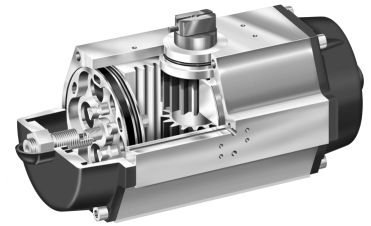




# Pneumatic Quarter Turn Actuator Technical Data



## size 001

### 1. General Data Body

<b>Body Material:</b>	Aluminium anodized acc. DIN 17611 (E6), calibrated
<b>End Caps:</b>	plastic end caps RAL 5002 (other colours upon request)
<b>End Cap Version:</b>	air end caps
<b>End Cap Screws:</b>	material and strength acc. A2 70, DIN 912
<b>Weight:</b>	0,3 kg
<b>Air Connection:</b>	G 1/8"
<b>Shaft:</b>	one piece
<b>Rotation:</b>	clockwise => double acting and spring to close anti- clockwise => double acting and spring to open
<b>Lubrication:</b>	permanent greasing
<b>Piston Support:</b>	PTFE guiding tapes
<b>Interfaces:</b>	actuator/valve: F03; flange acc. DIN 5211 without centring key, with female square

### 2. General Technical Data

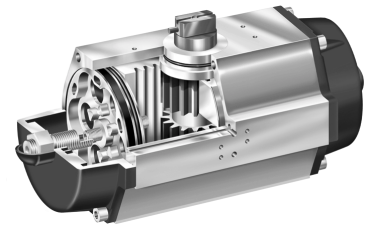
<b>Actuations principle:</b>	rack and pinion
<b>Allowable pressures:</b>	working pressure: 2,5 to 10 bar tightness test: 1,1 x max. nominal pressure
<b>Cycle Time:</b>	$t_{open} < 1,0 \text{ sec.}$ , with solenoid valve $K_v=1,2 \text{ [m}^3/\text{h]}$ , at 6 bar air supply pressure $t_{close} < 1,0 \text{ sec.}$ , with solenoid valve $K_v=1,2 \text{ [m}^3/\text{h]}$ , at 6 bar air supply pressure
<b>Travel:</b>	90° standard, other options upon request
<b>Travel tolerance:</b>	+/- 1,5° each end position
<b>Air Consumption:</b>	theoretical 0,06 N l/h at 1 bar per cycle 0° - 90°
<b>Leakage:</b>	new => max 2 N l/h at 6 bar working pressure after 500.000 cycles => max 10 N l/h at 6 bar working pressure
<b>Life span:</b>	1 Mio. cycles at 6 bar working pressure, 20°C ambient temperature acc. VDI/VDE 3844
<b>Ambient Temperature:</b>	-20 to + 80° C (standard)
<b>Installation Position:</b>	random
<b>Medium:</b>	air and all non-aggressive gases

Torques:	Air Supply Pressure [bar]						
	2	3	4	5	6	7	8
theoretical value	2,48 Nm	3,72 Nm	4,96 Nm	6,2 Nm	7,44 Nm	8,68 Nm	9,92 Nm
min. efficiency at 6 bar	70%	70%	70%	70%	70%	70%	70%

Figures for spring-torques and corresponding air torques can be found in our Revo catalogue, chapt. 3



# Pneumatic Quarter Turn Actuator Technical Data



**size 002**

## 1. General Data Body

**Body Material:** Aluminium anodized acc. DIN 17611 (E6), calibrated  
**End Caps:** plastic end caps RAL 5002 (other colours upon request)  
**End Cap Version:** air end caps  
**End Cap Screws:** material and strength acc. A2 70, DIN 912  
**Weight:** 0,6 kg  
**Air Connection:** G 1/8"  
**Shaft:** one piece  
**Rotation:** clockwise => double acting and spring to close  
 anti- clockwise => double acting and spring to open  
**Lubrication:** permanent greasing  
**Piston Support:** PTFE guiding tapes  
**Interfaces:**  
 actuator/valve: F04/F05; flange acc. DIN 5211 without centring key, with female square

## 2. General Technical Data

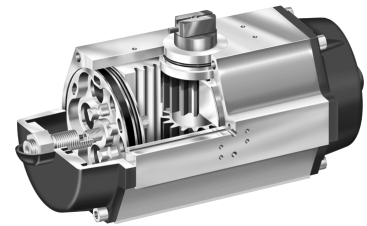
**Actuations principle:** rack and pinion  
**Allowable pressures:**  
 working pressure: 2,5 to 10 bar  
 tightness test: 1,1 x max. nominal pressure  
**Cycle Time:**  
 $t_{open} < 1,0 \text{ sec.}$ , with solenoid valve  $K_v=1,2 \text{ [m}^3/\text{h]}$ , at 6 bar air supply pressure  
 $t_{close} < 1,0 \text{ sec.}$ , with solenoid valve  $K_v=1,2 \text{ [m}^3/\text{h]}$ , at 6 bar air supply pressure  
**Travel:** 90° standard, other options upon request  
**Travel tolerance:** +/- 1,5° each end position  
**Air Consumption:** theoretical 0,09 N l/h at 1 bar per cycle 0° - 90°  
**Leakage:**  
 new => max 2 N l/h at 6 bar working pressure  
 after 500.000 cycles => max 10 N l/h at 6 bar working pressure  
**Life span:** 1 Mio. cycles at 6 bar working pressure, 20°C ambient temperature  
 acc. VDI/VDE 3844  
**Ambient Temperature:** -20 to + 80° C (standard)  
**Installation Position:** random  
**Medium:** air and all non-aggressive gases

Torques:	Air Supply Pressure [bar]						
	2	3	4	5	6	7	8
theoretical value	12,4 Nm	18,6 Nm	24,8 Nm	31 Nm	37,2 Nm	43,4 Nm	49,6 Nm
min. efficiency at 6 bar	80%	80%	80%	80%	80%	80%	80%

Figures for spring-torques and corresponding air-torques can be found in our Revo catalogue, chapt. 3



# Pneumatic Quarter Turn Actuator Technical Data



size 006

## 1. General Data Body

**Body Material:** Aluminium anodized acc. DIN 17611 (E6), calibrated  
**End Caps:** plastic end caps RAL 5002 (other colours upon request)  
**End Cap Version:** air end caps  
**End Cap Screws:** material and strength acc. A2 70, DIN 912  
**Weight:** 1,2 kg  
**Air Connection:** G 1/8"  
**Shaft:** one piece  
**Rotation:** clockwise => double acting and spring to close  
 anti- clockwise => double acting and spring to open  
**Lubrication:** permanent greasing  
**Piston Support:** PTFE guiding tapes  
**Interfaces:**  
 actuator/valve: F04/F05; flange acc. DIN 5211 without centring key, with female square  
 limit switches, positioner: VDI/VDE 3845 (Namur)

## 2. General Technical Data

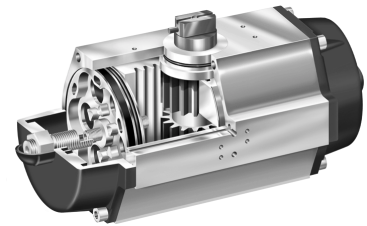
**Actuations principle:** rack and pinion  
**Allowable pressures:**  
 working pressure: 2,5 to 10 bar  
 tightness test: 1,1 x max. nominal pressure  
**Cycle Time:**  
 $t_{open} < 1,0 \text{ sec.}$ , with solenoid valve  $K_v=1,2 \text{ [m}^3/\text{h]}$ , at 6 bar air supply pressure  
 $t_{close} < 1,0 \text{ sec.}$ , with solenoid valve  $K_v=1,2 \text{ [m}^3/\text{h]}$ , at 6 bar air supply pressure  
**Travel:** 90° standard, other options upon request  
**Travel tolerance:** +/- 1,5° each end position  
**Air Consumption:** theoretical 0,13 N l/h at 1 bar per cycle 0° - 90°  
**Leakage:** new => max 2 N l/h at 6 bar working pressure  
 after 500.000 cycles => max 10 N l/h at 6 bar working pressure  
**Life span:** 1 Mio. cycles at 6 bar working pressure, 20°C ambient temperature  
 acc. VDI/VDE 3844  
**Ambient Temperature:** -20 to + 80° C (standard)  
**Installation Position:** random  
**Medium:** air and all non-aggressive gases

Torques:	Air Supply Pressure [bar]						
	2	3	4	5	6	7	8
theoretical value	5,4 Nm	8,1 Nm	10,8 Nm	13,5 Nm	16,2 Nm	18,9 Nm	21,6 Nm
min. efficiency at 6 bar	80%	80%	80%	80%	80%	80%	80%

Figures for spring-torques and corresponding air-torques can be found in our Revo catalogue, chapt. 3



# Pneumatic Quarter Turn Actuator Technical Data



## size 012

### 1. General Data Body

<b>Body Material:</b>	Aluminium anodized acc. DIN 17611 (E6), calibrated
<b>End Caps:</b>	Aluminium end caps RAL 5002 (other colours upon request), min. 60µm
<b>End Cap Version:</b>	air end caps
<b>End Cap Screws:</b>	material and strength acc. A2 70, DIN 912
<b>Weight:</b>	2,2 kg
<b>Air Connection:</b>	G ¼"
<b>Shaft:</b>	blow-out-proof, pressure-balanced, one piece
<b>Rotation:</b>	clockwise => double acting and spring to close anti- clockwise => double acting and spring to open
<b>Lubrication:</b>	permanent greasing
<b>Piston Support:</b>	PTFE guiding tapes
<b>Interfaces:</b>	
	actuator/valve: F05; flange acc. DIN 5211 with female square acc. DIN 3337
	solenoid valve: VDI/VDE 3845 (Namur)
	limit switches, positioner: VDI/VDE 3845 (Namur)
<b>Position indicator:</b>	red plastic indicator
<b>Production:</b>	acc. DIN EN ISO 9001

### 2. General Technical Data

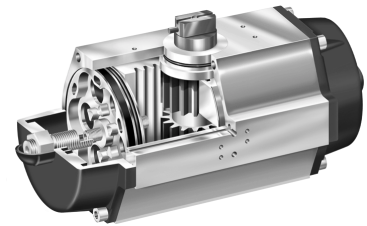
<b>Actuations principle:</b>	rack and pinion
<b>Allowable pressures:</b>	
	working pressure: 2 to 10 bar
	tightness test: 1,1 x max. nominal pressure
<b>Cycle Time:</b>	$t_{open} < 1,0 \text{ sec.}$ , with solenoid valve $K_v=1,2 \text{ [m}^3/\text{h]}$ , at 6 bar air supply pressure $t_{close} < 1,0 \text{ sec.}$ , with solenoid valve $K_v=1,2 \text{ [m}^3/\text{h]}$ , at 6 bar air supply pressure
<b>Travel:</b>	90° standard, other options upon request
<b>Travel tolerance:</b>	+/- 1,5° each end position
<b>Limit stop adjustment:</b>	series 3: 0° → 4° until +8°, 90° → +4° until -8°
<b>Air Consumption:</b>	theoretical 0,18 N l/h at 1 bar per cycle 0° - 90°
<b>Leakage:</b>	new => max 2 N l/h at 6 bar working pressure after 500.000 cycles => max 10 N l/h at 6 bar working pressure
<b>Life span:</b>	1 Mio. cycles at 6 bar working pressure, 20°C ambient temperature acc. VDI/VDE 3844
<b>Ambient Temperature:</b>	-20 to + 80° C (standard)
<b>Installation Position:</b>	random
<b>Medium:</b>	air and all non-aggressive gases

Torques:	Air Supply Pressure [bar]						
	2	3	4	5	6	7	8
theoretical value	24,7 Nm	37 Nm	49,3 Nm	61,6 Nm	74 Nm	86,3 Nm	98,6 Nm
min. efficiency at 6 bar	90%	90%	90%	90%	90%	90%	90%

Figures for spring-torques and corresponding air-torques can be found in our Revo catalogue, chapt. 3



# Pneumatic Quarter Turn Actuator Technical Data



## size 025

### 1. General Data Body

<b>Body Material:</b>	Aluminium anodized acc. DIN 17611 (E6), calibrated
<b>End Caps:</b>	Aluminium end caps RAL 5002 (other colours upon request), min. 60µm
<b>End Cap Version:</b>	air end caps
<b>End Cap Screws:</b>	material and strength acc. A2 70, DIN 912
<b>Weight:</b>	3,5 kg
<b>Air Connection:</b>	G ¼"
<b>Shaft:</b>	blow-out-proof, pressure-balanced, one piece
<b>Rotation:</b>	clockwise => double acting and spring to close anti- clockwise => double acting and spring to open
<b>Lubrication:</b>	permanent greasing
<b>Piston Support:</b>	PTFE guiding tapes
<b>Interfaces:</b>	
	actuator/valve: F05; flange acc. DIN 5211 with female square acc. DIN 3337
	solenoid valve: VDI/VDE 3845 (Namur)
	limit switches, positioner: VDI/VDE 3845 (Namur)
<b>Position indicator:</b>	red plastic indicator
<b>Production:</b>	acc. DIN EN ISO 9001

### 2. General Technical Data

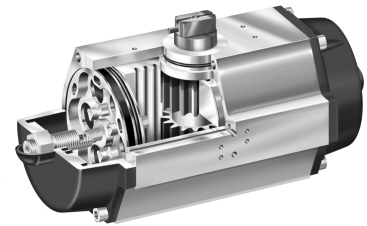
<b>Actuations principle:</b>	rack and pinion
<b>Allowable pressures:</b>	
	working pressure: 2 to 10 bar
	tightness test: 1,1 x max. nominal pressure
<b>Cycle Time:</b>	$t_{open} < 1,0 \text{ sec.}$ , with solenoid valve $K_v=1,2 \text{ [m}^3/\text{h]}$ , at 6 bar air supply pressure $t_{close} < 1,0 \text{ sec.}$ , with solenoid valve $K_v=1,2 \text{ [m}^3/\text{h]}$ , at 6 bar air supply pressure
<b>Travel:</b>	90° standard, other options upon request
<b>Travel tolerance:</b>	+/- 1,5° each end position
<b>Limit stop adjustment:</b>	series 3: 0° → 4° until +8°, 90° → +4° until -8°
<b>Air Consumption:</b>	theoretical 0,5 N l/h at 1 bar per cycle 0° - 90°
<b>Leakage:</b>	new => max 2 N l/h at 6 bar working pressure after 500.000 cycles => max 10 N l/h at 6 bar working pressure
<b>Life span:</b>	1 Mio. cycles at 6 bar working pressure, 20°C ambient temperature acc. VDI/VDE 3844
<b>Ambient Temperature:</b>	-20 to + 80° C (standard)
<b>Installation Position:</b>	random
<b>Medium:</b>	air and all non-aggressive gases

Torques:	Air Supply Pressure [bar]						
	2	3	4	5	6	7	8
theoretical value	47 Nm	72 Nm	95 Nm	119 Nm	143 Nm	167Nm	191 Nm
min. efficiency at 6 bar	90%	90%	90%	90%	90%	90%	90%

Figures for spring-torques and corresponding air-torques can be found in our Revo catalogue, chapt. 3



# Pneumatic Quarter Turn Actuator Technical Data



**size 050**

## 1. General Data Body

<b>Body Material:</b>	Aluminium anodized acc. DIN 17611 (E6), calibrated
<b>End Caps:</b>	Aluminium end caps RAL 5002 (other colours upon request), min. 60µm
<b>End Cap Version:</b>	air end caps
<b>End Cap Screws:</b>	material and strength acc. A2 70, DIN 912
<b>Weight:</b>	5,9 kg
<b>Air Connection:</b>	G 1/4"
<b>Shaft:</b>	blow-out-proof, pressure-balanced, one piece
<b>Rotation:</b>	clockwise => double acting and spring to close anti- clockwise => double acting and spring to open
<b>Lubrication:</b>	permanent greasing
<b>Piston Support:</b>	PTFE guiding tapes
<b>Interfaces:</b>	actuator/valve: F07; flange acc. DIN 5211 with female square acc. DIN 3337 solenoid valve: VDI/VDE 3845 (Namur) limit switches, positioner: VDI/VDE 3845 (Namur)
<b>Position indicator:</b>	red plastic indicator
<b>Production:</b>	acc. DIN EN ISO 9001

## 2. General Technical Data

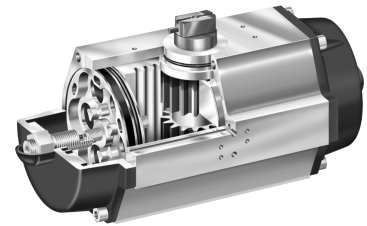
<b>Actuations principle:</b>	rack and pinion
<b>Allowable pressures:</b>	working pressure: 2,5 to 10 bar tightness test: 1,1 x max. nominal pressure
<b>Cycle Time:</b>	$t_{open} < 0,8 \text{ sec.}$ with solenoid valve $K_v=1,2 \text{ [m}^3/\text{h]}$ , at 6 bar air supply pressure $t_{close} < 0,8 \text{ sec.}$ with solenoid valve $K_v=1,2 \text{ [m}^3/\text{h]}$ , at 6 bar air supply pressure
<b>Travel:</b>	90° standard, other options upon request
<b>Travel tolerance:</b>	+/- 1,5° each end position
<b>Limit stop adjustment:</b>	series 3: 0° → 4° until +8°, 90° → +4° until -8°
<b>Air Consumption:</b>	theoretical 0,8 N l/h at 1 bar per cycle 0° - 90°
<b>Leakage:</b>	new => max 2 N l/h at 6 bar working pressure after 500.000 cycles => max 10 N l/h at 6 bar working pressure
<b>Life span:</b>	1 Mio. cycles at 6 bar working pressure, 20°C ambient temperature acc. VDI/VDE 3844
<b>Ambient Temperature:</b>	-20 to + 80° C (standard)
<b>Installation Position:</b>	random
<b>Medium:</b>	air and all non-aggressive gases

Torques:	Air Supply Pressure [bar]						
	2	3	4	5	6	7	8
theoretical value	89 Nm	133 Nm	177 Nm	222 Nm	266 Nm	310 Nm	364 Nm
min. efficiency at 6 bar	90%	90%	90%	90%	90%	90%	90%

Figures for spring-torques and corresponding air-torques can be found in our Revo catalogue, chapt. 3



# Pneumatic Quarter Turn Actuator Technical Data



**size 090**

## 1. General Data Body

**Body Material:** Aluminium anodized acc. DIN 17611 (E6), calibrated  
**End Caps:** Aluminium end caps RAL 5002 (other colours upon request), min. 60µm  
**End Cap Version:** air end caps  
**End Cap Screws:** material and strength acc. A2 70, DIN 912  
**Weight:** 10,4 kg  
**Air Connection:** G ¼"  
**Shaft:** blow-out-proof, pressure-balanced, one piece  
**Rotation:** clockwise => double acting and spring to close  
 anti- clockwise => double acting and spring to open  
**Lubrication:** permanent greasing  
**Piston Support:** PTFE guiding tapes  
**Interfaces:**  
 actuator/valve: F07/F10\*; flange acc. DIN 5211 with female square acc. DIN 3337  
 solenoid valve: VDI/VDE 3845 (Namur)  
 limit switches, positioner: VDI/VDE 3845 (Namur)  
**Position indicator:** red plastic indicator  
**Production:** acc. DIN EN ISO 9001  
 \* other options upon request

## 2. General Technical Data

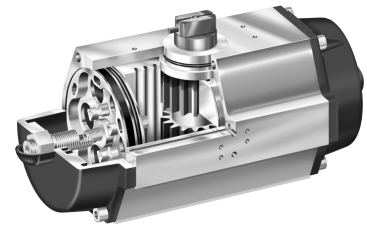
**Actuations principle:** rack and pinion  
**Allowable pressures:**  
 working pressure: 2,5 to 10 bar  
 tightness test: 1,1 x max. nominal pressure  
**Cycle Time:**  
 $t_{open} < 1,0 \text{ sec.}$ , with solenoid valve  $K_v=1,2 \text{ [m}^3/\text{h]}$ , at 6 bar air supply pressure  
 $t_{close} < 1,0 \text{ sec.}$ , with solenoid valve  $K_v=1,2 \text{ [m}^3/\text{h]}$ , at 6 bar air supply pressure  
**Travel:** 90° standard, other options upon request  
**Travel tolerance:** +/- 1,5° each end position  
**Limit stop adjustment:** series 3: 0° → 4° until +8°, 90° → +4° until -8°  
**Air Consumption:** theoretical 1 N l/h at 1 bar per cycle 0° - 90°  
**Leakage:** new => max 2 N l/h at 6 bar working pressure  
 after 500.000 cycles => max 10 N l/h at 6 bar working pressure  
**Life span:** 1 Mio. cycles at 6 bar working pressure, 20°C ambient temperature  
 acc. VDI/VDE 3844  
**Ambient Temperature:** -20 to + 80° C (standard)  
**Installation Position:** random  
**Medium:** air and all non-aggressive gases

Torques:	Air Supply Pressure [bar]						
	2	3	4	5	6	7	8
theoretical value	169 Nm	253 Nm	337Nm	421 Nm	505 Nm	589 Nm	673 Nm
min. efficiency at 6 bar	90%	90%	90%	90%	90%	90%	90%

Figures for spring-torques and corresponding air-torques can be found in our Revo catalogue, chapt. 3



# Pneumatic Quarter Turn Actuator Technical Data



size 130

## 1. General Data Body

<b>Body Material:</b>	Aluminium anodized acc. DIN 17611 (E6), calibrated
<b>End Caps:</b>	Aluminium end caps RAL 5002 (other colours upon request), min. 60µm
<b>End Cap Version:</b>	air end caps
<b>End Cap Screws:</b>	material and strength acc. A2 70, DIN 912
<b>Weight:</b>	19 kg
<b>Air Connection:</b>	G 1/4"
<b>Shaft:</b>	blow-out-proof, pressure-balanced, one piece
<b>Rotation:</b>	clockwise => double acting and spring to close anti- clockwise => double acting and spring to open
<b>Lubrication:</b>	permanent greasing
<b>Piston Support:</b>	PTFE guiding tapes
<b>Interfaces:</b>	actuator/valve: F10/12; flange acc. DIN 5211 with female square acc. DIN 3337 solenoid valve: VDI/VDE 3845 (Namur) limit switches, positioner: VDI/VDE 3845 (Namur)
<b>Position indicator:</b>	red plastic indicator
<b>Production:</b>	acc. DIN EN ISO 9001

## 2. General Technical Data

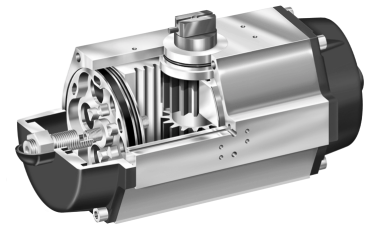
<b>Actuations principle:</b>	rack and pinion
<b>Allowable pressures:</b>	working pressure: 2 to 10 bar tightness test: 1,1 x max. nominal pressure
<b>Cycle Time:</b>	$t_{open} < 1,0 \text{ sec.}$ , with solenoid valve $K_v=1,2 \text{ [m}^3/\text{h]}$ , at 6 bar air supply pressure $t_{close} < 1,0 \text{ sec.}$ , with solenoid valve $K_v=1,2 \text{ [m}^3/\text{h]}$ , at 6 bar air supply pressure
<b>Travel:</b>	90° standard, other options upon request
<b>Travel tolerance:</b>	+/- 1,5° each end position
<b>Limit stop adjustment:</b>	series 3: 0° → 4° until +8°, 90° → +4° until -8°
<b>Air Consumption:</b>	theoretical 1,5 N l/h at 1 bar per cycle 0° - 90°
<b>Leakage:</b>	new => max 2 N l/h at 6 bar working pressure after 500.000 cycles => max 10 N l/h at 6 bar working pressure
<b>Life span:</b>	1 Mio. cycles at 6 bar working pressure, 20°C ambient temperature acc. VDI/VDE 3844
<b>Ambient Temperature:</b>	-20 to + 80° C (standard)
<b>Installation Position:</b>	random
<b>Medium:</b>	air and all non-aggressive gases

Torques:	Air Supply Pressure [bar]						
	2	3	4	5	6	7	8
theoretical value	256 Nm	385 Nm	513 Nm	642 Nm	770 Nm	898 Nm	1026 Nm
min. efficiency at 6 bar	90%	90%	90%	90%	90%	90%	90%

Figures for spring-torques and corresponding air-torques can be found in our Revo catalogue, chapt. 3



# Pneumatic Quarter Turn Actuator Technical Data



**size 180**

## 1. General Data Body

<b>Body Material:</b>	Aluminium anodized acc. DIN 17611 (E6), calibrated
<b>End Caps:</b>	Aluminium end caps RAL 5002 (other colours upon request), min. 60µm
<b>End Cap Version:</b>	air end caps
<b>End Cap Screws:</b>	material and strength acc. A2 70, DIN 912
<b>Weight:</b>	22,5 kg
<b>Air Connection:</b>	G ¼"
<b>Shaft:</b>	blow-out-proof, pressure-balanced, one piece
<b>Rotation:</b>	clockwise => double acting and spring to close anti- clockwise => double acting and spring to open
<b>Lubrication:</b>	permanent greasing
<b>Piston Support:</b>	PTFE guiding tapes
<b>Interfaces:</b>	actuator/valve: F12; flange acc. DIN 5211 with female square acc. DIN 3337 solenoid valve: VDI/VDE 3845 (Namur) limit switches, positioner: VDI/VDE 3845 (Namur)
<b>Position indicator:</b>	red plastic indicator
<b>Production:</b>	acc. DIN EN ISO 9001

## 2. General Technical Data

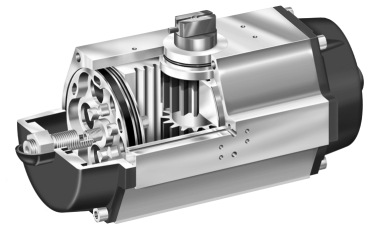
<b>Actuations principle:</b>	rack and pinion
<b>Allowable pressures:</b>	working pressure: 2 to 10 bar tightness test: 1,1 x max. nominal pressure
<b>Cycle Time:</b>	$t_{open} < 1,2 \text{ sec.}$ , with solenoid valve $K_v=1,2 \text{ [m}^3/\text{h]}$ , at 6 bar air supply pressure $t_{close} < 1,2 \text{ sec.}$ , with solenoid valve $K_v=1,2 \text{ [m}^3/\text{h]}$ , at 6 bar air supply pressure
<b>Travel:</b>	90° standard, other options upon request
<b>Travel tolerance:</b>	+/- 1,5° each end position
<b>Limit stop adjustment:</b>	series 3: 0° → 4° until +8°, 90° → +4° until -8°
<b>Air Consumption:</b>	theoretical 2 N l/h at 1 bar per cycle 0° - 90°
<b>Leakage:</b>	new => max 2 N l/h at 6 bar working pressure after 500.000 cycles => max 10 N l/h at 6 bar working pressure
<b>Life span:</b>	1 Mio. cycles at 6 bar working pressure, 20°C ambient temperature acc. VDI/VDE 3844
<b>Ambient Temperature:</b>	-20 to + 80° C (standard)
<b>Installation Position:</b>	random
<b>Medium:</b>	air and all non-aggressive gases

Torques:	Air Supply Pressure [bar]						
	2	3	4	5	6	7	8
theoretical value	338 Nm	506 Nm	675 Nm	843 Nm	1012 Nm	1181 Nm	1350 Nm
min. efficiency at 6 bar	90%	90%	90%	90%	90%	90%	90%

Figures for spring-torques and corresponding air-torques can be found in our Revo catalogue, chapt. 3



# Pneumatic Quarter Turn Actuator Technical Data



## size 205

### 1. General Data Body

<b>Body Material:</b>	Aluminium anodized acc. DIN 17611 (E6), calibrated
<b>End Caps:</b>	Aluminium end caps RAL 5002 (other colours upon request), min. 60µm
<b>End Cap Version:</b>	air end caps
<b>End Cap Screws:</b>	material and strength acc. A2 70, DIN 912
<b>Weight:</b>	30 kg
<b>Air Connection:</b>	G ¼"
<b>Shaft:</b>	blow-out-proof, pressure-balanced, one piece
<b>Rotation:</b>	clockwise => double acting and spring to close anti- clockwise => double acting and spring to open
<b>Lubrication:</b>	permanent greasing
<b>Piston Support:</b>	PTFE guiding tapes
<b>Interfaces:</b>	actuator/valve: F12/F14*; flange acc. DIN 5211 with female square acc. DIN 3337 solenoid valve: VDI/VDE 3845 (Namur)
	limit switches, positioner: VDI/VDE 3845 (Namur)
<b>Position indicator:</b>	red plastic indicator
<b>Production:</b>	acc. DIN EN ISO 9001
* other options upon request	

### 2. General Technical Data

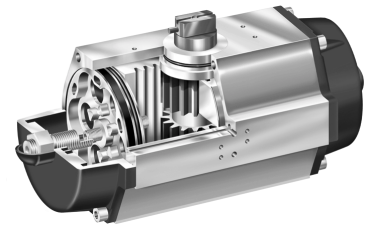
<b>Actuations principle:</b>	rack and pinion
<b>Allowable pressures:</b>	working pressure: 2 to 10 bar tightness test: 1,1 x max. nominal pressure
<b>Cycle Time:</b>	t <sub>open</sub> < 1,2 sec., with solenoid valve K <sub>v</sub> =1,2 [m³/ h], at 6 bar air supply pressure t <sub>close</sub> < 1,2 sec., with solenoid valve K <sub>v</sub> =1,2 [m³/ h], at 6 bar air supply pressure
<b>Travel:</b>	90° standard, other options upon request
<b>Travel tolerance:</b>	+/- 1,5° each end position
<b>Limit stop adjustment:</b>	series 3: 0° → 4° until +8°, 90° → +4° until -8°
<b>Air Consumption:</b>	theoretical 3,1 N l/h at 1 bar per cycle 0° - 90°
<b>Leakage:</b>	new => max 2 N l/h at 6 bar working pressure after 500.000 cycles => max 10 N l/h at 6 bar working pressure
<b>Life span:</b>	1 Mio. cycles at 6 bar working pressure, 20°C ambient temperature acc. VDI/VDE 3844
<b>Ambient Temperature:</b>	-20 to + 80° C (standard)
<b>Installation Position:</b>	random
<b>Medium:</b>	air and all non-aggressive gases

Torques:	Air Supply Pressure [bar]						
	2	3	4	5	6	7	8
theoretical value	506 Nm	758 Nm	1011 Nm	1264 Nm	1517 Nm	1770 Nm	2023 Nm
min. efficiency at 6 bar	90%	90%	90%	90%	90%	90%	90%

Figures for spring-torques and corresponding air-torques can be found in our Revo catalogue, chapt. 3



# Pneumatic Quarter Turn Actuator Technical Data



## size 380

### 1. General Data Body

<b>Body Material:</b>	Aluminium anodized acc. DIN 17611 (E6), calibrated
<b>End Caps:</b>	Aluminium end caps RAL 5002 (other colours upon request), min. 60µm
<b>End Cap Version:</b>	air end caps
<b>End Cap Screws:</b>	material and strength acc. A2 70, DIN 912
<b>Weight:</b>	36 kg
<b>Air Connection:</b>	G ¼"
<b>Shaft:</b>	blow-out-proof, pressure-balanced, one piece
<b>Rotation:</b>	clockwise => double acting and spring to close anti- clockwise => double acting and spring to open
<b>Lubrication:</b>	permanent greasing
<b>Piston Support:</b>	PTFE guiding tapes
<b>Interfaces:</b>	actuator/valve: F12/F14*; flange acc. DIN 5211 with female square acc. DIN 3337 solenoid valve: VDI/VDE 3845 (Nimur) limit switches, positioner: VDI/VDE 3845 (Nimur)
<b>Position indicator:</b>	red plastic indicator
<b>Production:</b>	acc. DIN EN ISO 9001

\* other options upon request

### 2. General Technical Data

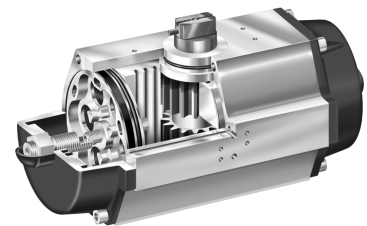
<b>Actuations principle:</b>	rack and pinion
<b>Allowable pressures:</b>	working pressure: 2 to 10 bar tightness test: 1,1 x max. nominal pressure
<b>Cycle Time:</b>	t <sub>open</sub> < 2,1 sec., with solenoid valve K <sub>v</sub> =1,2 [m³/ h],at 6 bar air supply pressure t <sub>close</sub> < 2,1 sec., with solenoid valve K <sub>v</sub> =1,2 [m³/ h],at 6 bar air supply pressure
<b>Travel:</b>	90° standard, other options upon request
<b>Travel tolerance:</b>	+/- 1,5° each end position
<b>Limit stop adjustment:</b>	series 3: 0°→ 4° until +8°, 90°→ +4° until -8°
<b>Air Consumption:</b>	theoretical 4,4 N l/h at 1 bar per cycle 0° - 90°
<b>Leakage:</b>	new => max 2 N l/h at 6 bar working pressure after 500.000 cycles => max 10 N l/h at 6 bar working pressure
<b>Life span:</b>	1 Mio. cycles at 6 bar working pressure, 20°C ambient temperature acc. VDI/VDE 3844
<b>Ambient Temperature:</b>	-20 to + 80° C (standard)
<b>Installation Position:</b>	random
<b>Medium:</b>	air and all non-aggressive gases

Torques:	Air Supply Pressure [bar]						
	2	3	4	5	6	7	8
theoretical value	758 Nm	1138 Nm	1517 Nm	1896 Nm	2275 Nm	2654 Nm	3033 Nm
min. efficiency at 6 bar	90%	90%	90%	90%	90%	90%	90%

Figures for spring-torques and corresponding air-torques can be found in our Revo catalogue, chapt. 3



# Pneumatic Quarter Turn Actuator Technical Data



**size 630**

## 1. General Data Body

<b>Body Material:</b>	Aluminium anodized acc. DIN 17611 (E6), calibrated
<b>End Caps:</b>	Aluminium end caps RAL 5002 (other colours upon request), min. 60µm
<b>End Cap Version:</b>	air end caps
<b>End Cap Screws:</b>	material and strength acc. A2 70, DIN 912
<b>Weight:</b>	82 kg
<b>Air Connection:</b>	G 1/4"
<b>Shaft:</b>	blow-out-proof, pressure-balanced, one piece
<b>Rotation:</b>	clockwise => double acting and spring to close anti- clockwise => double acting and spring to open
<b>Lubrication:</b>	permanent greasing
<b>Piston Support:</b>	PTFE guiding tapes
<b>Interfaces:</b>	actuator/valve: F14/F16*; flange acc. DIN 5211 with female square acc. DIN 3337 solenoid valve: VDI/VDE 3845 (Namur)
	limit switches, positioner: VDI/VDE 3845 (Namur)
<b>Position indicator:</b>	red plastic indicator
<b>Production:</b>	acc. DIN EN ISO 9001
* other options upon request	

## 2. General Technical Data

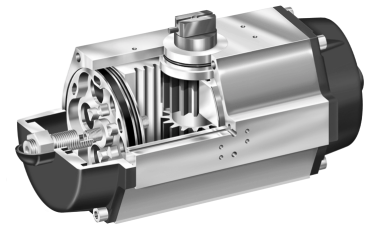
<b>Actuations principle:</b>	rack and pinion
<b>Allowable pressures:</b>	working pressure: 2 to 10 bar tightness test: 1,1 x max. nominal pressure
<b>Cycle Time:</b>	t <sub>open</sub> < 3,2 sec., with solenoid valve K <sub>v</sub> =1,2 [m³/ h], at 6 bar air supply pressure t <sub>close</sub> < 3,2 sec., with solenoid valve K <sub>v</sub> =1,2 [m³/ h], at 6 bar air supply pressure
<b>Travel:</b>	90° standard, other options upon request
<b>Travel tolerance:</b>	+/- 1,5° each end position
<b>Limit stop adjustment:</b>	series 3: 0° → 4° until +8°, 90° → +4° until -8°
<b>Air Consumption:</b>	theoretical 8,5 N l/h at 1 bar per cycle 0° - 90°
<b>Leakage:</b>	new => max 2 N l/h at 6 bar working pressure after 500.000 cycles => max 10 N l/h at 6 bar working pressure
<b>Life span:</b>	1 Mio. cycles at 6 bar working pressure, 20°C ambient temperature acc. VDI/VDE 3844
<b>Ambient Temperature:</b>	-20 to + 80° C (standard)
<b>Installation Position:</b>	random
<b>Medium:</b>	air and all non-aggressive gases

Torques:	Air Supply Pressure [bar]						
	2	3	4	5	6	7	8
theoretical value	1264 Nm	1896 Nm	2528 Nm	3159 Nm	3791 Nm	4423 Nm	5055 Nm
min. efficiency at 6 bar	90%	90%	90%	90%	90%	90%	90%

Figures for spring-torques and corresponding air-torques can be found in our Revo catalogue, chapt. 3



# Pneumatic Quarter Turn Actuator Technical Data



**size 960**

## 1. General Data Body

**Body Material:** Aluminium anodized acc. DIN 17611 (E6), calibrated  
**End Caps:** Aluminium end caps RAL 5002 (other colours upon request), min. 60µm  
**End Cap Version:** air end caps  
**End Cap Screws:** material and strength acc. A2 70, DIN 912  
**Weight:** 124 kg  
**Air Connection:** G ¼"  
**Shaft:** blow-out-proof, pressure-balanced, one piece  
**Rotation:** clockwise => double acting and spring to close  
 anti- clockwise => double acting and spring to open  
**Lubrication:** permanent greasing  
**Piston Support:** PTFE guiding tapes  
**Interfaces:**  
 actuator/valve: F16/F25\*; flange acc. DIN 5211 with female square acc. DIN 3337  
 solenoid valve: VDI/VDE 3845 (Namur)  
 limit switches, positioner: VDI/VDE 3845 (Namur)  
**Position indicator:** red plastic indicator  
**Production:** acc. DIN EN ISO 9001  
 \* other options upon request

## 2. General Technical Data

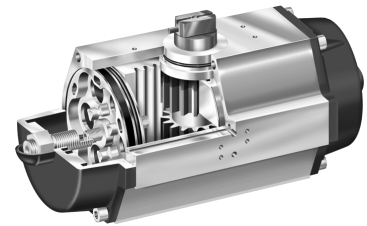
**Actuations principle:** rack and pinion  
**Allowable pressures:**  
 working pressure: 2 to 10 bar  
 tightness test: 1,1 x max. nominal pressure  
**Cycle Time:**  
 $t_{open} < 4,0 \text{ sec.}$ , with solenoid valve  $K_v=1,2 \text{ [m}^3/\text{h]}$ , at 6 bar air supply pressure  
 $t_{close} < 4,0 \text{ sec.}$ , with solenoid valve  $K_v=1,2 \text{ [m}^3/\text{h]}$ , at 6 bar air supply pressure  
**Travel:** 90° standard, other options upon request  
**Travel tolerance:** +/- 1,5° each end position  
**Limit stop adjustment:** series 3: 0° → 4° until +8°, 90° → +4° until -8°  
**Air Consumption:** theoretical 11,5 N l/h at 1 bar per cycle 0° - 90°  
**Leakage:** new => max 2 N l/h at 6 bar working pressure  
 after 500.000 cycles => max 10 N l/h at 6 bar working pressure  
**Life span:** 1 Mio. cycles at 6 bar working pressure, 20°C ambient temperature  
 acc. VDI/VDE 3844  
**Ambient Temperature:** -20 to + 80° C (standard)  
**Installation Position:** random  
**Medium:** air and all non-aggressive gases

Torques:	Air Supply Pressure [bar]						
	2	3	4	5	6	7	8
theoretical value	1919 Nm	2879 Nm	3839 Nm	4799 Nm	5758 Nm	6718 Nm	7677 Nm
min. efficiency at 6 bar	90%	90%	90%	90%	90%	90%	90%

Figures for spring-torques and corresponding air-torques can be found in our Revo catalogue, chapt. 3



# Pneumatic Quarter Turn Actuator Technical Data



## size H15

### 1. General Data Body

<b>Body Material:</b>	Aluminium anodized acc. DIN 17611 (E6), calibrated
<b>End Caps:</b>	Aluminium end caps RAL 5002 (other colours upon request), min. 60µm
<b>End Cap Version:</b>	air end caps
<b>End Cap Screws:</b>	material and strength acc. A2 70, DIN 912
<b>Weight:</b>	151 kg
<b>Air Connection:</b>	G ¼"
<b>Shaft:</b>	blow-out-proof, pressure-balanced, one piece
<b>Rotation:</b>	clockwise => double acting and spring to close anti- clockwise => double acting and spring to open
<b>Lubrication:</b>	permanent greasing
<b>Piston Support:</b>	PTFE guiding tapes
<b>Interfaces:</b>	actuator/valve: F25/F30*; flange acc. DIN 5211 with female square acc. DIN 3337 solenoid valve: VDI/VDE 3845 (Namur)
	limit switches, positioner: VDI/VDE 3845 (Namur)
<b>Position indicator:</b>	red plastic indicator
<b>Production:</b>	acc. DIN EN ISO 9001
* other options upon request	

### 2. General Technical Data

<b>Actuations principle:</b>	rack and pinion
<b>Allowable pressures:</b>	working pressure: 2 to 10 bar tightness test: 1,1 x max. nominal pressure
<b>Cycle Time:</b>	t <sub>open</sub> < 6,5 sec., with solenoid valve K <sub>v</sub> =1,2 [m³/ h], at 6 bar air supply pressure t <sub>close</sub> < 6,5 sec., with solenoid valve K <sub>v</sub> =1,2 [m³/ h], at 6 bar air supply pressure
<b>Travel:</b>	90° standard, other options upon request
<b>Travel tolerance:</b>	+/- 1,5° each end position
<b>Limit stop adjustment:</b>	series 3: 0°→ 4° until +8°, 90°→ +4° until -8°
<b>Air Consumption:</b>	theoretical 16 N l/h at 1 bar per cycle 0° - 90°
<b>Leakage:</b>	new => max 2 N l/h at 6 bar working pressure after 500.000 cycles => max 10 N l/h at 6 bar working pressure
<b>Life span:</b>	1 Mio. cycles at 6 bar working pressure, 20°C ambient temperature acc. VDI/VDE 3844
<b>Ambient Temperature:</b>	-20 to + 80° C (standard)
<b>Installation Position:</b>	random
<b>Medium:</b>	air and all non-aggressive gases

Torques:	Air Supply Pressure [bar]						
	2	3	4	5	6	7	8
theoretical value	2938 Nm	4407 Nm	5876 Nm	7345 Nm	8814 Nm	10283 Nm	11752 Nm
min. efficiency at 6 bar	90%	90%	90%	90%	90%	90%	90%

Figures for spring-torques and corresponding air-torques can be found in our Revo catalogue, chapt. 3

## Revo Actuators

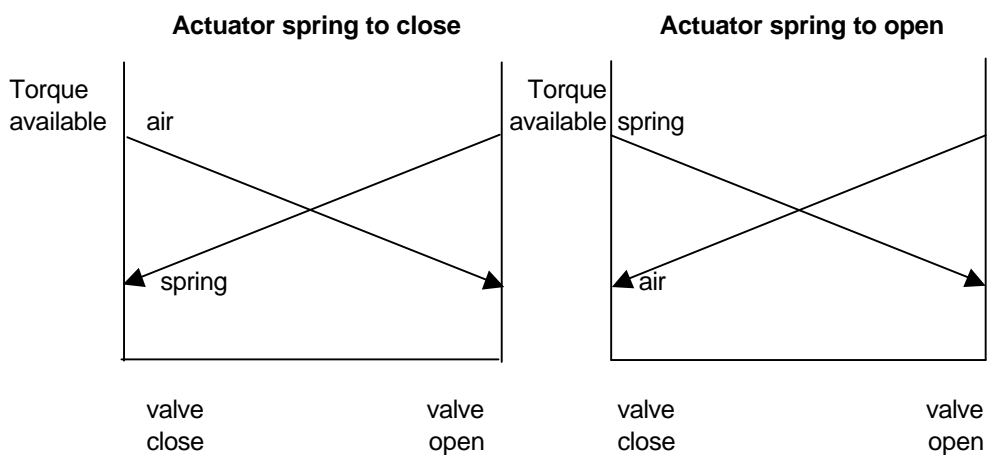
Torques in Nm

**Size 002**

**Torques for 90° turn actuators \***

Number of springs	Spring torque	Torque available	Air torque at supply pressure (bar)					
			3	4	5	6	7	8
0			8,1	10,8	13,5	16,2	18,9	21,6
2	0,9	min	6,3	9,0	11,7	14,4	17,1	19,8
	1,8	max	7,2	9,9	12,6	15,3	18,0	20,7
4	1,8	min	4,5	7,2	9,9	12,6	15,3	18,0
	3,6	max	6,3	9,0	11,7	14,4	17,1	19,8
6	2,7	min	2,7	5,4	8,1	10,8	13,5	16,2
	5,4	max	5,4	8,1	10,8	13,5	16,2	18,9
8	3,6	min	0,9	3,6	6,3	9,0	11,7	14,4
	7,2	max	4,5	7,2	9,9	12,6	15,3	18,0
10	4,5	min		1,8	4,5	7,2	9,9	12,6
	9,0	max		6,3	9,0	11,7	14,4	17,1
12	5,4	min			2,7	5,4	8,1	10,8
	10,8	max			8,1	10,8	13,5	16,2
14	6,3	min			0,9	3,6	6,3	9,0
	12,6	max			7,2	9,9	12,6	15,3

\* for 180° turn actuators consult factory



**Revo Actuation**

### **Torques Revo Actuator Type R .. 002**

**Rev:**

**07.07.1998**

**page:**

**98002001**

# Revo Actuators

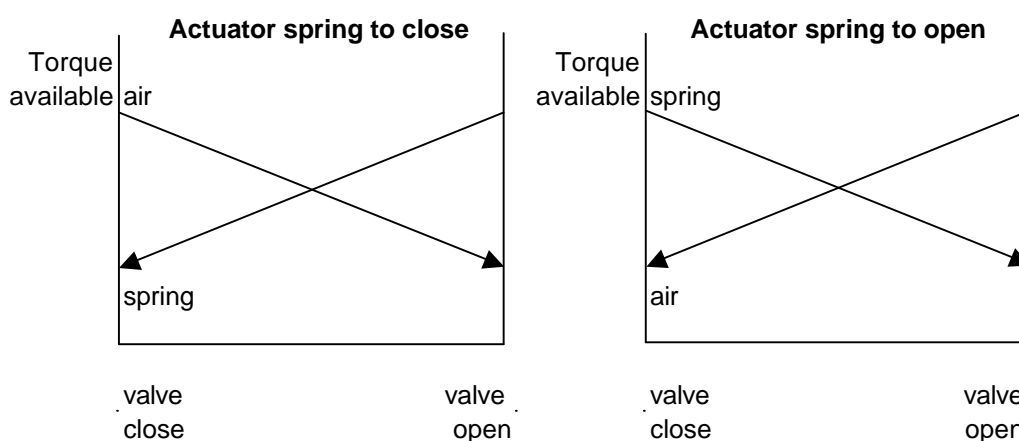
Torques in Nm

Size **006**

## Torques for 90° turn actuators \*

Number of springs	Spring torque	Torque available	Air torque at supply pressure (bar)					
			3	4	5	6	7	8
0			18,6	24,8	31,0	37,2	43,4	49,6
2	2,0	min	14,6	20,8	27,0	33,2	39,4	45,6
	4,0	max	16,6	22,8	29,0	35,2	41,4	47,6
4	4,1	min	10,4	16,6	22,8	29,0	35,2	41,4
	8,2	max	14,5	20,7	26,9	33,1	39,3	45,5
6	6,1	min	6,4	12,6	18,8	25,0	31,2	37,4
	12,2	max	12,5	18,7	24,9	31,1	37,3	43,5
8	8,2	min	2,2	8,4	14,6	20,8	27,0	33,2
	16,4	max	10,4	16,6	22,8	29,0	35,2	41,4
10	10,3	min		4,2	10,4	16,6	22,8	29,0
	20,6	max		14,5	20,7	26,9	33,1	39,3
12	12,3	min			6,4	12,6	18,8	25,0
	24,6	max			18,7	24,9	31,1	37,3
14	14,4	min			2,2	8,4	14,6	20,8
	28,8	max			16,6	22,8	29,0	35,2

\* for 180° turn actuators consult factory



Revo Actuation

## Torques Revo Actuator Type R .. 006

Rev: 07.07.1998

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## Revo Actuators

Torques in Nm

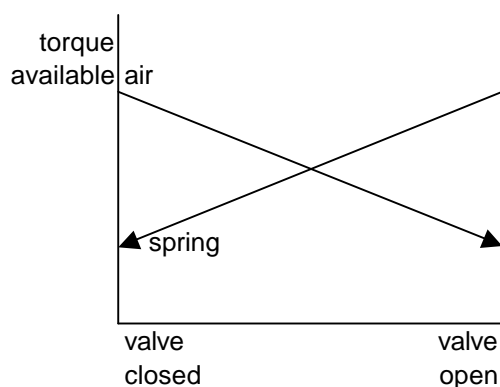
Size **012**

Torques for 90° turn actuators \*

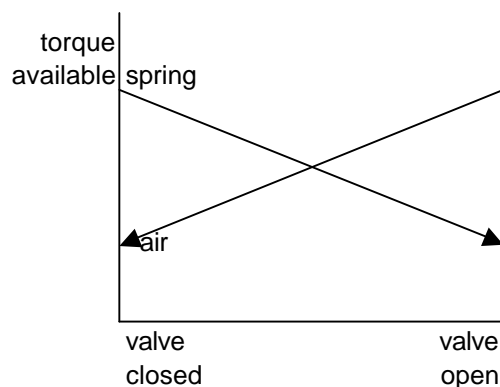
Number of springs	Spring Torque	Torque available	Air torque at supply pressure (bar)					
			3	4	5	6	7	8
0			37,0	49,3	61,6	74,0	86,3	98,6
2	4,1	min	28,7	41,0	53,3	65,7	78,0	90,3
	8,3	max	32,9	45,2	57,5	69,9	82,2	94,5
4	8,2	min	20,4	32,7	45,0	57,4	69,7	82,0
	16,6	max	28,8	41,1	53,4	65,8	78,1	90,4
6	12,3	min	12,1	24,4	36,7	49,1	61,4	73,7
	24,9	max	24,7	37,0	49,3	61,7	74,0	86,3
8	16,4	min		16,1	28,4	40,8	53,1	65,4
	33,2	max		32,9	45,2	57,6	69,9	82,2
10	20,5	min			20,1	32,5	44,8	57,1
	41,5	max			41,1	53,5	65,8	78,1
12	24,6	min			11,8	24,2	36,5	48,8
	49,8	max			37,0	49,4	61,7	74,0
14	28,7	min			4,5	16,9	29,2	41,5
	57,1	max			32,9	45,3	57,6	69,9

\* for 180° turn actuators consult factory

**Actuator spring to close**



**Actuator spring to open**



Revo Actuation

### Torques Revo Actuator Type R .. 012

Rev:

07.07.1998

page:

98012001

## Revo Actuators

Torques in Nm

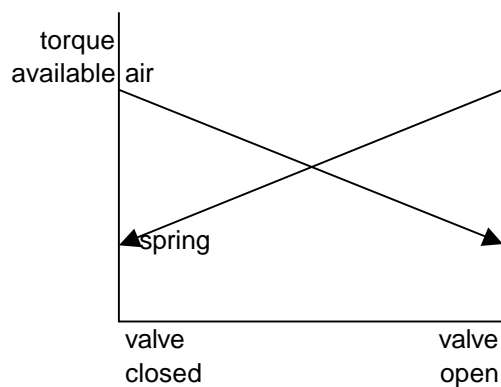
Size **025**

Torques for 90° turn actuators \*

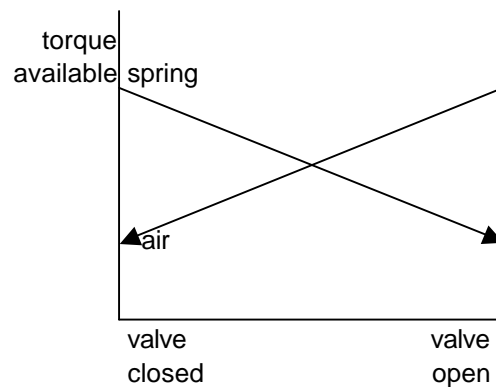
Number of springs	Spring Torque	Torque available	Air torque at supply pressure (bar)					
			3	4	5	6	7	8
0			72	95	119	143	167	191
2	8	min	56	79	103	127	151	175
	16	max	64	87	111	135	159	183
4	16	min	40	63	87	111	135	159
	32	max	56	79	103	127	151	175
6	24	min	24	47	71	95	119	143
	48	max	48	71	95	119	143	167
8	32	min		31	55	79	103	127
	64	max		63	87	111	135	159
10	40	min		15	39	63	87	111
	80	max		55	79	103	127	151
12	48	min			23	47	71	95
	96	max			71	95	119	143
14	56	min			7	31	55	79
	112	max			63	87	111	135

\* for 180° turn actuators consult factory

**Actuator spring to close**



**Actuator spring to open**



Revo Actuation

### Torques Revo Actuator Type R .. 025

Rev:

10.02.1998

page:

98025001

## Revo Actuators

Torques in Nm

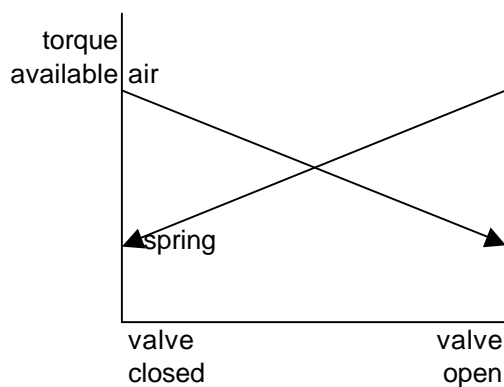
Size **050**

Torques for 90° turn actuators \*

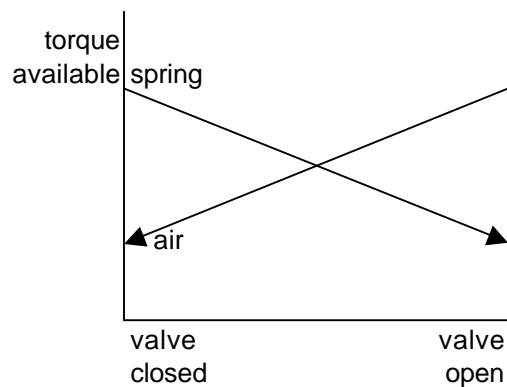
Number of springs	Spring Torque	Torque available	Air torque at supply pressure (bar)					
			3	4	5	6	7	8
0			133	177	222	266	310	364
2	15	min	103	147	192	236	280	334
	30	max	118	162	207	251	295	349
4	29	min	74	118	163	207	251	305
	59	max	104	148	193	237	281	335
6	44	min	44	88	133	177	221	275
	89	max	89	133	178	222	266	320
8	58	min		59	104	148	192	246
	118	max		119	164	208	252	306
10	73	min		29	74	118	162	216
	148	max		104	149	193	237	291
12	88	min			44	88	132	186
	178	max			134	178	222	276
14	102	min			15	59	103	157
	207	max			120	164	208	262

\* for 180° turn actuators consult factory

**Actuator spring to close**



**Actuator spring to open**



Revo Actuation

### Torques Revo Actuator Type R .. 050

Rev:

10.02.1998

page:

98050001

## Revo Actuators

Torques in Nm

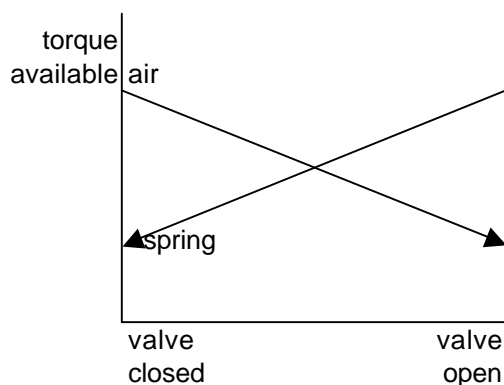
Size **090**

Torques for 90° turn actuators \*

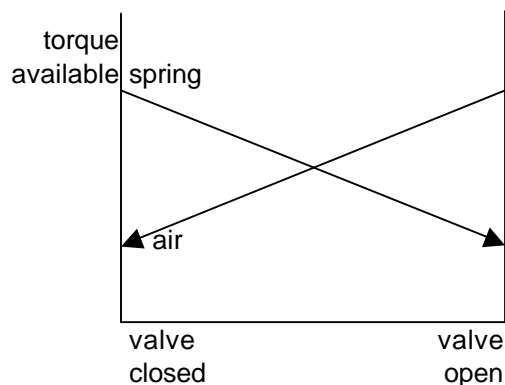
Number of springs	Spring Torque	Torque available	Air torque at supply pressure (bar)					
			3	4	5	6	7	8
0			253	337	421	505	589	673
2	27	min	197	281	365	449	533	617
	56	max	226	310	394	478	562	646
4	53	min	141	225	309	393	477	561
	112	max	200	284	368	452	536	620
6	80	min	85	169	253	337	421	505
	168	max	173	257	341	425	509	593
8	107	min		113	197	281	365	449
	224	max		230	314	398	482	566
10	134	min		57	141	225	309	393
	280	max		203	287	371	455	539
12	160	min			85	169	253	337
	336	max			261	345	429	513
14	187	min			29	113	197	281
	392	max			234	318	402	486

\* for 180° turn actuators consult factory

**Actuator spring to close**



**Actuator spring to open**



Revo Actuation

### Torques Revo Actuator Type R .. 090

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98090001

## Revo Actuators

Torques in Nm

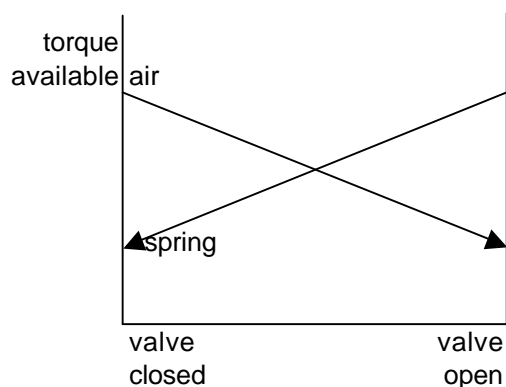
Size 130

Torques for 90° turn actuators \*

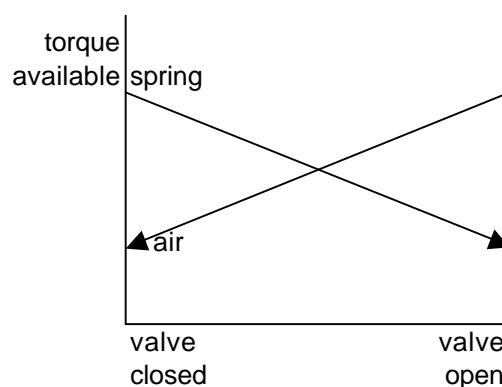
Number of springs	Spring Torque	Torque available	Air torque at supply pressure (bar)					
			3	4	5	6	7	8
0			385	513	642	770	898	1026
2	41	min	301	429	558	686	814	942
	84	max	344	472	601	729	857	985
4	81	min	216	344	473	601	729	857
	169	max	304	432	561	689	817	945
6	122	min	132	260	389	517	645	773
	253	max	263	391	520	648	776	904
8	162	min		176	305	433	561	689
	337	max		351	480	608	736	864
10	203	min		91	220	348	476	604
	422	max		310	439	567	695	823
12	244	min			136	264	392	520
	506	max			398	526	654	782
14	284	min			52	180	308	436
	590	max			358	486	614	742

\* for 180° turn actuators consult factory

Actuator spring to close



Actuator spring to open



Revo Actuation

### Torques Revo Actuator Type R .. 130

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98130001

## Revo Actuators

Torques in Nm

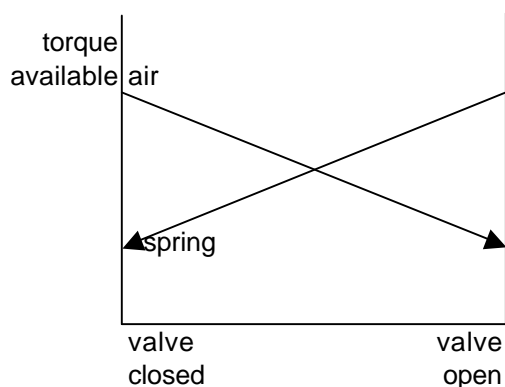
Size 180

Torques for 90° turn actuators \*

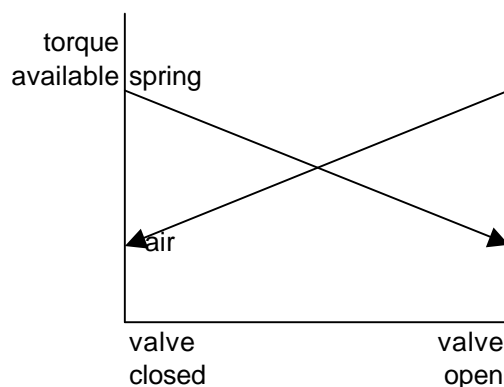
Number of springs	Spring Torque	Torque available	Air torque at supply pressure (bar)					
			3	4	5	6	7	8
0			506	675	843	1012	1181	1350
2	53	min	395	564	732	901	1070	1239
	111	max	453	622	790	959	1128	1297
4	107	min	284	453	621	790	959	1128
	222	max	399	568	736	905	1074	1243
6	160	min	174	343	511	680	849	1018
	332	max	346	515	683	852	1021	1190
8	213	min	63	232	400	569	738	907
	443	max	293	462	630	799	968	1137
10	267	min		121	289	458	627	796
	554	max		408	576	745	914	1083
12	320	min			178	347	516	685
	665	max			523	692	861	1030
14	373	min			67	236	405	574
	776	max			470	639	808	977

\* for 180° turn actuators consult factory

Actuator spring to close



Actuator spring to open



Revo Actuation

### Torques Revo Actuator Type R .. 180

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98180001

## Revo Actuators

Torques in Nm

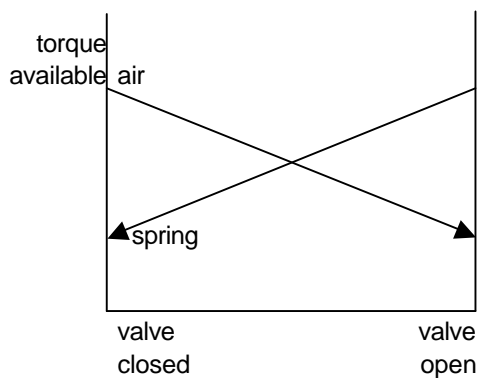
Size **205**

### Torques for 90° turn actuators \*

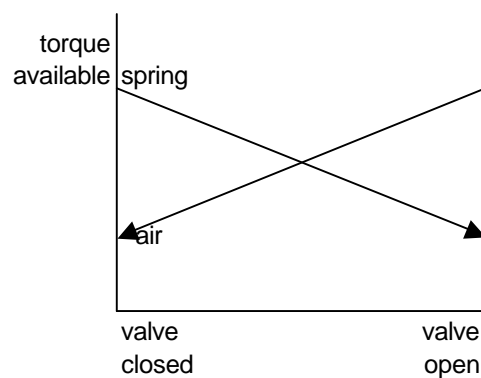
Number of springs	Spring Torque	Torque available	Air torque at supply pressure (bar)					
			3	4	5	6	7	8
0			758	1011	1264	1517	1770	2023
2	84	min	589	842	1095	1348	1601	1854
	169	max	674	927	1180	1433	1686	1939
4	169	min	421	674	927	1180	1433	1686
	337	max	589	842	1095	1348	1601	1854
6	253	min	252	505	758	1011	1264	1517
	506	max	505	758	1011	1264	1517	1770
8	337	min		337	590	843	1096	1349
	674	max		674	927	1180	1433	1686
10	421	min		168	421	674	927	1180
	843	max		590	843	1096	1349	1602
12	506	min			253	506	759	1012
	1011	max			758	1011	1264	1517
14	590	min			84	337	590	843
	1180	max			674	927	1180	1433

\* for 180° turn actuators consult factory

Actuator spring to close



Actuator spring to open



Revo Actuation

### Torques Revo Actuator Type R .. 205

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98205001

## Revo Actuators

Torques in Nm

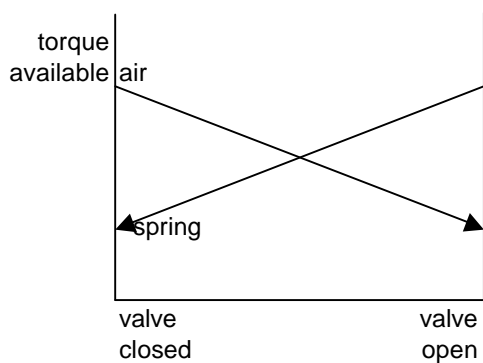
Size **380**

Torques for 90° turn actuators \*

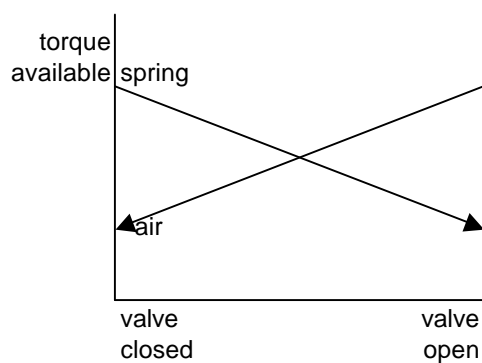
Number of springs	Spring Torque	Torque available	Air torque at supply pressure (bar)					
			3	4	5	6	7	8
0			1138	1517	1896	2275	2654	3033
2	126	min	885	1264	1643	2022	2401	2780
	253	max	1012	1391	1770	2149	2528	2907
4	253	min	632	1011	1390	1769	2148	2527
	506	max	885	1264	1643	2022	2401	2780
6	379	min	382	761	1140	1519	1898	2277
	756	max	759	1138	1517	1896	2275	2654
8	506	min		506	885	1264	1643	2022
	1011	max		1011	1390	1769	2148	2527
10	632	min		253	632	1011	1390	1769
	1264	max		885	1264	1643	2022	2401
12	758	min			379	758	1137	1516
	1517	max			1138	1517	1896	2275
14	885	min			127	506	885	1264
	1769	max			1011	1390	1769	2148

\* for 180° turn actuators consult factory

Actuator spring to close



Actuator spring to open



Revo Actuation

### Torques Revo Actuator Type R.. 380

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## Revo Actuators

Torques in Nm

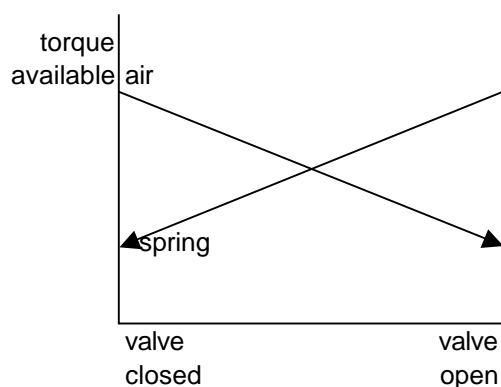
Size **630**

Torques for 90° turn actuators \*

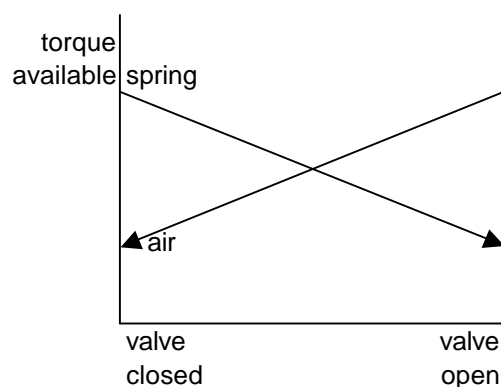
Number of springs	Spring Torque	Torque available	Air torque at supply pressure (bar)					
			3	4	5	6	7	8
0			1896	2528	3159	3791	4423	5055
2	211	min	1475	2107	2738	3370	4002	4634
	421	max	1685	2317	2948	3580	4212	4844
4	421	min	1053	1685	2316	2948	3580	4212
	843	max	1475	2107	2738	3370	4002	4634
6	632	min	632	1264	1895	2527	3159	3791
	1264	max	1264	1896	2527	3159	3791	4423
8	843	min		843	1474	2106	2738	3370
	1685	max		1685	2316	2948	3580	4212
10	1053	min		421	1052	1684	2316	2948
	2107	max		1475	2106	2738	3370	4002
12	1264	min			631	1263	1895	2527
	2528	max			1895	2527	3159	3791
14	1475	min			210	842	1474	2106
	2949	max			1684	2316	2948	3580

\* for 180° turn actuators consult factory

**Actuator spring to close**



**Actuator spring to open**



Revo Actuation

### Torques Revo Actuator Type R .. 630

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## Revo Actuators

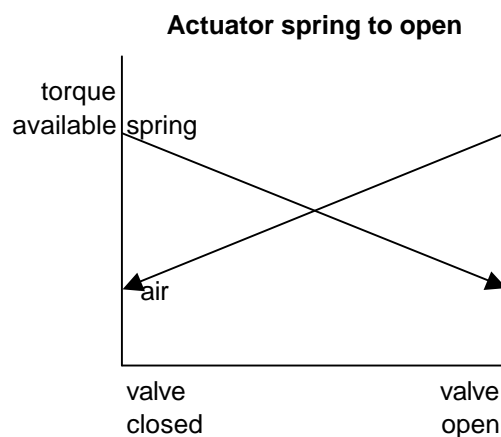
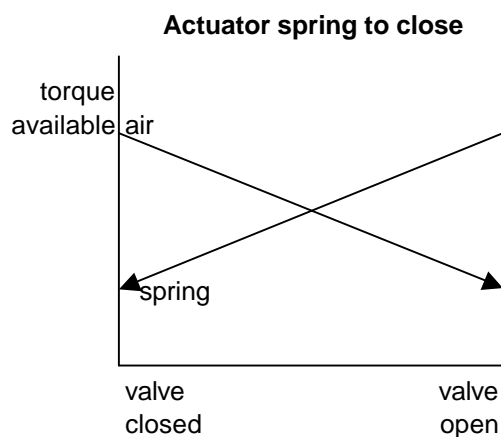
Torques in Nm

Size **960**

Torques for 90° turn actuators \*

Number of springs	Spring Torque	Torque available	Air torque at supply pressure (bar)					
			3	4	5	6	7	8
0			2879	3839	4799	5758	6718	7677
3	316	min	2247	3207	4167	5126	6086	7045
	632	max	2563	3523	4483	5442	6402	7361
6	632	min	1615	2575	3535	4494	5454	6413
	1264	max	2247	3207	4167	5126	6086	7045
9	948	min	983	1943	2903	3862	4822	5781
	1896	max	1931	2891	3851	4810	5770	6729
12	1264	min		1311	2271	3230	4190	5149
	2528	max		2575	3535	4494	5454	6413
15	1580	min		679	1639	2598	3558	4517
	3160	max		2259	3219	4178	5138	6097
18	1896	min			1007	1966	2926	3885
	3792	max			2903	3862	4822	5781

\* for 180° turn actuators consult factory



Revo Actuation

### Torques Revo Actuator Type R.. 960

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## Revo Actuators

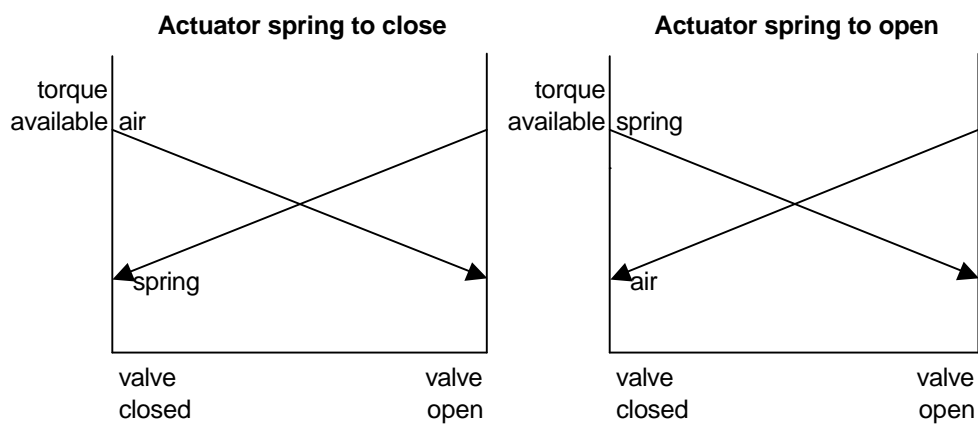
Torques in Nm

Size H15

Torques for 90° turn actuators \*

Number of springs	Spring Torque	Torque available	Air torque at supply pressure (bar)					
			3	4	5	6	7	8
0			4407	5876	7345	8814	10283	11752
2	489	min	3428	4897	6366	7835	9304	10773
	979	max	3918	5387	6856	8325	9794	11263
4	979	min	2449	3918	5387	6856	8325	9794
	1958	max	3428	4897	6366	7835	9304	10773
6	1468	min	1470	2939	4408	5877	7346	8815
	2937	max	2939	4408	5877	7346	8815	10284
8	1958	min		2260	3729	5198	6667	8136
	3616	max		3918	5387	6856	8325	9794
10	2447	min		982	2451	3920	5389	6858
	4894	max		3429	4898	6367	7836	9305
12	2937	min			1472	2941	4410	5879
	5873	max			4408	5877	7346	8815
14	3792	min			3553	5022	6491	7960
	6852	max			493	1962	3431	4900

\* for 180° turn actuators consult factory



Revo Actuation

### Torques Revo Actuator Type R.. H15

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# Revo Actuator Series R

Sizes 001 to 006

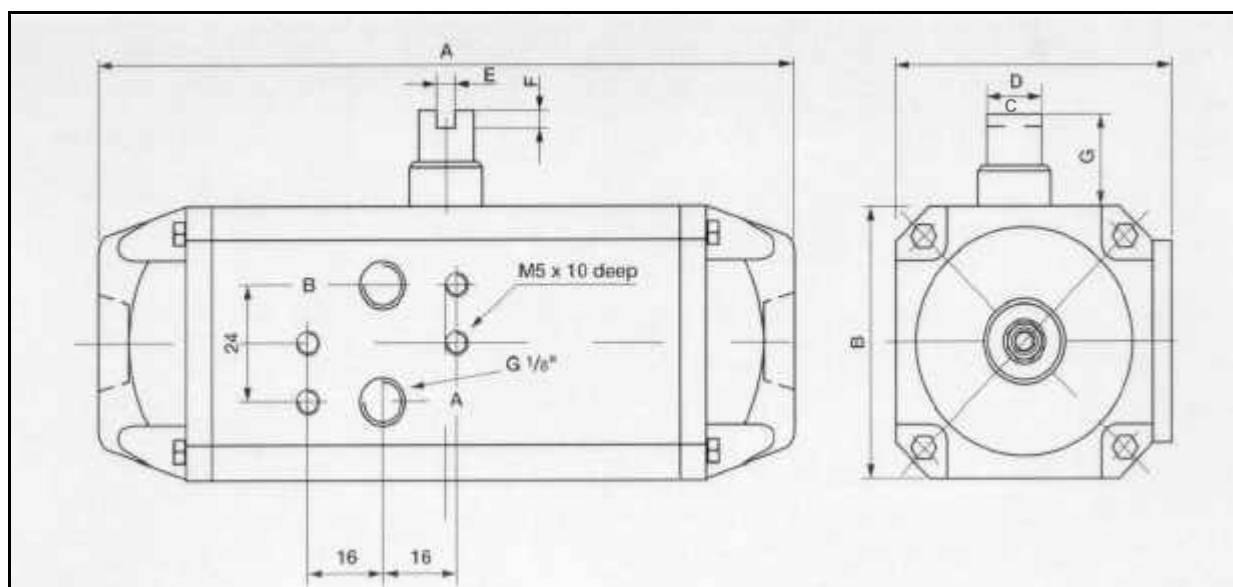


- Connecting flange ISO 5211, with female square DIN 3337.
- Connection for solenoid valve VDI/VDE, Namur
- Connection for positioner and limit switch VDI/VDE 3845 (Namur)\*

\* Size A: Bore pattern 60 x 25 mm, shaft height 30 mm, Size B: Bore pattern 60 x 30 mm

## Dimensions and Weights

Size	Connection	A	8	C	D	E	F	G	kg
R.. 001	F03 V09	88	45	45	8	4	4	15	0,6
R.. 002	F04 V11	133	56	60	12	4	4	20	0,8
R.. 006	F05 V14	176	66	71	22	4	4	20	1,1



## Torques (Nm)

### Double-acting actuators

Size	Air supply pressure (bar)						
	1	2	3	4	5	6	7
R.. 001	1,24	2,48	3,72	4,96	6,20	7,44	8,68
R.. 002	2,70	5,40	8,10	10,80	13,50	16,20	18,90
R.. 006	6,20	12,40	18,80	24,80	31,00	37,20	43,40

## Torques (Nm)

### Single-acting actuators

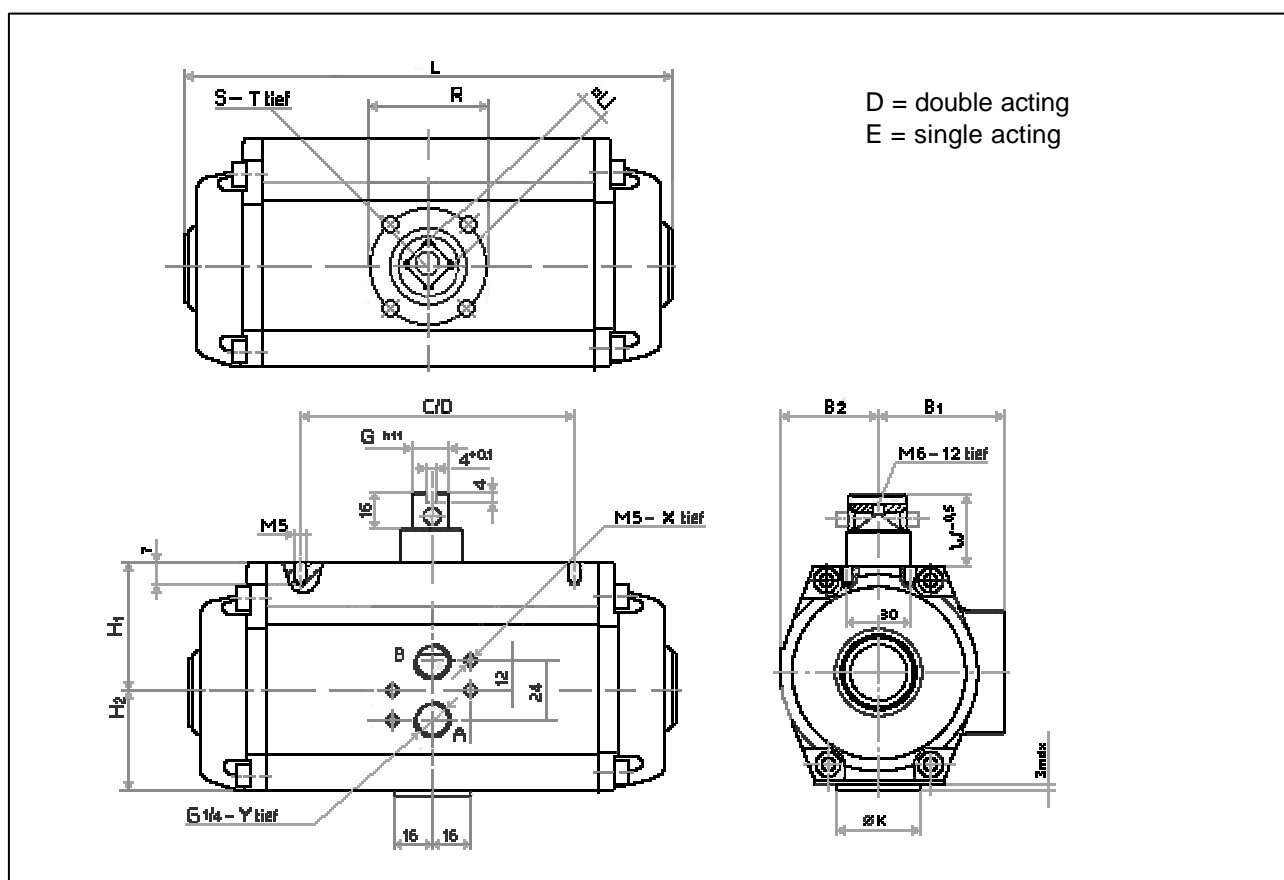
Size	Air supply pressure (bar)						
	1	3	3	4	5	6	7
Rx*.. 002	0,90	1,80	2,70	3,60	4,50	5,40	6,30
Rx*.. 006	2,06	4,12	6,18	8,24	10,60	12,38	14,42
No. of springs	2	4	6	8	10	12	14

\* x: S = spring close, A = spring open

Due to constant product improvements, details shown on this data sheet are subject to change.

# Revo Actuator Series R

Sizes 012 to 180



## Dimensions and Weights

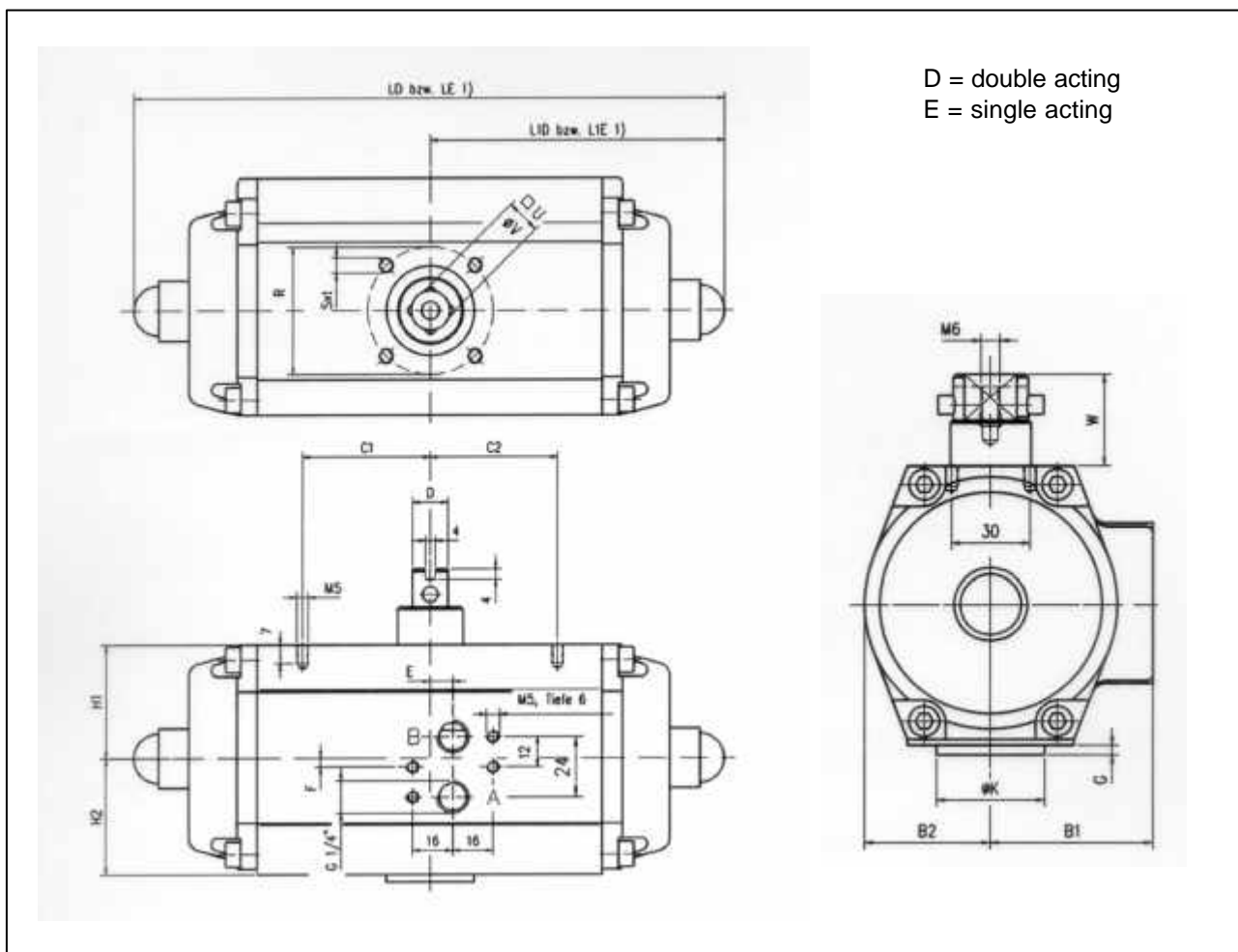
Model	LD/LE 1)	B1	B2	C1	C2	D	E	F	G	H1	H2	R	K	S	t	U	W	weight (kg)	connection
R.. 012	205	52	41	40	40	14	0	0	3	44,5	46,5	50	35	M6	9	14	20	2,4	F05
R.. 025	214	67	55	40	40	14	0	0	3	59,5	61,5	50	35	M6	9	14	20	3,6	F05
R.. 050	267	79	67	40	40	17	0	0	3	71,5	74,5	70	55	M8	12	17	20	6,4	F07
R.. 090	355	94	78	65	65	17	15	0	3	81,5	84,5	70	55	M8	12	17	20	11,2	F07
R.. 090	355	94	78	65	65	22	15	0	3	81,5	84,5	102	70	M10	16	22	30	11,2	F10
R.. 130	412	99,5	90	65	65	22	15	0	3	94	98	102	70	M10	16	22	30	18,5	F10
R.. 130	412	99,5	90	65	65	27	15	0	3	94	98	125	85	M12	17,5	27	30	18,5	F12
R.. 180	419	114	102	65	65	27	15	0	3	106,5	111,5	125	85	M12	17,5	27	30	23,0	F12

1) LD = double acting  
LE = single acting

Due to constant product improvements, details shown on this data sheet are subject to change.

# Revo Actuator Series R

## Sizes 012 to 180 with Overtravel and Limit Stops



### Dimensions and Weights

Model	LD/LE	L1D/L1E	B1	B2	C1	C2	D	E	F	G	H1	H2	R	K	S	t	U	W	weight (kg)	connection
	1)	1)																		
R.. 012	253	L/2	52	41	40	40	14	0	0	3	44,5	46,5	50	35	M6	9	14	20	2,4	F05
R.. 025	272	L/2	67	55	40	40	14	0	0	3	59,5	61,5	50	35	M6	9	14	20	3,6	F05
R.. 050	326	L/2	79	67	40	40	17	0	0	3	71,5	74,5	70	55	M8	12	17	20	6,4	F07
R.. 090	420	L/2	94	78	65	65	17	15	0	3	81,5	84,5	70	55	M8	12	17	20	11,2	F07
R.. 090	420	L/2	94	78	65	65	22	15	0	3	81,5	84,5	102	70	M10	16	22	30	11,2	F10
R.. 130	487	L/2	99,5	90	65	65	22	15	0	3	94	98	102	70	M10	16	22	30	18,5	F10
R.. 130	487	L/2	99,5	90	65	65	27	15	0	3	94	98	125	85	M12	17,5	27	30	18,5	F12
R.. 180	494	L/2	114	102	65	65	27	15	0	3	106,5	111,5	125	85	M12	17,5	27	30	23,0	F12

1) LD / L1D = double acting  
LE / L1E = single acting

# Revo Actuator Series R

Due to constant product improvements, details shown on this data sheet are subject to change.

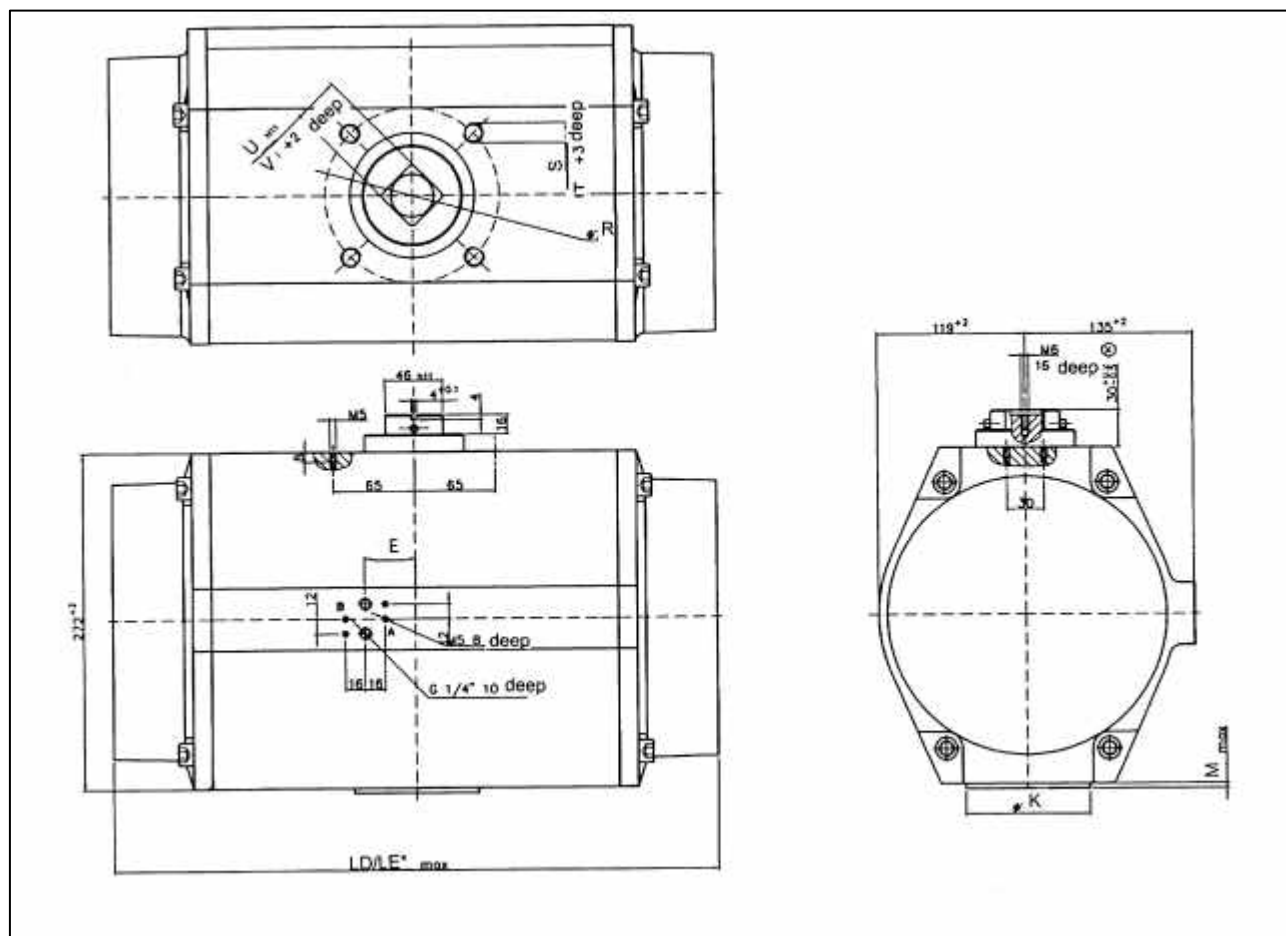
## Sizes 012 to 180 with Overtravel and Limit Stops

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# Revo Actuator Series R

## Sizes 205 to 380



LD = Double Acting  
LE = Single Acting

### Dimensions (mm) and Weights

Size-connection	LD	LE*	E	R	K	M	S	T	U	V	weight (kg)
205-F12	388	486	40	125	85	3	M12	20	27	29	31
205-F14	388	486	40	140	100	4	M16	25	36	38	31
205-F14/R45	388	486	40	70	100	4	M16	25	-	70	31
380-F12	510	602	71	125	85	3	M12	20	27	29	37
380-F14	510	602	71	140	100	4	M16	25	36	38	37
380-F14/R45	510	602	71	102	100	4	M16	25	-	70	37

# Revo Actuator Series R

## Sizes 205 to 380



### Torques (Nm)

Torque figures valid for range 0-90° only.

### Double acting Actuators

Size	Air supply pressure (bar)					
	2	3	4	5	6	7
205	506	758	1011	1264	1517	1770
380	758	1138	1517	1896	2275	2654

### Single acting Actuators

Size	Air supply pressure (bar)											
	2.5 – 2.9		3.0 – 3.9		4.0 – 4.9		5.0 – 5.9		6.0 – 6.9		7.0 – 10	
205	169	4	252	6	337	8	421	10	506	12	590	14
380	253	4	379	6	506	8	632	10	758	12	885	14

### Connction Sizes

Connection sizes according to DIN/ISO 5211 and square hole according to DIN 3337

Connection square hole Size	Torque <sup>1)</sup> (Nm)	F04 V11	F05 V14	F07 V17	F10 V22	F12 V27	F14 V36	F14 Ø45	F16 V46	F16 Ø70	F25 V55	F25 Ø70	F25 Ø75	F25 Ø85	F30 V75
205-12	1000														
205-14*	2000														
205-14	2000														
380-12	1000														
380-14*	2000														
380-14	2000														

\* Standard

1) Maximum torques for corresponding connection size according to ISO 5211

The information contained herein is correct at the time of issue but may be subject to change without notice.



\*LD – double acting  
LE – single acting

# Revo Actuator Series R

## Size 630



### Torques (Nm)

Torque figures valid for range 0-90° only.

### Double acting Actuators

Size	Air supply pressure (bar)					
	2	3	4	5	6	7
630	1264	1896	2528	3159	3791	4423

### Single acting Actuators

Size	Air supply pressure (bar)											
	2.5 – 2.9		3.0 – 3.9		4.0 – 4.9		5.0 – 5,9		6.0 – 6.9		7.0 – 10	
		Springs		Springs		Springs		Springs		Springs		Springs
630	421	4	632	6	843	8	1053	10	1263	12	1474	14

### Connction Sizes

Connection sizes according to DIN/ISO 5211 and square hole according to DIN 3337

Connection square hole	Torque <sup>1</sup> (Nm)	F04 V11	F05 V14	F07 V17	F10 V22	F12 V27	F14 V36	F14 Ø45	F16 V46	F16 Ø70	F25 V55	F25 Ø70	F25 Ø75	F25 Ø85	F30 V75
Size															
630-14	2000														
630-A1	2000														
630-16*	4000														
630-A2	4000														

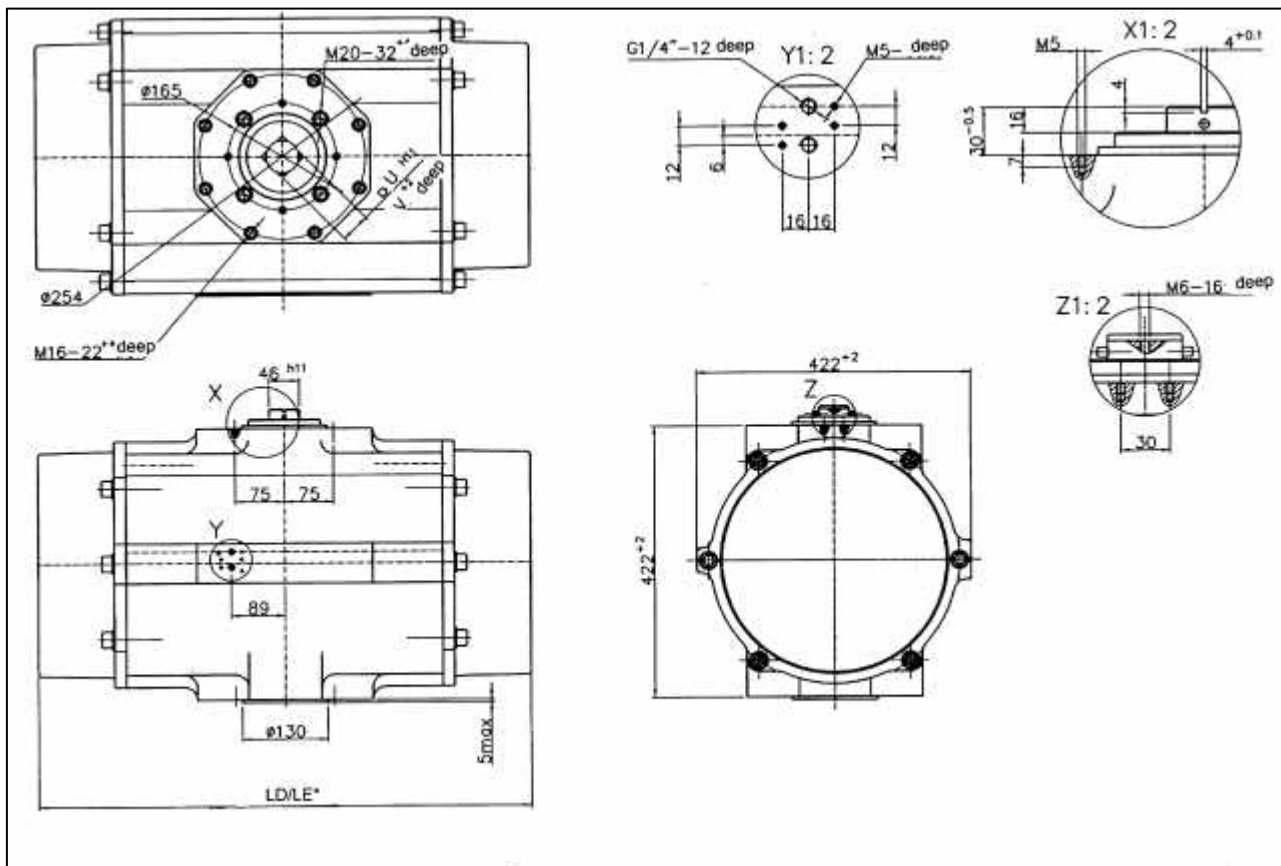
\* Standard

1) Maximum torques for corresponding connection size according to ISO 5211

The information contained herein is correct at the time of issue but may be subject to change without prior notice.

# Revo Actuator Series R

## Size 960



\* LD – double acting  
LE – single acting

### Dimensions (mm) and Weights

Size connection	LD*	LE*	U	V	Weight (kg)
960-F16 (V46)	533	754	46	48	123
960-16F/25 (R70)	533	754	-	112	123
960-F25 (V55)	533	754	55	57	123
960-F25 (R75)	533	754	-	122	123

# Revo Actuator Series R

## Size 960



### Torques (Nm)

Torque figures valid for range 0-90° only.

### Double acting Actuators

Size	Air supply pressure (bar)					
	2	3	4	5	6	7
960	1919	2879	3839	4799	5758	6718

### Single acting Actuators

Size	Air supply pressure (bar)											
	2.5 – 2.9		3.0 – 3.9		4.0 – 4.9		5.0 – 5.9		6.0 – 6.9		7.0 – 10	
		Springs		Springs		Springs		Springs		Springs		Springs
960	632	6	983	9	1264	12	1580	15	1896	18	1896	18

### Connection Sizes

Connecting sizes according to DIN/ISO 5211 and square hole according to DIN 3337

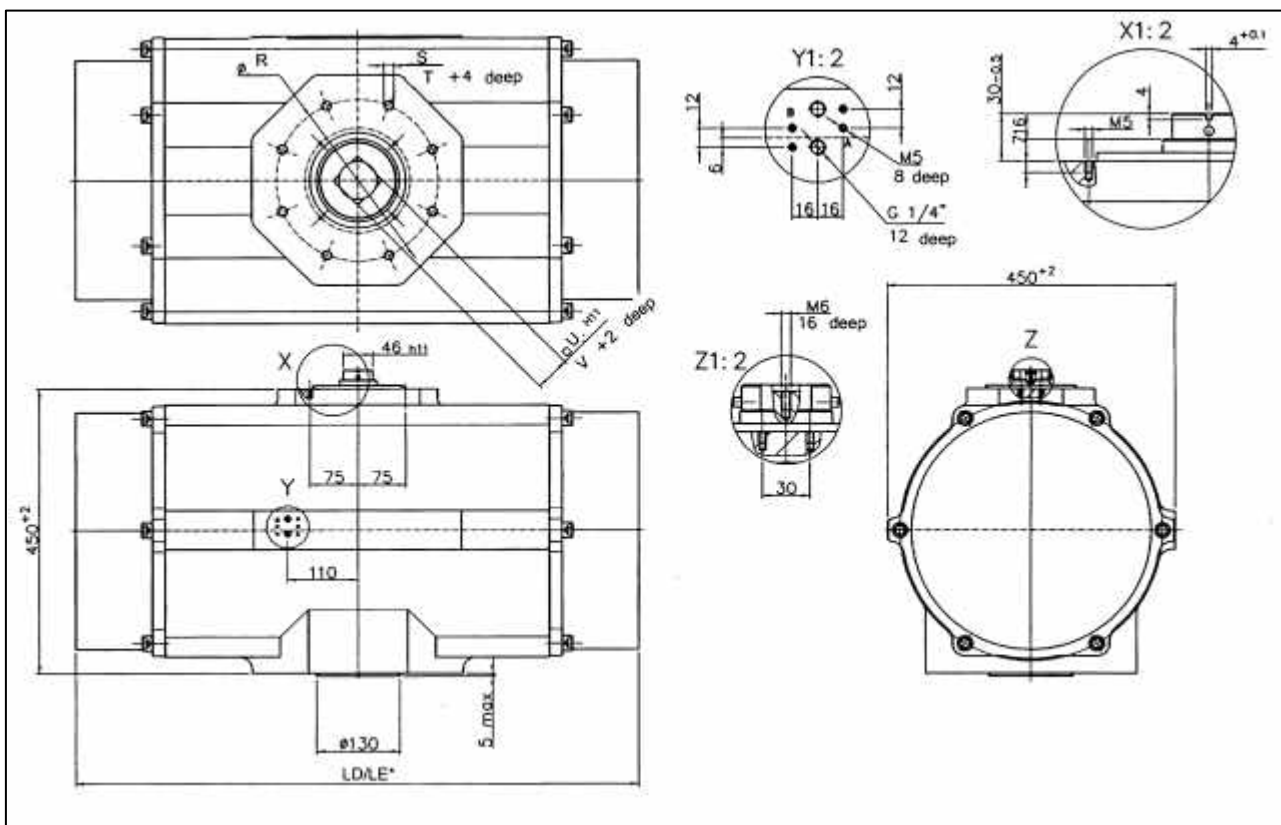
Connection square hole Size	Torque Nm <sup>1)</sup>	F04 V11	F05 V14	F07 V17	F10 V22	F12 V27	F14 V36	F14 Ø45	F16 V46	F16 Ø70	F25 V55	F25 Ø70	F25 Ø75	F25 Ø85	F30 V75
950-16	4000														
960-A2	4000														
960-A3	8000														
960-25*	8000														
960-A4	8000														

\* Standard

1) Maximum torques for corresponding connection size according to ISO 5211

The information contained herein is correct at the time of issue but may be subject to change without prior notice.

## Size H15



\*\* see drawing

Size-connection	LD*	LE*	R	S	T	U	V	Weight (kg)
H15-F25 (V55)	669	879	254	M16	25	55	57	156
H15-F30 (R75)	669	879	298	M20	32	75	77	156
H15-F25 (R70)	669	879	254	M16	25	-	112	156
H15-F25 (R75)	669	879	254	M16	25	-	117	156
H15-V25 (R85)	669	879	254	M16	25	-	117	156

# Revo Actuator Series R

## Size H15



### Torques (Nm)

Torque figures valid for range 0-90° only.

### Double acting Actuators

Size	Air supply pressure (bar)					
	2	3	4	5	6	7
H15	2938	4407	5876	7345	8814	10283

### Single acting Actuators

Size	Air supply pressure (bar)											
	2.5 – 2.9 Springs		3.0 – 3.9 Springs		4.0 – 4.9 Springs		5.0 – 5.9 Springs		6.0 – 6.9 Springs		7.0 - 10 Springs	
H15	979	4	1468	6	1958	8	2447	10	2937	12	3431	14

### Connection Sizes

Connection sizes according to DIN/ISO 5211 and square hole according to DIN 3337

Connection square hole Size	Torque Nm <sup>1)</sup>	F04 V11	F05 V14	F07 V17	F10 V22	F12 V27	F14 V36	F14 Ø45	F16 V46	F16 Ø70	F25 V55	F25 Ø70	F25 Ø75	F25 Ø80	F30 V75
H15-25*	4000														
H15-30	4000														
H16-A3	8000														
H15-A4	8000														
H15-A5	8000														

\* Standard

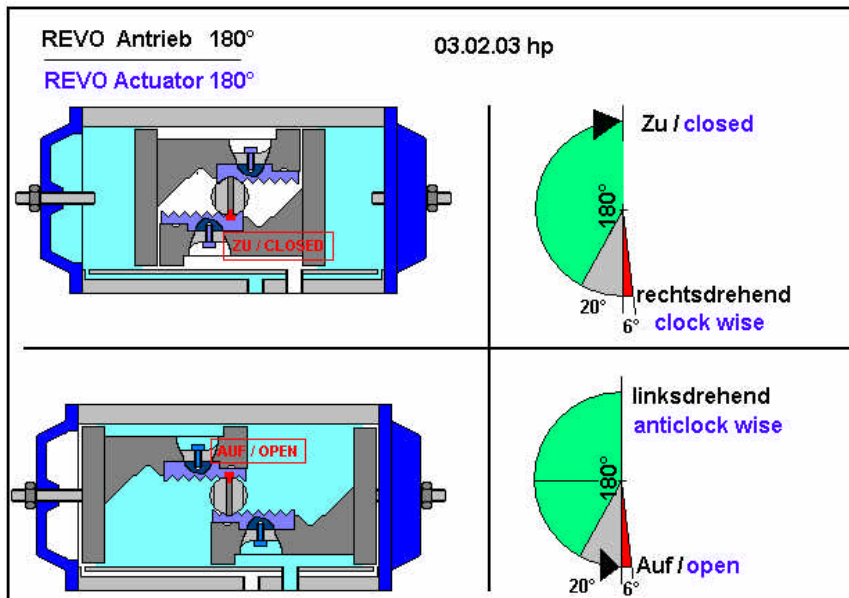
1) Maximum torques for corresponding connection size according to ISO 5211

The information contained herein is correct at the time of issue but may be subject to change without prior notice.



# 180° - Schwenkantriebe / 180° Actuator

## Bauart 5 / Version 5



### Beschreibung / Description:

REVO 180° Schwenkantriebe sind aus 90° Antrieben gefertigt und können als AUF / ZU, oder Regelantriebe eingesetzt werden. Die Antriebe verfügen standardmäßig über eine Endlageneinstellung in Auf – Richtung.

REVO 180° - actuators base on the standard 90° - actuator and are available in „OPEN / CLOSED“ or „modulating function“. The actuators are adjustable in „OPEN“ – position.

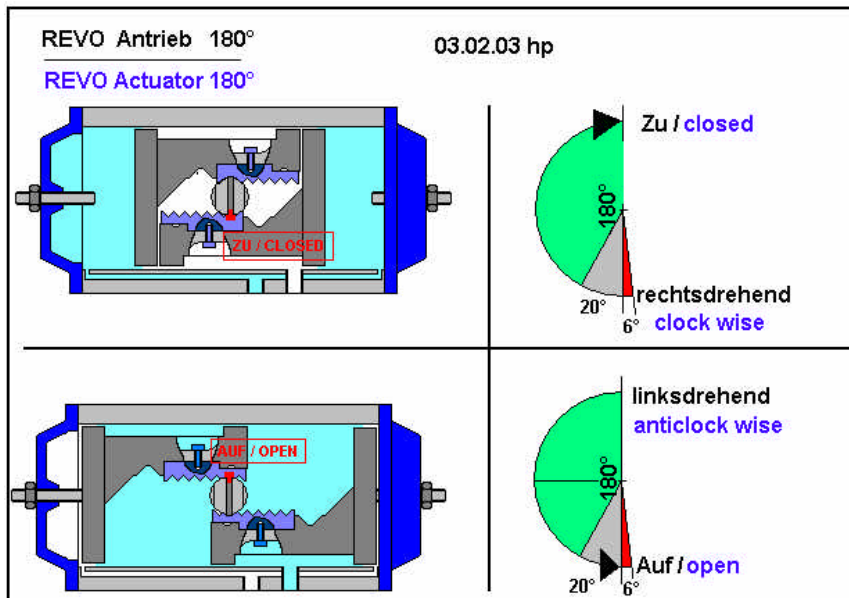
### Spezifikation / Specification:

Druck / Pressure	- max. 5 bar
Medium	- Luft, nicht korrosives Gas / air, inert gas
Drehmoment / Torque	- siehe Tabelle / refer to attached List
Temperatur / Temperature	- -20°C bis +80°C
Drehwinkel / Travel	- 0° bis 186° einstellbar von 160° bis 186° adjustable between 160° to 186°



# 180° - Schwenkantriebe / 180° Actuator

## Bauart 5 / Version 5



### Beschreibung / Description:

REVO 180° Schwenkantriebe sind aus 90° Antrieben gefertigt und können als AUF / ZU, oder Regelantriebe eingesetzt werden. Die Antriebe verfügen standardmäßig über eine Endlageneinstellung in Auf – Richtung.

REVO 180° - actuators base on the standard 90° - actuator and are available in „OPEN / CLOSED“ or „modulating function“. The actuators are adjustable in „OPEN“ – position.

### Spezifikation / Specification:

Druck / Pressure	- max. 5 bar
Medium	- Luft, nicht korrosives Gas / air, inert gas
Drehmoment / Torque	- siehe Tabelle / refer to attached List
Temperatur / Temperature	- -20°C bis +80°C
Drehwinkel / Travel	- 0° bis 186° einstellbar von 160° bis 186° adjustable between 160° to 186°



# 180° - Schwenkantriebe / 180° Actuator

## Drehmomente / Torques

### Drehmomente in Nm / Torques in Nm

Doppeltwirkend / Double Acting

Grösse Size	Zuluftdruck in bar / Air Supply Pressure			
	2	3	4	5
O12	12,35	18,50	24,65	30,80
O25	23,50	35,50	47,50	59,50
O50	44,50	66,50	88,50	111,00
O90	84,50	126,50	168,50	210,50
130	128,00	192,50	256,50	321,00
180	169,00	253,00	337,50	421,50
205	253,00	379,00	505,50	632,00
380	379,00	569,00	758,50	948,00

### Drehmomente in Nm / Torques in Nm

Einfachwirkend / Spring Return

Grösse Size	Zuluftdruck in bar / Air Supply Pressure							
	2		3		4		5	
	Nm	Z *	Nm	Z *	Nm	Z *	Nm	Z *
O12	4,10	4	6,15	6	8,20	8	10,25	8
O25	8,00	4	12,00	6	16,00	8	20,00	8
O50	14,50	4	22,00	6	29,00	8	36,50	8
O90	26,50	4	40,00	6	53,50	8	67,00	8
130	40,50	4	61,00	6	81,00	8	101,50	8
180	53,50	4	80,00	6	106,50	8	133,50	8
205	84,50	4	126,50	6	168,50	8	210,50	8
380	126,50	4	189,50	6	253,00	8	316,00	8

Z \* . Anzahl der Federn / No. of Springs



# 180° - Schwenkantriebe / 180° Actuator

## Drehmomente / Torques

### Drehmomente in Nm / Torques in Nm

Doppeltwirkend / Double Acting

Grösse Size	Zuluftdruck in bar / Air Supply Pressure			
	2	3	4	5
O12	12,35	18,50	24,65	30,80
O25	23,50	35,50	47,50	59,50
O50	44,50	66,50	88,50	111,00
O90	84,50	126,50	168,50	210,50
130	128,00	192,50	256,50	321,00
180	169,00	253,00	337,50	421,50
205	253,00	379,00	505,50	632,00
380	379,00	569,00	758,50	948,00

### Drehmomente in Nm / Torques in Nm

Einfachwirkend / Spring Return

Grösse Size	Zuluftdruck in bar / Air Supply Pressure							
	2		3		4		5	
	Nm	Z *	Nm	Z *	Nm	Z *	Nm	Z *
O12	4,10	4	6,15	6	8,20	8	10,25	8
O25	8,00	4	12,00	6	16,00	8	20,00	8
O50	14,50	4	22,00	6	29,00	8	36,50	8
O90	26,50	4	40,00	6	53,50	8	67,00	8
130	40,50	4	61,00	6	81,00	8	101,50	8
180	53,50	4	80,00	6	106,50	8	133,50	8
205	84,50	4	126,50	6	168,50	8	210,50	8
380	126,50	4	189,50	6	253,00	8	316,00	8

Z \* . Anzahl der Federn / No. of Springs

## 180° turn Actuator

## Revo Actuators

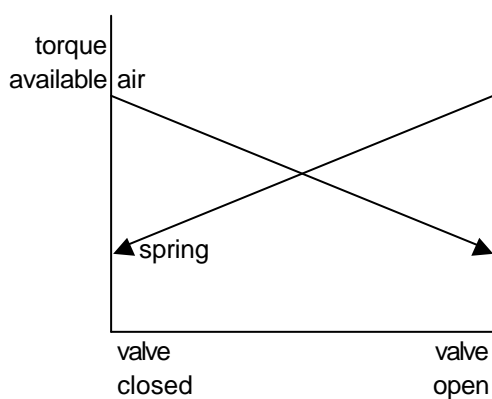
Torques in Nm

Size 012

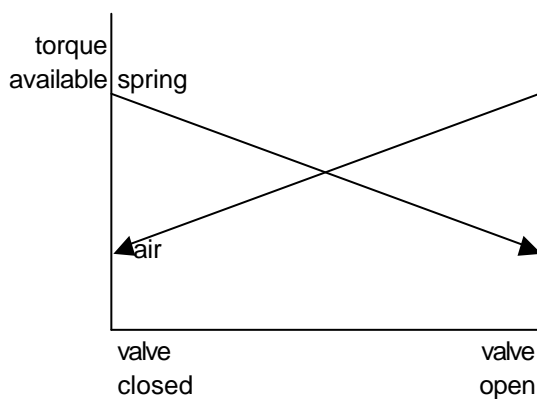
Torques for 180° turn actuators

Number of springs	Spring Torque	Torque available	Air torque at supply pressure ( bar)				
			2	3	4	5	6
0			12,0	19,0	25,0	31,0	37
2	2,1	min	7,9	14,9	20,9	26,9	32,9
	4,1	max	10,0	17,0	23,0	29,0	35,0
4	4,1	min	3,8	10,8	16,8	22,8	28,8
	8,2	max	7,9	14,9	20,9	26,9	32,9
6	6,2	min		6,7	12,7	18,7	24,7
	12,3	max		12,9	18,9	24,9	30,9
8	8,2	min			8,6	14,6	20,6
	16,4	max			16,8	22,8	28,8
10	10,3	min				10,5	16,5
	20,5	max				20,8	26,8

Actuator spring to close



Actuator spring to open



Revo Actuation

### Torques Revo Actuator Type R .. 012 -180

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6.06.03 hp

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98012002

## 180° turn Actuator

## Revo Actuators

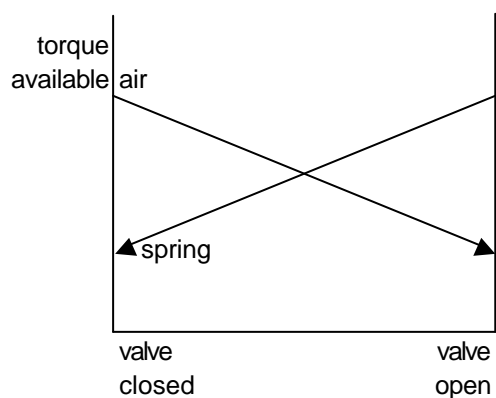
Torques in inlbs

Size **012**

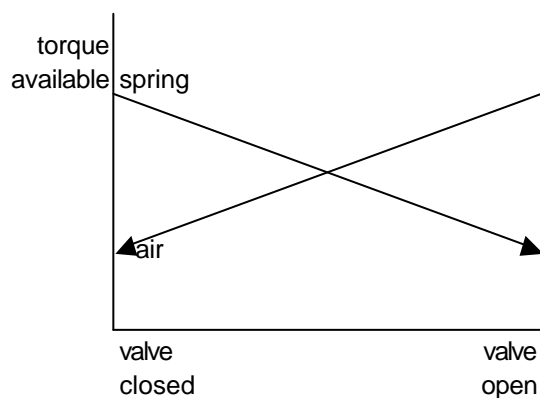
Torques for 180° turn actuators in inlbs

Number of springs	Spring Torque	Torque available	Air torque at supply pressure ( psi)				
			40	50	60	70	80
0			146,4	183,0	219,6	256,2	292,8
2	18,6	min	109,2	145,8	182,4	219,0	255,6
	37,2	max	127,8	164,4	201,0	237,6	274,2
4	37,2	min	72,1	108,7	145,3	181,9	218,5
	74,3	max	109,2	145,8	182,4	219,0	255,6
6	55,8	min		71,5	108,1	144,7	181,3
	111,5	max		127,2	163,8	200,4	237,0
8	74,3	min			70,9	107,5	144,1
	148,7	max			145,3	181,9	218,5
10	92,9	min				70,4	107,0
	185,9	max				163,3	199,9

Actuator spring to close



Actuator spring to open



**Torques Revo Actuator**

Rev:

6.06.03 hp

Revo Actuation	Type R .. 012 -180	page:	98012003
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## 180° turn Actuator

## Revo Actuators

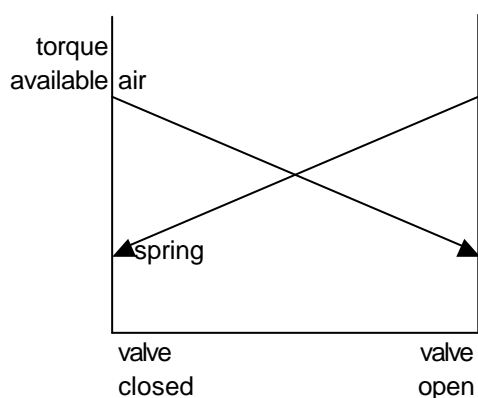
Torques in Nm

Size **025**

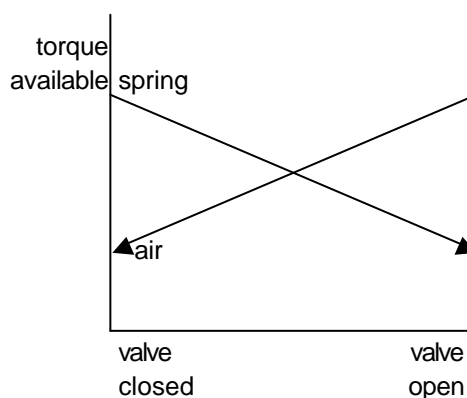
Torques for 180° turn actuators

Number of springs	Spring Torque	Torque available	Air torque at supply pressure ( bar)				
			2	3	4	5	6
0			24	36	48	60	72
2	4	min	16	28	40	52	64
	8	max	20	32	44	56	68
4	8	min	8	20	32	44	56
	16	max	16	28	40	52	64
6	12	min		12	24	36	48
	24	max		24	36	48	60
8	16	min			16	28	40
	32	max			32	44	56
10	20	min				20	32
	40	max				40	52

Actuator spring to close



Actuator spring to open



Revo Actuation

### Torques Revo Actuator Type R .. 025 - 180

Rev: 06.06.2003 hp

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## 180° turn Actuator

## Revo Actuators

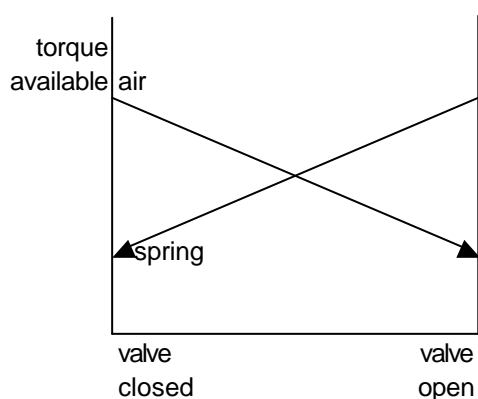
Torques in inlbs

Size **025**

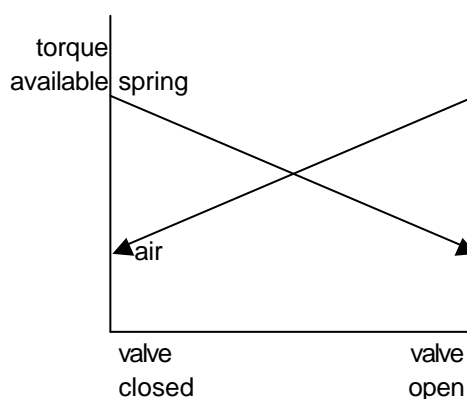
Torques for 180° turn actuators in inlbs

Number of springs	Spring Torque	Torque available	Air torque at supply pressure ( psi)				
			40	50	60	70	80
0			292	365	438	511	584
2	35	min	221	294	367	440	513
	71	max	257	330	403	476	549
4	71	min	150	223	296	369	442
	142	max	221	294	367	440	513
6	106	min		153	226	299	372
	212	max		259	332	405	478
8	142	min			155	228	301
	283	max			296	369	442
10	177	min				157	230
	354	max				334	407

Actuator spring to close



Actuator spring to open



Revo Actuation

### Torques Revo Actuator Type R .. 025 - 180

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page: 98025003

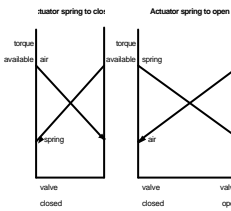
180° turn Actuator

Revo Actuators

Torques in Nm  
Size 050

Torques for 180° turn actuators

Number of springs	Spring Torque	Torque available	Air torque at supply pressure (bar)					
			2	3	4	5	6	
0			45	67	88	111	133,5	
2	7,5	min	30	52	74	96	119	
	15,0	max	38	60	82	104	126	
4	14,5	min	16	38	60	82	105	
	29,0	max	31	53	75	97	119	
6	22,0	min		23	45	67	90	
	44,0	max		45	67	89	112	
8	29,0	min			31	53	76	
	58,0	max			60	82	105	
10	36,5	min				38	61	
	73,0	max				75	97	



Torques Revo Actuators  
Type R .. 050 - 180

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page: 98050002

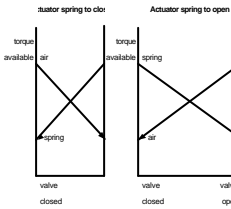
180° turn Actuator

Revo Actuators

Torques in lbf·ft  
Size 050

Torques for 180° turn actuators in lbf·ft

Number of springs	Spring Torque	Torque available	Air torque at supply pressure (psi)					
			40	50	60	70	80	
0			549	687	824	961	1098	
2	66,4	min	416	554	691	828	966	
	132,8	max	483	620	757	895	1032	
4	132,8	min	284	421	558	696	833	
	265,5	max	416	554	691	828	966	
6	199,1	min		288	426	563	700	
	398,3	max		487	625	762	899	
8	265,5	min			293	430	567	
	531,0	max			558	696	833	
10	331,9	min				297	435	
	663,8	max				625	767	



Torques Revo Actuators  
Type R .. 050 - 180

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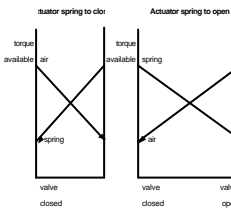
180° turn Actuator

Revo Actuators

Torques in Nm  
Size 050

Torques for 180° turn actuators

Number of springs	Spring Torque	Torque available	Air torque at supply pressure (bar)					
			2	3	4	5	6	
0			45	67	88	111	133,5	
2	7,5	min	30	52	74	96	119	
	15,0	max	38	60	82	104	126	
4	14,5	min	16	38	60	82	105	
	29,0	max	31	53	75	97	119	
6	22,0	min		23	45	67	90	
	44,0	max		45	67	89	112	
8	29,0	min			31	53	76	
	58,0	max			60	82	105	
10	36,5	min				38	61	
	73,0	max				75	97	



Torques Revo Actuators  
Type R .. 050 - 180

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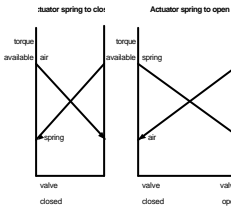
180° turn Actuator

Revo Actuators

Torques in lbf·ft  
Size 050

Torques for 180° turn actuators in lbf·ft

Number of springs	Spring Torque	Torque available	Air torque at supply pressure (psi)					
			40	50	60	70	80	
0			549	687	824	961	1098	
2	66,4	min	416	554	691	828	966	
	132,8	max	483	620	757	895	1032	
4	132,8	min	284	421	558	696	833	
	265,5	max	416	554	691	828	966	
6	199,1	min		288	426	563	700	
	398,3	max		487	625	762	900	
8	265,5	min			293	430	567	
	531,0	max			558	696	833	
10	331,9	min				297	435	
	663,8	max				625	767	



Torques Revo Actuators  
Type R .. 050 - 180

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page: 98050003

180° turn Actuator

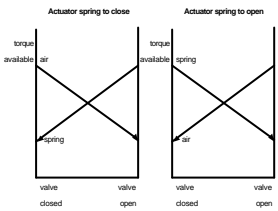
Revo Actuators

Torques in Nm

Size 090

Torques for 180° turn actuators

Number of springs	Spring Torque	Torque available	Air torque at supply pressure ( bar )				
			2	3	4	5	6
0			85	127	169	211	253,5
2	13,5	min	58	100	142	184	227
	27,0	max	72	114	156	198	240
4	26,5	min	32	74	116	158	201
	53,0	max	59	101	143	185	227
6	40,0	min		47	89	131	174
	80,0	max		87	129	171	214
8	53,5	min			62	104	147
	107,0	max			116	158	200
10	67,0	min				77	120
	134,0	max				144	187



Torques Revo Actuator  
Type R .. 090 - 180

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180° turn Actuator

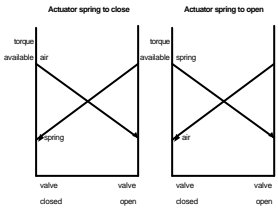
Revo Actuators

Torques in lbf·ft

Size 090

Torques for 180° turn actuators in lbf·ft

Number of springs	Spring Torque	Torque available	Air torque at supply pressure ( psi )				
			40	50	60	70	80
0			1036	1295	1554	1813	2072
2	119,4	min	797	1056	1315	1574	1833
	238,8	max	917	1176	1435	1694	1953
4	238,8	min	558	817	1076	1335	1594
	477,6	max	797	1056	1315	1574	1833
6	358,2	min		579	838	1097	1356
	716,4	max		937	1196	1455	1714
8	477,6	min			599	858	1117
	955,2	max			1076	1335	1594
10	597,0	min				619	878
	1194,0	max				1216	1475



Torques Revo Actuator  
Type R .. 090 - 180

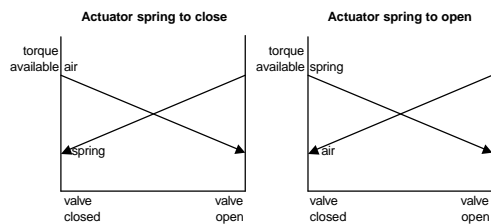
Rev: 6.06.03 hp

page: 98090002

**180° turn Actuator****Revo Actuators**Torques in Nm  
Size 130

Torques for 180° turn actuators

Number of springs	Spring Torque	Torque available	Air torque at supply pressure ( bar)			
			2	3	4	6
0			128	193	257	321
2	20,5	min	87	152	216	280
	41,0	max	108	173	237	301
4	40,5	min	47	112	176	240
	81,0	max	88	153	217	281
6	61,0	min		71	135	199
	122,0	max		132	196	260
8	81,0	min			95	159
	162,0	max			176	240
10	101,5	min				118
	203,0	max				220

**Torques Revo Actuator  
Type R .. 130 - 180**

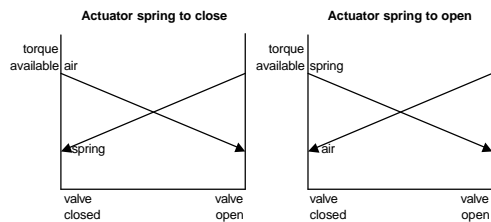
Rev: 6.06.03 hp

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**180° turn Actuator****Revo Actuators**Torques in inlbs  
Size 130

Torques for 180° turn actuators in lbs

Number of springs	Spring Torque	Torque available	Air torque at supply pressure ( psi)				
			40	50	60	70	80
0			1564	1955	2346	2737	3128
2	181,4	min	1201	1592	1983	2374	2765
	362,8	max	1383	1774	2165	2556	2947
4	362,8	min	838	1229	1620	2011	2402
	725,6	max	1201	1592	1983	2374	2765
6	544,2	min		867	1258	1649	2040
	1088,4	max		1411	1802	2193	2584
8	725,6	min			895	1286	1677
	1451,2	max			1620	2011	2402
10	907,0	min				923	1314
	1814,0	max				1830	2221

**Torques Revo Actuator  
Type R .. 130 - 180**

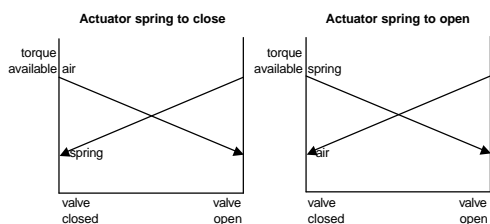
Rev: 6.06.03 hp

page: 98130003

**180° turn Actuator****Revo Actuators**  
Torques in Nm  
Size 180

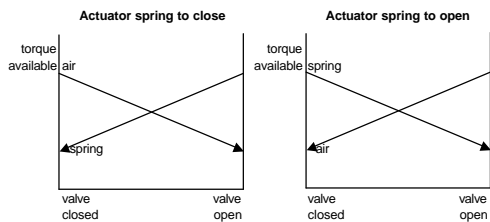
Torques for 180° turn actuators

Number of springs	Spring Torque	Torque available	Air torque at supply pressure ( bar)			
			2	3	4	5
0			169	253	338	422
2	26,5	min	116	200	285	369
	53,0	max	143	227	312	396
4	53,5	min	62	146	231	315
	107,0	max	116	200	285	369
6	80,0	min		93	178	262
	160,0	max		173	258	342
8	106,5	min			125	209
	213,0	max			232	316
10	133,5	min				155
	267,0	max				289

**Torques Revo Actuator**  
Type R .. 180 - 180Rev: 6.06.03 hp  
page: 98180002**180° turn Actuator****Revo Actuators**  
Torques in inlbs  
Size 180

Torques for 180° turn actuators in inlbs

Number of springs	Spring Torque	Torque available	Air torque at supply pressure ( psi)				
			40	50	60	70	80
0			2064	2580	3096	3612	4128
2	234,6	min	1595	2111	2627	3143	3659
	469,2	max	1829	2345	2861	3377	3893
4	469,2	min	1126	1642	2158	2674	3190
	938,4	max	1595	2111	2627	3143	3659
6	703,8	min		1172	1688	2204	2720
	1407,6	max		1876	2392	2908	3424
8	938,4	min			1219	1735	2251
	1876,8	max			2158	2674	3190
10	1173,0	min				1266	1782
	2346,0	max				2439	2955

**Torques Revo Actuator**  
Type R .. 180 - 180Rev: 6.06.03 hp  
page: 98180003

## 180° turn Actuator

## Revo Actuators

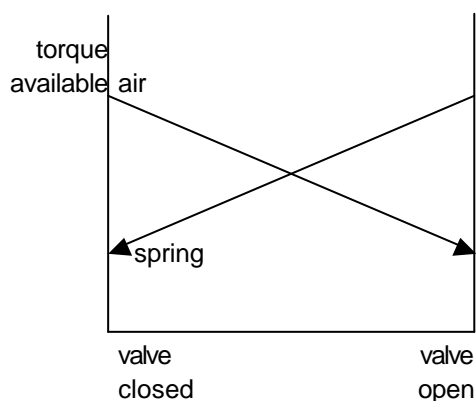
Torques in Nm

Size 205

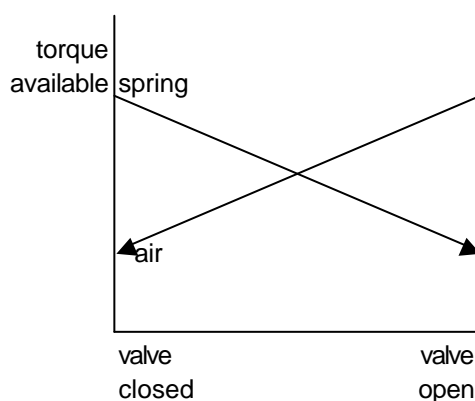
Torques for 180° turn actuators

Number of springs	Spring Torque	Torque available	Air torque at supply pressure ( bar)				
			2	3	4	5	6
0			253	379	506	632	758
2	42,0	min	169	295	422	548	674
	84,0	max	211	337	464	590	716
4	84,0	min	85	211	338	464	590
	168,0	max	169	295	422	548	674
6	126,5	min		126	253	379	505
	253,0	max		253	380	506	632
8	168,5	min			169	295	421
	337,0	max			338	464	590
10	210,5	min				211	337
	421,0	max				422	548

Actuator spring to close



Actuator spring to open



Revo Actuation

### Torques Revo Actuator Type R .. 205 - 180

Rev:

6.06.03 hp

page:

98205002

## 180° turn Actuator

## Revo Actuators

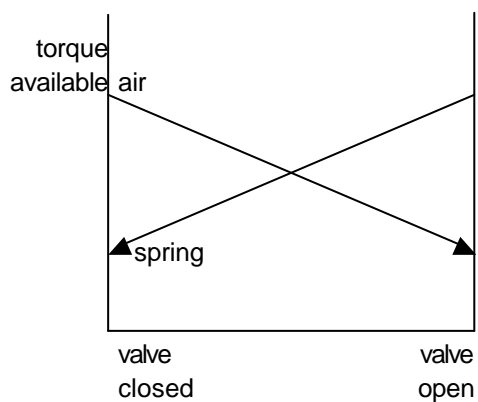
Torques in inlbs

Size **205**

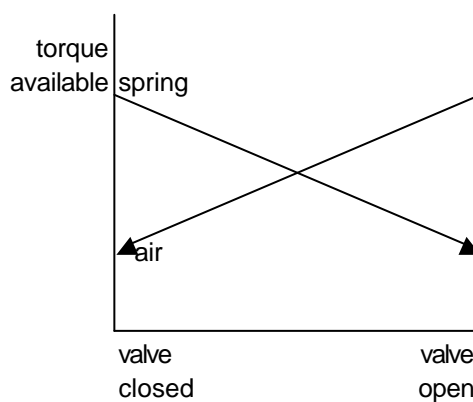
Torques for 180° turn actuators in inlbs

Number of springs	Spring Torque	Torque available	Air torque at supply pressure ( psi)				
			40	50	60	70	80
0			3088	3860	4632	5404	6176
2	371,8	min	2344	3116	3888	4660	5432
	743,6	max	2716	3488	4260	5032	5804
4	743,6	min	1601	2373	3145	3917	4689
	1487,2	max	2344	3116	3888	4660	5432
6	1115,4	min		1629	2401	3173	3945
	2230,8	max		2745	3517	4289	5061
8	1487,2	min			1658	2430	3202
	2974,4	max			3145	3917	4689
10	1859,0	min				1686	2458
	3718,0	max				3545	4317

Actuator spring to close



Actuator spring to open





Revo Actuation

# Torques Revo Actuator Type R .. 205 - 180

Rev:

6.06.03 hp

page:

98205003

## 180° turn Actuator

## Revo Actuators

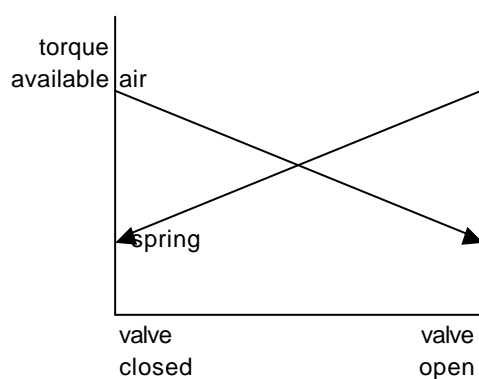
Torques in Nm

Size **380**

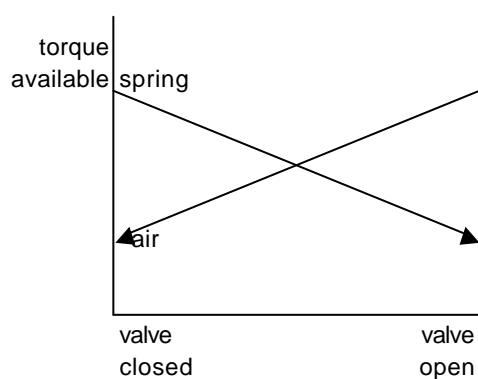
Torques for 180° turn actuators

Number of springs	Spring Torque	Torque available	Air torque at supply pressure ( bar)				
			2	3	4	5	6
0			379	569	759	948	1137
2	63	min	253	443	633	822	1011
	126	max	316	506	696	885	1074
4	126	min	127	317	507	696	885
	252	max	253	443	633	822	1011
6	189	min		191	381	570	759
	378	max		380	570	759	948
8	253	min			253	442	631
	506	max			506	695	884
10	316	min				316	505
	632	max				632	821

Actuator spring to close



Actuator spring to open



Revo Actuation

**Torques Revo Actuator  
Type R.. 380 - 180**

Rev:

6.06.03 hp

page:

98380002

## 180° turn Actuator

## Revo Actuators

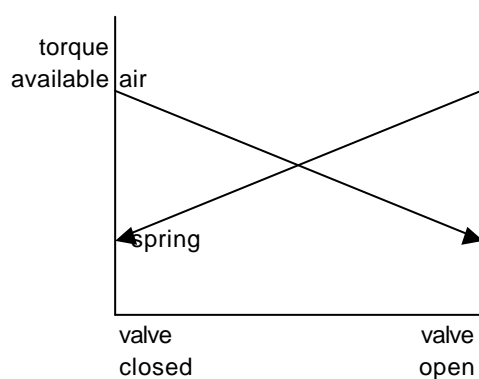
Torques in inlbs

Size **380**

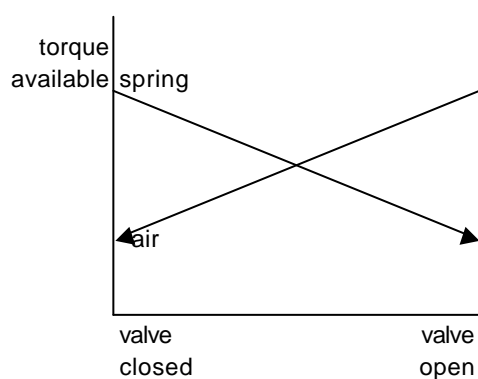
Torques for 180° turn actuators in inlbs

Number of springs	Spring Torque	Torque available	Air torque at supply pressure ( psi)				
			40	50	60	70	80
0			4628	5785	6942	8099	9256
2	558	min	3513	4670	5827	6984	8141
	1115	max	4070	5227	6384	7541	8698
4	1115	min	2398	3555	4712	5869	7026
	2230	max	3513	4670	5827	6984	8141
6	1673	min		2439	3596	4753	5910
	3346	max		4112	5269	6426	7583
8	2230	min			2481	3638	4795
	4461	max			4712	5869	7026
10	2788	min				2523	3680
	5576	max				5311	6468

Actuator spring to close




Actuator spring to open



**Torques Revo Actuator**

Rev:

6.06.03 hp

 Revo Actuation	Type R.. 380 - 180	page:	98380003
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## 180° turn Actuator

## Revo Actuators

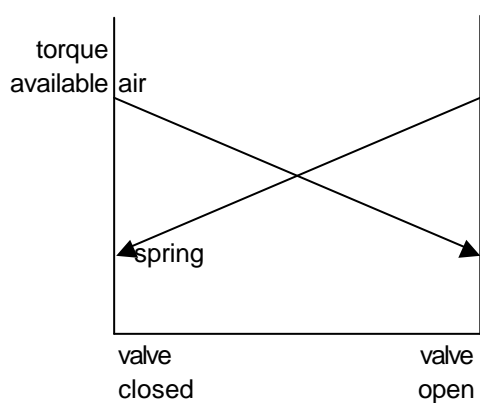
Torques in Nm

Size 630

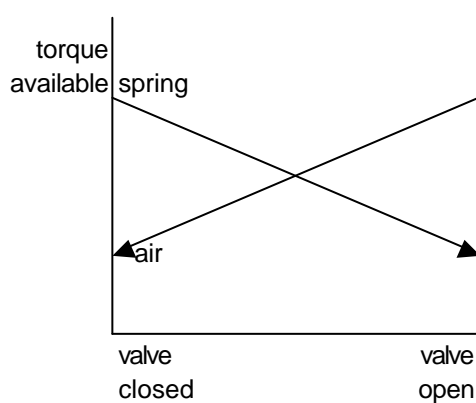
Torques for 180° turn actuators

Number of springs	Spring Torque	Torque available	Air torque at supply pressure ( bar)				
			2	3	4	5	6
0			632	948	1264	1580	1896
2	106	min	420	736	1052	1368	1684
	212	max	526	842	1158	1474	1790
4	212	min	208	524	840	1156	1472
	424	max	420	736	1052	1368	1684
6	316	min		316	632	948	1264
	632	max		632	948	1264	1580
8	421	min			422	738	1054
	842	max			843	1159	1475
10	526	min				528	844
	1052	max				1054	1370

Actuator spring to close



Actuator spring to open



Revo Actuation

**Torques Revo Actuator  
Type R.. 630 - 180**

Rev:

10.07.03 hp

page:

98380002

RevoId-180.xls, 630

## 180° turn Actuator

## Revo Actuators

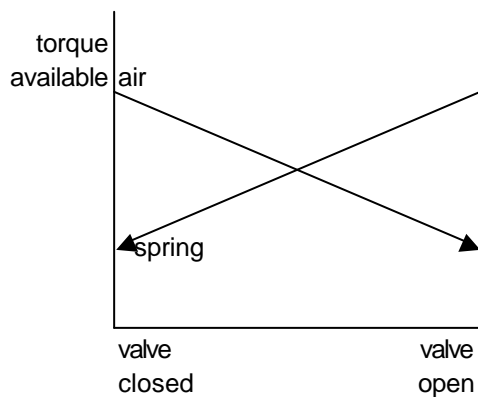
Torques in inlbs

Size 630

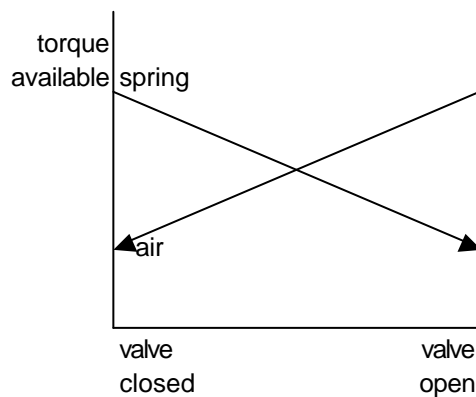
Torques for 180° turn actuators in inlbs

Number of springs	Spring Torque	Torque available	Air torque at supply pressure ( psi)				
			40	50	60	70	80
0			7716	9645	11574	13503	15432
2	938	min	5840	7769	9698	11627	13556
	1876	max	6778	8707	10636	12565	14494
4	1876	min	3963	5892	7821	9750	11679
	3753	max	5840	7769	9698	11627	13556
6	2815	min		4016	5945	7874	9803
	5629	max		6830	8759	10688	12617
8	3753	min			4068	5997	7926
	7506	max			7821	9750	11679
10	4691	min				4121	6050
	9382	max				8812	10741

Actuator spring to close



Actuator spring to open



 Revo Actuation	<b>Torques Revo Actuator Type R.. 630 - 180</b>	Rev:	10.07.03 hp
		page:	98380003

## 180° turn Actuator

## Revo Actuators

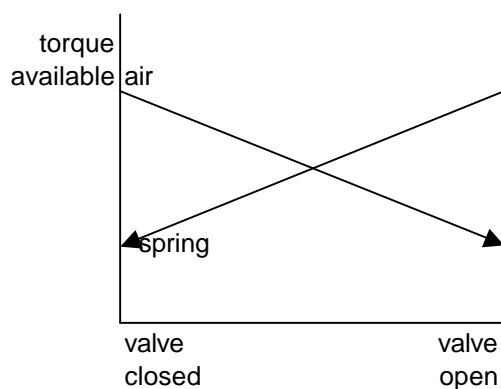
Torques in Nm

Size 960

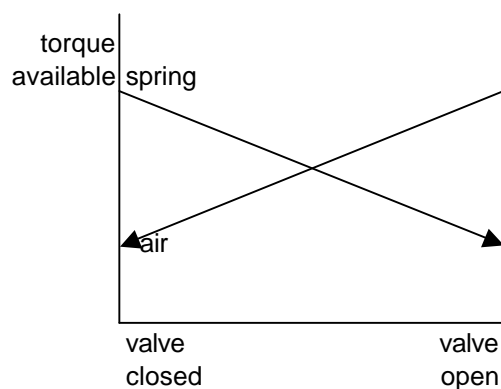
Torques for 180° turn actuators

Number of springs	Spring Torque	Torque available	Air torque at supply pressure ( bar)				
			2	3	4	5	6
0			960	1440	1920	2400	2880
3	158	min	644	1124	1604	2084	2564
	316	max	802	1282	1762	2242	2722
6	316	min	328	808	1288	1768	2248
	632	max	644	1124	1604	2084	2564
9	474	min		492	972	1452	1932
	948	max		966	1446	1926	2406
12	632	min			656	1136	1616
	1264	max			1288	1768	2248
15	790	min				820	1300
	1580	max				1610	2090

Actuator spring to close



Actuator spring to open



Revo Actuation

### Torques Revo Actuator Type R.. 960 - 180

Rev:

10.07.03 hp

page:

98380002

## 180° turn Actuator

## Revo Actuators

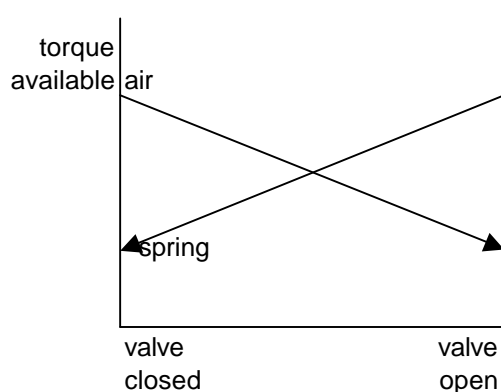
Torques in inlbs

Size 960

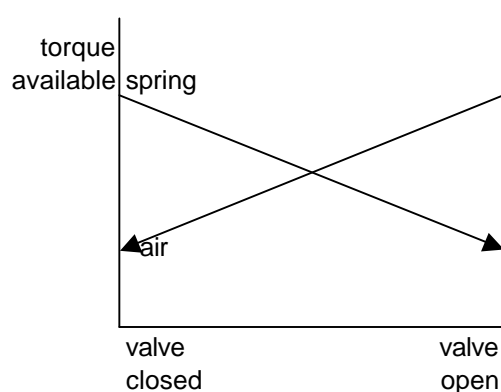
Torques for 180° turn actuators in inlbs

Number of springs	Spring Torque	Torque available	Air torque at supply pressure ( psi)				
			40	50	60	70	80
0			11720	14650	17580	20510	23440
3	2098	min	7525	10455	13385	16315	19245
	4195	max	9622	12552	15482	18412	21342
6	4195	min	3330	6260	9190	12120	15050
	8390	max	7525	10455	13385	16315	19245
9	6293	min		2064	4994	7924	10854
	12586	max		8357	11287	14217	17147
12	8390	min			799	3729	6659
	16781	max			9190	12120	15050
15	10488	min					2464
	20976	max					12952

Actuator spring to close



Actuator spring to open



Revo Actuation

### Torques Revo Actuator Type R.. 960 - 180

Rev:

10.07.03 hp

page:

98380003

			page:	00000000
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## 180° turn Actuator

## Revo Actuators

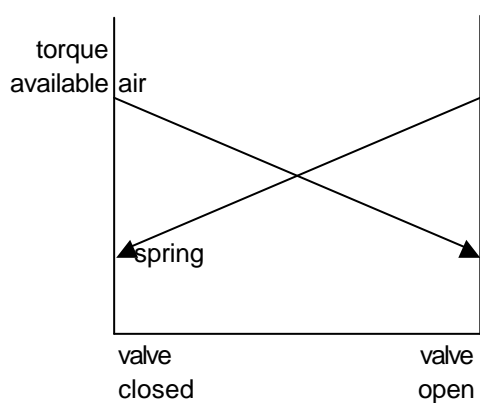
Torques in Nm

Size H15

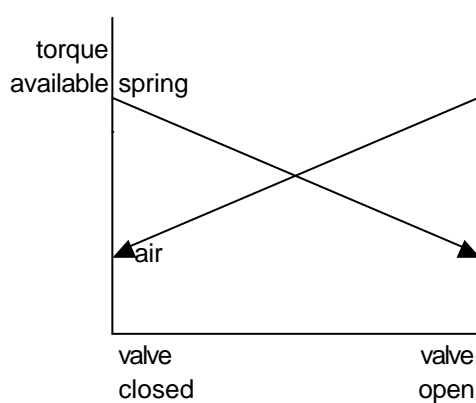
Torques for 180° turn actuators

Number of springs	Spring Torque	Torque available	Air torque at supply pressure ( bar)				
			2	3	4	5	6
0			1469	2203	2937	3671	4405
2	244	min	981	1715	2449	3183	3917
	488	max	1225	1959	2693	3427	4161
4	489	min	491	1225	1959	2693	3427
	978	max	980	1714	2448	3182	3916
6	734	min		735	1469	2203	2937
	1468	max		1469	2203	2937	3671
8	979	min			979	1713	2447
	1958	max			1958	2692	3426
10	1223	min				1225	1959
	2446	max				2448	3182

Actuator spring to close



Actuator spring to open



**Torques Revo Actuator**

Rev:

10.07.03 hp

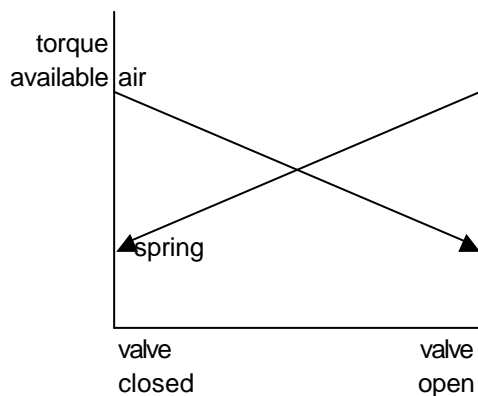
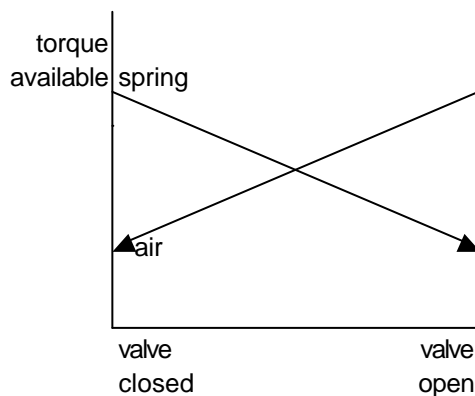
**180° turn Actuator****Revo Actuators**


Torques in inlbs

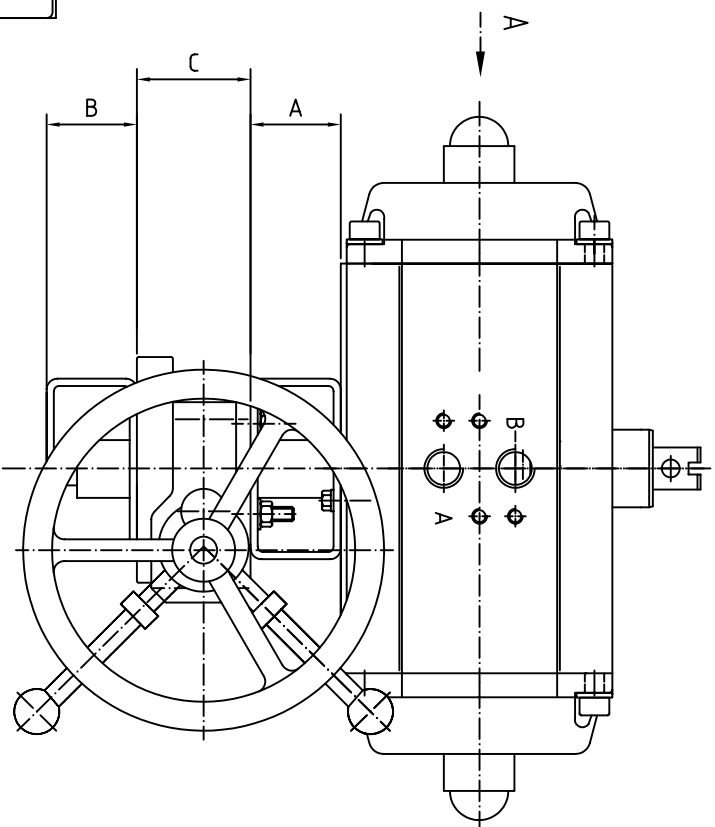
Size H15

Torques for 180° turn actuators in inlbs

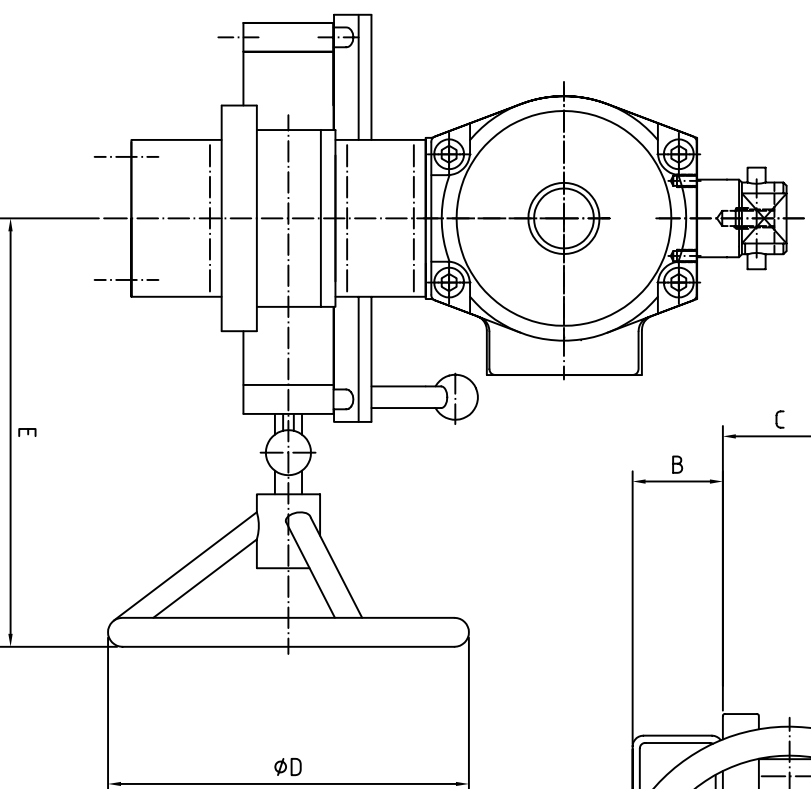
Number of springs	Spring Torque	Torque available	Air torque at supply pressure ( psi)				
			40	50	60	70	80
0			17932	22415	26898	31381	35864
2	2159	min	13613	18096	22579	27062	31545
	4319	max	15773	20256	24739	29222	33705
4	4319	min	9294	13777	18260	22743	27226
	8638	max	13613	18096	22579	27062	31545
6	6478	min		9459	13942	18425	22908
	12956	max		15937	20420	24903	29386
8	8638	min			9623	14106	18589
	17275	max			18260	22743	27226
10	10797	min				9787	14270
	21594	max				20584	25067


**Actuator spring to close****Actuator spring to open**

 <b>Revo Actuation</b>	<b>Torques Revo Actuator Type R.. H15 - 180</b>	Rev:	10.07.03 hp
		page:	98380003

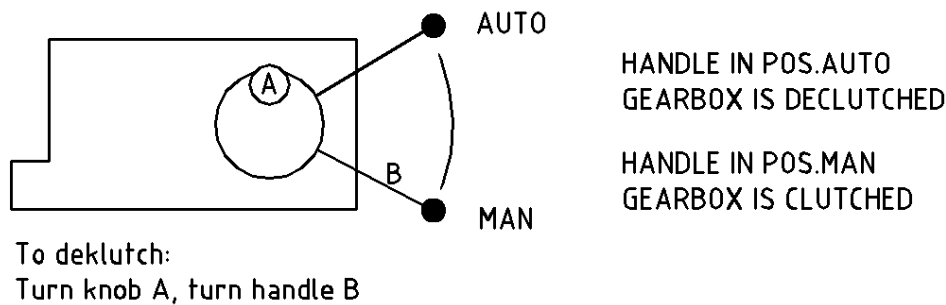


Größe	A	B	C	φD	E
RZGHU01A05A05VA	60	80	60	200	170
RZGHU01A05A07VA	60	80	60	200	170
RZGHU01A07A05VA	60	80	60	200	170
RZGHU01A07A07VA	60	80	60	200	170
RZGHU01A10A05VA	80	80	60	200	170
RZGHU01A10A07VA	80	80	60	200	170
RZGHU01A10A10VA	80	80	60	200	170
RZGHU01A12A07VA	80	80	60	200	170
RZGHU02A10A05VA	80	80	80	300	315
RZGHU02A10A07VA	80	80	80	300	315
RZGHU02A10A10VA	80	80	80	300	315
RZGHU02A12A07VA	80	80	80	300	315
RZGHU02A12A10VA	80	80	80	300	315
RZGHU02A12A14.45	80	90	80	300	315
RZGHU02A12A12VA	80	80	80	300	315
RZGHU02A14A07VA	90	80	80	300	315
RZGHU02A14A10VA	90	80	80	300	315
RZGHU03A14A07VA	90	80	110	400	385
RZGHU03A14A10VA	90	80	110	400	385
RZGHU03A14A14.45	90	90	110	400	385
RZGHU03A16A10VA	120	90	110	400	385
RZGHU03A16A16VA	120	120	110	400	385
RZGHU13A16A16VA	120	120	110	400	385
RZGHU03A16A10VA	120	80	110	400	385
RZGHU03A25A14.45	180	80	110	400	385



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The information on this sheet is confidential and is the property of CH&ME and must not be published directly in any manner whatsoever without the written permission of the company and must not be used in any way detrimental to their interests.		(V)	
X		2002	Name
Y		Bear. 19.09	0.kleinisch
Z		Gepr.	
a		Norm.	
b			
c			
d			
e			
Änderung		Datum	Name
Zusätzl. Änderung		Datum	Name

# Operating Instructions for „Emergency Gear” RZUGH- Series



## **Mounting of the gearbox**

Mounting of the gearbox shall be according to the mounting instructions.

## **Operating**

Handle B in position AUTO: Gearbox is declutched, Valve will be operated by actuator.

Handle B in position MAN: Gearbox is clutched, Valve will be operated by gearbox.

## **Clutching the gearbox**

If manual operation of the valve by the gearbox is wanted , you must clutch the gearbox as follows:

1. Unscrew knob A.
2. Turn the handle B from position ATUO to position MAN.
3. If handle does not go down far enough turn the handweel until you feel that the teeth are clutching and the handle is in MAN-position.
4. Fix the handle by screwing knob A into the threaded hole to prevent not allowed operating.

## **Declutching the gearbox**

If the valve shall be operated by the actuator, the gearbox must be declutched.

Declutch the gearbox as follows:

1. Make sure the Actuator is out of operation. If you declutch with an output torque on the actuator the gearwheel-teeth of the gearbox can be damaged during declutching.
2. Unscrew knob A.
3. Declutch by turning the handle B from position MAN to position AUTO.
4. Fix the handle B by screwing knob A into the threaded hole to prevent not allowed operating.