



Technical Sales Bulletin

KUSA-TSB130

To: All Kinetrol Customers

Date: October 9, 2019

From: Greg Mitchell, General Manager

Subject: Kinetrol New Model 60 Actuator

Kinetrol is pleased to announce the introduction of the new Model 60 Actuator which will now increase the torque capability of the Kinetrol range to 356,977 inch-pounds.

Feature and Options

Double-Acting and Spring-Return options

2" Air ports as standard

Standard working temperature range: -40°F to +176°F

Angle of travel adjustable 80 to 100 degrees

Displaced volume: 6284 in³

Weight (less coupling): 998.7 pounds

Coupling weight: 48.5 pounds

VLS / ULS / XLS Limit Switch Box options

AP Positioner options

ATEX Category 2 approved (see below)





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Materials of Construction

- Casing: Sand cast aluminum alloy
- Vane & Output shaft: SG Iron, zinc plated
- Shaft bushes: PTFE coated bronze
- Seals: Molded polyurethane
- Seal exponders: Stainless spring steel
- Coupling: Weldable mild steel, zinc plated

Double-Acting Actuator Part Numbers and Torques

The Model 60 will follow the Kinetrol convention and utilize 607-100 for ANSI and 604-100 for ISO threaded units.

Double Acting Torque Outputs - Metric Units Nm

Actuator Model	Pressure (bar)											
	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0
60-100	8345	11106	14041	16680	19673	22806	25680	28870	31995	34909	37818	40765

Double Acting Torque Outputs - English Units lbf ins

Actuator Model	Pressure (psi)									
	20	30	40	50	60	70	80	90	100	
60-100	67602	102031	135487	173262	208807	245953	283879	319645	356977	

Spring-Return Actuator Part Numbers and Torques

The Model 60 Spring-Return Actuator incorporates the Model 18 Spring which will be fitted above the actuator as standard and will use the designation 609-1*0 for ANSI and 600-1*0 for ISO. Spring directions are the same as standard "2" for Clockwise and "3" for Counter-Clockwise when viewed from above.



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Low pressure versions will also be available and will also be mounted above the actuator.

- 609-1*0-8400 - 4 x Model 18 spring units
- 609-1*0-8500 - 5 x Model 18 spring units
- 609-1*0 - 6 x Model 18 spring units

Spring Return Torque Outputs - Metric Units Nm

Actuator Model	Position of air OR spring return stroke	Pressure (bar)												
		1.7	2.0	2.4	2.8	3.1	3.5	3.8	4.1	4.5	4.8	5.2	5.5	
60-120-8400	Start				8343.0	9506.0	10669.0							
	Finish				6965.0	7936.0		8907.0	8907.0	8907.0	8907.0	8907.0	8907.0	8907.0
60-120-8500	Start						10669.0	11763.0	12858.0	13996.0				
	Finish						8907.0	9821.0	10734.0	11684.0	11684.0	11684.0	11684.0	11684.0
60-120	Start									14001.0	15145.0	16313.0	17437.0	
	Finish									11689.0	12644.0	13619.0	14558.0	

Spring Return Torque Outputs - English Units lbf ins

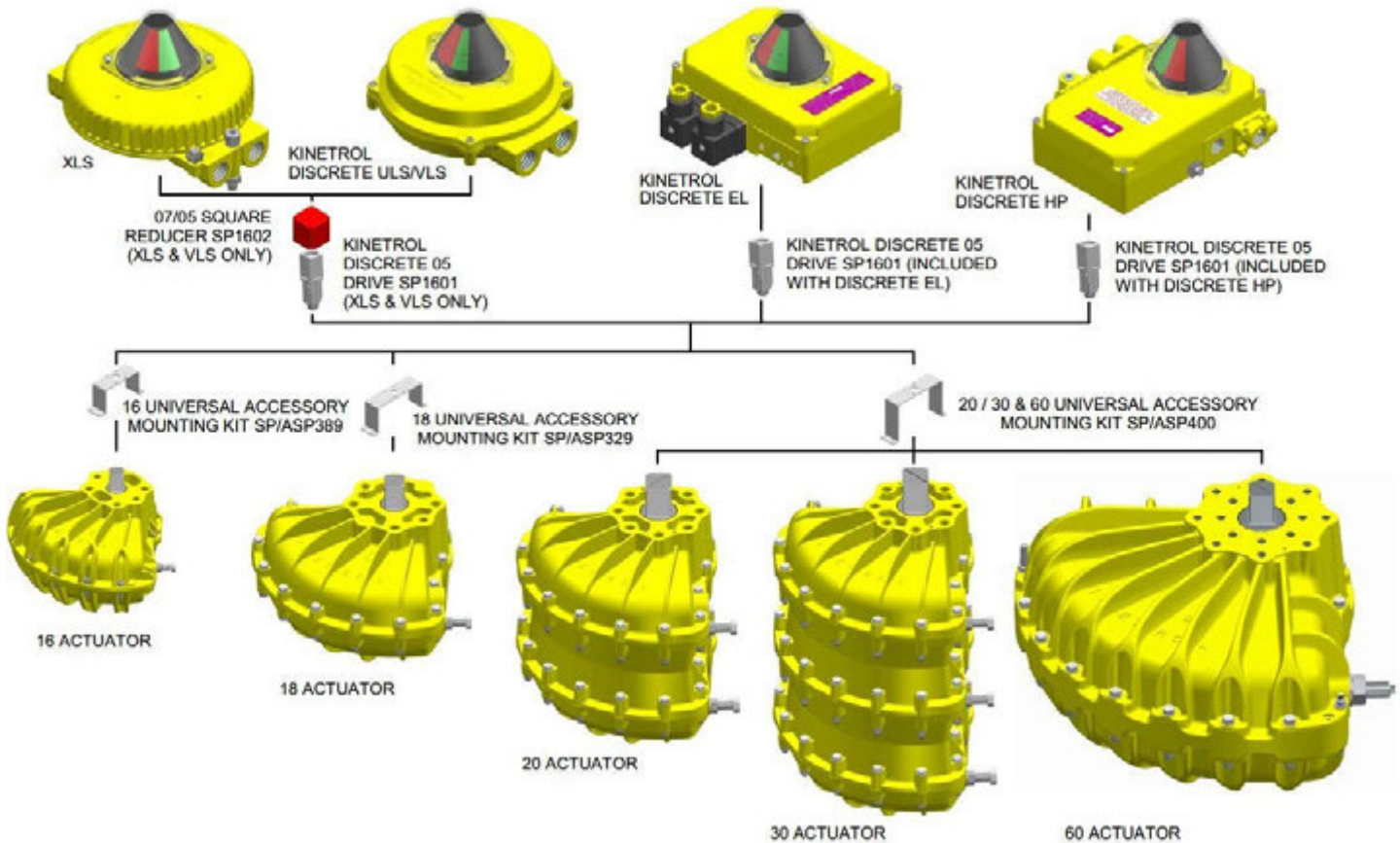
Actuator Model	Position of air OR spring return stroke	Pressure (bar)												
		25	30	35	40	45	50	55	60	65	70	75	80	
60-120-8400	Start				73841	84134	94428							
	Finish				61647	70240	78834	78834	78834	78834	78834	78834	78834	78834
60-120-8500	Start						94428	104114	113800	123872				
	Finish						78834	86921	95007	103416	103416	103416	103416	103416
60-120	Start									123872	134045	144379	154333	
	Finish									103416	111909	120537	128847	

Accessory Mounting

The Model 60 will utilize the same accessory mounting bracket and interface as the Model 20 & 30 when mounting Kinetrol switch boxes and positioners (positioner units will be externally piped). The Model 60 can also incorporate industry standard VDI/VDE mounting in the top of the accessory square.

Technical Sales Bulletin

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Prices

Prices are included in the latest Kinetrol USA Price List PL1905R3, 20191009 that was emailed as a sales bulletin earlier today.

ATEX

The Model 60 is ATEX approved to category 2 as follows:

Ex II 2G Ex h IIC T5 Gb

Ex II 2D Ex h IIIC T90°C Db Tamb -40°C to +80°C



Technical Sales Bulletin

KUSA-TSB130

Drawings

The following outline drawings are attached with this bulletin:

128-2852 Model 604-100 Double Acting ISO

128-2852A Model 607-100 Double Acting ANSI

128-2853 Model 600-120 Spring Return ISO

128-2853A Model 609-120 Spring Return ANSI

128-2945 Model 600-120-8400 Spring Return ISO

128-2945A Model 609-120-8400 Spring Return ANSI

128-2946A Model 600-120-8500 Spring Return ISO

128-2946A Model 609-120-8500 Spring Return ANSI

Availability

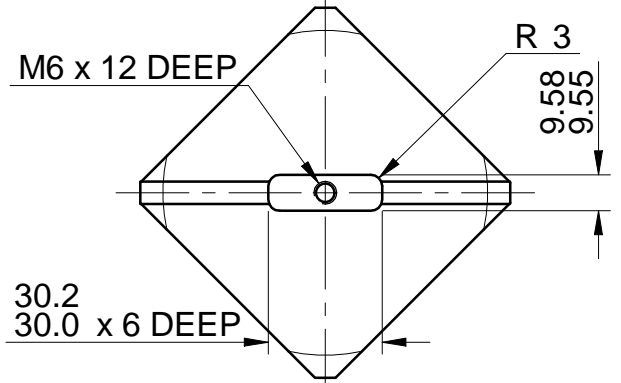
The Model 60 is available to order immediately on a lead time of 14 working weeks from receipt of order.

Documentation

We are now working on a new Actuator Catalog which will feature the Model 60 Actuator and we will advise when this is available. Installation Operation and Maintenance instructions will also be added to the Kinetrol website shortly.

KINETROL

DRG. No.	128-2852/A3
DR.	D.G.W.
DATE	25-04-18
CH.	
APP.	
ALTERATIONS	
B	MOUNT FACE UPDATED. D.G.W. 13-07-18
C	SPRING BOSS UPDATED. D.G.W. 04-09-18
D	356 PCD WAS 365 PCD. D.G.W. 20-11-18
E	PICTORIALLY UPDATED TO SHOW ANCILLARY MNT PATTERN ON ACT MNT FACE. D.G.W. 26-06-19
F	73 ACCESSORY END WAS 78 ACCESSORY END (ERROR). D.G.W. 24-07-19

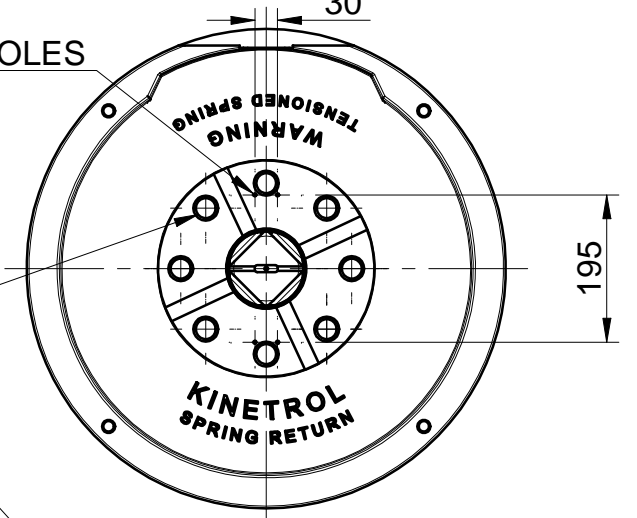


VANE SLOT DETAILS ACCESSORY END
1 : 2

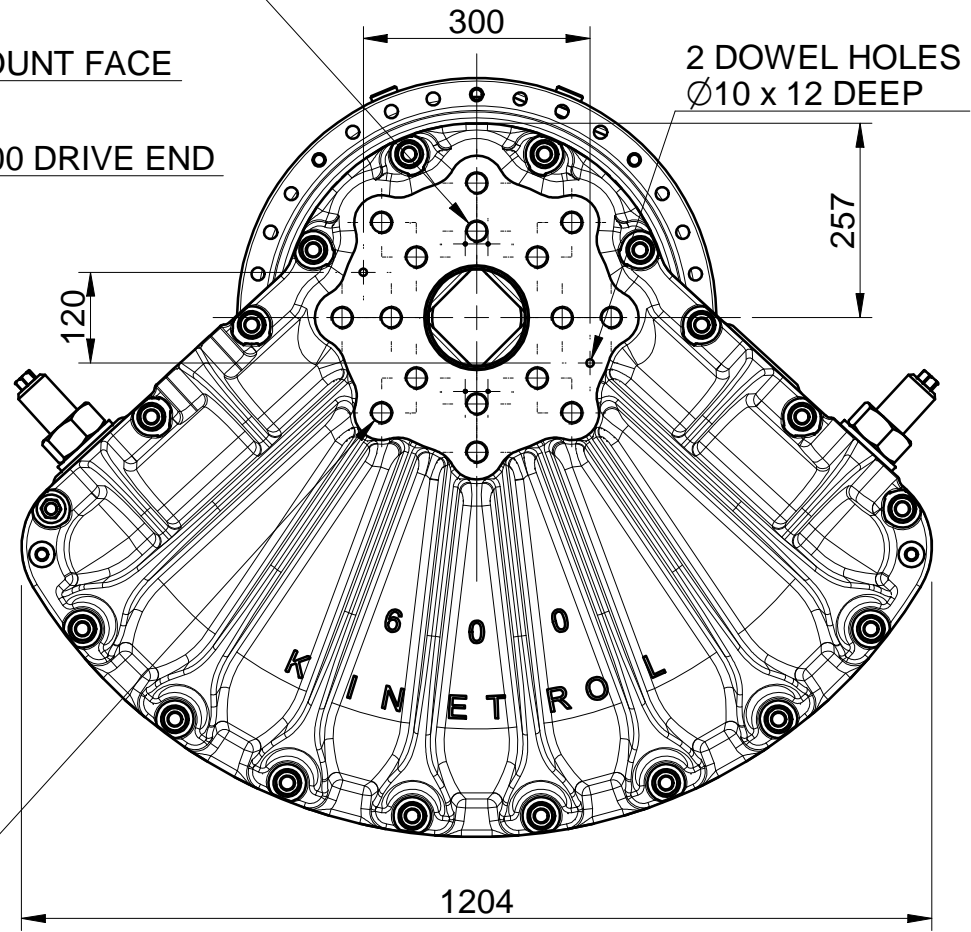
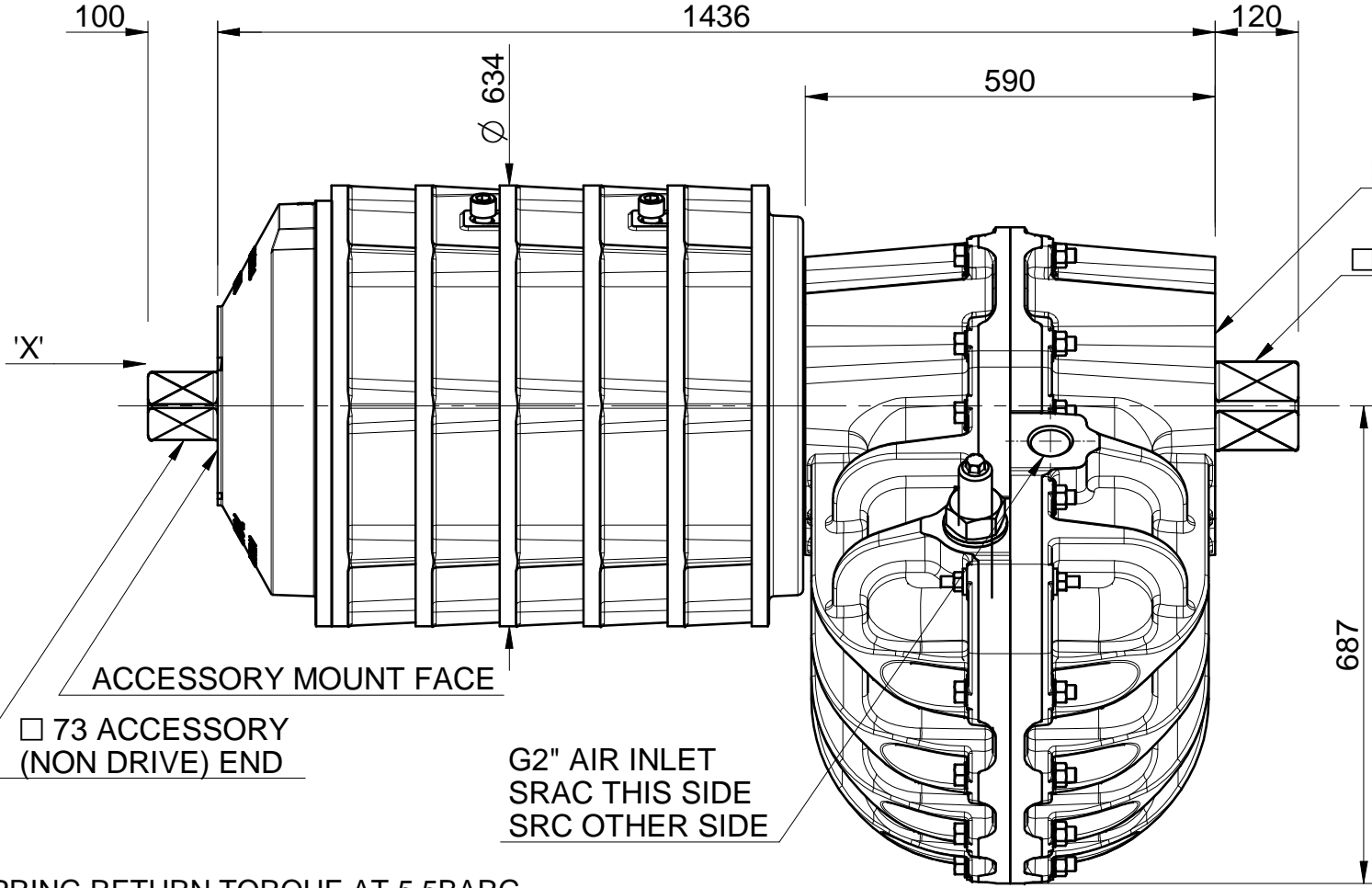
4 OFF M5 x 8 DEEP
ACCESSORY MOUNT HOLES

8 MOUNT HOLES M30 x 60 DEEP
EQUI-SPACED ON 226.3 PCD
(FOR FITTING OF SUPPORT PLATE IF
ACTUATOR INSTALLED HORIZONATALLY.
MUST NOT BE MOUNTED TO DRIVEN LOAD)

8 MOUNT HOLES M30 x 60 DEEP
EQUI-SPACED ON 226.3 PCD
MUST NOT BE MOUNTED TO DRIVEN LOAD)



VIEW IN DIRECTION OF ARROW 'X'



SPRING RETURN TORQUE AT 5.5BARG
START = 16368 Nm APPROX
FINISH = 13392 Nm APPROX

ANGLE OF TRAVEL ADJUSTABLE = 80 TO 100°.

SPRING AND ACTUATOR WEIGHT = 1425KG APRROX
ACTUATOR WEIGHT = 475KG APRROX

8 MOUNT HOLES M30 x 60 DEEP
EQUI-SPACED ON 356 PCD
(FOR MOUNTING TO DRIVEN LOAD)

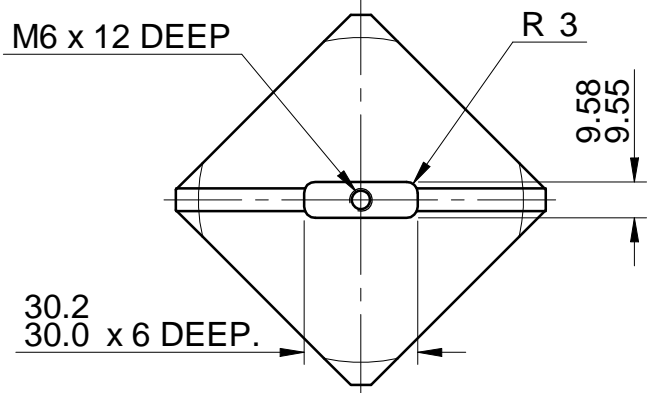
THIRD ANGLE PROJECTION
IF IN DOUBT - ASK DO NOT SCALE

ISSUE				
A	B	C	D	E
F				

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	<p>DIMS. IN</p> <p>MM</p>	<p>FINISH</p>		<p>DRG.No. 128-2852/A3</p>
				<p>KINETROL TRADING ESTATE FARNHAM, SURREY</p>

KINETROL

DRG. No. 128-2945/A3
DR. C.S.
DATE 11-09-19
CH.
APP.
ALTERATIONS

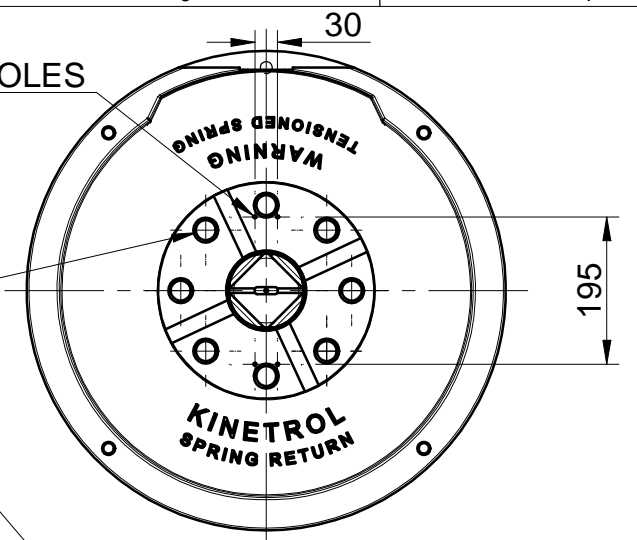


VANE SLOT DETAILS ACCESSORY END
1 : 2

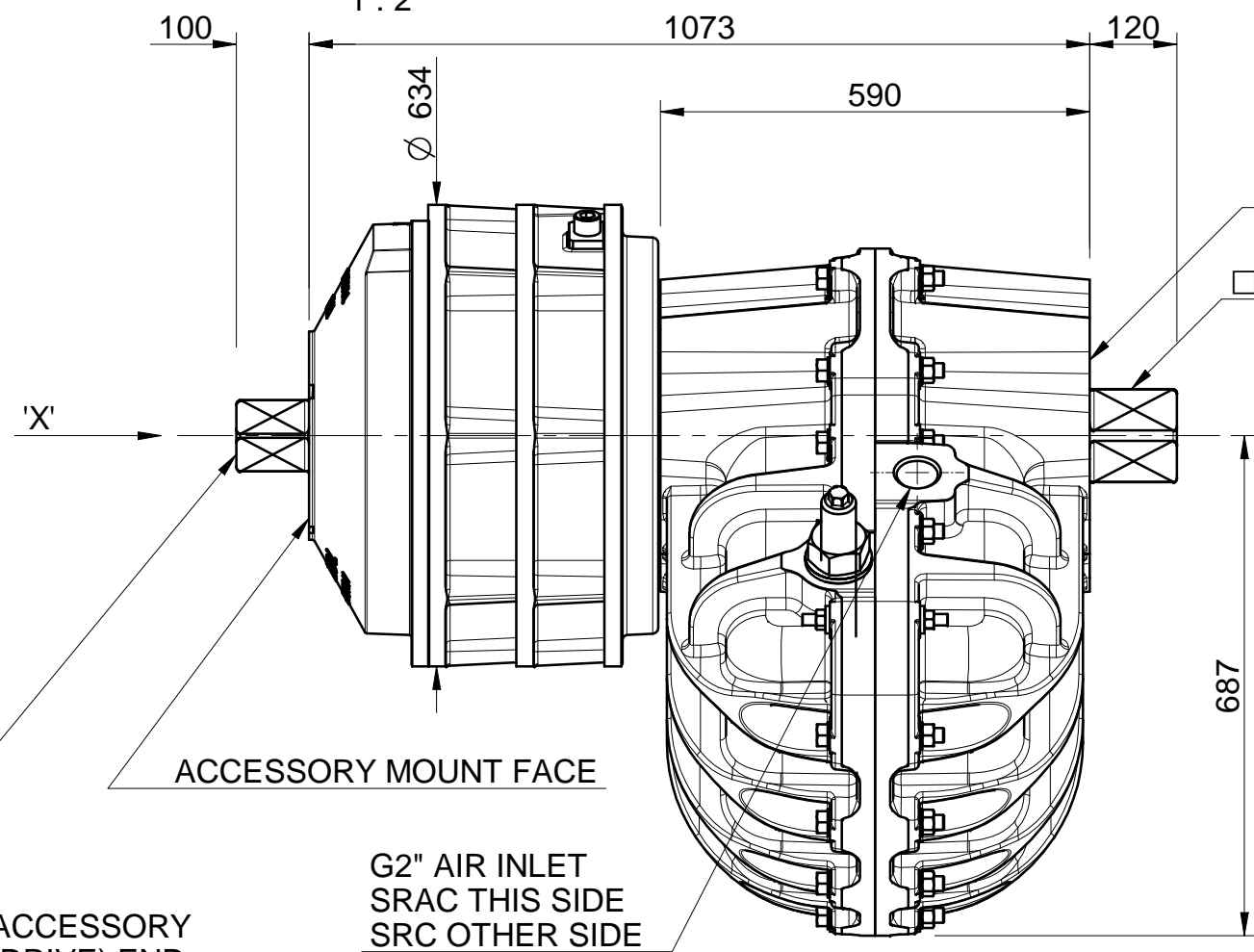
8 MOUNT HOLES M30 x 60 DEEP
EQUI-SPACED ON 226.3 PCD
(FOR FITTING OF SUPPORT PLATE IF
ACTUATOR INSTALLED HORIZONATALLY.
MUST NOT BE MOUNTED TO DRIVEN LOAD)

8 MOUNT HOLES M30 x 60 DEEP
EQUI-SPACED ON 226.3 PCD
MUST NOT BE MOUNTED TO DRIVEN LOAD)

4 OFF M5 x 8 DEEP
ACCESSORY MOUNT HOLES



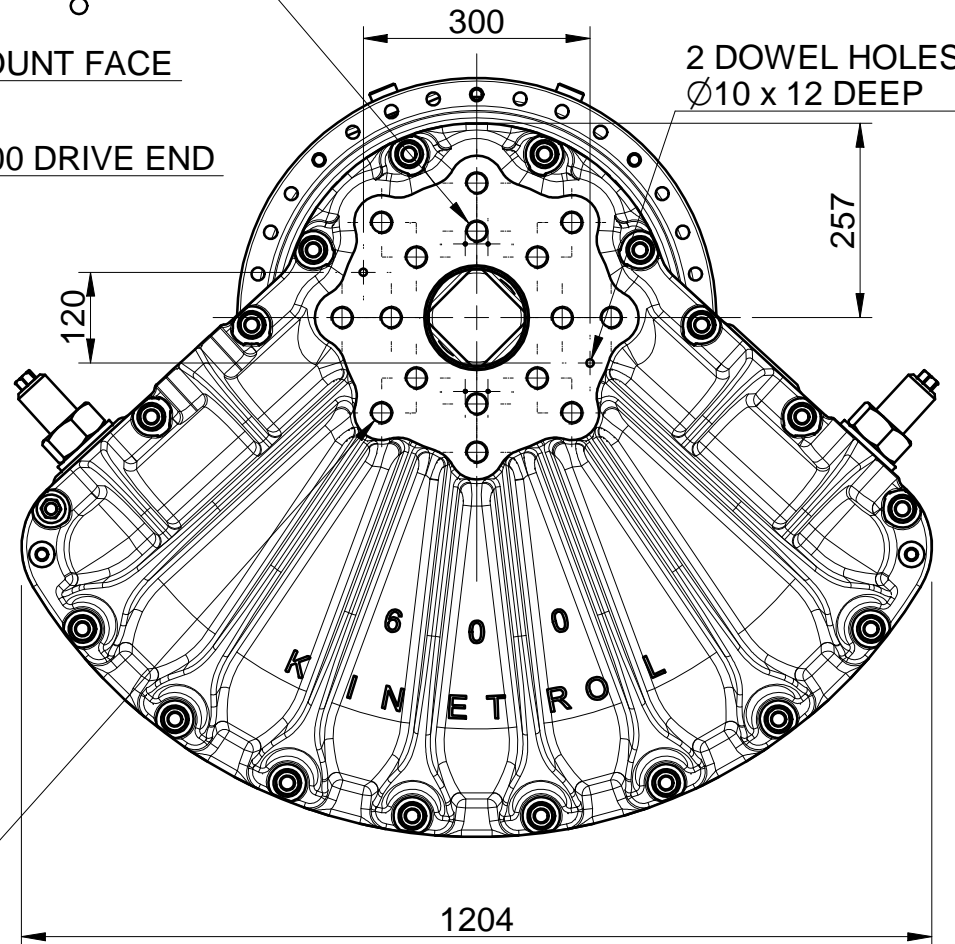
VIEW IN DIRECTION OF ARROW 'X'



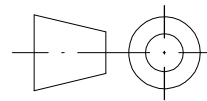
MOUNT FACE

100 DRIVE END

2 DOWEL HOLES
Ø10 x 12 DEEP



8 MOUNT HOLES M30 x 60 DEEP
EQUI-SPACED ON 356 PCD
(FOR MOUNTING TO DRIVEN LOAD)



THIRD ANGLE PROJECTION
IF IN DOUBT - ASK DO NOT SCALE

ISSUE			
A			

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SCALE
1 : 2 & 1 : 10
DIMS. IN
MM

MAT'L & SPEC.
FINISH

TITLE
OUTLINE DIMENSIONS OF MODEL
600-120-8400 / 600-130-8400
SPRING RETURN ACTUATOR

INDEX No. 2D12811
DRG.No. 128-2945/A3
KINETROL TRADING ESTATE
FARNHAM, SURREY

KINETROL

DRG. No.
128-2946/A3

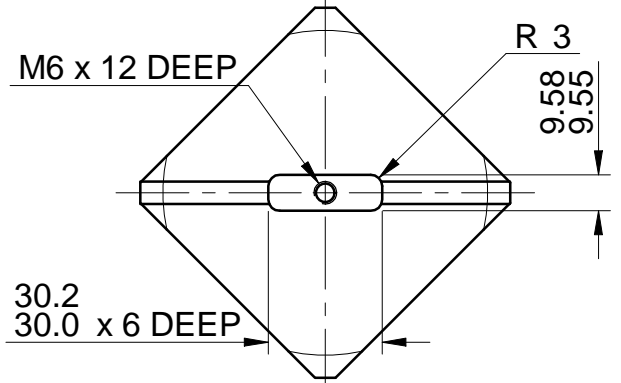
DR. C.S.

DATE 11-09-19

CH.

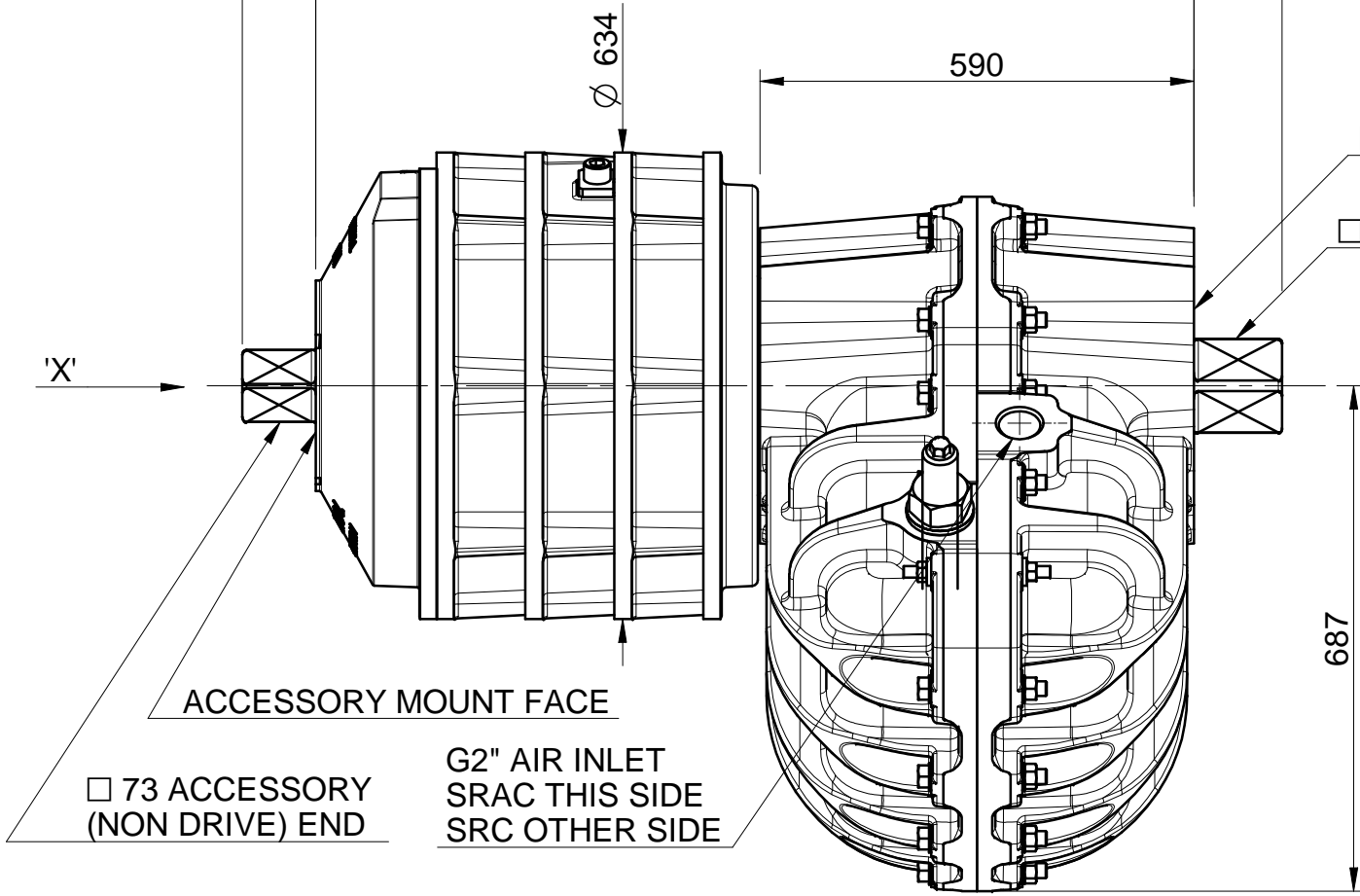
APP.

ALTERATIONS



VANE SLOT DETAILS ACCESSORY END

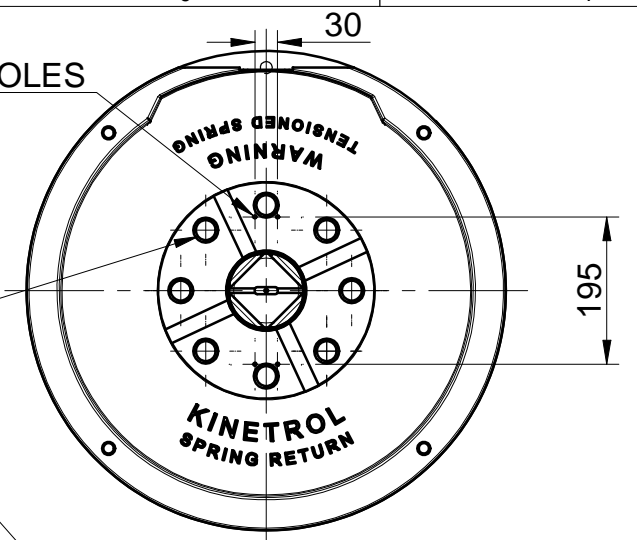
100 1:2 1194



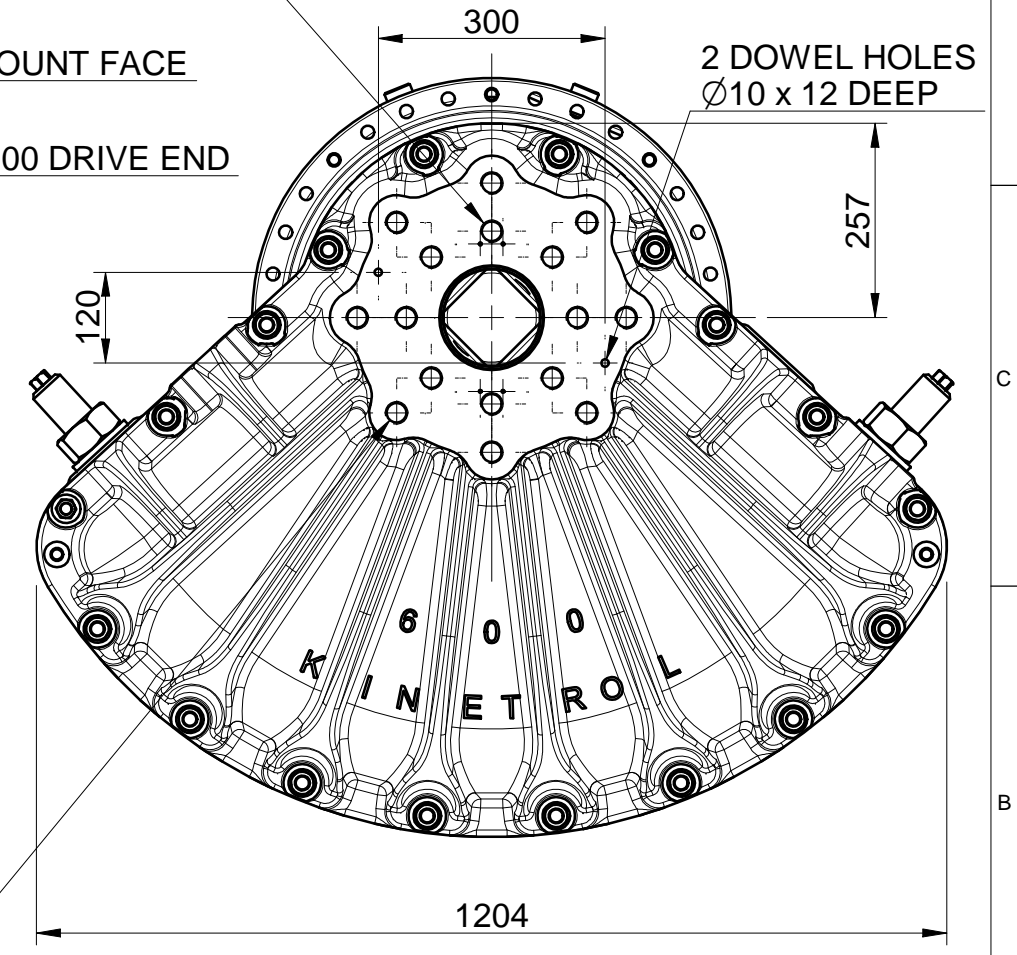
4 OFF M5 x 8 DEEP ACCESSORY MOUNT HOLES

8 MOUNT HOLES M30 x 60 DEEP EQUI-SPACED ON 226.3 PCD (FOR FITTING OF SUPPORT PLATE IF ACTUATOR INSTALLED HORIZONATALLY. MUST NOT BE MOUNTED TO DRIVEN LOAD)

8 MOUNT HOLES M30 x 60 DEEP EQUI-SPACED ON 226.3 PCD MUST NOT BE MOUNTED TO DRIVEN LOAD)



VIEW IN DIRECTION OF ARROW 'X'



8 MOUNT HOLES M30 x 60 DEEP EQUI-SPACED ON 356 PCD (FOR MOUNTING TO DRIVEN LOAD)

THIRD ANGLE PROJECTION
IF IN DOUBT - ASK DO NOT SCALE

ISSUE			
A			

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SCALE
1 : 2 & 1 : 10

DIMS. IN
MM

MAT'L & SPEC.

FINISH

TITLE

OUTLINE DIMENSIONS OF MODEL
600-120-8500 / 600-130-8500
SPRING RETURN ACTUATOR

INDEX No. 2D12811

DRG.No. 128-2946 /A3

KINETROL TRADING ESTATE
FARNHAM, SURREY

1

2

3

4

5

6

7

KINETROL

DRG. No.
128-2853/A3

DR. D.G.W.
DATE 30-04-18

CH.
APP.

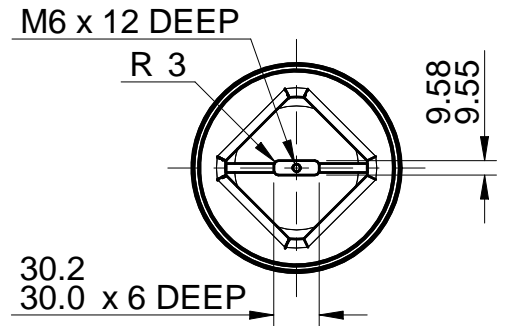
ALTERATIONS

B
MOUNT FACES UPDATED.
D.G.W. 13-07-18

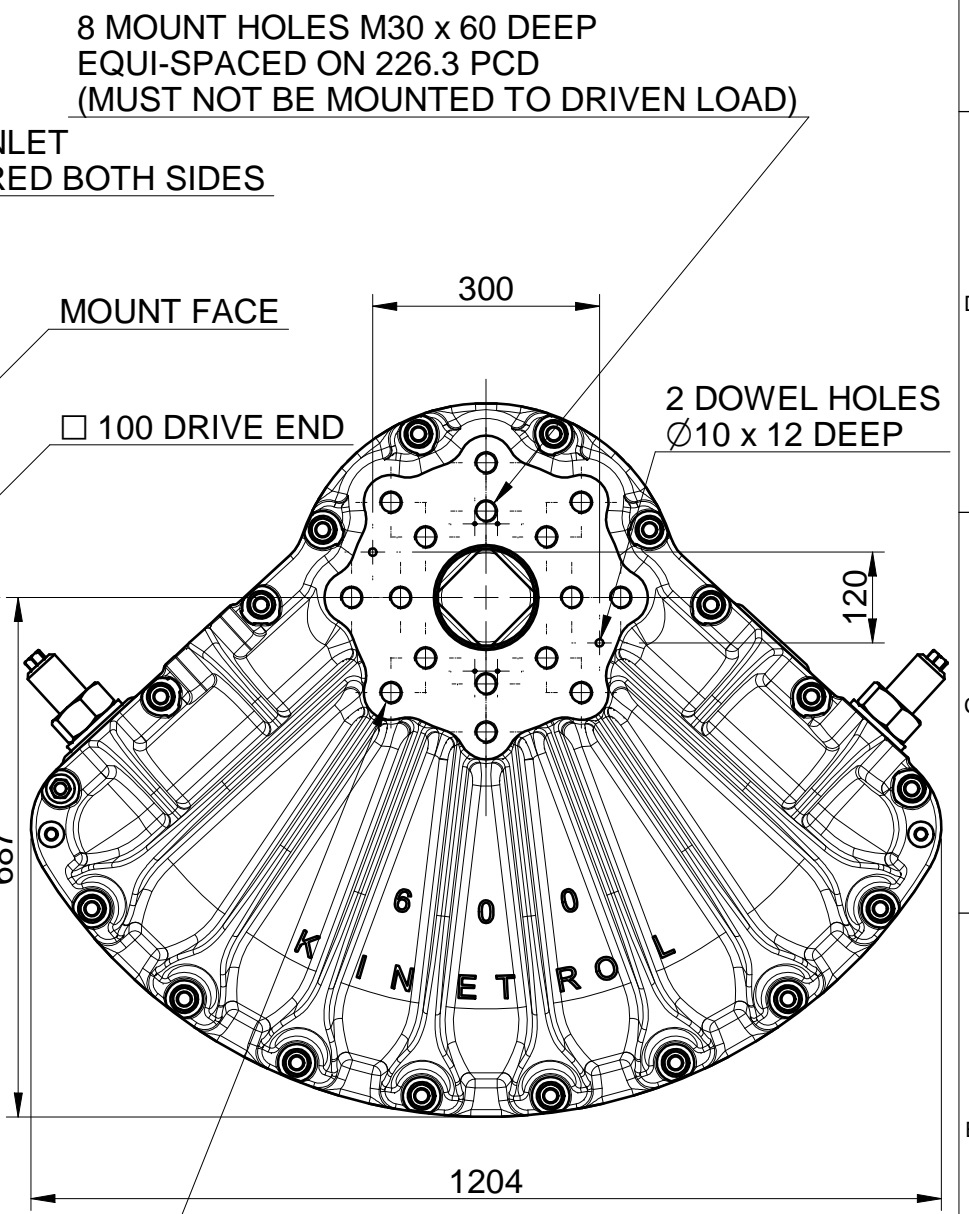
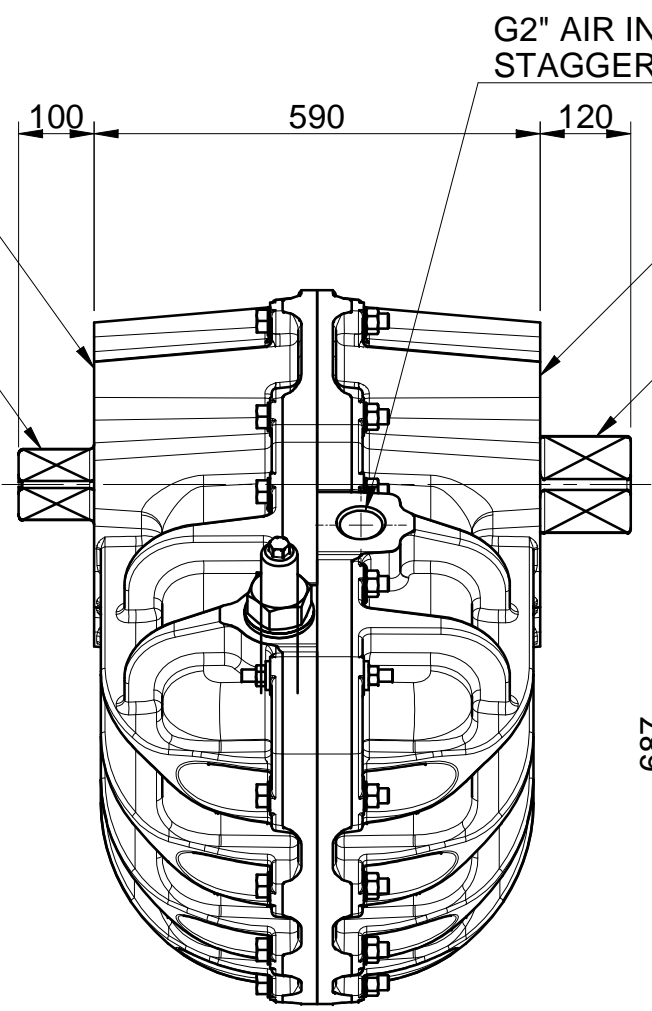
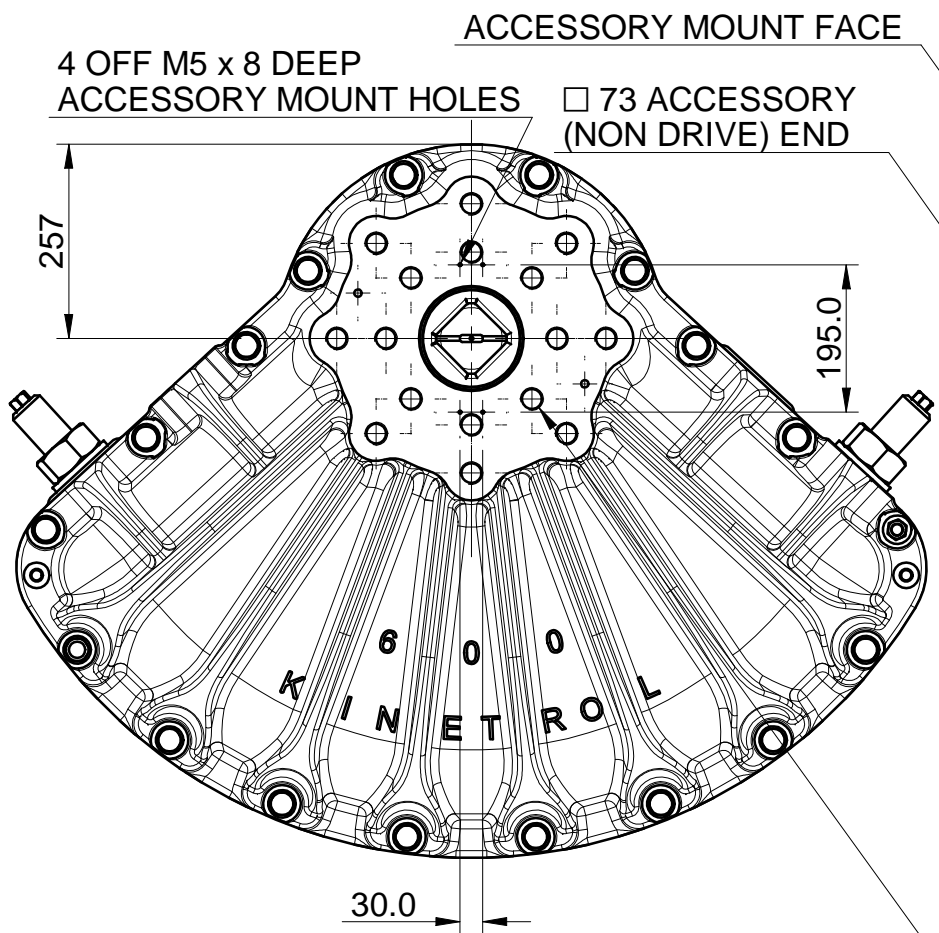
C
356 PCD WAS 365 PCD.
D.G.W. 20-11-18

D
PICTORIALLY UPDATED
TO SHOW ANCILLARY
MNT PATTERN ON ACT
MNT FACE.
D.G.W. 26-06-19

E
ACCESSORY SQ. SIZE 73
WAS 78; CORRECTION.
C.S. 26-07-19



VANE SLOT DETAILS ACCESSORY END
1 : 5



DOUBLE ACTING TORQUE AT 7BARG = 38000Nm APPROX
 ANGLE OF TRAVEL ADJUSTABLE = 80 TO 100°.
 ACTUATOR WEIGHT = 475KG APPROX

ISSUE				
A	B	C	D	E

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SCALE
1 : 2 & 1 : 10
 DIMS. IN
MM

MAT'L & SPEC.
 FINISH

TITLE
**OUTLINE DIMENSIONS
 OF MODEL 600
 DOUBLE ACTING ACTUATOR**

INDEX No. 2D12811
 DRG.No. 128-2853/A3
KINETROL TRADING ESTATE
 FARNHAM, SURREY

KINETROL

DRG. No.
128-2853A/A3

DR. D.G.W.

DATE 03-09-18

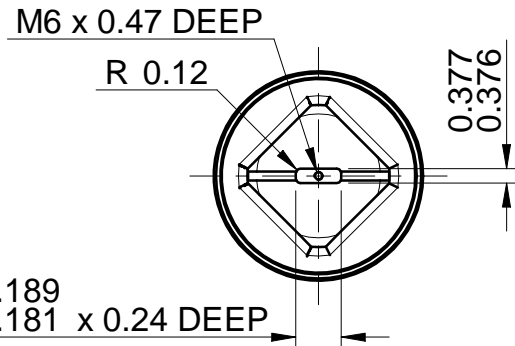
CH.

APP.

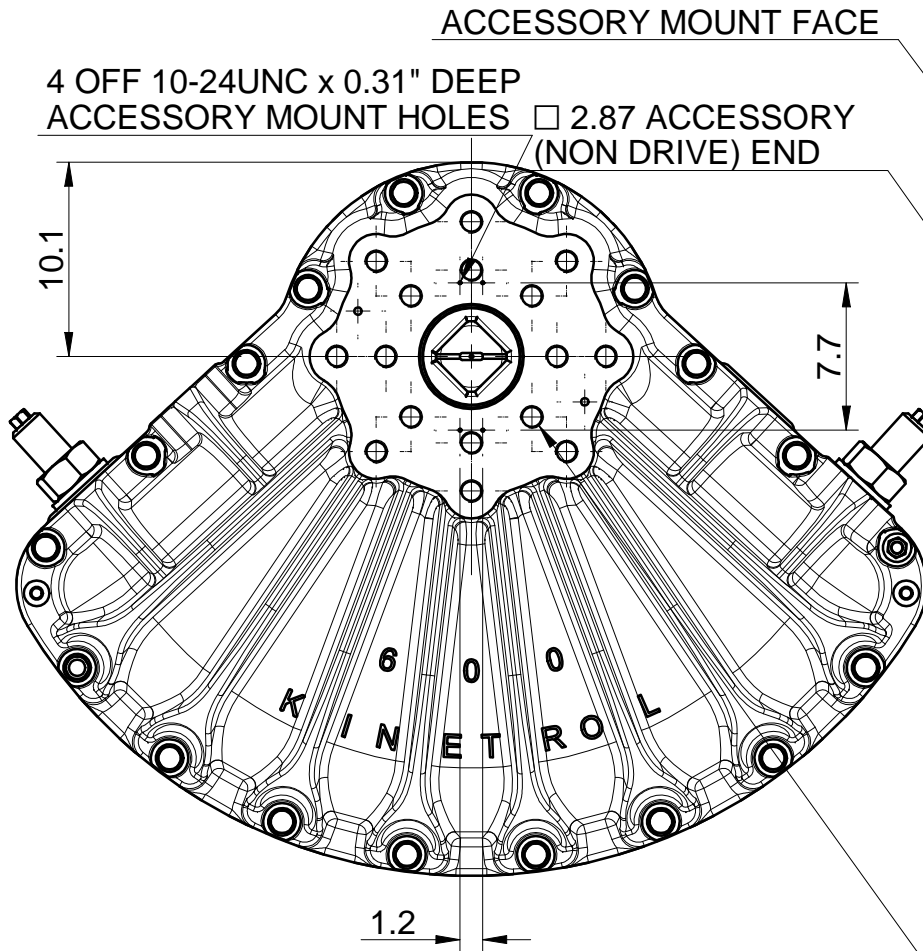
ALTERATIONS

B] PICTORIALY UPDATED TO SHOW ANCILLARY MNT PATTERN ON ACT MNT FACE.
D.G.W. 26-06-19

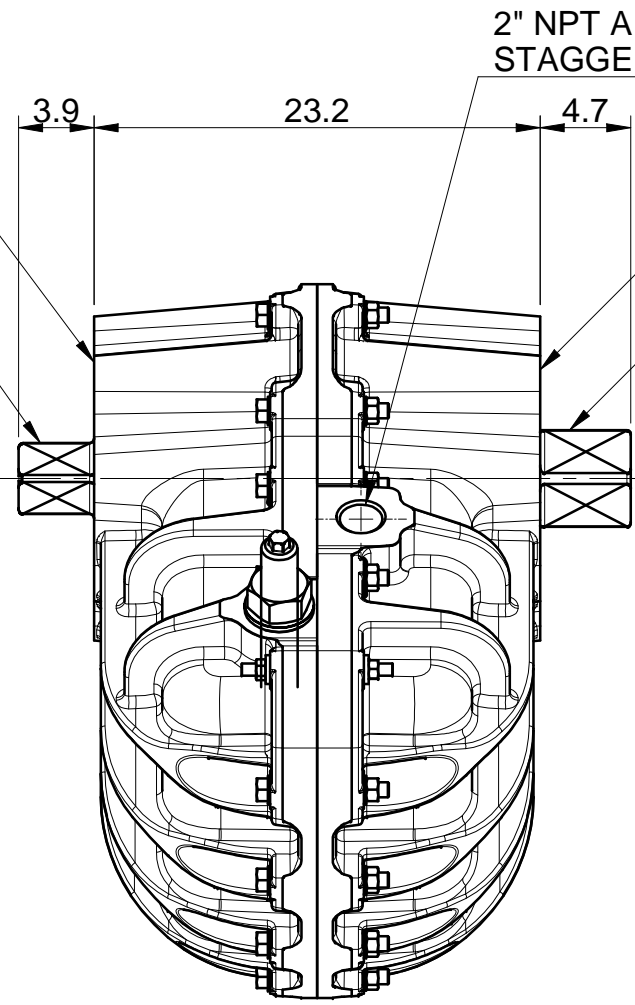
C] 2.87 ACCESSORY END WAS 3.1 ACCESSORY END (ERROR).
D.G.W. 24-07-19



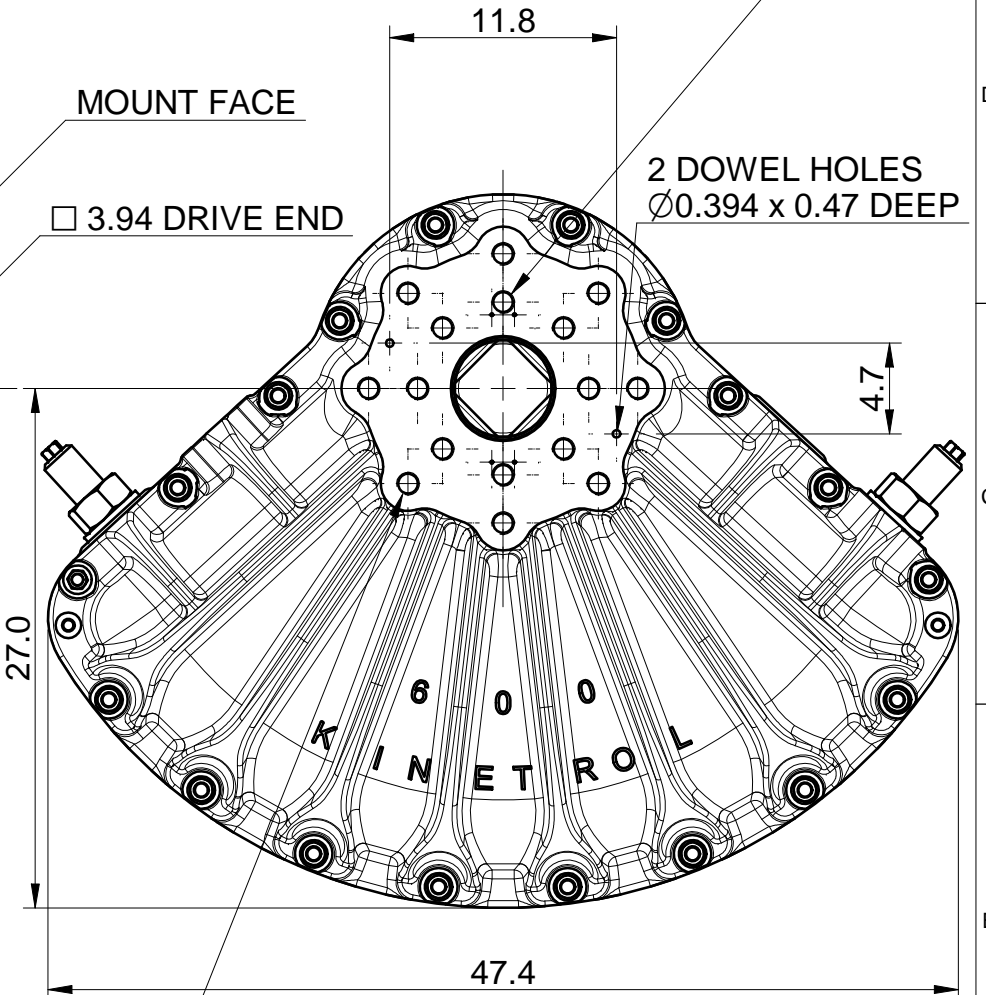
VANE SLOT DETAILS ACCESSORY END
1 : 5



ACCESSORY MOUNT FACE
4 OFF 10-24UNC x 0.31" DEEP
ACCESSORY MOUNT HOLES □ 2.87 ACCESSORY
(NON DRIVE) END



2" NPT AIR INLET
STAGGERED BOTH SIDES



MOUNT FACE

□ 3.94 DRIVE END

2 DOWEL HOLES
Ø0.394 x 0.47 DEEP

8 MOUNT HOLES 1.1/8-7 UNC x 2.36 DEEP
EQUI-SPACED ON 8.91 PCD
(MUST NOT BE MOUNTED TO DRIVEN LOAD)

8 MOUNT HOLES 1.1/8-7 UNC x 2.36 DEEP
EQUI-SPACED ON 8.91 PCD
(FOR FITTING SPRING RETURN)

8 MOUNT HOLES 1.1/8-7 UNC x 2.36 DEEP
EQUI-SPACED ON 14.02 PCD
(FOR MOUNTING TO DRIVEN LOAD)

DOUBLE ACTING TORQUE AT 100psi = 338567 lbf ins APPROX
ANGLE OF TRAVEL ADJUSTABLE = 80 TO 100°.
ACTUATOR WEIGHT = 1047 lb APRROX

ISSUE		
A	B	C

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SCALE
1 : 2 & 1 : 10
DIMS. IN
ANSI

MAT'L & SPEC.
FINISH

TITLE
OUTLINE DIMENSIONS
OF MODEL 600
DOUBLE ACTING ACTUATOR

INDEX No. 2D12811
DRG.No. 128-2853A /A3
KINETROL TRADING ESTATE
FARNHAM, SURREY

KINETROL

DRG. No.
128-2852A/A3

DR. D.G.W.
DATE 04-09-18

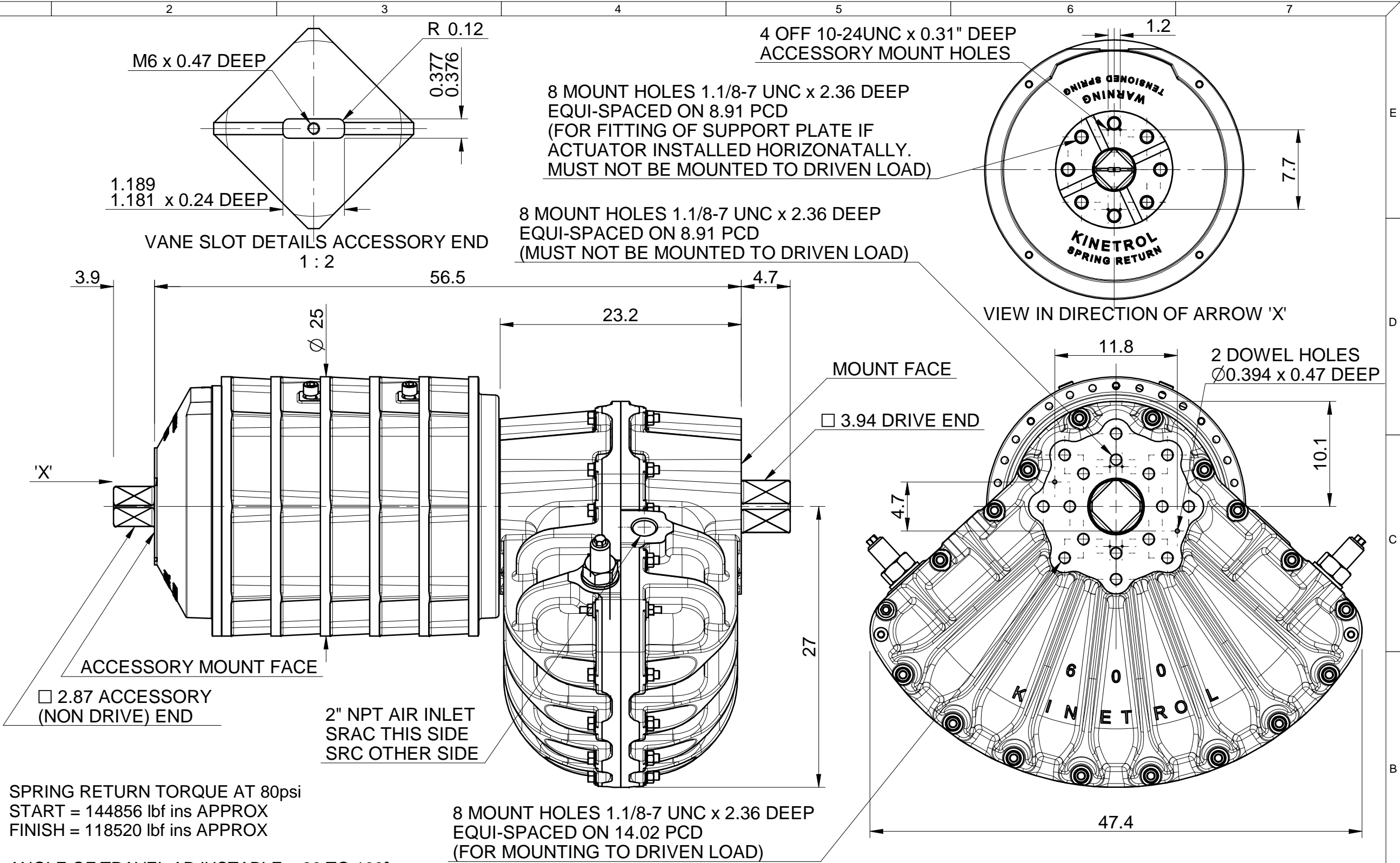
CH.
APP.

ALTERATIONS

B] PICTORIALY UPDATED TO SHOW ANCILLARY MNT PATTERN ON ACT MNT FACE.
D.G.W. 26-06-19

C] 2.87 ACCESSORY END WAS 3.1 ACCESSORY END (ERROR).
D.G.W. 24-07-19

ISSUE		
A	B	C



SPRING RETURN TORQUE AT 80psi
START = 144856 lbf ins APPROX
FINISH = 118520 lbf ins APPROX

ANGLE OF TRAVEL ADJUSTABLE = 80 TO 100°.

SPRING AND ACTUATOR WEIGHT = 3141 lb APRROX
ACTUATOR WEIGHT = 1047 lb APRROX

THIRD ANGLE PROJECTION
IF IN DOUBT - ASK DO NOT SCALE

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	<p>DIMS. IN INCHES</p>			<p>FINISH</p>
	<p>KINETROL</p>			<p>TRADING ESTATE FARNHAM, SURREY</p>

KINETROL

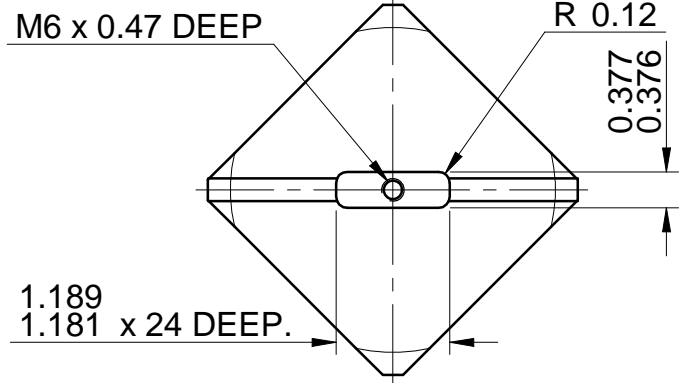
DRG. No.
128-2945A /A3

DR. C.S.
DATE 18-09-19

CH.

APP.

ALTERATIONS

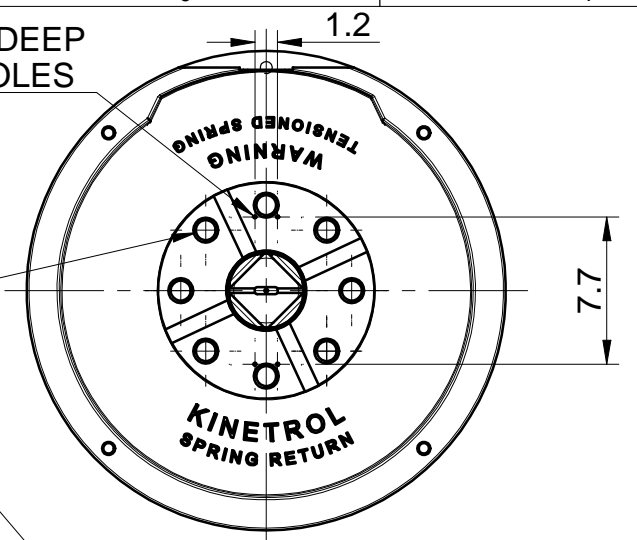


VANE SLOT DETAILS ACCESSORY END
1 : 2

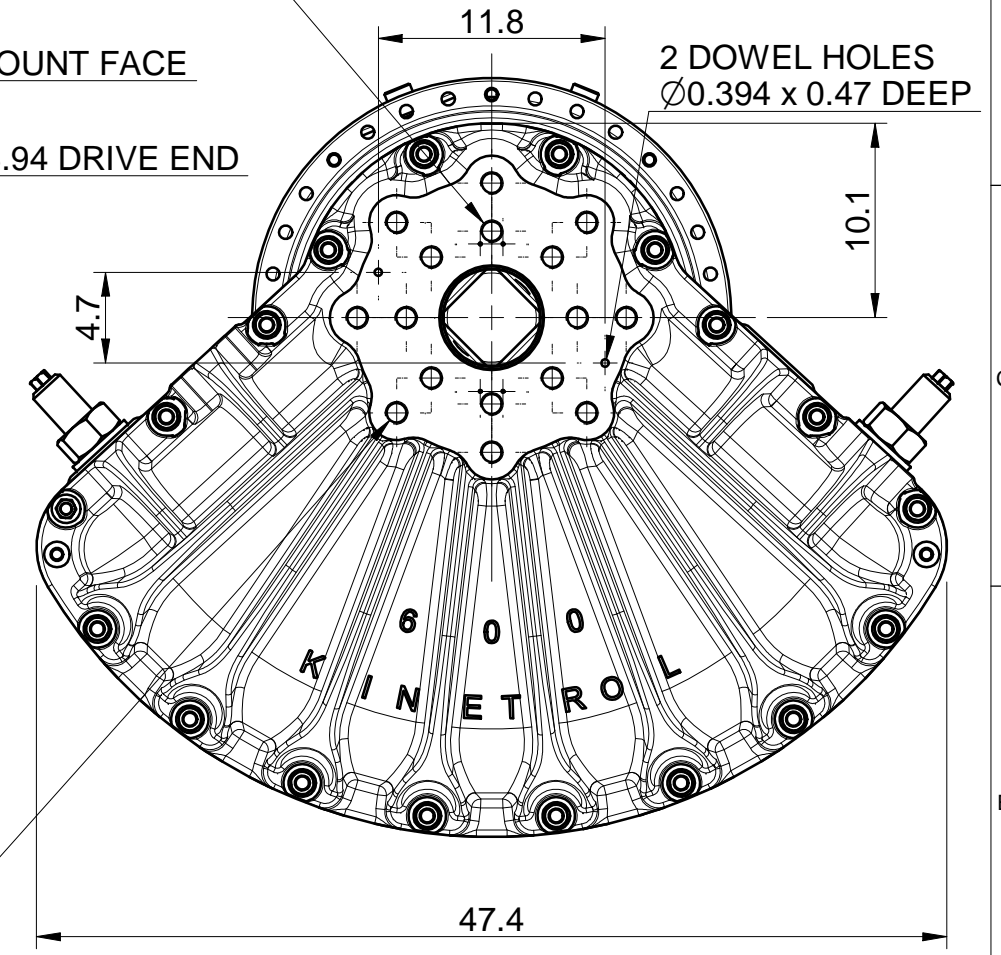
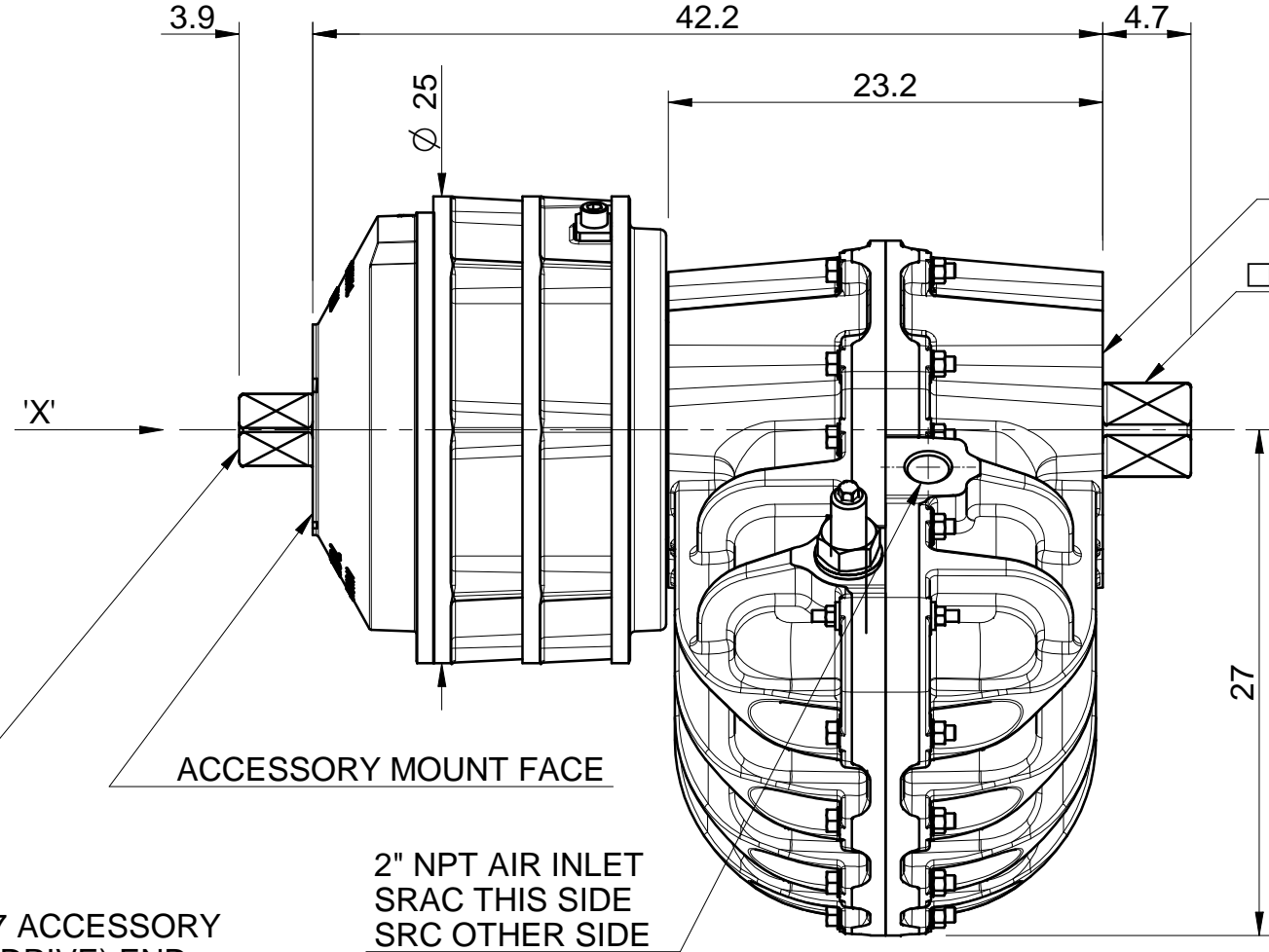
4 OFF 10-24UNC x 0.31" DEEP
ACCESSORY MOUNT HOLES

8 MOUNT HOLES 1.1/8-7 UNC x 2.36 DEEP
EQUI-SPACED ON 8.91 PCD
(FOR FITTING OF SUPPORT PLATE IF
ACTUATOR INSTALLED HORIZONATALLY.
MUST NOT BE MOUNTED TO DRIVEN LOAD)

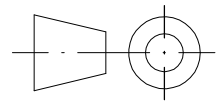
8 MOUNT HOLES 1.1/8-7 UNC x 2.36 DEEP
EQUI-SPACED ON 8.91 PCD
MUST NOT BE MOUNTED TO DRIVEN LOAD)



VIEW IN DIRECTION OF ARROW 'X'



8 MOUNT HOLES 1.1/8-7 UNC x 2.36 DEEP
EQUI-SPACED ON 14.02 PCD
(FOR MOUNTING TO DRIVEN LOAD)



THIRD ANGLE PROJECTION
IF IN DOUBT - ASK DO NOT SCALE

ISSUE			
A			

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PERMISSION FROM THE OWNER.

SCALE
1 : 2 & 1 : 10
DIMS. IN
INCHES

MAT'L & SPEC.
FINISH

TITLE
OUTLINE DIMENSIONS OF MODEL
609-120-8400 / 609-130-8400
SPRING RETURN ACTUATOR

INDEX No. 2D12811
DRG.No. 128-2945A /A3
KINETROL TRADING ESTATE
FARNHAM, SURREY

KINETROL

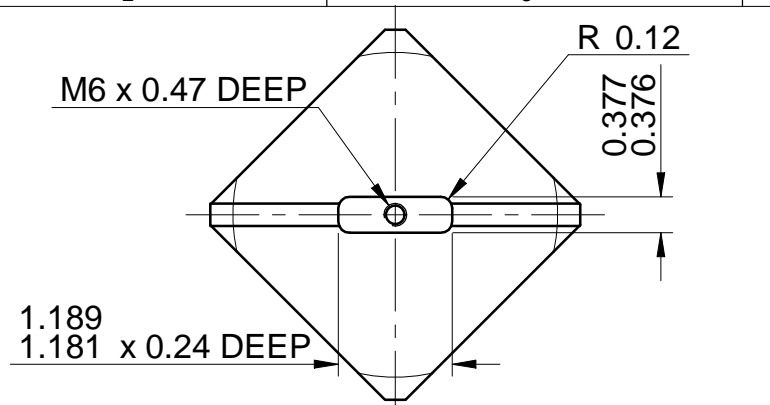
DRG. No.
128-2946A/A3

DR. C.S.
DATE 18-09-19

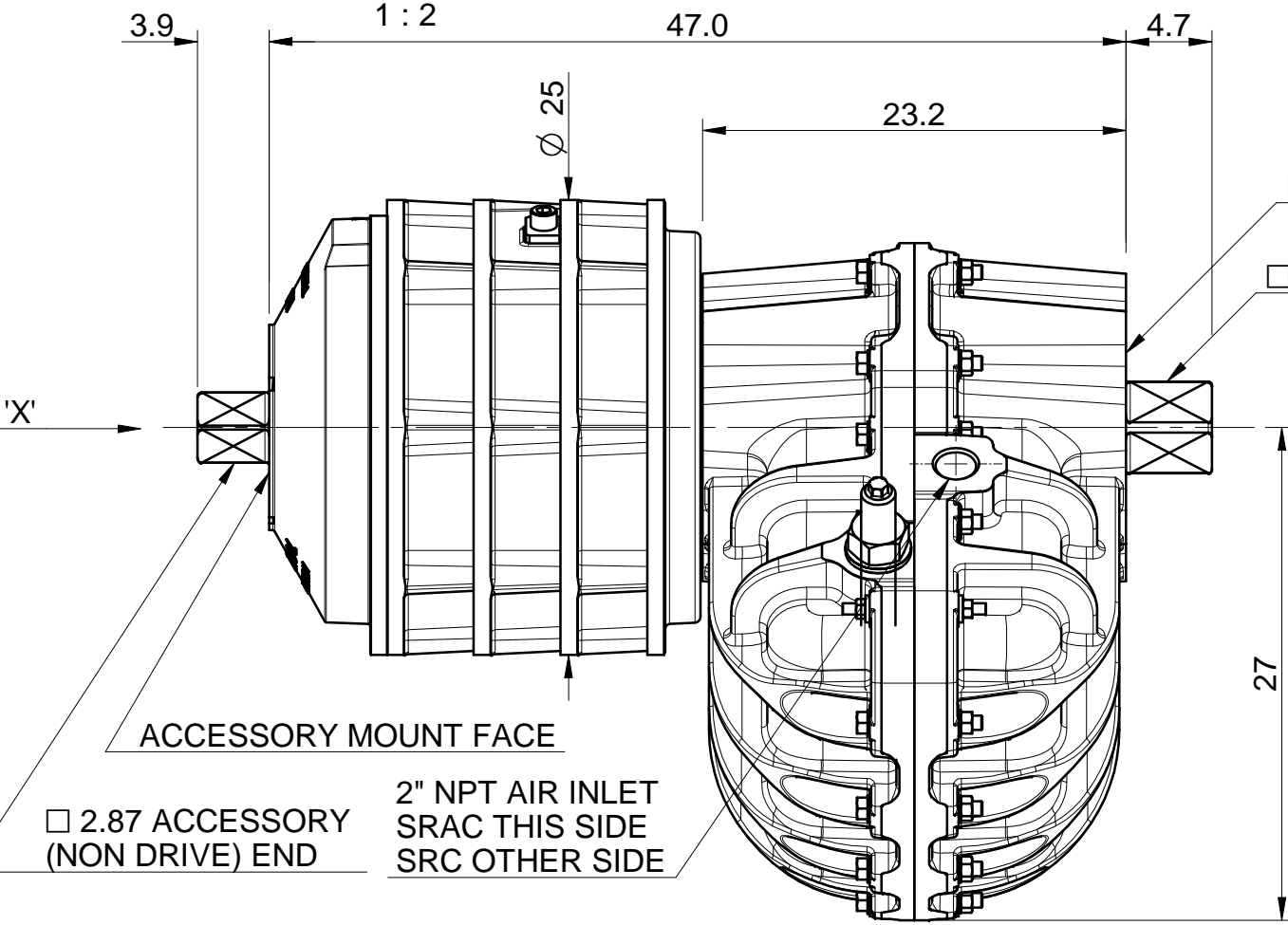
CH.

APP.

ALTERATIONS



VANE SLOT DETAILS ACCESSORY END



□ 2.87 ACCESSORY (NON DRIVE) END

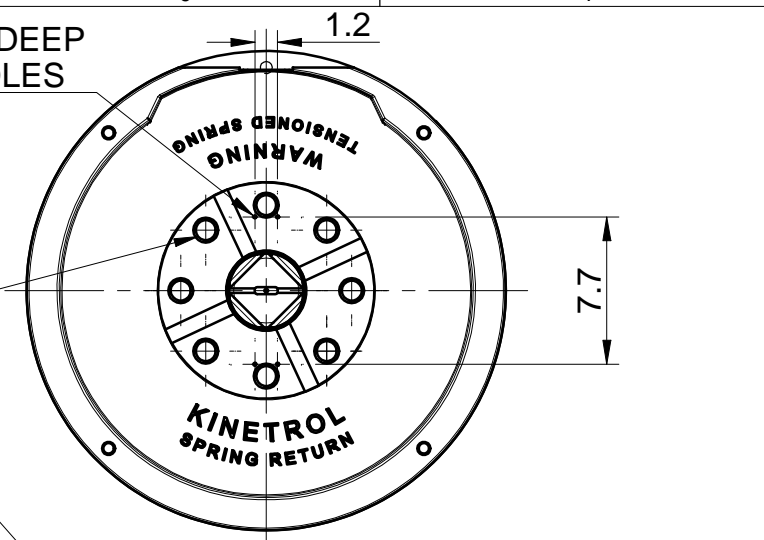
2" NPT AIR INLET SRAC THIS SIDE SRC OTHER SIDE

4 OFF 10-24 UNC x 0.31" DEEP ACCESSORY MOUNT HOLES

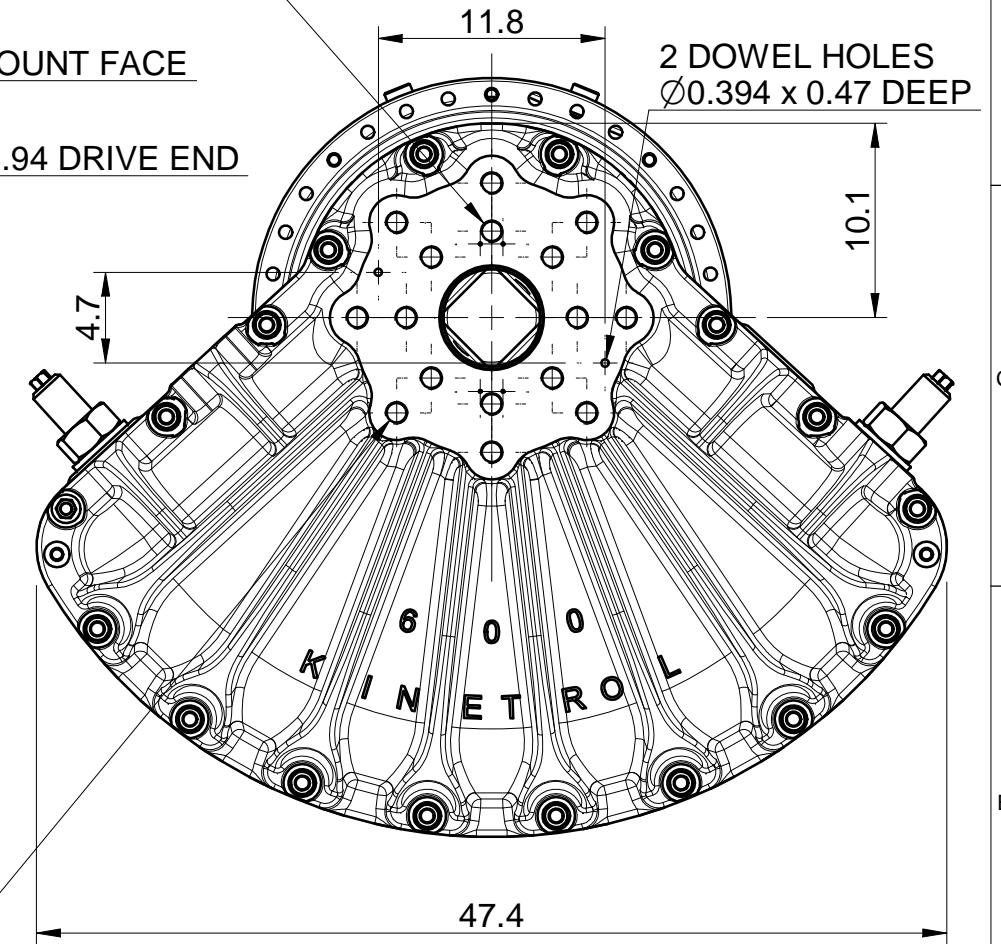
8 MOUNT HOLES 1.1/8-7 UNC x 2.36 DEEP EQUI-SPACED ON 8.91 PCD (FOR FITTING OF SUPPORT PLATE IF ACTUATOR INSTALLED HORIZONATALLY. MUST NOT BE MOUNTED TO DRIVEN LOAD)

8 MOUNT HOLES 1.1/8-7 UNC x 2.36 DEEP EQUI-SPACED ON 8.91 PCD MUST NOT BE MOUNTED TO DRIVEN LOAD)

8 MOUNT HOLES 1.1/8-7 UNC x 2.36 DEEP EQUI-SPACED ON 14.02 PCD (FOR MOUNTING TO DRIVEN LOAD)



VIEW IN DIRECTION OF ARROW 'X'



THIRD ANGLE PROJECTION
IF IN DOUBT - ASK DO NOT SCALE

ISSUE			
A			

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	<p>DIMS. IN INCHES</p>			<p>FINISH</p>
	<p>KINETROL</p>			<p>TRADING ESTATE FARNHAM, SURREY</p>