

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



HL83

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

Maximum torque :
1000 Nm (740 lb.ft)

GAS

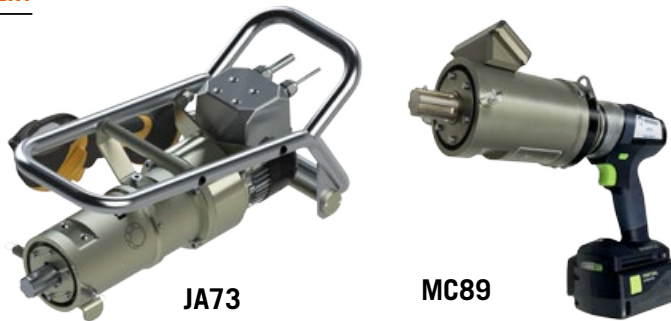


PY68

Unlimited autonomy
Ideal for remote environments

Maximum torque :
1000 Nm (740 lb.ft)

BATTERY



JA73

MC89

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

Maximum torque :
1000 Nm (740 lb.ft)

KIT H2O



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

Maximum torque :
850 Nm (630 lb.ft)

2 CHOOSE YOUR ACTUATOR'S HEAD

Unless otherwise stated, all heads are compatible with any actuator

STRAIGHT

For HL83 Easy and Standard duty only



RIGHT ANGLE

RA20

Note: Using the RA20 right angle head increases torque and decreases speed by 33% and is only possible with HL83 Easy and Standard duty.



RA30



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



3 CHOOSE YOUR ADAPTOR

STANDARD FIXED FINGERS ADAPTORS



SELF-ADJUSTING AND SELF-CENTERING FINGERS ADAPTORS



SPOKE ADAPTORS FOR FLAT HANDWHEELS



SPOKE ADAPTORS FOR TAPERED HANDWHEELS



FIXED UNIVERSAL ADAPTORS

(To be installed on the hand wheel)



SQUARE DRIVES FOR STANDARD SOCKETS



4 CHOOSE YOUR TORQUE REACTION MANAGEMENT SYSTEM

TORQUE REACTION ARM

(simple or double)



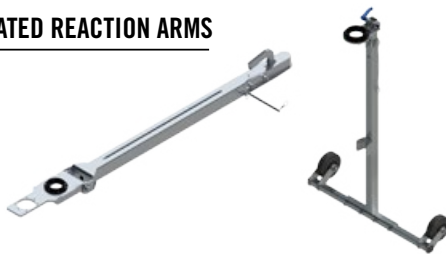
TELESCOPIC BIPOD



TORQUE REACTION FINGER



ARTICULATED REACTION ARMS



MAKE TO ORDER SPECIAL FLANGES

(to be installed on the valve)



CUSTOM DESIGN

5 CHOOSE YOUR OPTIONS AND ACCESSORIES

REVOLUTION COUNTER

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



TORQUE LIMITER

Mechanical torque
limiter, manual re-engage
Adjustable torque limit



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



TRANSPORTATION AND STORAGE CASES

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



BATTERIES

Long-life battery
Backpack



AIR TREATMENT AND SAFETY UNITS

For HL83 pneumatic portable
actuators





REDUCTION RATIO

(1 to 3 digits)
see table overleaf

H L 8 3 X X X X X X

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

OPTION

(2 digits)
see table overleaf

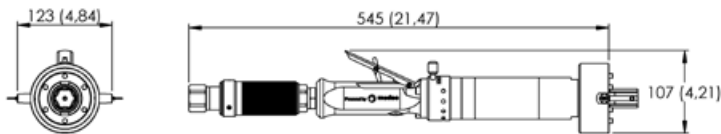
modtec pneumatic portable valve actuators are the most **compact**, **light** and **powerful**. They offer a wide choice in terms of power and **can be used in all environments**, even the very difficult ones.

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

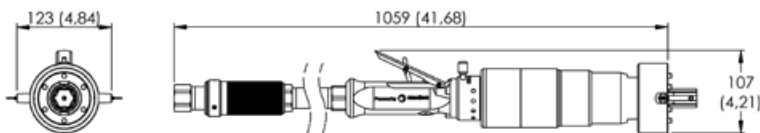
The maximum torque can be set by simply adjusting air supply pressure : No risk for your valves.

LAYOUT

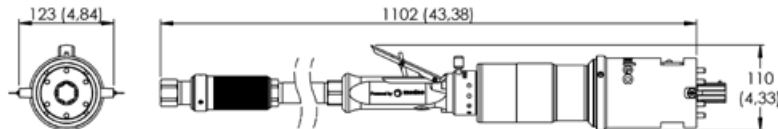
HL83



HL83S



HL83H



LAYOUT	Weight kg (lb)
HL83E	3,6 (7,9)
HL83S	6,5 (14,3)
HL83H	8,4 (18,5)

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

OPTIONS AND ACCESSORIES

OPTIONS (page 18)						
Right-angled head RA20		▶			▶	
Digital revolution counter*			▶			▶
Torque limiter**			▶	▶	▶	
CODE	00	01	02	03	04	05

*digital revolution counter and torque limiter can't be ATEX certified.

**see torque and speed values page 18 : « Options »
Not all options are available for all models. See below for availability.

ACCESSORIES	Page
Drive head	21
Adaptors and interfaces	22-29
Torque reaction systems	30-32
Air management	33-34
Other accessories	35

! 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 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	2000 (71)	G 3/4	8,2 (0,32)	12 (0,47)	6	AC107	AC118
HL83E	950 (34)	G 3/4	7 (0,3)	9 (0,4)	4	AC107	AC118

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

PERFORMANCE

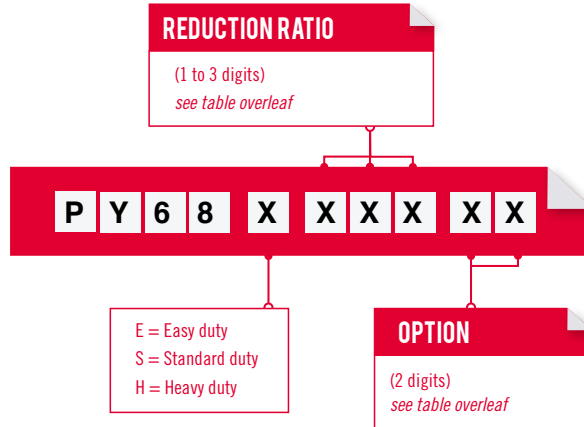
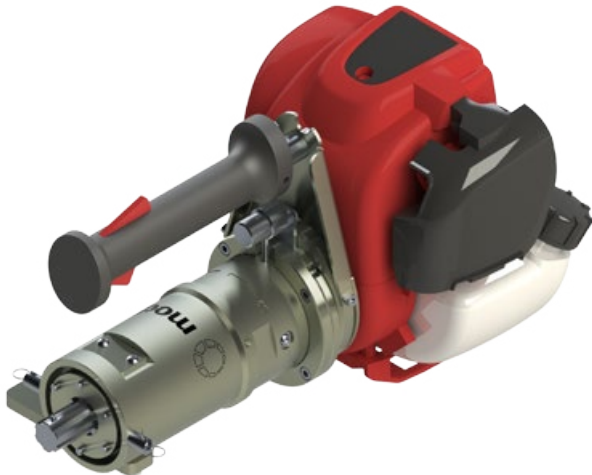
Straight or with RA30	Free speed (rpm)			Max torque (Nm (lb.ft))			Starting torque (Nm (lb.ft))			Options available				
	4 bars (58 psi)	5 bars (72 psi)	62 bars (90 psi)	4 bars (58 psi)	5 bars (72 psi)	62 bars (90 psi)	4 bars (58 psi)	5 bars (72 psi)	62 bars (90 psi)	01	02	03*	04*	05*
HL83E-023	500	530	560	13 (10)	17 (13)	21 (15)	10 (7)	14 (10)	17 (13)	▶				
HL83E-054	220	230	240	31 (23)	39 (29)	49 (36)	25 (18)	31 (23)	39 (29)	▶				
HL83S-035	230	250	270	100 (74)	120 (89)	145 (107)	80 (59)	96 (71)	116 (85)	▶	▶	▶	▶	▶
HL83S-060	130	140	150	170 (125)	200 (150)	250 (180)	130 (96)	160 (120)	200 (150)	▶	▶	▶	▶	▶
HL83H-111	70	76	83	250 (180)	300 (220)	370 (270)	230 (170)	280 (210)	350 (260)		▶	▶	▶	▶
HL83H-169	46	50	54	380 (280)	450 (330)	570 (420)	300 (220)	360 (270)	450 (330)		▶	▶	▶	▶
HL83H-321	24	26	29	720 (530)	860 (640)	1070 (790)**	670 (490)	810 (600)	1010 (750)**		▶	▶	▶	▶
With RA20 right angle head	Free speed (rpm)			Max torque (Nm (lb.ft))			Starting torque (Nm (lb.ft))			Options available				
	4 bars (58 psi)	5 bars (72 psi)	62 bars (90 psi)	4 bars (58 psi)	5 bars (72 psi)	62 bars (90 psi)	4 bars (58 psi)	5 bars (72 psi)	62 bars (90 psi)	01	02	03*	04*	05*
HL83E-023	380	400	420	18 (13)	22 (16)	28 (21)	14 (10)	18 (13)	22 (16)	▶				
HL83E-054	160	170	180	41 (30)	52 (38)	65 (48)	33 (24)	42 (31)	52 (38)	▶				
HL83S-035	170	180	190	120 (90)	160 (120)	190 (140)	96 (71)	130 (95)	150 (110)	▶			▶	
HL83S-060	100	105	115	220 (160)	270 (200)	330 (240)	175 (130)	215 (160)	265 (200)	▶			▶	
HL83H-111	Not available													
HL83H-169	Not available													
HL83H-321	Not available													
With banjo head BJH01	Free speed (rpm)			Max torque (Nm (lb.ft))			Starting torque (Nm (lb.ft))			Options available				
	4 bars (58 psi)	5 bars (72 psi)	62 bars (90 psi)	4 bars (58 psi)	5 bars (72 psi)	62 bars (90 psi)	4 bars (58 psi)	5 bars (72 psi)	62 bars (90 psi)	01	02	03*	04*	05*
HL83E-023	120	130	140	54 (40)	65 (48)	82 (60)	52 (38)	64 (47)	72 (53)					
HL83E-054	52	56	60	125 (92)	150 (110)	190 (140)	115 (84)	150 (110)	180 (130)					
HL83S-035	57	62	67	350 (260)	430 (320)	530 (390)	280 (210)	340 (250)	420 (310)		▶	▶		▶
HL83S-060	Not available													
HL83H-111	Not available													
HL83H-169	Not available													
HL83H-321	Not available													
With banjo head BJH02	Free speed (rpm)			Max torque (Nm (lb.ft))			Starting torque (Nm (lb.ft))			Options available				
	4 bars (58 psi)	5 bars (72 psi)	62 bars (90 psi)	4 bars (58 psi)	5 bars (72 psi)	62 bars (90 psi)	4 bars (58 psi)	5 bars (72 psi)	62 bars (90 psi)	01	02	03*	04*	05*
HL83E-023	160	170	180	40 (30)	49 (36)	62 (46)	32 (24)	39 (29)	50 (37)					
HL83E-054	70	75	80	95 (70)	115 (84)	145 (110)	76 (56)	92 (68)	115 (84)					
HL83S-035	75	82	90	260 (190)	320 (240)	400 (290)	210 (155)	260 (190)	320 (240)		▶	▶		▶
HL83S-060	44	48	52	450 (330)	550 (400)	680 (500)	360 (270)	440 (320)	540 (400)		▶	▶		▶
HL83H-111	23	25	28	750 (550)	900 (660)	1100 (810)**	690 (510)	840 (620)	1050 (770)**		▶	▶		▶
HL83H-169	Not available													
HL83H-321	Not available													

*see torque and speed values page 18 : « Options »

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

IMPORTANT

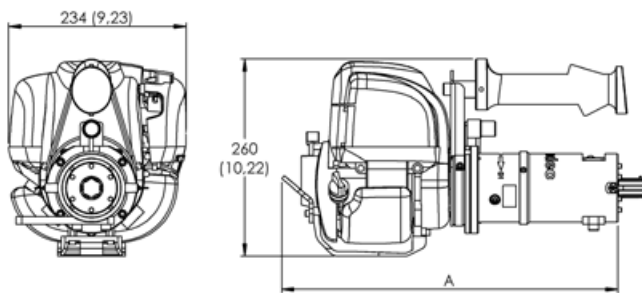
For your comfort and safety, please carefully read the instruction manual before using the portable valve actuator.



modtec gas 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	10,6 (23,4)	457 (17,99)
PY68H-641		

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 18)				
Digital revolution counter		▶		▶
Torque limiter*			▶	▶
CODE	00	02	03	05

*see torque and speed values page 18 : « Options »
 Not all options are available for all models.
 See below for availability.

! 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	21
Adaptors and interfaces	22-29
Torque reaction systems	30-32
Other accessories	35

PERFORMANCE

Straight or 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	15	1140 (840)**	850 (630)	▶	▶	▶

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	27	600 (440)	460 (340)	▶	▶	▶
PY68S-148	Not available					
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						

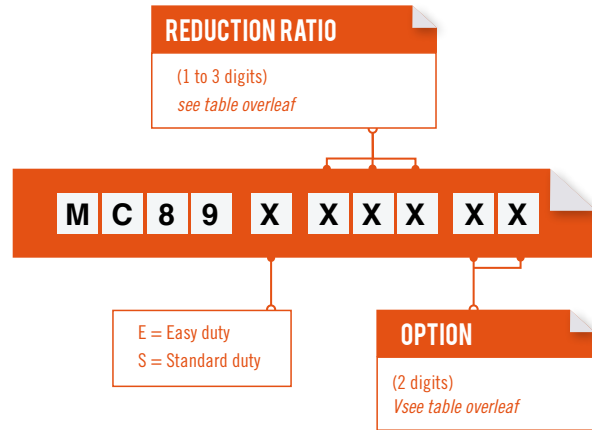


*see torque and speed values page 18 : « Options »

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

IMPORTANT

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

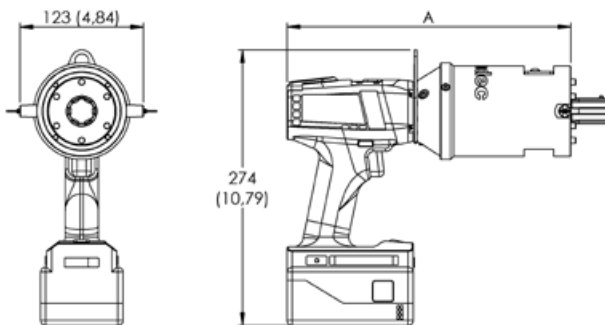


Although it is **super light and compact**, the MC89 Portable Valves Actuator delivers a **850 Nm** (630 lb.ft) maximum torque. This makes it the perfect tool for any « **Easy** » or « **Standard** » duty job, for any valve type, indoor or outdoor, with a great autonomy. Its two **18V Lithium-Ion batteries** 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



MC89		
LAYOUT	Weight (kg (lb))	Lenght «A» (mm (in))
MC89E - 007	5,1 (11,2)	283 (11,14)
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	BAT150	BAT154-US
Voltage	18V	
Capacity	5 Ah	8 Ah
Autonomy*	24 min	37 min
Charging times with standard charger BAT 152	45 min	87 min
Charging times with quick charger 153	33 min	69 min
Weight	0,7 kg (1,5 lbs)	1 kg (2,2 lbs)



Charger technical data	BAT152	BAT153
Power supply (input)	120 V	
Mains frequency	60 Hz	
Charging voltage (output)	10,8 - 18 V DC	
Quick charging	Max 6A	Max 8A
Charging temperature range	0°C à +40°C (32- 104°F)	
Safety class	II	
Weight	0,8 kg (1,7 lbs)	1,1 kg (2,4 lbs)



*Autonomy measured at 50% of the maximum load

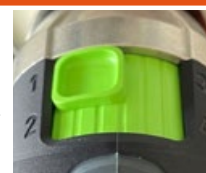
The main power connection kit (ref BAT147) connects any main power plug to the actuator (in place of the battery) and provides an unlimited autonomy.

SPEED CONTROLLER & ELECTRONIC TORQUE LIMITER (See details on page 19)

The MC89 comes with an embedded **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 (5 positions), 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 19-20 to get the speed and torque values for each settings.



OPTIONS AND ACCESSORIES

OPTIONS <small>(page 5)</small>		
Digital revolution counter		▶
CODE	00	02

! 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	21
Adaptors and interfaces	22-29
Torque reaction systems	30-32
Other accessories	35

PERFORMANCE

Straight or with RA30	Free speed (rpm)	Max torque (Nm (lb.ft))	Options available
			02
MC89E-007	450	115 (85)	▶
MC89S-035	94	550 (400)	▶
MC89S-054	61	850* (630)*	▶



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.

With banjo head BJH01	Free speed (rpm)	Max torque (Nm (lb.ft))	Options available
			02
MC89E-007	113	460 (340)	▶
MC89S-035	24	600* (440)*	▶
MC89S-054	14	600* (440)*	▶

* 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).



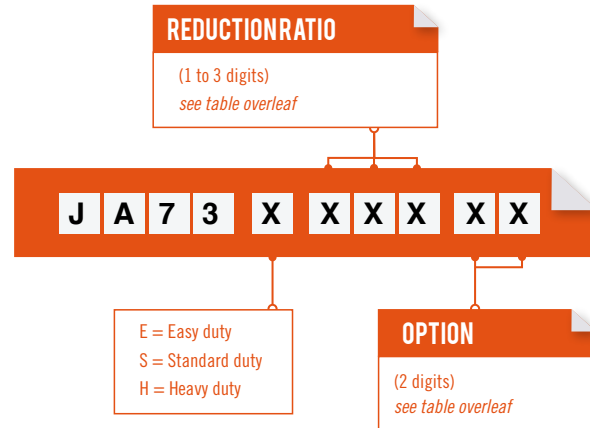
With banjo head BJH02	Free speed (rpm)	Max torque (Nm (lb.ft))	Options available
			02
MC89E-007	150	350 (260)	▶
MC89S-035	31	1000* (740)*	▶
MC89S-054	20	1000* (740)*	▶

* 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).



IMPORTANT

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



Dedicated to the most demanding applications!

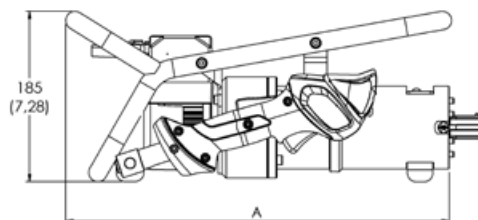
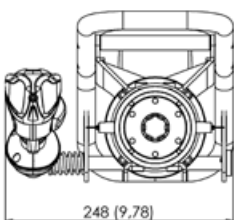
Thanks to its **robustness** and high autonomy batteries, the **JA73 modtec electric portable valve actuator** is able to deliver a **high power** for **more than one hour** continuously. It does not depend on any energy source (electric plug or compressed air network) and can operate freely anywhere. 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 comes 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 (See details on page 18)

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. See details on page 18 for the different settings and torque values available.



OPTIONS AND ACCESSORIES

OPTIONS (page 18)

Digital revolution counter		▶
CODE	00	02



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

ACCESSORIES

ACCESSORIES	Page
Drive head	21
Adaptors and interfaces	22-29
Torque reaction systems	30-32
Other accessories	35

PERFORMANCE

Straight or with RA30	Free speed (rpm)	Max torque (Nm (lb.ft))	Starting torque (Nm (lb.ft))	Options available
				02
JA73E-023	360	44 (32)	35 (26)	▶
JA73S-077	110	150 (110)	120 (89)	▶
JA73S-132	63	250 (180)	200 (150)	▶
JA73H-169	49	325 (240)	260 (190)	▶
JA73H-309	27	590 (435)	470 (350)	▶
JA73H-564	15	1080* (800)*	860 (640)	▶
With banjo head BJH01	Free speed (rpm)	Max torque (Nm (lb.ft))	Starting torque (Nm (lb.ft))	Options available
				02
JA73E-023	90	180 (130)	140 (100)	▶
JA73S-077	27	590 (435)	470 (350)	▶
JA73S-132	not available			
JA73H-169	not available			
JA73H-309	not available			
JA73H-564	not available			
With banjo head BJH02	Free speed (rpm)	Max torque (Nm (lb.ft))	Starting torque (Nm (lb.ft))	Options available
				02
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	not available			
JA73H-564	not available			



* 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 modéc 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 12)

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
 Integrated electronic torque limiter
 Speed controller

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 28

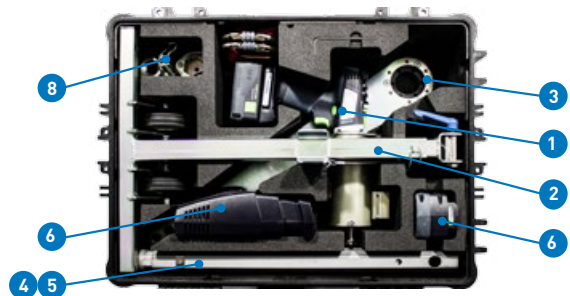
N°5



EB012

EXTENSION FOR TELESCOPIC VALVE KEY

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



Actuator	MC89E-007-02	MC89S-035-02	MC89S-054-02
Socket			
DC020	H20400	H20500	H20600
DC027	H20401	H20501	H20601
DC030	H20402	H20502	H20602
DC040	H20403	H20503	H20603
DC050	H20404	H20504	H20604
DC012-025	H20405	H20505	H20605
DC031-035	H20406	H20506	H20606
DC025	H20407	H20507	H20607
DPO40-044	H20408	H20508	H20608

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.

▶ RIGHT-ANGLE HEAD RA20



Only available for the HL83 Easy duty and Standard duty range, the **right angle head RA20** is very light and compact.

It enables the actuator to operate in small, tight spaces.

It adds a reduction ratio of 1.33 to the tool, thus **increasing the torque and reducing the speed by one third**.

Maximum torque allowed: 330Nm

▶ 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)*

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)		

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)			

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)			

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-007 without BJH, with or without RA30

Speed setting	Torque limit setting	1	2	3	4	5
1	max speed (rpm)	37	42	48	53	59
	max torque (Nm (lb.ft))	12 (9)	38 (28)	62 (46)	90 (66)	115 (85)
2	max speed (rpm)	59	66	74	81	88
	max torque (Nm (lb.ft))	11 (8)	34 (25)	57 (42)	81 (60)	107 (79)
3	max speed (rpm)	180	210	240	270	300
	max torque (Nm (lb.ft))	3,0 (2)	11 (8)	20 (15)	28 (20,5)	37 (27)
4	max speed (rpm)	280	320	370	400	450
	max torque (Nm (lb.ft))	2,0 (1,5)	7,5 (5,5)	14 (10,5)	20 (14,5)	26 (19)

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 (132,5)	300 (221)	430 (317)	550 (405,5)
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 (9,5)	50 (37)	100 (73,5)	140 (103)	175 (129)
4	max speed (rpm)	58	67	77	84	94
	max torque (Nm (lb.ft))	10 (7,5)	35 (26)	65 (48)	95 (70)	125 (92)

Torque / Speed matrix : MC89E-007 with BJH01

Speed setting	Torque limit setting	1	2	3	4	5
1	max speed (rpm)	9	11	12	13	15
	max torque (Nm (lb.ft))	48 (35,5)	152 (112)	248 (183)	360 (265,5)	460 (339)
2	max speed (rpm)	15	17	19	20	22
	max torque (Nm (lb.ft))	44 (32,5)	136 (100)	228 (168)	324 (239)	428 (315)
3	max speed (rpm)	45	53	60	68	75
	max torque (Nm (lb.ft))	12,0 (9)	44 (32,5)	80 (59)	112 (82,5)	148 (109)
4	max speed (rpm)	70	80	93	100	113
	max torque (Nm (lb.ft))	8,0 (6)	30,0 (22)	54 (40)	80 (59)	104 (76,5)

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 (177)				
2	max speed (rpm)	3				
	max torque (Nm (lb.ft))	200 (147,5)				
3	max speed (rpm)	10	11	13	14	
	max torque (Nm (lb.ft))	52,0 (38,5)	200 (147,5)	400 (295)	560 (413)	
4	max speed (rpm)	15	17	19	21	24
	max torque (Nm (lb.ft))	40,0 (29,5)	140 (103)	260 (192)	380 (280)	500 (369)

Torque / Speed matrix : MC89E-007 with BJH02

Speed setting	Torque limit setting	1	2	3	4	5
1	max speed (rpm)	12	14	16	18	20
	max torque (Nm (lb.ft))	36 (26,5)	114 (84)	186 (137)	270 (199)	345 (254)
2	max speed (rpm)	20	22	25	27	29
	max torque (Nm (lb.ft))	33 (24)	102 (75)	171 (126)	243 (179)	321 (237,5)
3	max speed (rpm)	60	70	80	90	100
	max torque (Nm (lb.ft))	9,0 (6,5)	33 (24)	60 (44)	84 (62)	111 (82)
4	max speed (rpm)	93	107	123	133	150
	max torque (Nm (lb.ft))	6,0 (4,5)	22,5 (16,5)	41 (30)	60 (44)	78 (57,5)

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 (132,5)	540 (398)	900 (664)		
2	max speed (rpm)	4	5	5		
	max torque (Nm (lb.ft))	150 (110,5)	480 (354)	810 (597,5)		
3	max speed (rpm)	13	15	17	19	21
	max torque (Nm (lb.ft))	39,0 (28,5)	150 (110,5)	300 (221)	420 (310)	525 (387)
4	max speed (rpm)	19	22	26	28	31
	max torque (Nm (lb.ft))	30,0 (22)	105 (77,5)	195 (144)	285 (210)	375 (276,5)

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)	5,0	5,8	7	7	8
	max torque (Nm (lb.ft))	90 (66)	280 (206)	460 (340)	660 (487)	850 (627)
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 (583)
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)	8,0	9,0	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 (265.5)				
2	max speed (rpm)	2				
	max torque (Nm (lb.ft))	320 (236)				
3	max speed (rpm)	6	7	8		
	max torque (Nm (lb.ft))	80,0 (59)	320 (236)	600 (442.5)		
4	max speed (rpm)	10	11	13	14	
	max torque (Nm (lb.ft))	60 (44.5)	220 (162)	400 (295)	580 (428)	

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 (619.5)			
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 (464.5)	810 (597.5)
4	max speed (rpm)	13	15	17	18	20
	max torque (Nm (lb.ft))	45 (33)	165 (121.5)	300 (221)	435 (321)	570 (420.5)

On the HL83 and PY68

On these actuators, 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 @ 6,2 bars (rpm)	Torque limit setting range (Nm (lb.ft))	
			min	Max
HL83S-035-03/05	1:54	175	40 (30)	90 (66)
HL83S-035-04	1:72	132	55 (41)	120 (89)
HL83S-060-03/05	1:127	71	90 (66)	220 (162)
HL83S-060-04	1:169	53	120 (89)	290 (214)
HL83H-111-03/05	1:199	46	140 (103)	340 (251)
HL83H-169-03/05	1:258	36	180 (133)	440 (325)
HL83H-321-03/05	1:564	16	400 (295)	960 (708)

With RA30 right angle head	Reduction ratio	Free speed @ 6,2 bars (rpm)	Torque limit setting range (Nm (lb.ft))	
			min	Max
HL83S-035-03/05	1:54	175	40 (30)	90 (66)
HL83S-035-04	1:72	132	55 (41)	120 (89)
HL83S-060-03/05	1:127	71	90 (66)	220 (162)
HL83S-060-04	1:169	53	120 (89)	290 (214)
HL83H-111-03/05	1:199	46	140 (103)	340 (251)
HL83H-169-03/05	1:258	36	180 (133)	440 (325)
HL83H-321-03/05	1:564	16	400 (295)	960 (708)**

** Maximum 600 Nm (440 lb.ft)

With banjo head BJH01	Reduction ratio	Free speed @ 6,2 bars (rpm)	Torque limit setting range (Nm (lb.ft))	
			min	Max
HL83S-035-03/05	1:216	44	160 (120)	160 (120)
HL83S-060-03/05	1:508	17	360 (264)	880 (648)**
HL83H-111-03/05	1:796	11		
HL83H-169-03/05	1:1032	9		
HL83H-321-03/05	1:2256	4		

** Maximum 600 Nm (440 lb.ft)

With banjo head BJH02	Reduction ratio	Free speed @ 6,2 bars (rpm)	Torque limit setting range (Nm (lb.ft))	
			min	Max
HL83S-035-03/05	1:162	58	120 (90)	360 (198)
HL83S-060-03/05	1:381	23	270 (198)	660 (486)
HL83H-111-03/05	1:597	15	420 (310)	1020 (750)
HL83H-169-03/05	1:774	12	540 (400)	1320 (975)*
HL83H-321-03/05	1:1692	5		

* Maximum 1000 Nm (740 lb.ft)

Without drive head	Reduction ratio	Free speed @ 6,2 bars (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 RA30 right angle head	Reduction ratio	Free speed @ 6,2 bars (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)**

** Maximum 600 Nm (440 lb.ft)

With banjo head BJH01	Reduction ratio	Free speed @ 6,2 bars (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 banjo head BJH02	Reduction ratio	Free speed @ 6,2 bars (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)	1020 (750)
PH68H-293-03/05	1:879	10	540 (399)	1320 (975)*
PY68H-641-03/05	1:1692	5		

IMPORTANT

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

ACTUATOR'S DRIVE HEADS

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

STANDARD DUTY RING-TYPE DRIVE HEAD (“BANJO HEAD”)

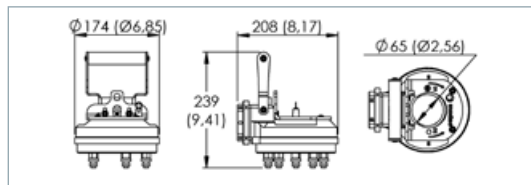


Maximum allowed torque: 600 Nm (440 lb.ft)
Weight: 5kg (11 lb)

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”)

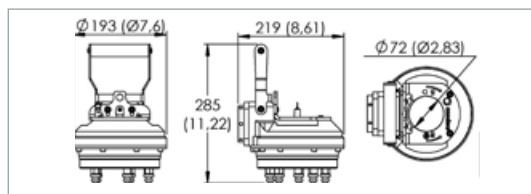


Maximum allowed torque: 1000 Nm (740 lb.ft)
Weight: 8.6kg (19 lb)

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



RIGHT-ANGLE DRIVE HEAD RA30



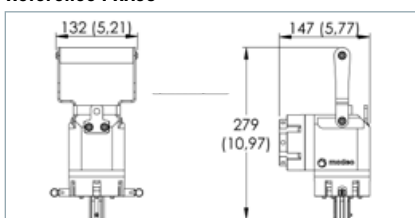
Maximum allowed torque : 600 Nm (440 lb.ft)
Weight : 4.2 kg (9.3 lb)

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



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° 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 27).

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



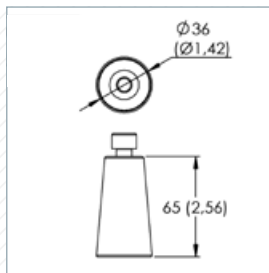
4 X SUA001 FIXED ON THE BANJO HEAD



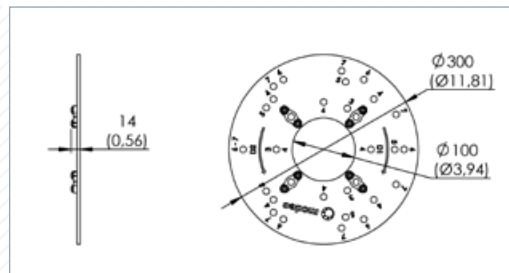
5 X SUA001 FIXED ON THE BANJO HEAD

FINGERS USED ON A DRIVE PLATE :

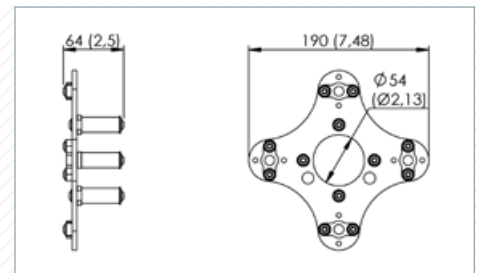
Requires KPA004 interface with a straight or right angle drive head



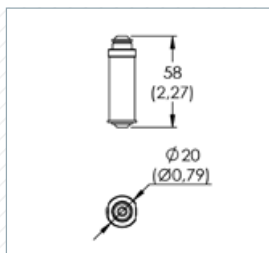
SUA001/ SUA901
(FINGER FOR BJH OR SUA002)



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.

ADAPTORS

2/5

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 see page 27). To **avoid scratching the handwheel**, use the protector **SA103/104/105/106/107** (see page 27).

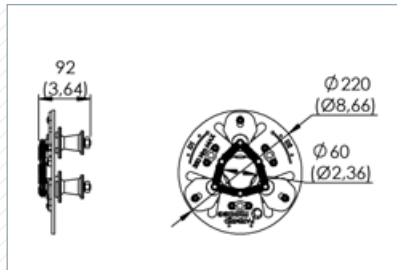
These adaptors **save a significant amount of time and money** as there's no need to buy and install a drive plate for each handwheel.



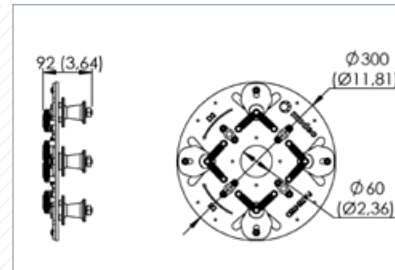
SA003



SA004



FOR 3 OR 6 SPOKES HANDWHEELS



FOR 2 OR 4 SPOKES HANDWHEELS

	Weight (kg (lb))	Max torque (Nm (lb.ft))	Interface for straight 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



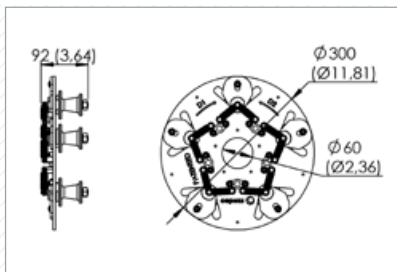
SA005



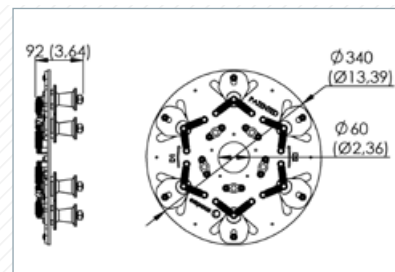
SA006



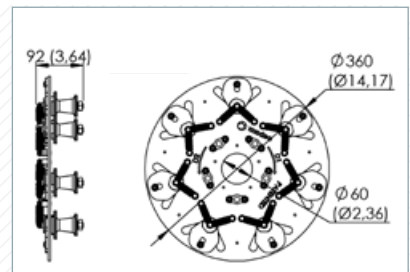
SA007



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°) handwheels; a second for tapered handwheels (> 30°).

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° 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 **KTA002** interface, and with a **banjo head** in conjunction with the **TTA002** (see page 29).

FSB		
LAYOUT	Weight (kg (lb))	Length «A» (mm (in))
FSBxxx-20	5,2 (11,5)	242 (9,53)
FSBxxx-40	6,4 (14,1)	442 (17,4)
FSBxxx-60	7,6 (16,8)	642 (25,28)



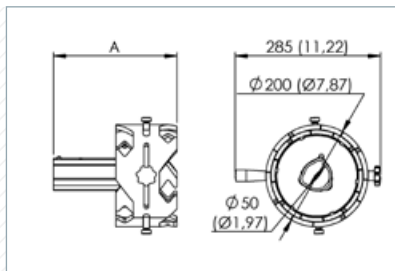
FSB245

For 2, 4 or 5 spokes handwheels

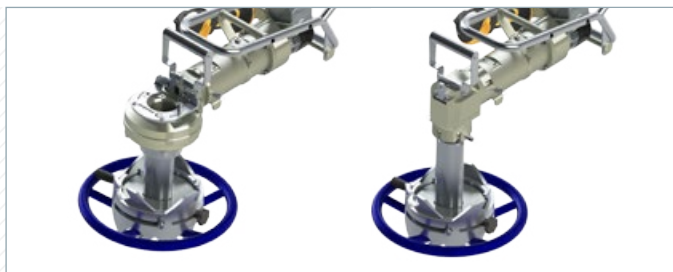
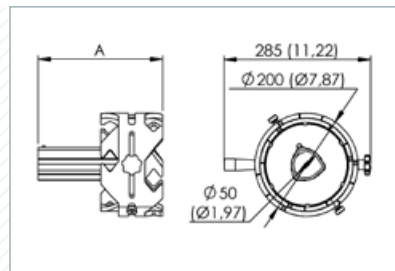


FSB356

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 KTA002 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.

ADAPTORS

4/5

► 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 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** due to the **KTA002**, and with a **banjo head** in conjunction with the **TTA002 interface** (see page 27).

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-30	5,4 (11,9)	401 (15,79)
CSBxxx-60	6,6 (14,6)	601 (23,66)



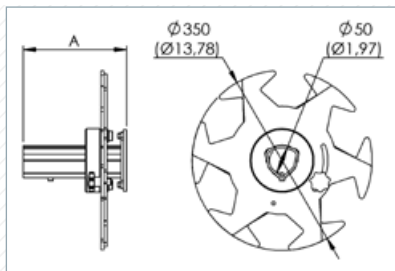
CSB003



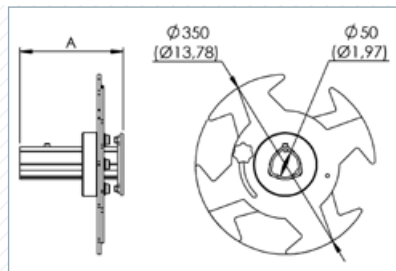
CSB004



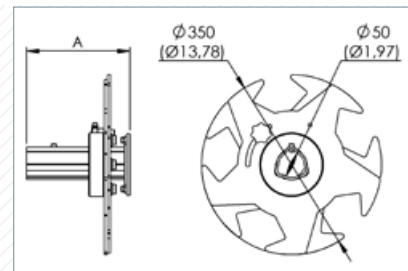
CSB005



FOR 3 OR 6 SPOKES HANDWHEELS

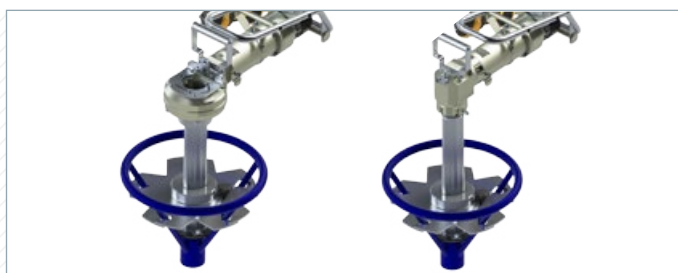


FOR 2 OR 4 SPOKES HANDWHEELS



FOR 5 SPOKES HANDWHEELS

Maximum allowed torque: 1000 Nm (740 lb.ft)
Weight : 4.2 kg (9,3 lb)



CSB adaptors require the KTA002 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)

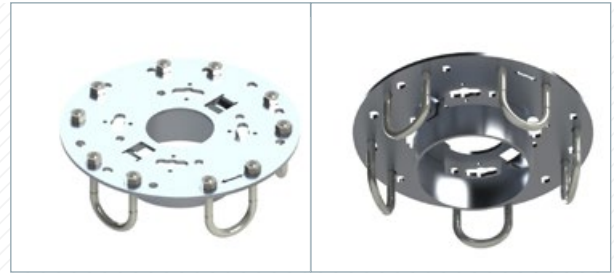
These adaptors must be **fixed to the handwheel before use**. Thanks to their multiple “U” clamps that catch the handwheel’s spokes, they can fix on to almost every type of handwheel.

The FUA adaptor is available in 4 versions for flat or tapered handwheels: **FUA001** (or **FUA316** for stainless steel version) **for flight or slightly tapered handwheels** with spokes inclined up to 30° in relation to the wheel’s plane; **FUA002** (or **FUA317** for stainless steel version) **for tapered handwheels** with spokes inclined from 30° to 40° in relation to the wheel’s plane.

These drive plate adaptors can be used **directly on a banjo head**. To use them with a **straight or right angle head**, you need to use the **KPA004 interface** (see page 27). They can also be used with **EBx04 extension bars** using the interface **TTA** (see page 29).



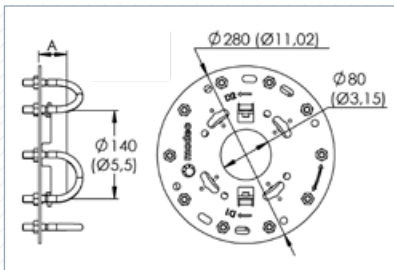
FUA001 FOR FLAT OR SLIGHTLY TAPERED HANDWHEELS (<30°)



FUA002 FOR TAPERED HANDWHEELS (30° TO 40°)

	Lenght «A» (mm (in))	Weight (kg (lb))
FUA001	45 (1,77)	3,1 (6,8)
FUA002	65 (2,56)	3,3 (7,3)

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



Requires KPA004 interface
(or KPA316 for stainless steel
version) with a straight or right
angle drive head

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.

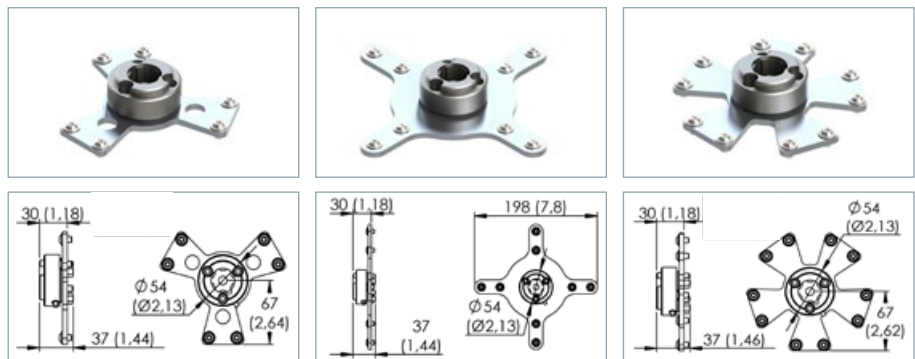
The KPA interface is available in 3 versions:

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)



▶ HANDWHEEL PROTECTORS FOR USE WITH SAxxx ADAPTORS

These protectors, integrated into the self-adjusting and self-centering fingers adaptors (SAxxx), are designed to **protect the handwheel from being scratched during use**. They can be built into the adaptor during assembly in the factory or added later without difficulty.

They are made from high performance polyethylene, which is anti-static and resists wear and tear.

Each adaptor has a corresponding interface:

SA103 for the SA003 adaptor

SA104 for the SA004 adaptor

SA105 for the SA005 adaptor

SA106 for the SA006 adaptor

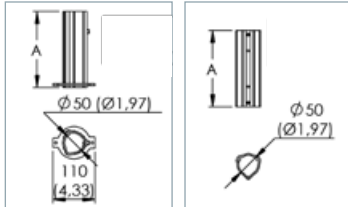
SA107 for the SA007 adaptor



IMPORTANT

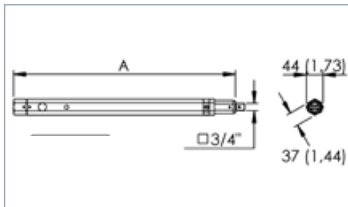
For your comfort and safety, please carefully read the instruction manual before using the portable valve actuator.

EXTENSION BARS



EBx02

EBx04



EB001 / EB002

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 29).

The **EB00X telescopic extension bars** are specifically adapted for manipulating **underground / buried valves**. On one end they have a square 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**.

Reference	Weight (kg (lb))	Max torque (Nm (lb.ft))	"L" (mm (in))	"A" (mm (in))	Maxi stem Ø (mm (in))
EB001	4,4 (9,7)	1000 (740)	1020-1726 (40) (68)	37 (1,46)	N/A
EB002	2,2 (4,9)	1000 (740)	570-940 (22) (37)	37 (1,46)	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 (8,2)	1000 (740)	600 (23,6)	50 (1,97)	48 (1,89)

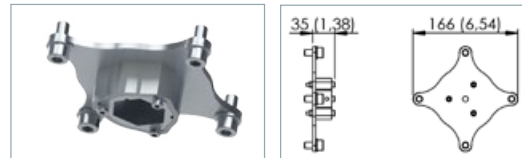
Reference	Interface for straight or right angle heads	Interface for Banjo head	Interface for adaptor	Type of adaptor
EB001/EB002	Direct	KHA002	Direct	DCxxx / CA3/4
EBX02	KTA002	TTA002	Direct	CSB
EBX04	KTA002	TTA002	Direct / TTA002	FSB / FUA

INTERFACES FOR TELESCOPIC VALVE KEY AND BJH

With the **KHA002** interface, you can manipulate the EB0xx extension bars (**telescopic valve keys**) with a banjohead.

Please note, this configuration cannot be used for handwheels with a rising stem.

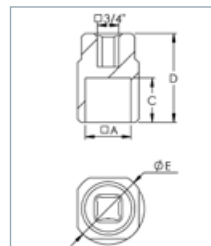
Reference	Weight kg (lb)	Max torque Nm (lb.ft)
KHA002	0,9 (2,0)	1000 (740)



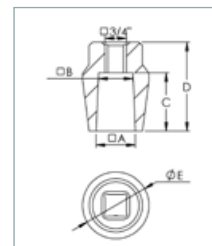
KHA002

SOCKETS FOR EB00X, KTA3/4 AND TTA3/4

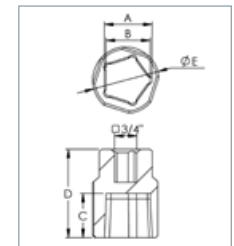
We provide different sockets that can be used with our telescopic valve keys EB001 and EB002 as well as the 3/4" square drives. These sockets are designed to connect to most of the valves output shafts.



Straight square sockets



conical square sockets



conical pentagonal sockets

IMPORTANT

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

INTERFACES

3/3

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)
Conical Square Sockets								
DC012-025	«Pyramidal square 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 square 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)
Conical Pentagonal Sockets								
DP040-044	Pyramidal 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 AND EXTENSION BARS

The **KTA** and **TTA** interfaces enable the actuators to drive the **FSB** and **CSB** adaptors, plus the **extension bars**.

The **KTA** models should be used for actuators with a straight or right angle head.

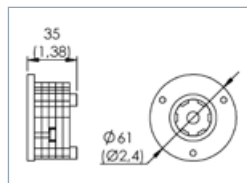
The **TTA** models fix directly on to the banjo head.

Reference	Weight (kg (lb))
KTA002	0,4 (0,88)
TTA002	0,7 (1,54)

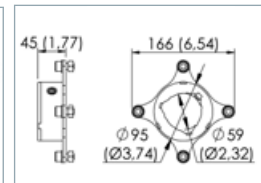
Maximum allowed torque : 1000 Nm (740 lb.ft)



KTA002 (for straight or right angle heads)



TTA002 (for banjo heads)



SQUARE DRIVES

Reference	Weight (kg (lb))	Max torque (Nm (lb.ft))
KTA3/4	1,1 (2,43)	1000 (740)
TTA3/4	1,1 (2,43)	1000 (740)

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

The **KTA3/4** and **TTA3/4** interfaces can take a **3/4" square drive** which connects to **all types of socket** thereby turning all kinds of screws and bolts – this makes it possible to use your actuator for various types of applications.

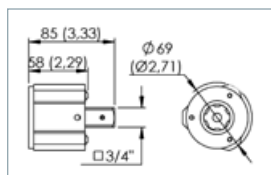
The **KTA** models should be used for actuators with a straight or right angle head.

The **TTA** models fix directly on to the banjo head.

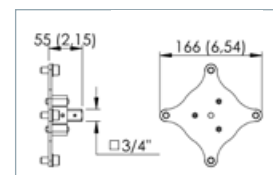
A large range of **standard square sockets** is also available to match most of the valves standards square drives



KTA3/4 (for straight or right angle heads)



TTA3/4 (for banjo heads)



IMPORTANT

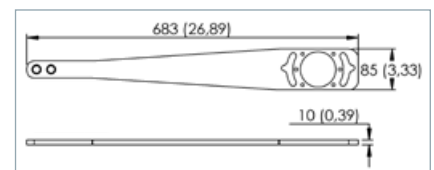
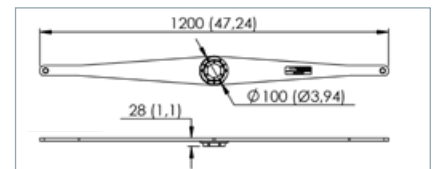
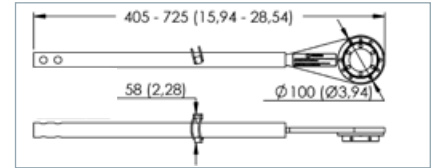
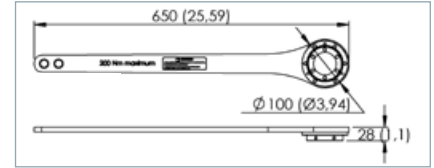
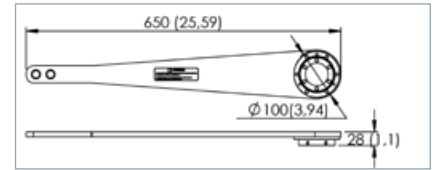
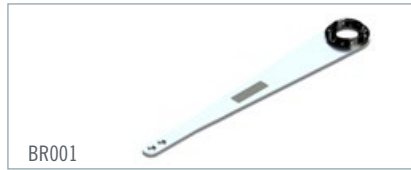
For your comfort and safety, please carefully read the instruction manual before using the portable valve actuator.

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.

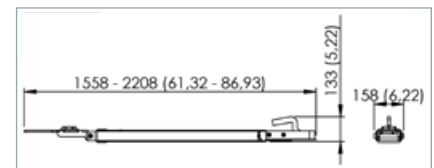
Reference	Weight (kg (lb))	Max torque (Nm (lb.ft))
BR001	3,5 (7,7)	1000 (740)
BR011	1,0 (2,2)	200 (150)
BR021	4,4 (9,7)	200 (150)
BR002	5,6 (12,3)	1000 (740)
BR003	3,4 (7,5)	1000 (740)



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.

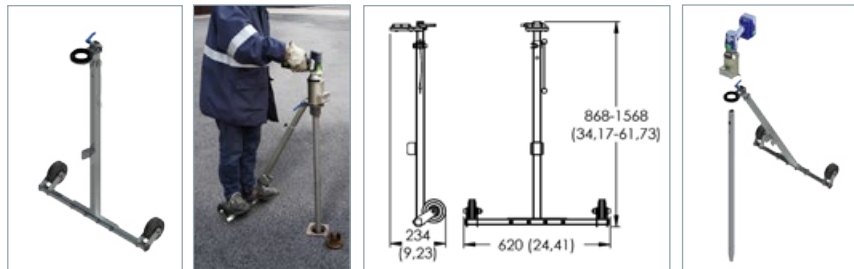
TORQUE REACTION MANAGEMENT SYSTEM

2/3

▶ 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

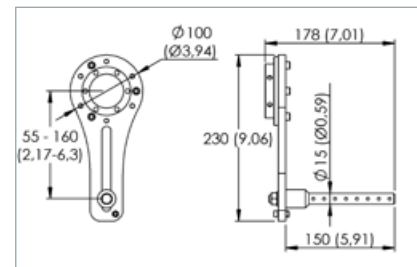
Example of use with a buried / underground valve.

▶ 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.

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

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



IMPORTANT

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

TELESCOPIC BIPOD

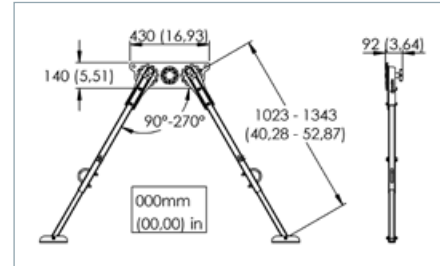
The bipod is **simple, small, easy to use and practical**. It's adapted for use in a wide variety of situations.

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)



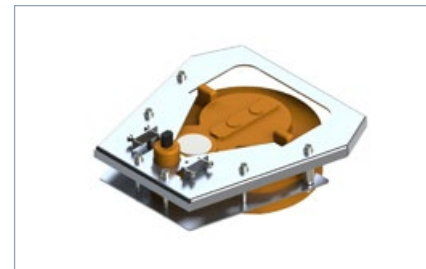
BP002



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.



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**).

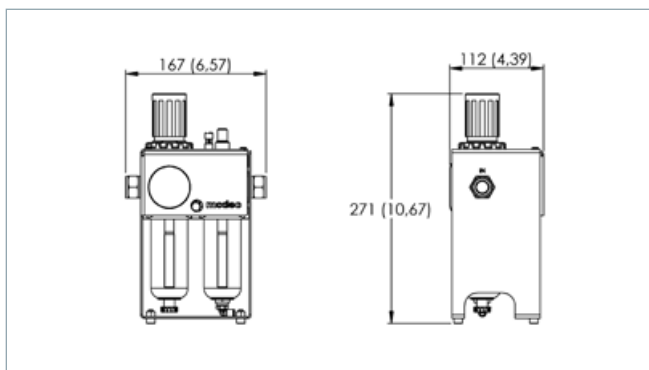
Reference	AC107
Max inlet pressure (23°C / 50°C)	16 / 10 bars 232 / 145 psi
Pressure gauge	0 / 10 bars 0 / 145 psi
Controlled pressure	0,5 / 8 bars 7 / 116 psi
Ambient temperature	0 à +50°C 0 / 122°F
Oil bowl capacity	80 cm ³ 0,003 cfm
Filtration	5 µm
Purge system	Semi-auto
Connection	G ½
Dimensions	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

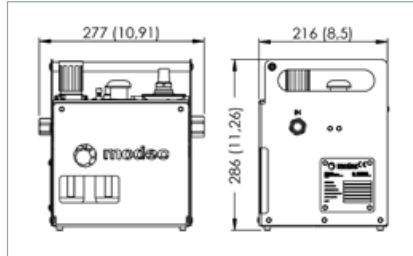
For your comfort and safety, please carefully read the instruction manual before using the portable valve actuator.

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 : G ¹ / ₂ / output : G ³ / ₄
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.

ACCESSOIRES

for transporting and storing portable actuators 3/3

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	VT006
Length mm	1200 (47,2)	860 (33,9)	630 (24,8)	670 (26,4)	355 (14)
Height mm (in)	420 (16,5)	560 (22,0)	500 (19,7)	510 (20,1)	460 (18,1)
Width mm (in)	234 (9,2)	355 (14,0)	370 (14,6)	262 (10,3)	225 (8,9)



«MODEC KIT BOX»

For **regular professional use**, the **modec 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 **modec kit box** can be modified to order and **adapted to your needs**.



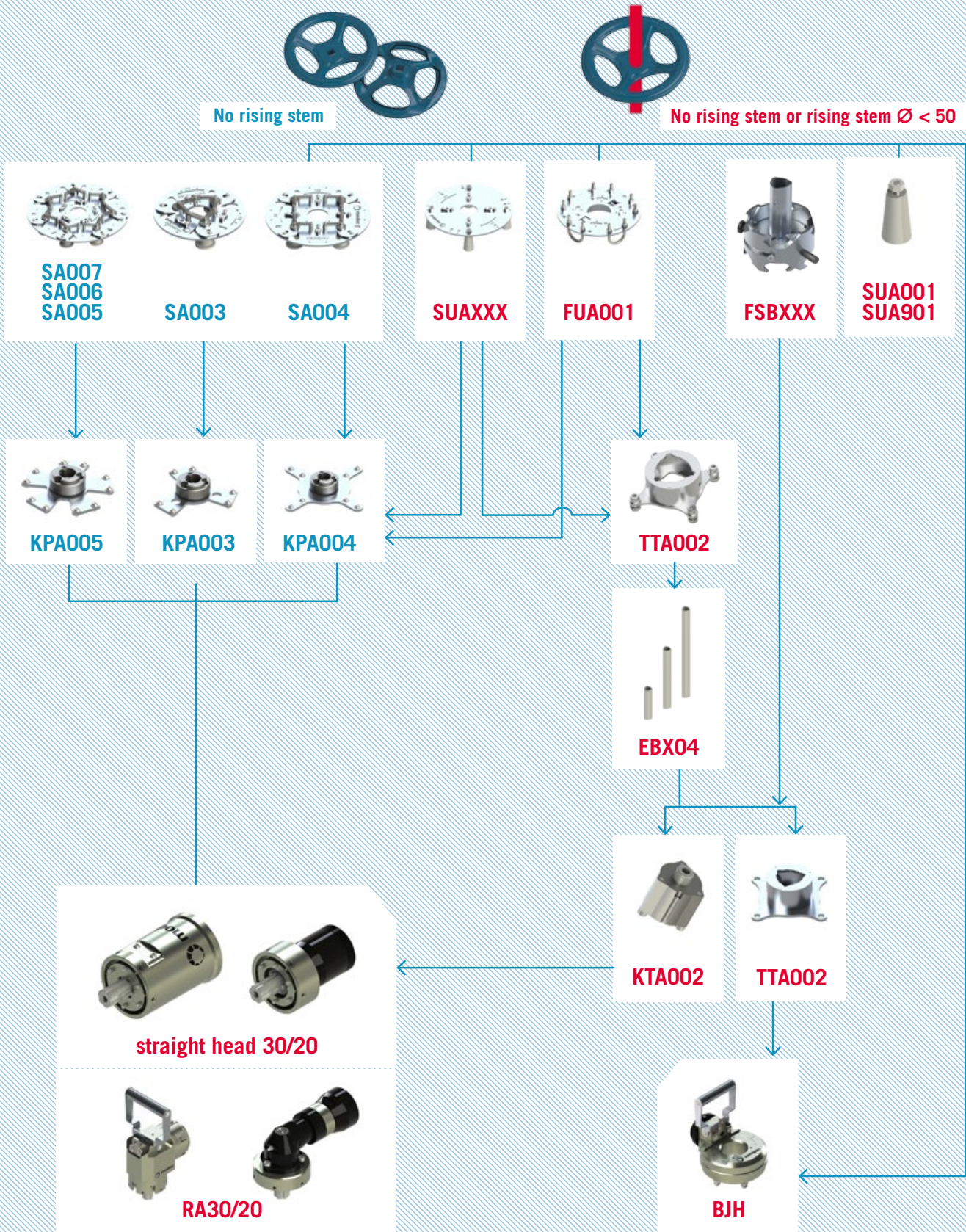
IMPORTANT

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

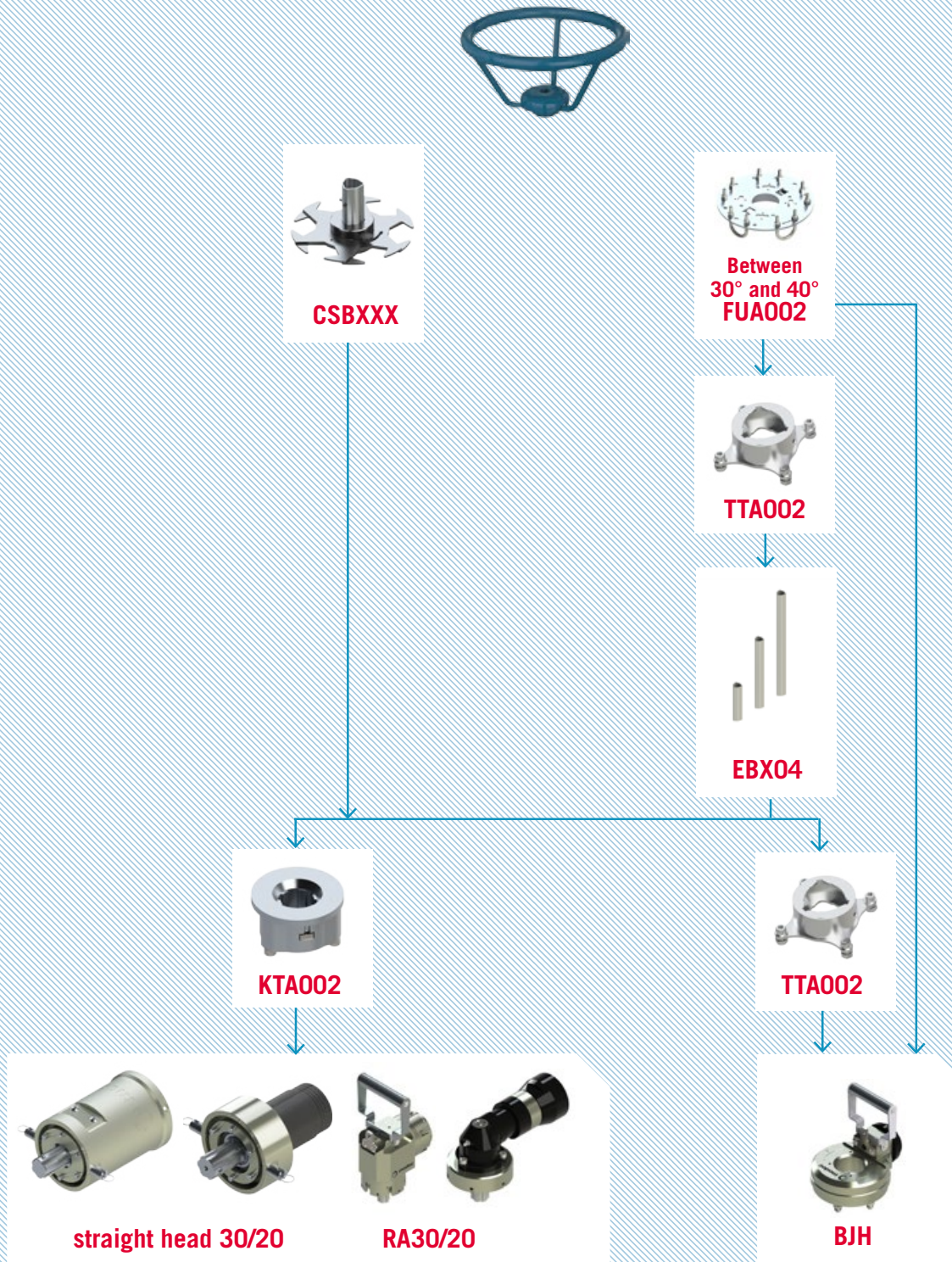


**ADAPTORS
SELECTION
GUIDE**

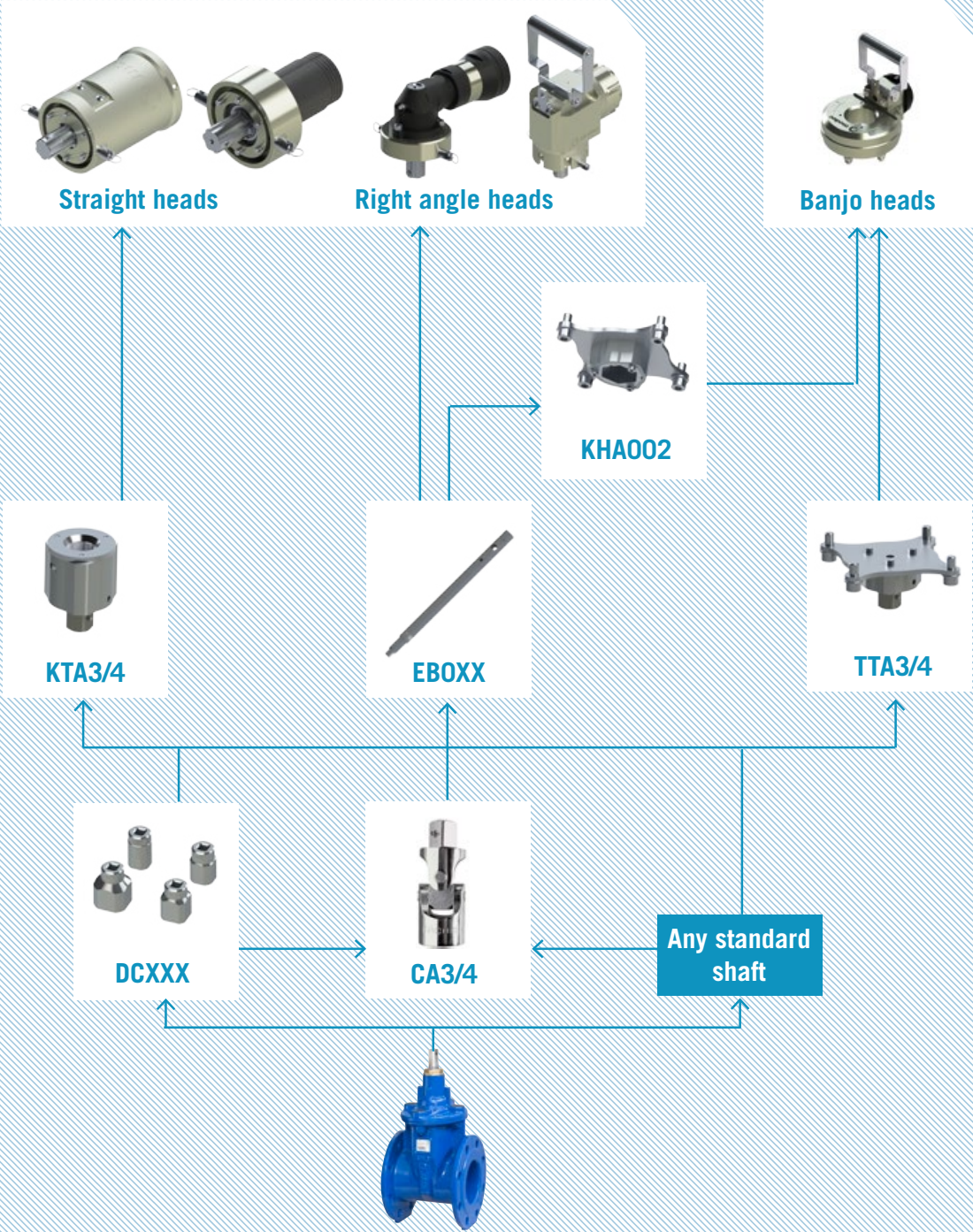
FLAT HAND WHEEL WITH OR WITHOUT RISING STEM

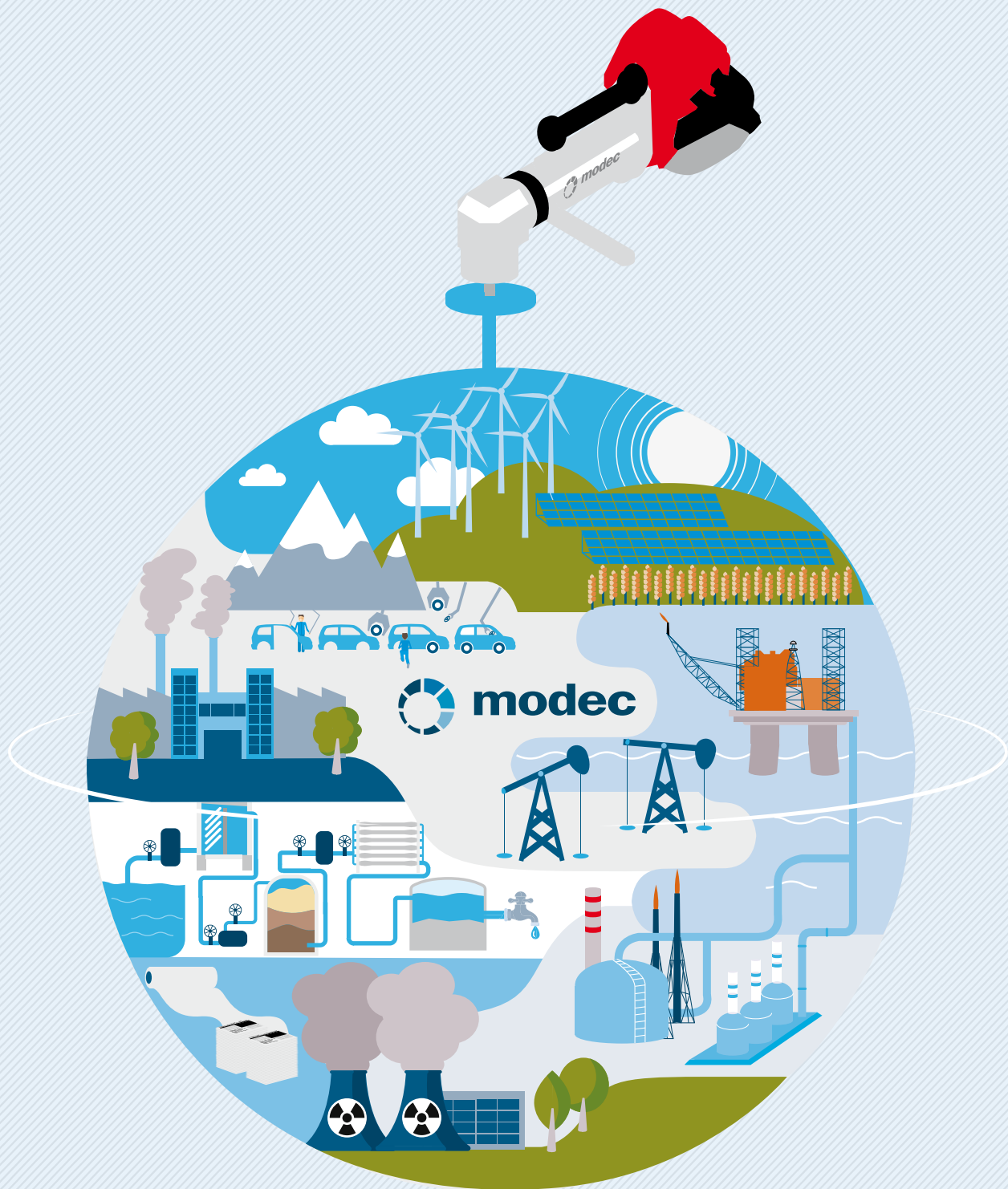


DEEP HAND WHEEL WITH OR WITHOUT RISING STEM ($\varnothing < 50$ MM)



OTHER TYPES OF VALVE SHAFT





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