

Ruskin Air Management Limited

*action*air



ES series

AIR CONTROL DAMPERS. **OPERATING AND MAINTENANCE MANUALS.**

1.0 INTRODUCTION.

- 1.1 This manual covers series ES35, ES36, & ES50 Air Control Dampers and should always be followed. Any deviation from this manual should always be agreed with the manufacturer Actionair.
- 1.2 The ES series Air Control Dampers are designed to control airflows in ducts, wall, ceilings and floors. The product offers numerous control options and features, as required and specified by contractors, local fire and or hospital authorities and consultants.
- 1.3 There are four casing variants: Flanged, square/rectangular, Spigot square/rectangular, Circular and Flat oval.
- 1.4 All dampers are manufactured in compliance with the company's quality control and quality assurance procedures.

2.0 Description and Operation.

- 2.1 The E35 and 36 series Air Control Dampers have galvanised triple V blade profile that operate through an opposed blade linkage system within a 1.2 thick galvanised casing.
- 2.2 The ES0 series Air Control Dampers have Aerofoil Aluminium blades that operate through an opposed blade linkage system within a 1.2 thick galvanised casing

2.3 The Linkage will provide the blade pivoting system to open and close the blades through a rotation of 90 degrees. Refer to the ES catalogue for the max operating parameters.

2.4 The ES damper can be operated by a manual quadrant or via a $\varnothing \frac{1}{2}$ drive spindle for motorisation by Actionair or others.

3.0 Installation Instructions.

3.1 Please ensure that the fixing framework and the ES damper flanges are carefully matched when assembled together.

3.2 Ensure before installation that any wooden battens or packaging supplied for transit strengthening purposes are removed. Failure to carry out this procedure could result in permanent damage to the unit.

3.3 Before installation, the damper should be inspected to ensure that it has not been damaged and is in good condition following transportation.

3.4 Please ensure that the damper frame and blades are free of any foreign matter and that the assembly is not distorted in any manner and without any dents and surface damage that could restrict blade movement.

3.5 Check that the dampers are operating correctly before carrying out installation.

3.6 Flanged dampers when installed must be square and flat to avoid additional torque being generated when opening and closing.

3.7 ES series dampers should not be installed with blades in the vertical position.

3.8 Check that the dampers are operating correctly when dampers have been installed.

4.0 Operation.

4.1 The ES series Air control damper is primarily designed for use in the ductwork systems and can be used behind louver sets to control the airflow. On the system being balanced during commissioning operations, manual dampers can be locked in position by tightening the wing nut. When dampers fitted with an actuator either by Actionair or by others you should check the actuator operating instructions before attempting to rotate the drive shaft when no power is available.

4.2 When actuators are fitted by others the extended drive shaft should be fixed to the 'F' drive nearest centre of the damper. The supplier's actuator fitting recommendations should always be observed.

- 4.3 It is assumed that the atmosphere which the damper controls meet national and international standard's for filtration and humidification conditions.

5.0 Maintenance

- 5.1 The ES series control damper have been designed incorporating galvanised coated mild steel casings and drive components as standard, to give a high degree of resistance to corrosion within filtered temperature and humidity controlled conditions.
- 5.2 It is recommended within normal preventative maintenance procedures for the blades and inner casing to be cleaned annually but dampers installed in high areas of high pollution should be cleaned more frequently. Specific attention should be made to ensure the spindles and bushes are clean, rotate freely and are well lubricated.

6.0 Spares List.

- 6.1 Manual dampers require no spare parts.
- 6.2 Actuators need not be kept as spares unless otherwise required by the building maintenance contractor.
- 6.3 Should damage occur on site the following data should be used to identify the required spare parts that can be rectified on site.

7.0 Defects and Liability

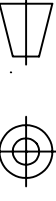
- 7.1 Defects and Liability Period shall be 12 months from the date the goods are supplied or the works are practically complete.

Draw No. ES50R-200

Rev. 1

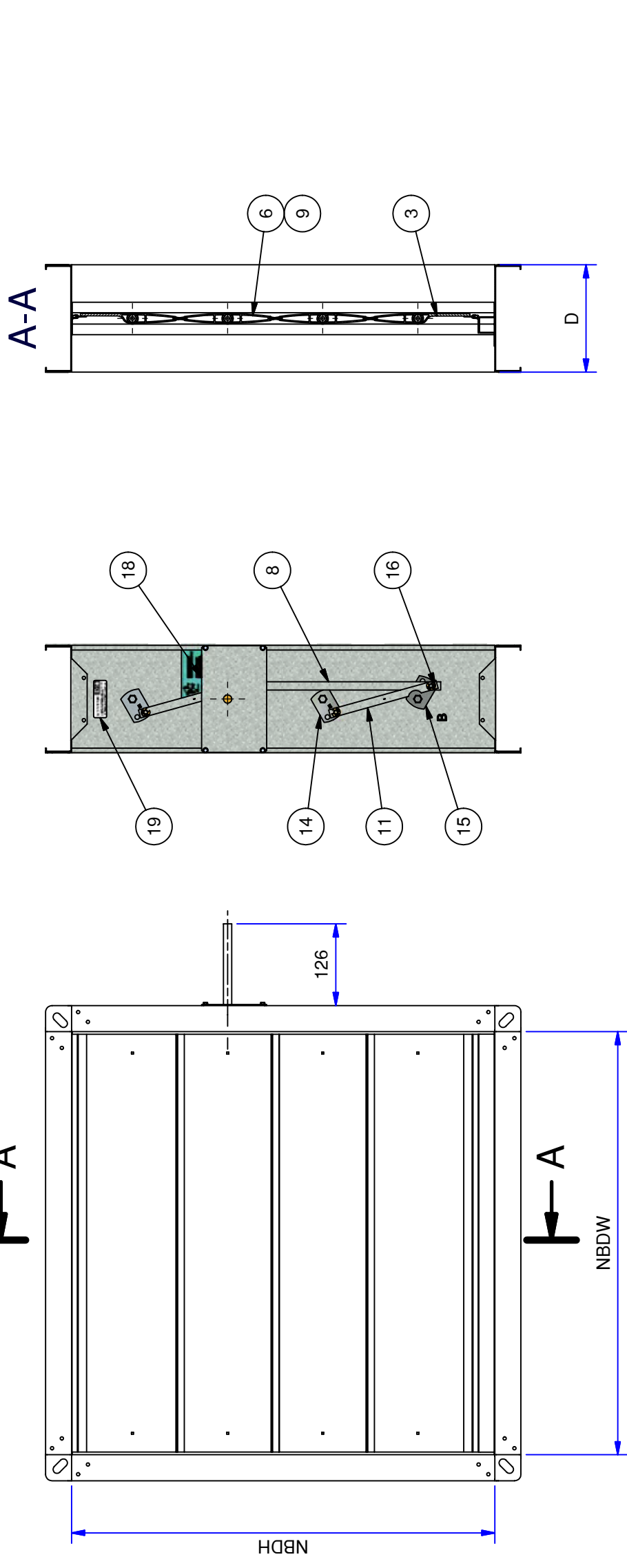
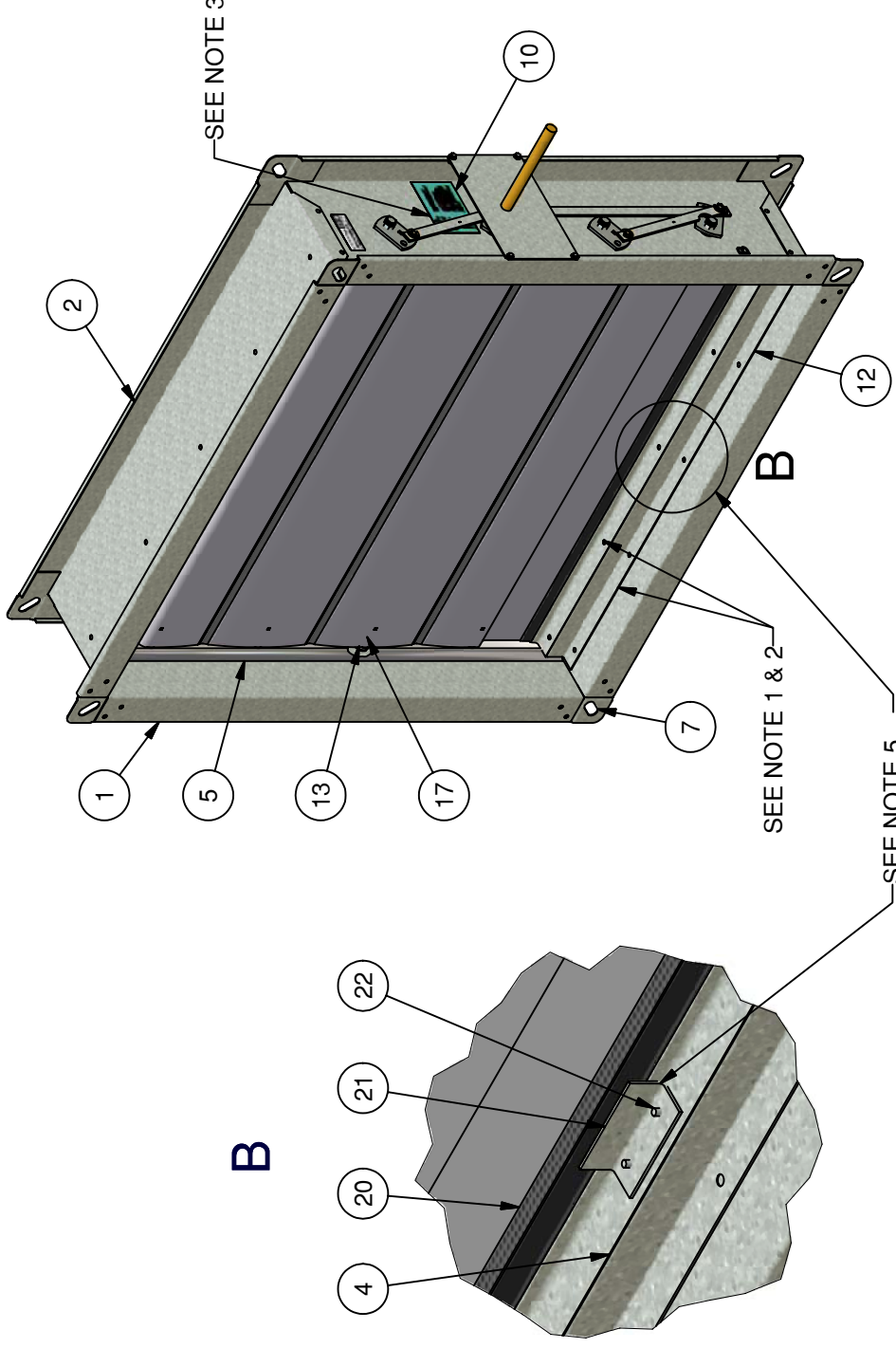
DIMENSIONS IN MILLIMETRES

DO NOT SCALE



PARTS LIST		
ITEM	QTY	DRAWING NUMBER / PART NUMBER / DESCRIPTION
1		ES35-001 SIDE FRAME
2		ES35-002 TOP & BOTTOM FRAME
3	SEE CHART	ES50-003A TRIM BLADE
4	2	CNN01833 ES50 BLADE STOP SEAL ASSEMBLY
5	2	CUNN01699 GASKET (SIDES)
6	SEE CHART	CANN01817 STANDARD BLADE
7	8	ES35-007A/007C SEE DRAWING FLANGE CORNER BRACKET
8	1 (N>=3)	CSGN01802 LINKAGE TIEBAR
9	2N (WITHOUT TRIMBLADE) 2(N-1) (WITH TRIM BLADE)	CNNN01836 ES50 BLADE SEAL
10	1	ES35-055 LNNN00010 DRIVING SHAFT LABEL
11	SEE DRAWING	ES35R-016 CSGN01804 CROSSOVER LINKAGE "A"
12	SEE CHART	ES50-050 SPACER
13	2N	CPNN01690 BEARING
14	AS ITEM 11	CSNN01691 "E" LINKAGE
15	N - ITEM 14	CSNN01692 "F" LINKAGE
16	N	USNN00073 E RING (E-25)
17	N	CSZN01693 IDLER HEX AXLE
18	1	SEE DRAWING EXTENDED SHAFT KIT
19	1	ES50-054 LNNN00009 ES50 LABEL
20	2 (SEE NOTE 5)	CNNN01933 FOAM
21	2 (SEE NOTE 5)	CSGN01932 ES50 OVER TRAVEL STOP
22	4 (SEE NOTE 5)	RSZN00084 FSD SELF PIERCE C/SK RIVET

(N(NOB): THE NUMBER OF BLADES (SEE CHART))



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NOTES:
 1/ CLINCH THE BLADE STOPS ON THE TOP & BOTTOM FRAMES (MAY ON THE SPACERS), MAKE SURE THE BLADE STOPS PARALLEL TO THE FRAME.
 2/ AFTER ASSEMBLY, SEAL BLADE STOPS AND SPACERS (IF PRESENT).
 3/ STICK DRIVE SHAFT LABEL ON THE DRIVE SIDE TO SHOW THE RECOMMENDED DRIVE SHAFT LOCATION (SEE DRAWING ES35-021 ~ 024).
 4/ TAPE THE EXTENDED SHAFT KIT ON THE TOP OF THE DAMPER.
 5/ WHEN NBDW IS GREATER THAN 1000MM AND WITH TRIM BLADES, STICK FOAMS (ITEM 20) ON THE TRIM BLADES, AND FIX ES50 OVER TRAVEL STOP (ITEM 21) ON THE CENTRE OF THE BLADE STOPS WITH RIVETS (ITEM 22).
 6/ NBDW: NOMINAL BASE DAMPER WIDTH.
 7/ NBDH: NOMINAL BASE DAMPER HEIGHT.
 8/ D: FRAME DEPTH.

Rev	Ecn	Initials	Dates
1	1221	HT	15/06/07
Drawn by		H Tang	16/05/2005
Checked by		HT	18/06/07
Approved by		MB	27/06/07
Ecn		ECN1031	

Material	SEE PARTS LIST
Finish	N/A
Product	ES DAMPER
Part Number	
Description	ES50R ASSEMBLY

Drawing No. **ES50R-200** Revision **1**

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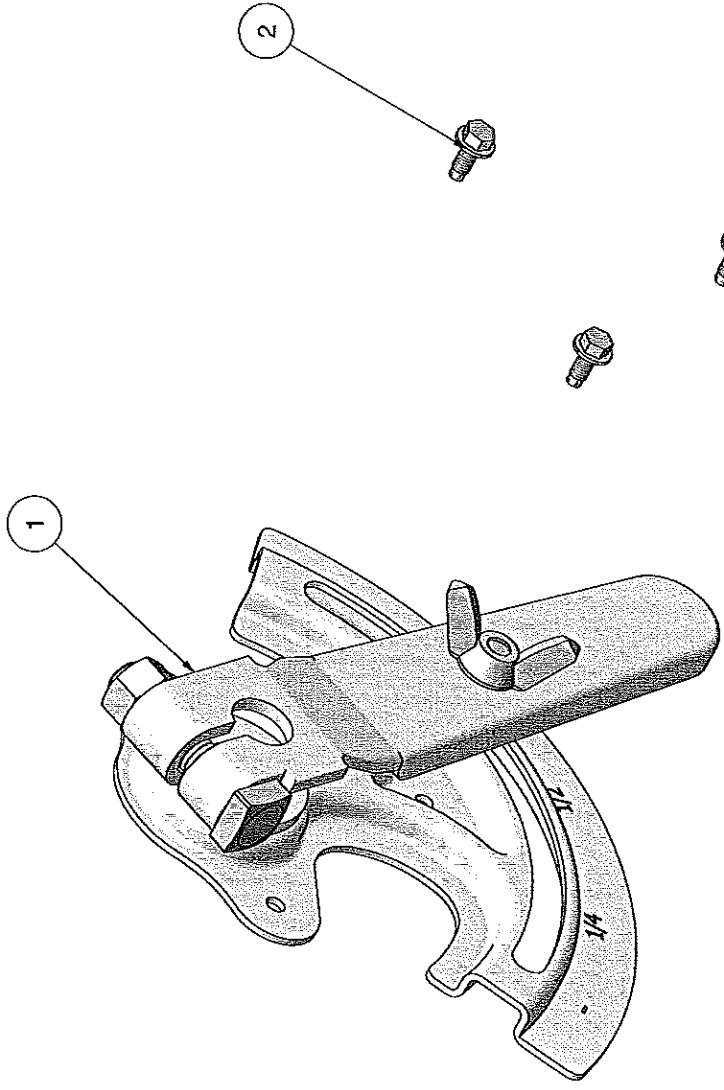
NOTES:
 1/ THIS KIT IS USED FOR ES GALVANISED DAMPER WITH Q CONTROL OPTION.
 2/ PUT ALL PARTS OF THIS KIT IN A CLEAR POLYTHENE BAG.

Draw No. ES35-051 Rev.

DIMENSIONS IN MILLIMETRES DO NOT SCALE

PARTS LIST

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	CSZN01822	QUADRANT HANDLE DD/KL 7R
2	3	QSN00161	SELF DRILL SCREW M3.5x9.5



Rev	Ecn	Initials	Dates

Drawn by	H Tang	30/03/2005
Checked by	HT	14/11/05
Approved by	HT	14/11/05
Ecn	ECN1031	

Limits Unless Stated Otherwise	
No Decimal	±1.00
One Decimal	±0.50
Two Decimals	±0.25
Three Decimals	±0.10
Angles	±2.00°

Material	
Finish	N/A
Product	ES DAMPER
Part Number	CNNN01754

Description	QUADRANT HANDLE KIT (FOR GALV DAMPER)
Drawing No.	ES35-051
Revision	

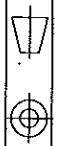
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NOTES:
 1/ THIS KIT IS USED FOR ES STD GALVANISED FLANGE DAMPER.
 2/ PUT ALL PARTS OF THIS KIT IN A CLEAR POLYTHENE BAG.
 3/ D: FRAME DEPTH.

Rev	Ecn	Initials	Dates
1	1221	HT	13/04/07
Drawn by		H Tang	15/06/2005
Checked by		HT	18/06/07
Approved by		HT	27/6/07
Ecn		FCN1031	

Limits Unless Stated Otherwise
No Decimal ±1.00
One Decimal ±0.50
Two Decimals ±0.25
Three Decimals ±0.10
Angles ±2.00°
Material
Finish
Product
Part Number
Description
EXTENDED SHAFT KIT (FOR ES GALV FLA)
Drawing No.
ES35-030
Revision
1



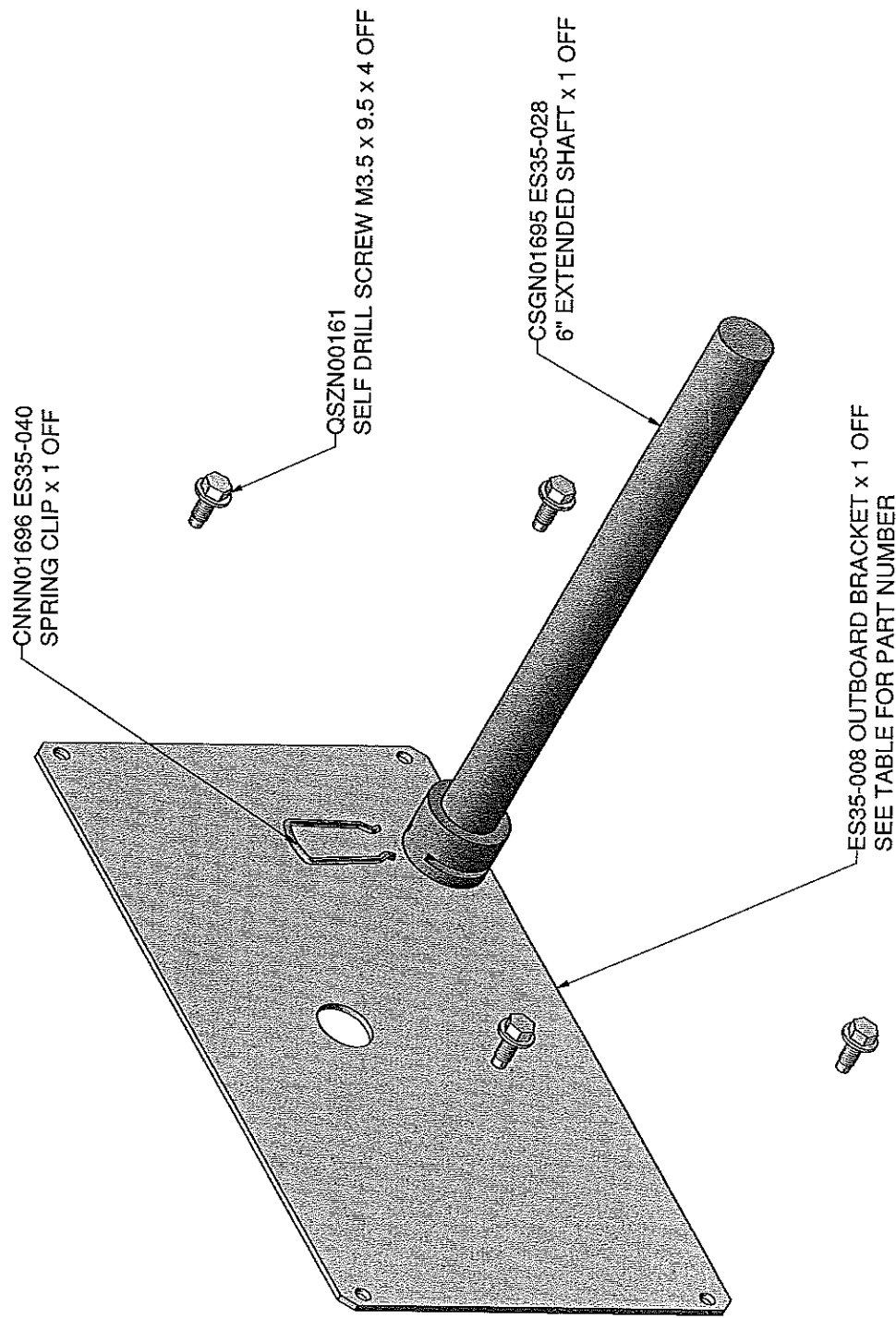
DO NOT SCALE

DIMENSIONS IN MILLIMETRES

Rev. 1

ES35-030

D	KIT PART NUMBER	OUTBOARD BKT PART NUMBER
100	JNNN00123	CSGN01937
120	JNNN00125	CSGN01938
150	JNNN00127	CSGN01939
160	JNNN00129	CSGN01972
165	CNNN01821	CSGN01799
175	JNNN00131	CSGN01973
200	JNNN00133	CSGN01940
250	JNNN00135	CSGN01941



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