried valves**. On one end they have a square $\frac{3}{4}$ " male connector that connects to a standard socket. They can be activated either by a **straight or right angle actuator**, or by an actuator with a **banjo head** (using the **KHA002** interface, see below). In case the valve is deep in the ground, one can use the **EB01X extensions** to the telescopic **EB00X**.

The shaft extension **EB003** fits on any actuator shaft and makes it **160 mm** longer.

Reference	Weight (kg (lb))	Max torque (Nm (lb.ft))	"L" (mm (in))	length "A" (mm (in))	Maxi stem Ø (mm (in))
EB001	4,4 (9,7)	1000 (740)	1020-1726 (40) (68)	1020-1726 (40-68)	N/A
EB002	2,2 (4,9)	1000 (740)	570-940 (22) (37)	570-940 (22,5-37)	N/A
EB003	0,85 (1,9)	1000 (740)	190 (7,5)	-	N/A
EB011	3,7 (8,2)	1000 (740)	1000 (39,4)	37 (1,46)	N/A
EB012	1,9 (4,2)	1000 (740)	500 (19,7)	37 (1,46)	N/A
EB202/EB204	1,3 (2,9)	1000 (740)	200 (7,9)	50 (1,97)	48 (1,89)
EB402/EB404	2,5 (5,5)	1000 (740)	400 (15,7)	50 (1,97)	48 (1,89)
EB602/EB604	3,7 (8,7)	1000 (740)	600 (23,6)	50 (1,97)	48 (1,89)

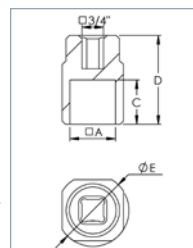
Reference	Interface for straight or right angle heads	Interface for Banjo head	Interface for adaptor	Type of adaptor
EB001/EB002	Direct	KHA002	Direct	DCxx/CA3/4
EBX02	KTA 3/4	TTA002	Direct	CSB
EBX03	Direct	N/A	KPAxxx/ KTA 3/4	SUA-FUA/ FSB-CSB
EBX04	KTA 3/4	TTA002	Direct/TTA002	FSB/FUA

SOCKETS FOR EB00X, KTA3/4 AND TTA3/4

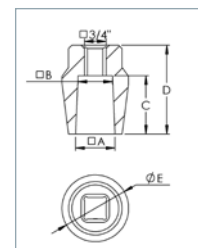
We provide different sockets that can be used with our telescopic valve keys EB001 and EB002 as well as the $\frac{3}{4}$ " square drives. These sockets are designed to connect to most of the valves output shafts.



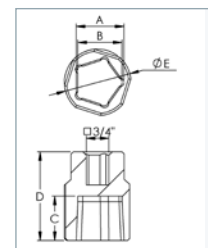
We can also design specific socket on request



Straight square sockets



Pyramidal sockets



tapered pentagonal sockets

IMPORTANT

For your comfort and safety, please carefully read the instruction manual before using the portable valve actuator.

Straight Square Sockets								
Ref.	Type of shaft (mm (in))	Connection	A - B : Print dimension	C : Print depth (mm (in))	E : Outside diameter (mm (in))	D : Socket height (mm (in))	Weight (kg (lb))	Max torque (Nm(lb.ft))
DC020	20 (3/4) Square shaft	3/4" female square drive	22x22 (0,87x0,87)	40 (1,6)	50 (2)	80 (3,2)	1 (2,2)	1000 (740)
DC025	25 (0,98) Square shaft		27x27 (1,06x1,06)	40 (1,6)	50 (2)	80 (3,2)	0,9 (2)	1000 (740)
DC027	27 (1) Square shaft		29x29 (1,14x1,14)	40 (1,6)	50 (2)	80 (3,2)	0,8 (1,8)	1000 (740)
DC030	30 (1,2) Square shaft		32x32 (1,26x1,26)	40 (1,6)	55 (2,2)	80 (3,2)	0,9 (2)	1000 (740)
DC040	40 (1-1/2) Square shaft		42x42 (1,61x1,61)	40 (1,6)	65 (2,6)	80 (3,2)	1 (2,2)	1000 (740)
DC050	50 (2) Square shaft		52x52 (2,05x2,05)	50 (2)	80 (3,2)	90 (3,5)	1,3 (2,9)	1000 (740)
Pyramidal Sockets								
DC012-025	Pyramidal shaft 12-25 (1/2-1)	3/4" female square drive	12-25 (1/2-1)	40 (1,6)	50 (2)	80 (3,2)	1 (2,2)	1000 (740)
DC031-035	Pyramidal shaft 31-35 (1,2-1,4)		31-35 (1,2-1,4)	52 (2,1)	60 (2,4)	80 (3,2)	0,9 (2)	1000 (740)
tapered pentagonal Sockets								
DP040-044	tapered pentagonal shaft 40-44 (1-1/2 - 1-3/4)	3/4" female square drive	40-44 (1-1/2 - 1-3/4)	40 (1,6)	60 (2,4)	80 (3,2)	1 (2,2)	1000 (740)

INTERFACES FOR ADAPTORS FSB, CSB, EXTENSION BARS AND SOCKETS

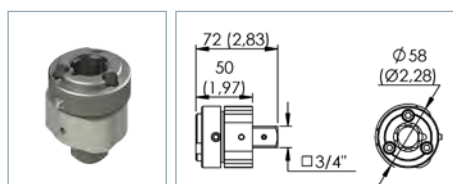
DIRECT CONNECTION

Reference	Weight (kg (lb))
KTA $\frac{3}{4}$	0,7 (1,54)

Maximum allowed torque : 1000 Nm (740 lb.ft)

The **KTA $\frac{3}{4}$** interface enables actuators to drive FSB and CSB adapters and EBX04 extensions. It also **connects to any type of socket** with a $\frac{3}{4}$ " female square connection.

By removing the $\frac{3}{4}$ " square drive, you can also use it to connect to any $\frac{3}{4}$ " male square drive.



KTA $\frac{3}{4}$ (for straight or right angle heads)

INTERFACES FOR BJH

Reference	Weight (kg (lb))	Max torque (Nm (lb.ft))
TTA002	0,7 (1,54)	1000 (740)
TTA $\frac{3}{4}$	1,1 (2,43)	1000 (740)
KHA002	0,9 (2,0)	1000 (740)

Maximum allowed torque : 1000 Nm (740 lb.ft)

The **TTA $\frac{3}{4}$** interface enables a banjo head to **connect to any type of socket** with a $\frac{3}{4}$ " female square connection. By removing the $\frac{3}{4}$ " square drive, you can also use it to connect to any $\frac{3}{4}$ " male square drive.

You can also fix it onto an adapter (SA004, SUAxxx, FUA005, FUA006) and remove the $\frac{3}{4}$ " square drive so that you can **connect a EB001 or EB002 telescopic extension to the adapter**.

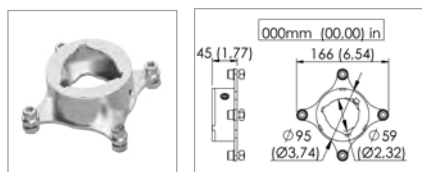
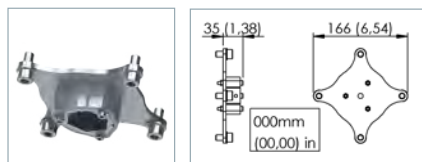
Please note, this interface cannot be used with a rising stem.

The **TTA002** interface enables a banjo head to **connect to FSB and CSB adapters and EBX04 extensions**. It is also required on some adapters (SA004, SUAxxx, FUAxxx) if you want to use a EBx04 extension.

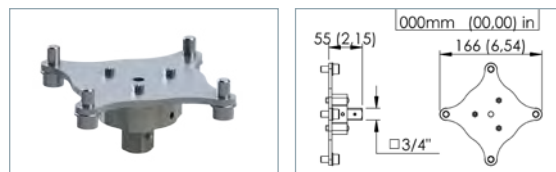
This configuration (except for FUA003 and FUA004) can be used with a rising stem if its diameter is smaller than 48mm and its length shorter than the extension length.

The **KHA002** interface enables a banjo head to **connect to EB001 or EB002 telescopic extensions**.

Please note, this interface cannot be used with a rising stem



TTA002 (for banjo heads)



TTA $\frac{3}{4}$ (para cabezales BJH)

IMPORTANT

For your comfort and safety, please carefully read the instruction manual before using the portable valve actuator.

TORQUE REACTION MANAGEMENT SYSTEM

1/3

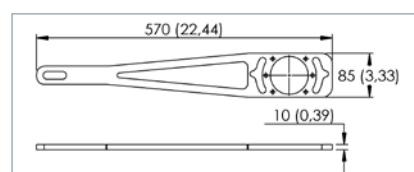
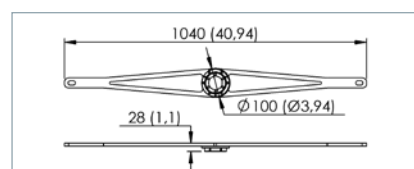
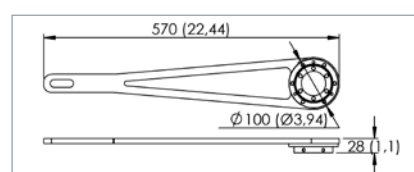
TORQUE REACTION

To guarantee operator **safety** and **comfort**, it's **essential** to use a **torque reaction management system**. Several types of system are available for use in different situations. Each is compatible with the whole range of actuators and adaptors because of their standard flange.

SINGLE AND DOUBLE REACTION ARMS

Our actuators are supplied with a **torque reaction arm** which enables the torque to be controlled by a strap attached to the end of the bar and to a fixed point in the working environment. In this way, **the operator is not exposed to the torque reaction**, in particular at the end of the process.

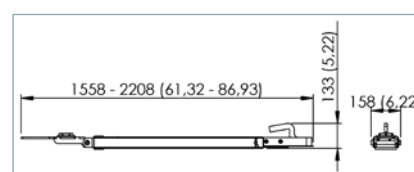
Reference	Weight (kg (lb))	Max torque (Nm (lb.ft))
BR001	1,8 (4)	1000 (740)
BR002	3 (6,6)	1000 (740)
BR003	1,5 (3,3)	1000 (740)



ARTICULATED REACTION ARM FIXED TO VEHICLE TRAILER HITCH

This **telescopic metal bar** can be easily positioned between a vehicle's trailer hitch and the actuator. Ideal for **valves buried beneath roads**, or for any valve which has an upward facing handwheel.

Reference	Weight (kg (lb))	Max torque (Nm (lb.ft))
BA001	12.3 (27,1)	1000 (740)



IMPORTANT

For your comfort and safety, please carefully read the instruction manual before using the portable valve actuator.

FOOT HELD ARTICULATED REACTION ARM

You don't need to attach this torque reaction system to anything – By simply standing on the reaction arm, the operator doesn't need to carry the torque reaction with his arms, his own weight does the job !

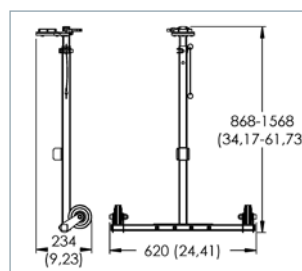
Reference	Weight (kg (lb))	Max torque (Nm (lb.ft))
BA002	5,3 (11,7)	350 (260)



BA002



Example of use with a buried / underground valve.

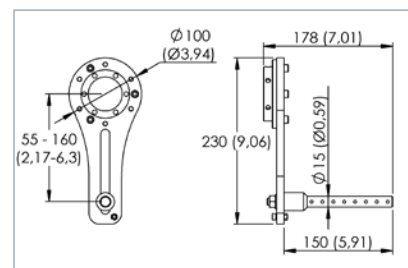


TORQUE REACTION FINGER

This simple reaction **system is quickly and easily adjustable** to most of the valves and penstocks that do not have handwheel, just an output shaft (square, keyed ...). The distance between the finger and the rotation center can be adjusted. The finger comes inside a flange that is already placed on the valve, or simply comes to rest on the valve body.

The maximum torque depends on where the point of contact is on the finger.

Reference	Weight (kg (lb))	Max torque (Nm (lb.ft))
BS001	1,5 (2,2)	350 (260)



IMPORTANT

For your comfort and safety, please carefully read the instruction manual before using the portable valve actuator.

TORQUE REACTION MANAGEMENT SYSTEM

3/3

TORQUE REACTION

TELESCOPIC BIPOD

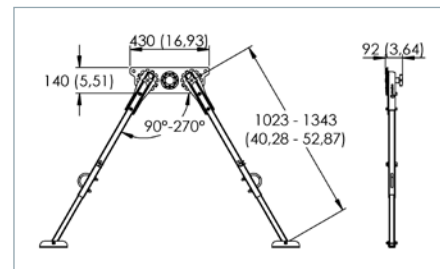
The bipod is **simple, small, easy to use and practical**. It's adapted for use in a wide variety of situations.

With its two telescopic legs and a flange that can be placed in **any position**, it redirects the torque without any difficulty into the ground, a wall or any other fixed point.

Reference	Weight (kg (lb))	Max torque (Nm (lb.ft))
BP002	12.3 (27.1)	1000 (740)



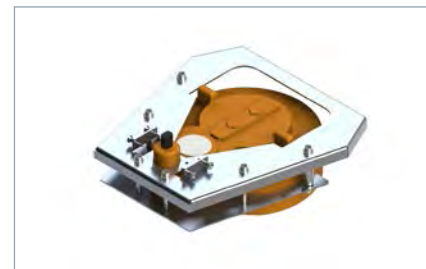
BP002



SPECIAL, MADE TO ORDER ADAPTERS AND TORQUE REACTION SYSTEMS

These flanges are designed to be used with a **specific valve or system**. Before using it, you need to equip the valve with a fixed system on to which the actuator can be placed. Some of them therefore require some **preliminary design** but thereafter the flange is perfectly adapted to both the system and application. This flange is particularly useful for valves and systems that do not have a handwheel and need activating regularly.

These flanges are **made to order** by our technical department based on the specific characteristics of your system.



CUSTOM DESIGN

IMPORTANT

For your comfort and safety, please carefully read the instruction manual before using the portable valve actuator.

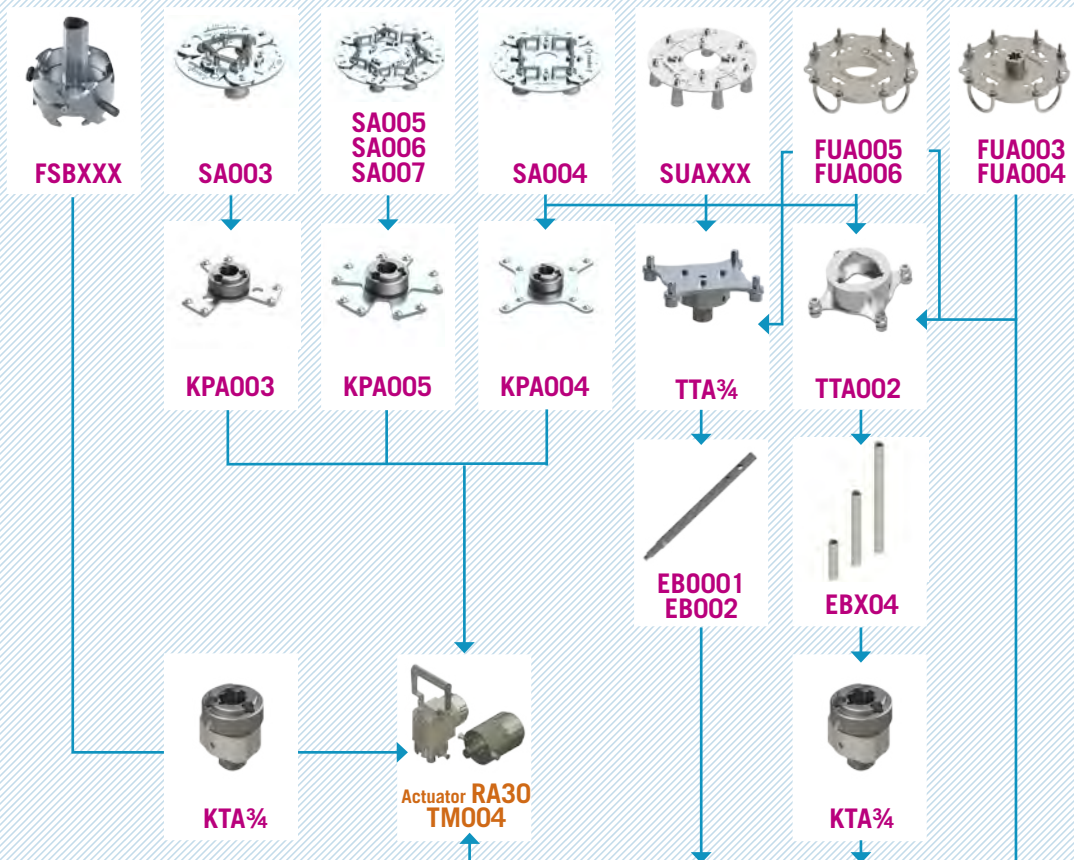


ADAPTORS SELECTION GUIDE

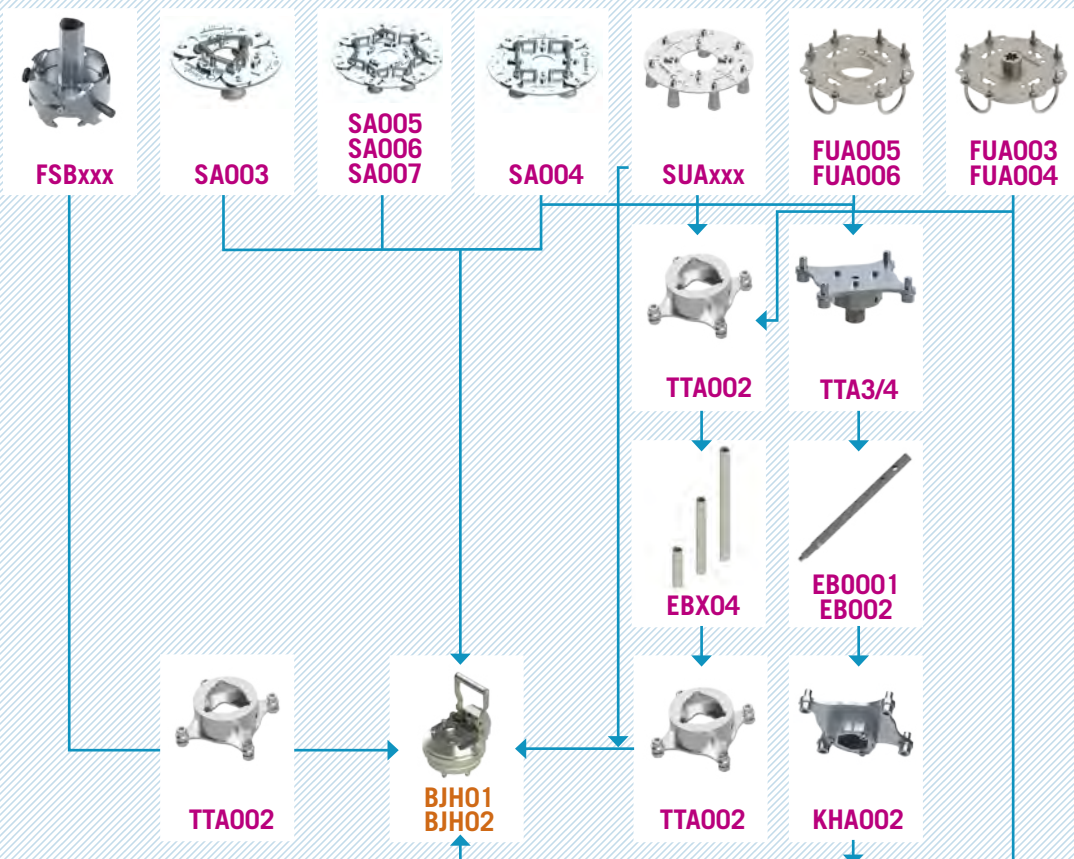
FLAT HANDWHEELS NO RISING STEM



FLAT HANDWHEELS (<30°) No rising stem - No BJH



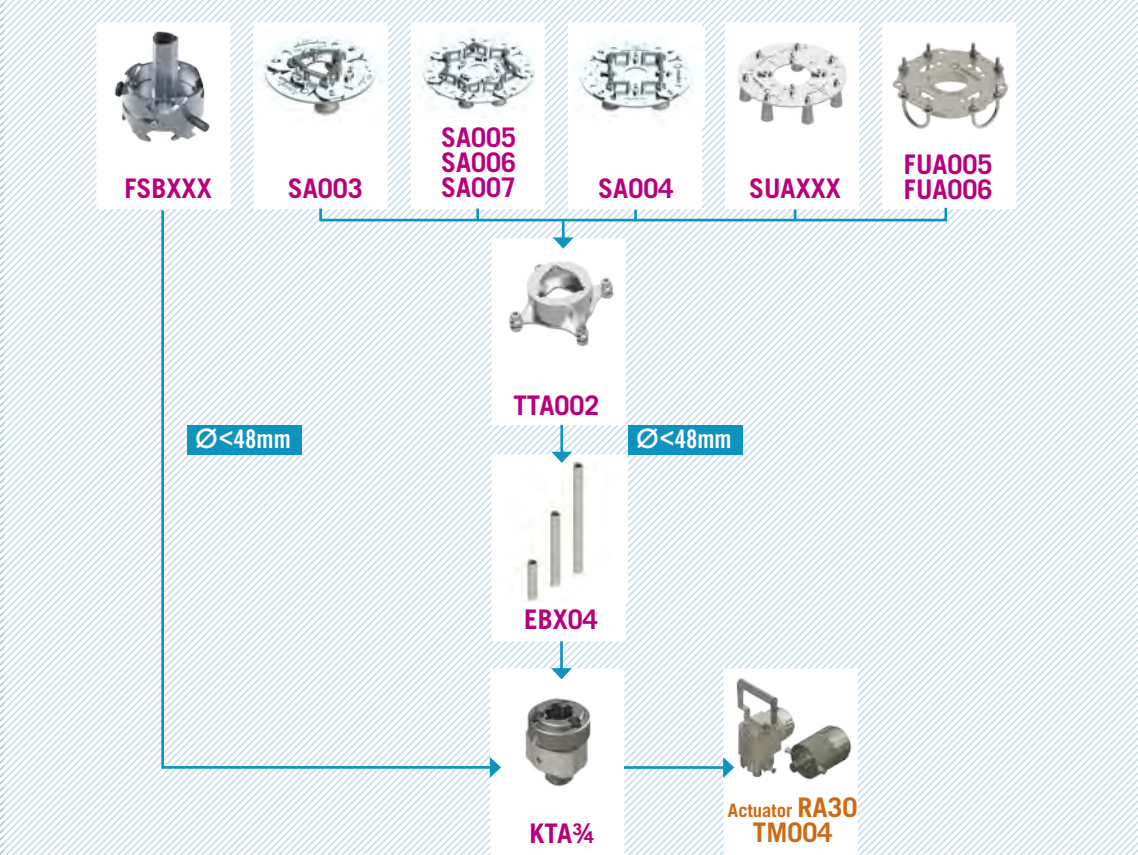
FLAT HANDWHEELS (<30°) No rising stem- with BJH



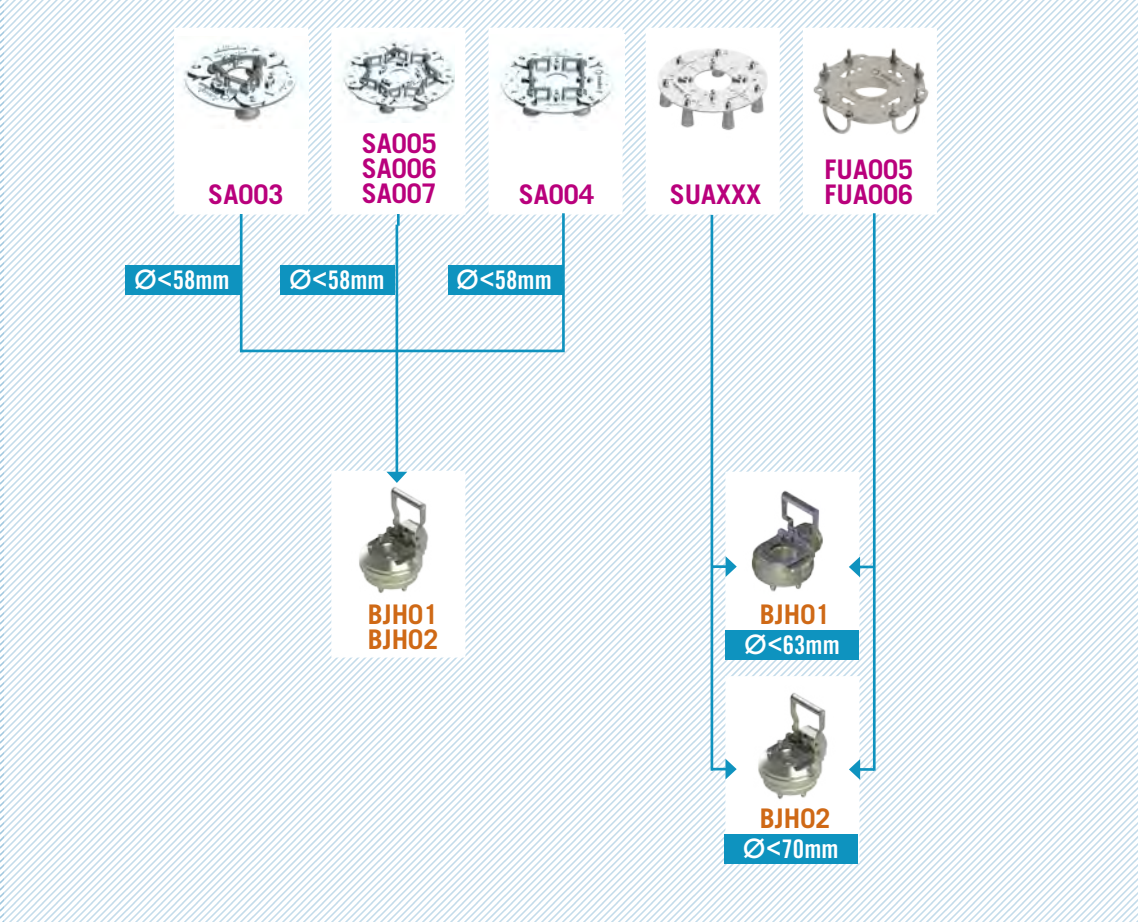
FLAT HANDWHEELS RISING STEM



FLAT HANDWHEELS (<30°) Rising stem Ø<48mm - No BJH



FLAT HANDWHEELS (<30°) Rising stem 48<Ø<72mm - with BJH

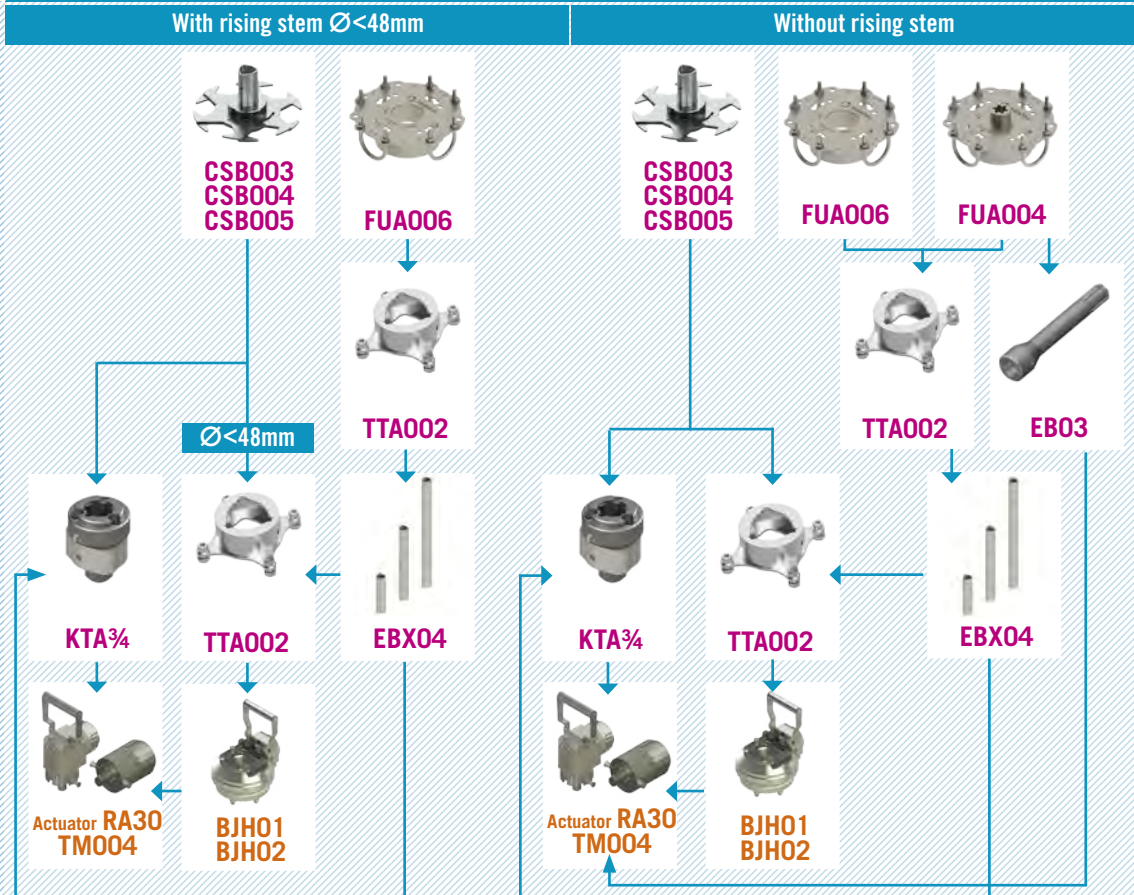


TAPERED HANDWHEELS WITH AND WITHOUT RISING STEM ($\varnothing < 50 \text{ MM}$)

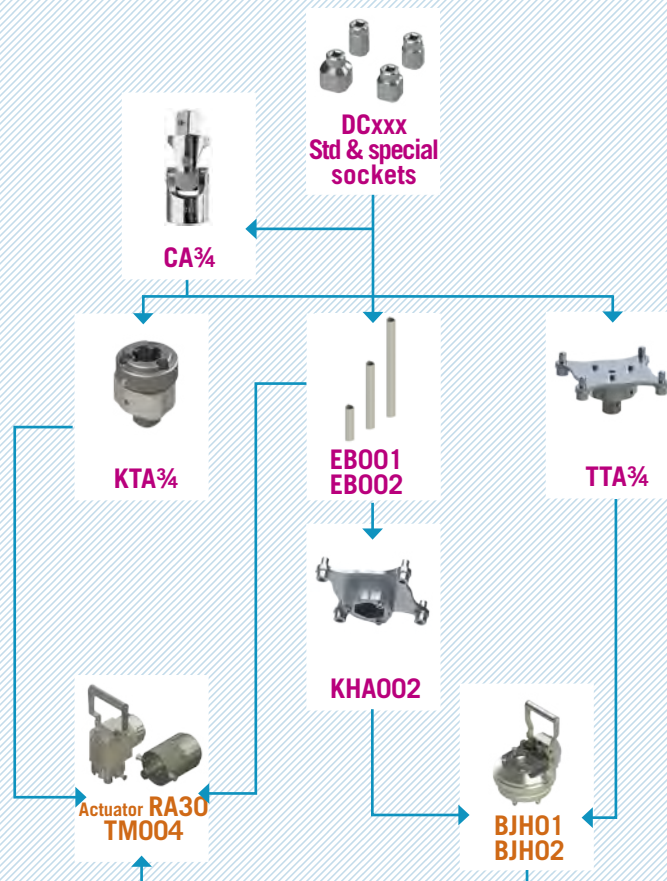


TAPERED HANDWHEELS ($>30^\circ$)

With and without rising stem
With and without BJH



NO HANDWHEEL - Drive shaft - With and without BJH





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