

TITAN SEMI ROTARY ACTUATORS

DESIGN

Titan semi rotary actuators are designed for long life , suitable for heavy duty applications and available in a wide range of torque outputs.

The range comprises both single and double rack versions, the racks being hydraulic driven against a pinion to provide a rotary output.

PERFORMANCE

Titan actuators are designed for maximum mechanical efficiency, the quoted torque figures are 100% and take into account losses within the actuator.

The actuators will provide a constant torque output regardless of angular position, torque can be adjusted by regulating the hydraulic system pressure, speed of operation can be controlled by regulating the system flow rate.

POSITIONING

Titan actuators are available with standard rotations of 90°, 180°, 270° and 360°, standard variable end stops allow fine setting of each end of rotation position.

Standard position controls will allow a total of 20° angular adjustment i.e. 10° per end.

Mid rotation point is at 12 o'clock and is indicated by the position of the key way or identified by an arrow on non keyed shafts.

CUSHIONING

Cushioning is used to decelerate rotation at the end of stroke and is effective over the last 10 to 15 degrees of rotation ,use of end stops will reduce the available cushioning length proportionally.

OUTPUT SHAFTS

Output shafts can be single or double sided, and can be supplied as plain keyed or splined, all models can be supplied with keyed hollow shafts. For heavy duty applications, actuators can be supplied with a double shaft key.

MATERIALS

Titan actuators are manufactured in alloy steel for industrial applications, marinised and stainless steel versions are available for the offshore, food and subsea industries.

SEALS

Actuators are fitted with nitrile seals as standard for use with mineral oil up to 80°C.

Alternative seals can be supplied for higher temperatures, or to suit other types of hydraulic fluid.

PORT POSITIONS

As standard, port positions are shown as on the data sheet, if required they can be positioned at 90° or 180° to standard.

DOUBLE RACK VERSIONS

All TITAN actuators are available in a double rack configuration to provide twice the torque output shown for single rack models. This configuration ensures that the pinion bearings are balanced by the racks during operation.

VALVE ACTUATORS

These variants can be supplied as spring returned or spring centred with visual or electrical valve position indicators and manual overrides.

PAINT FINISHES

Actuators are supplied finished in enamel paint, they can be supplied in primer only or to marine specification as required.

POSITIONAL CONTROL

Positional control can be supplied by end of stroke limit switches, proximity switches or rotary potentiometer for full range resolution.

SPECIAL UNITS

All actuators can be modified for special requirements, units are available to directly interchange with existing equipment and custom designed models can be supplied if required.

ORDERING CODE

EXAMPLE	RA 63	90	S	2	20
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MODEL TYPE

TOTAL ROTATION REQUIRED

SINGLE RACK

S

DOUBLE RACK

D

SHAFT TYPE

HOLLOW KEYED SHAFT

1

SINGLE END KEYED SHAFT

2

DOUBLE END KEYED SHAFT

3

SINGLE END SPLINED SHAFT

4

DOUBLE END SPLINED SHAFT

5

SPECIAL SHAFT

6

OPTIONS

CUSHIONING

20

MARINISED FINISH

21

STAINLESS STEEL

22

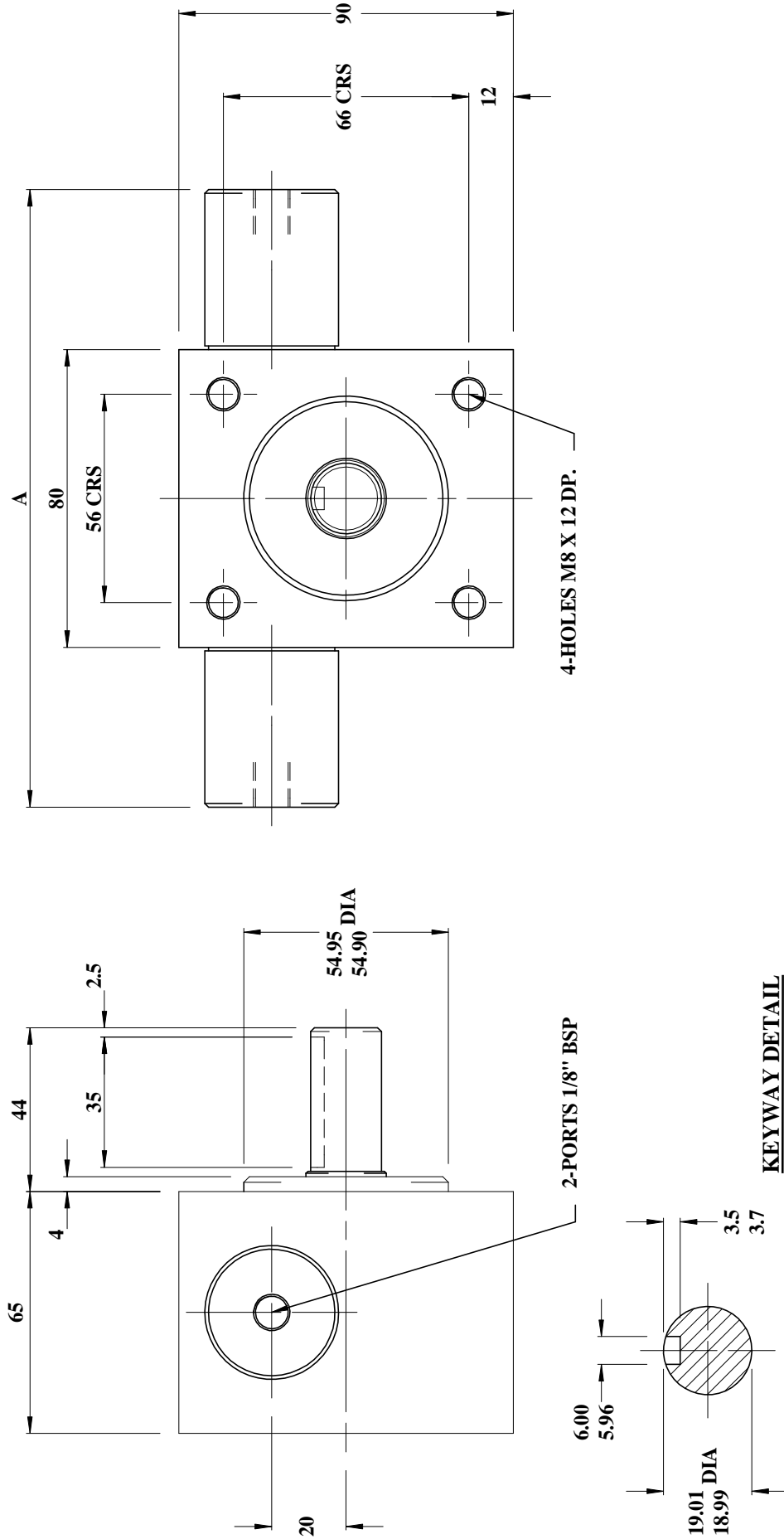
VITON SEALS

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POSITIONAL CONTROL

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TITAN SERIES RA SEMI ROTARY ACTUATORS



ANGULAR POSn.	DISPLACEMENT (CC)
90°	11
180°	22
270°	33
360°	44

WORKING PRESSURE (BAR)	OUTPUT TORQUE (NM)
70	38
140	75
210	113

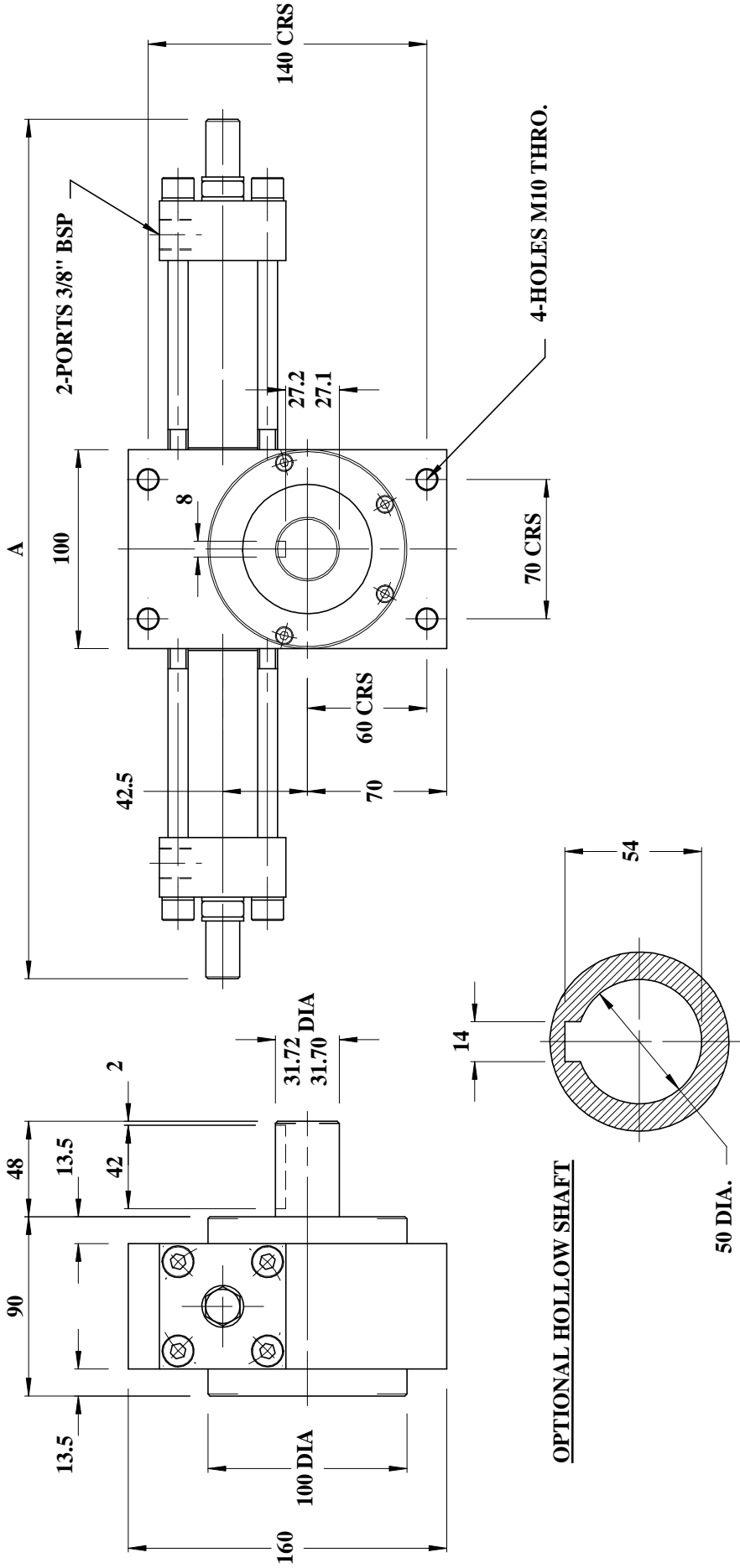
A	
90°	166
180°	198
270°	210
360°	232

MAXIMUM WORKING PRESSURE : 210 BAR

SEMI ROTARY ACTUATOR : RA25 - S



TITAN SERIES RA SEMI ROTARY ACTUATORS



ANGULAR POSn.	DISPLACEMENT (CC)
90°	75
180°	150
270°	225
360°	300

WORKING PRESSURE (BAR)	OUTPUT TORQUE (NM)
70	277
140	554
210	831

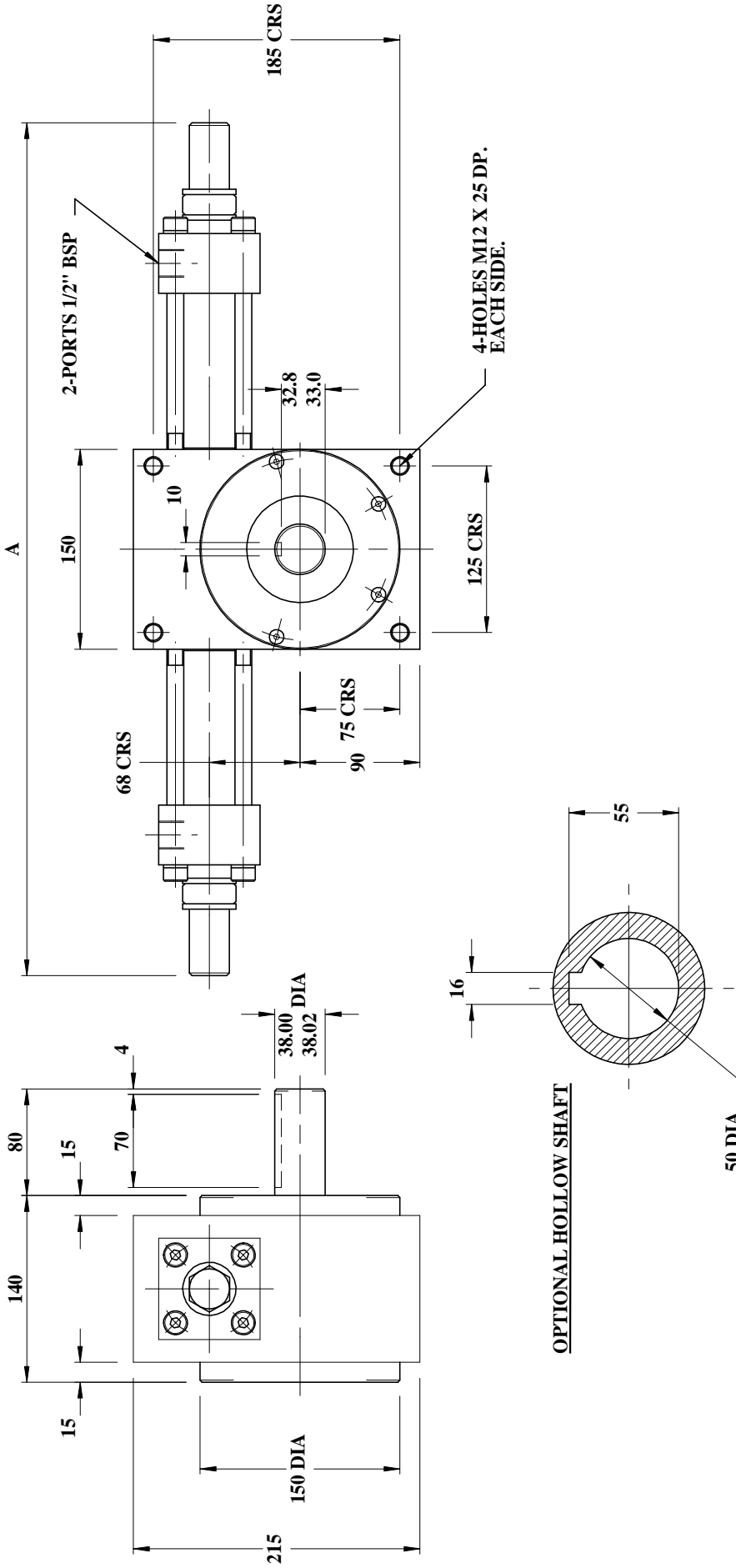
A	
90°	420
180°	540
270°	680
360°	800

MAXIMUM WORKING PRESSURE : 210 BAR

SEMI ROTARY ACTUATOR : RA40 - S



TITAN SERIES RA SEMI ROTARY ACTUATORS



A	
90°	180°
270°	360°
640	845
990	1250

WORKING PRESSURE (BAR)	OUTPUT TORQUE (NM)
70	641
140	1282
210	1923

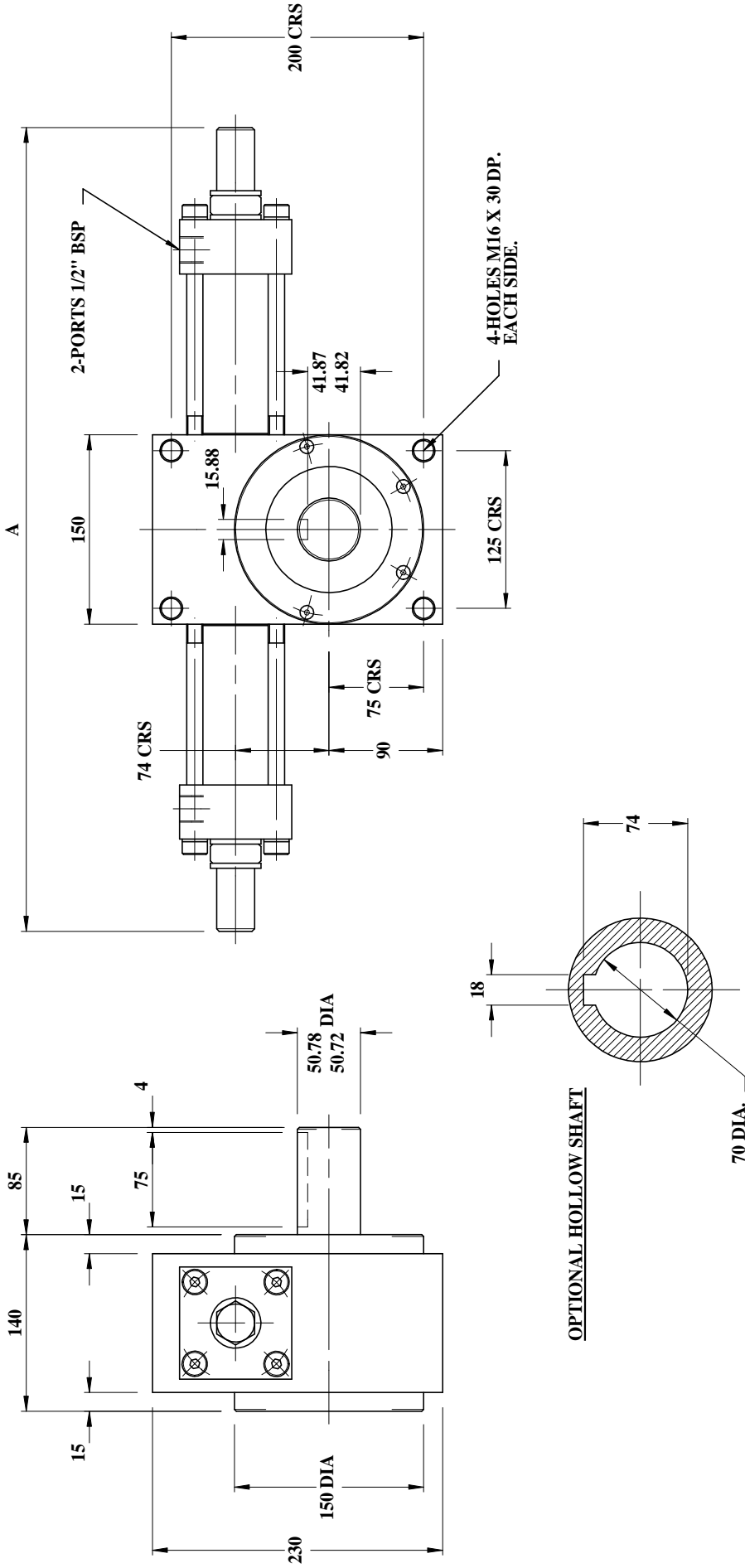
ANGULAR POSn.	DISPLACEMENT (CC)
90°	172
180°	345
270°	517
360°	690

MAXIMUM WORKING PRESSURE : 210 BAR

SEMI ROTARY ACTUATOR : RA50 - S



TITAN SERIES RA SEMI ROTARY ACTUATORS



A	
90°	180°
270°	360°
635	795
962	1138

WORKING PRESSURE (BAR)	OUTPUT TORQUE (NM)
70	1020
140	2040
210	3060

ANGULAR POSn.	DISPLACEMENT (CC)
90°	274
180°	548
270°	822
360°	1096

MAXIMUM WORKING PRESSURE : 210 BAR

SEMI ROTARY ACTUATOR : RA63 - S



