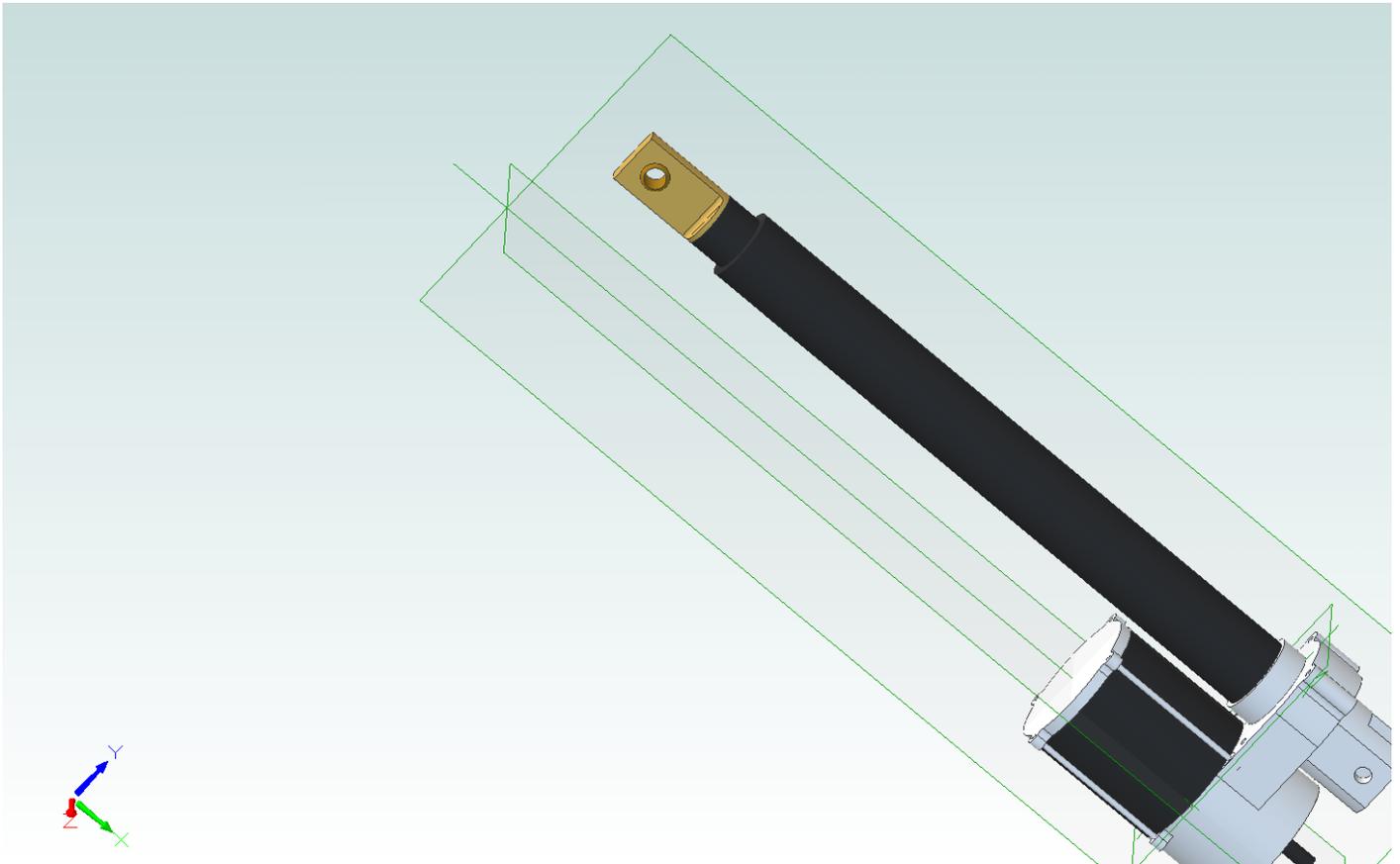




MOTION TECHNOLOGIES PTY LIMITED

Heavy Duty Commercial Grade Linear Actuator



Click image to activate 3D mode. This may not work when viewed in a browser so download the file and open using a pdf viewer.

New improved series 2 providing a low cost solution available from stock with AC or DC motors

'IJ2' SERIES INDUSTRIAL ACTUATOR

STANDARD FEATURES

- * Economical
- * Quiet operation
- * Up to 500kg static capacity
- * Self aligning rod end on acme screw versions
- * Weather resistant TENV motors (approx. IP54)
- * Screw lead 5.08" (both acme and ball screw)
- * Integral individually adjustable top and bottom limit switches for <= 610mm strokes (longer strokes require external limit switches)
- * Ball screw version has extra trunnion bearings
- * Ideal for high force, low duty cycle applications
- * Corrosion resistant
- * Fully repairable
- * Brushed DC PM motors
- * 4 pole AC motor (1400 rpm) c/with integral capacitor and thermal protection
- * Self-locking acme screw
- * Integral load holding brake for ball screw versions
- * Precision ball thrust bearings
- * 20:1 gear ratio
- * Customisation is readily achieved

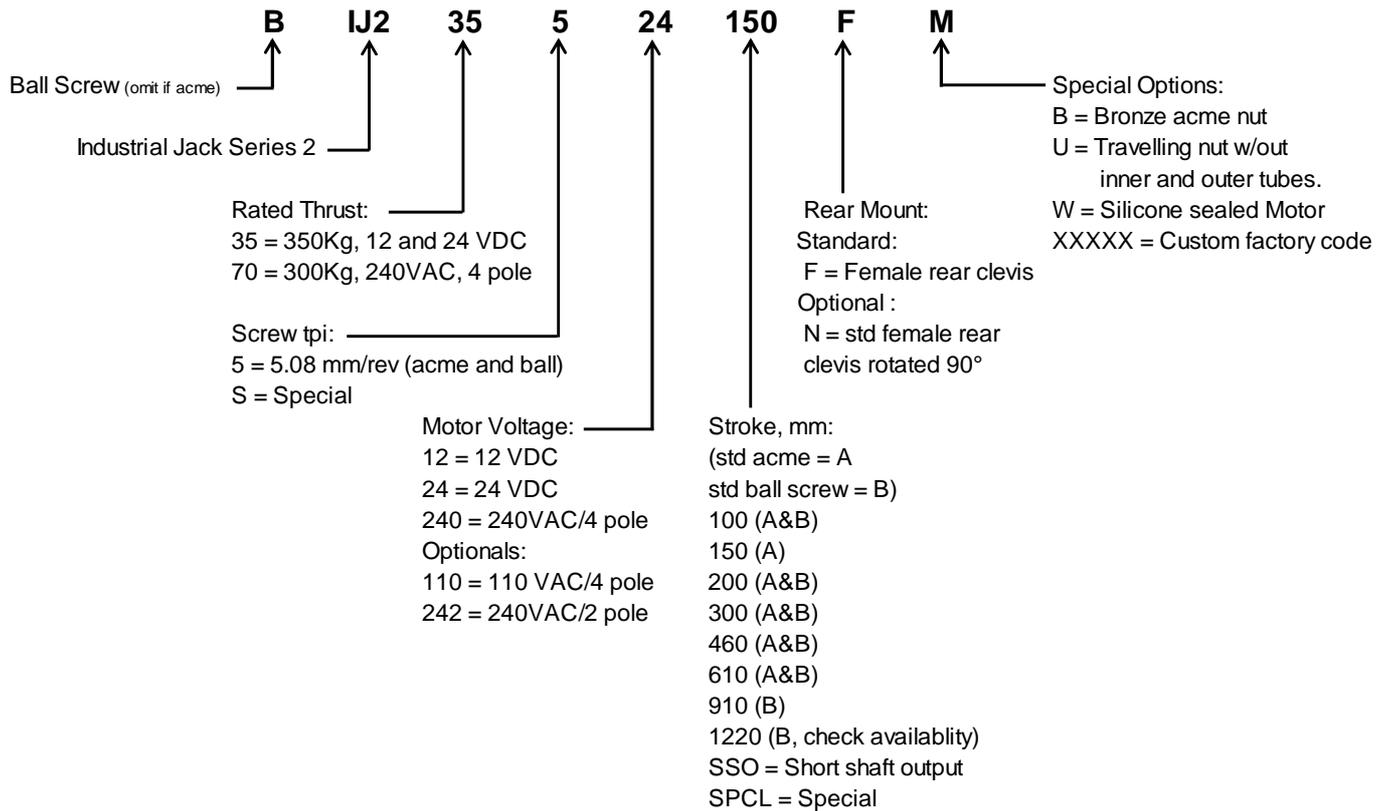
OPTIONAL FEATURES

- * Bellows boot rod protection
- * Optional screw thread leads
- * Stepper motors, servo motors, brushless motors
- * Silicone sealed motors (approx. IP65)
- * Potentiometer position feedback
- * Wide choice of optional screw leads
- * 2 pole AC motor (double speed, half thrust)
- * DC speed controllers, click [here](#) for separate catalogue.
- * Bronze acme screw nut
- * Rotatable rear clevis
- * Custom rod ends
- * IP65 cable gland
- * Custom strokes
- * Output shaft version (without lift screw)
- * Travelling nut design

APPLICATIONS

Agricultural equipment:	Silage chutes, conveyors, transmission shifter, tractor accessory lifts, belt tensioner, spray broom operator, automatic gate opener, remote throttle controller.
Industrial Equipment:	Belt speed and tension controls, flue and draft controls, table lifts, hatch covers, ventilator controls, valve actuators, window operators, clamping, damper controls, variable pump controllers, fluid coupling controllers.
Medical Equipment:	Hospital beds, dental chairs, examination tables, invalid lifts.
Materials Handling:	Container tippers, dumper chute doors, elevators, barrel lift, conveyor gate diverter.
Office Equipment:	Computer terminal desks, chairs, drafting tables.

MODEL NUMBER DESIGNATION



IJ2 PERFORMANCE DATA

- DC actuators:
- 1) Rated max thrust = 350 kg
 - 2) Travel rate = 10 mm/sec max.
 - 3) Current draw =
24vDc ~ 6 amps max.
12vDC ~ 12 amps max.
 - 4) Rated duty cycle = 25%

- AC Actuators:
- 1) Rated max thrust = 300 kg
 - 2) Travel rate = 5 mm/sec max.
 - 3) Current draw = 6 amps at rated load
 - 4) Rated at 220VAC ±10%, 1 phase, 50Hz, 0.75A, 58 Watts
 - 5) Rated duty cycle: On time 1 min., off time 9 min.
 - 6) Motor run time must be considered with respect to stroke.
 - 7) Supplied with 400mm long 4C cable

Notes:

- 1) Column strength capacity must be considered for compressive loads, especially for long stroke applications.
- 2) Load and rotor inertia may cause coasting when motor is turned off.
- 3) Do not use physical hard stops at end of travel as non-warrantable damage is possible. It is recommended to always use limit switches to stop travel at the required stroke.
- 4) Models with long strokes may exceed rated duty cycle within a single stroke.

HOW TO SET LIMIT SWITCHES

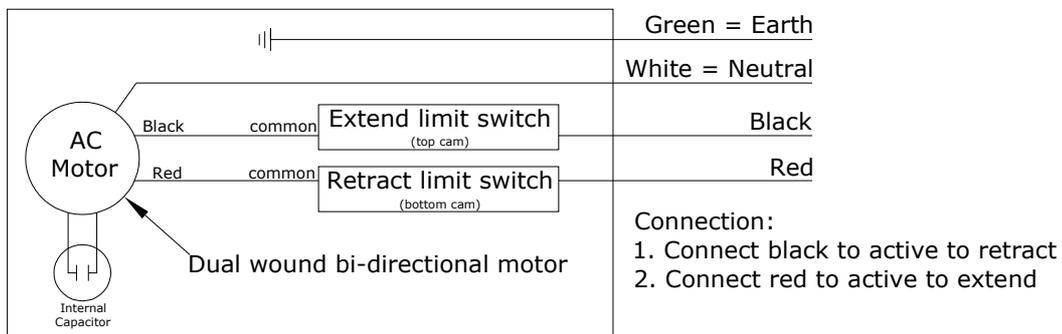
These procedures must be followed for warranty to apply.

Limit switch settings as supplied are not guaranteed unless requested at time of order.

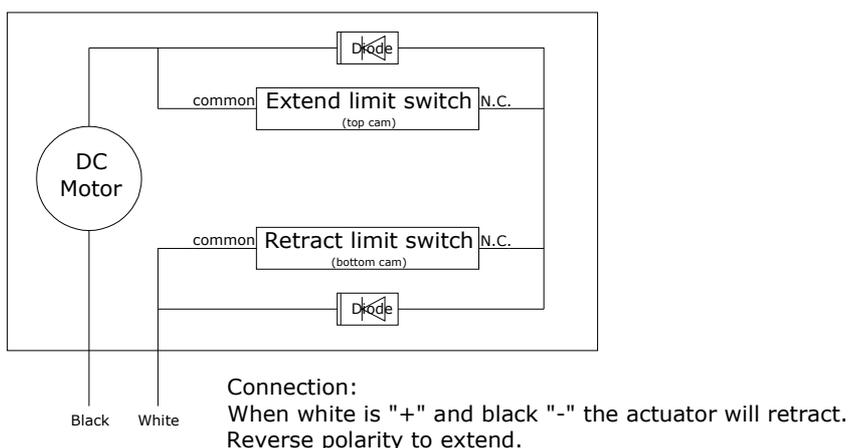
- Step 1: Power actuator to retract. Allow rod to rotate till retract limit turns motor off.
- Step 2: Screw rod in/out by hand until the desire start point is reached. At least three full extending turns of rod from fully mechanical retracted position is recommended.
- Step 3: Restrain rod from rotating for remaining steps. Do not use a screw driver or the like through the rod clevis as accidental over-travel may cause harm to operator.
NOTE: Do not manually rotate the rod after this step.
- Step 4: Power jog actuator to extend to desired stroke and stop by switching jog power supply off.
- Step 5: Remove rear cover and loosen top cam. Rotate top cam until switch activates. Tighten cam locking screw. Warning, do not over-tighten as non-warrantable damage can result.
- Step 6: Replace cover
- Step 7: Test cycle actuator before installing and re-adjust if necessary.

CONNECTION DIAGRAMS

A) AC motors:



B) DC motors:

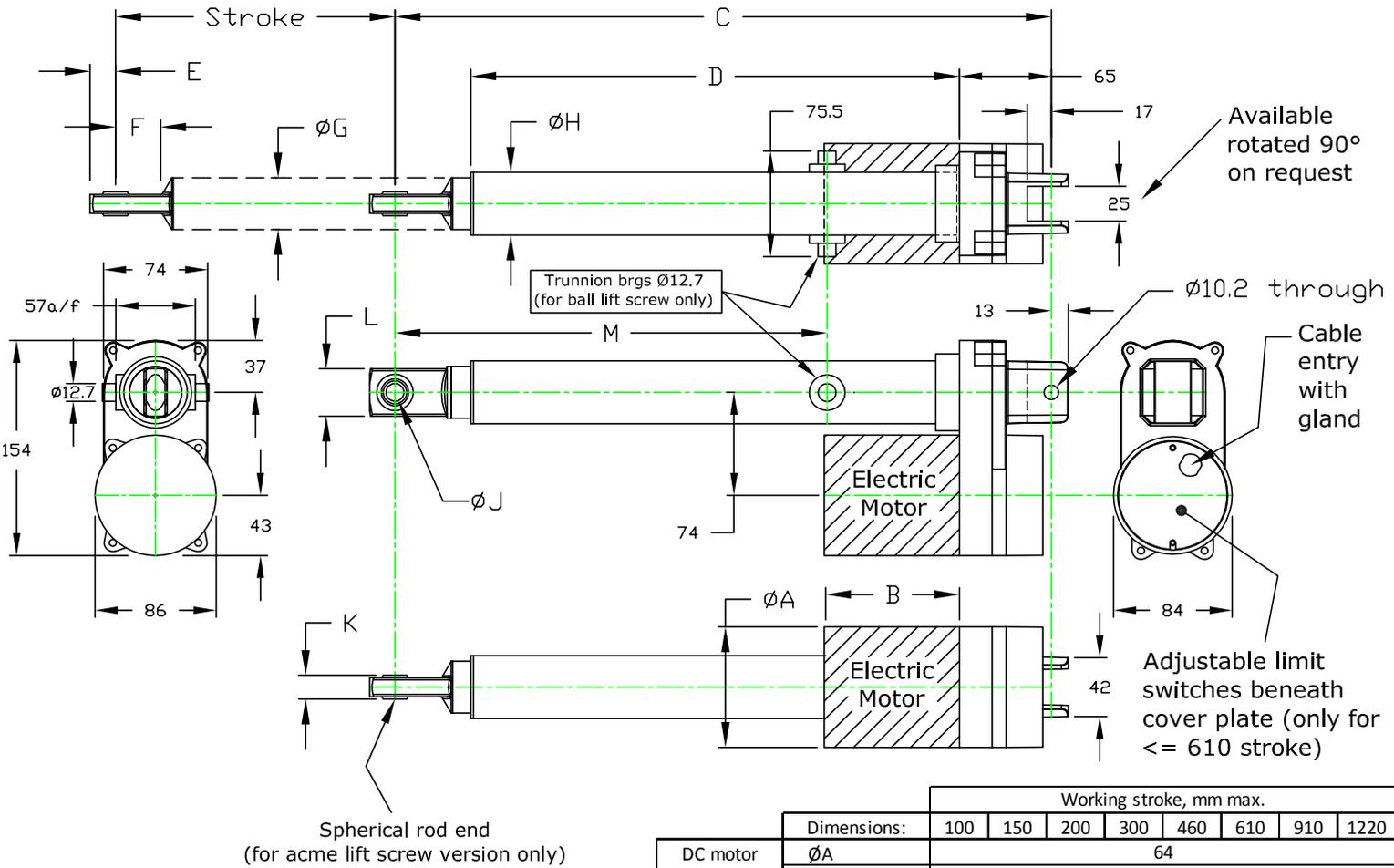


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DO NOT SCALE - IF IN DOUBT, ASK.

REVISION HISTORY

REV	DATE	DETAILS	BY/APPD



Working stroke, mm max.

Dimensions:	Working stroke, mm max.								
	100	150	200	300	460	610	910	1220	
DC motor (12 or 24 volt)	ϕA		64						
	B		118						
AC motor (240 volt)	ϕA		86						
	B		96						
Acme lift screw	C	338	388	438	538	698	848	Not available	
	D	215	265	315	415	575	725		
	E	18							
	F	32							
	ϕG	37							
	ϕH	45							
	ϕJ	12.7							
	K	17							
	L	35							
	Approx kg	5	5.2	5.5	6	6.5	7		
Ball lift screw	C	382	n/a	483	584	787	939	1244	1550
	D	295		396	497	700	850	1155	1460
	E	12.7							
	F	19							
	ϕG	44.5							
	ϕH	51							
	ϕJ	13.1							
	K	14.3							
	L	25.4							
	M (retracted)	223.5	n/a	325.1	426.7	629.9	782.3	604.5	737.6
Approx kg	7	7.5		8	9.5	10	13	15	

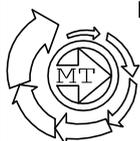
CAD DWG - NO MANUAL REVISION.

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GENERAL TOLERANCES (Unless otherwise noted):

Whole: $\pm 0.5\text{mm}$
 Decimal: $\pm 0.1\text{mm}$
 Angular: $\pm 0.25\text{deg.}$

Break ALL sharp corners and remove burrs & swarf.
 All machining & fabrication to meet relevant Australian standards



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email: info@motiontech.com.au

Drn: JWC Date: July 2018

E. & O. E.

MACHINED FINISH:

3.2/
 ∇ UON



All Dimensions in mm unless otherwise noted

Third Angle Projection - AS 1100

TITLE

IJ2 Actuator Sales General Arrangement

All dimensions and details subject to change without notice.

A 4

DWG No: IJ2_Sales

REV No:

SCALE: None

SHEET 1 of 1

Other Linear Actuators

Model	Haydon Kerk	LEA3	IJ2	Linearmech
				
Details				
Acme/Trapezoidal Screw	Std	Std	Std	Std
Ball Screw	N/A	N/A	POA	POA
Self locking	Y	Y	Y	Y
Standard IEC motors available	N	N	N	Y
DC motor volts	2 to 12	12, 24 (36 POA)	24 (others POA)	12 & 24 (other POA)
240 VAC Single Phase	N	N	Y	Y
415VAC Three Phase	N	N	N	Y
Servo or Stepper options	Stepper only	Stepper	Both	Both
Stroke (mm)	< 500	< 300	< 1200	< 800
Requires anti-rotation guide	Opt	N	Y	Y
Built in Limit Switches	N	Y	Y	Opt
Adjustable Limit Switches	N	Y (factory set)	Y	Y
Compression Switch	N	N	N	N
Base material	Aluminium	Anodised Aluminium	Aluminium	Aluminium
Outer Tube material	N/A	Aluminium	Powder coated steel	Aluminium
Rod Material	N/A	Anodised Aluminium	Powder coated steel	S/S
Double clevis mount	N/A	Y	Y	Y
Standard IP rating	IP44	IP65	IP44	DC: IP54 AC: IP55
Speeds (mm/sec)	up to 130	6 to 45	5 to 8	2 to 100
Local availability	indent	stocked	stocked	limited
Duty	light industrial	light economy	medium economy	medium commerical

Other Linear Actuators

Servomech	Cosmic	Pfaff ALS	Model
			
			Details
Std	Std	Y	Acme/Trapezoidal Screw
Std	Std	Y	Ball Screw
Y	brake option	Y	Self locking
Y	N	Y	Standard IEC motors available
12 & 24 (other POA)	on application	on application	DC motor volts
Y	Y	Y	240 VAC Single Phase
Y	Y	Y	415VAC Three Phase
Both	(on request only)	Both	Servo or Stepper options
< 800	< 2000	< 2000	Stroke (mm)
Optional	N	N	Requires anti-rotation guide
Optional	Optional	Optional	Built in Limit Switches
Y	Y	Y	Adjust Limit Switches
N	Optional	N	Compression Switch
< Size 50 Aluminium > Size 50 Cast Iron	CI/Steel	CI/Steel	Base material
	Steel	Steel	Outer Tube material
S/S	Chrome plated steel	Chrome plated steel	Outer Rod Material
Y	Y	Y	Double clevis mount
DC: IP54 AC: IP55	DC: N/A AC: IP55	up to IP66	IP rating
2 to 200	up to 150	up to 300	Speeds (mm/sec)
limited	indent	indent	Local availability
medium industrial	heavy duty industrial	heavy duty industrial	Duty

Other Motion Tech Products



Precision in the Extreme



Distributors for Australia & New Zealand

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