

SAM Series

Rotary Actuator

Displacement: 155, 256, 513, 827, 1253 cc/rev



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Introduction



SAM series rotary actuator is mainly designed for all kinds of aerial work platform. Customized product solutions according to customer requirements for different equipment can also be realized.



Platform control



Arm control

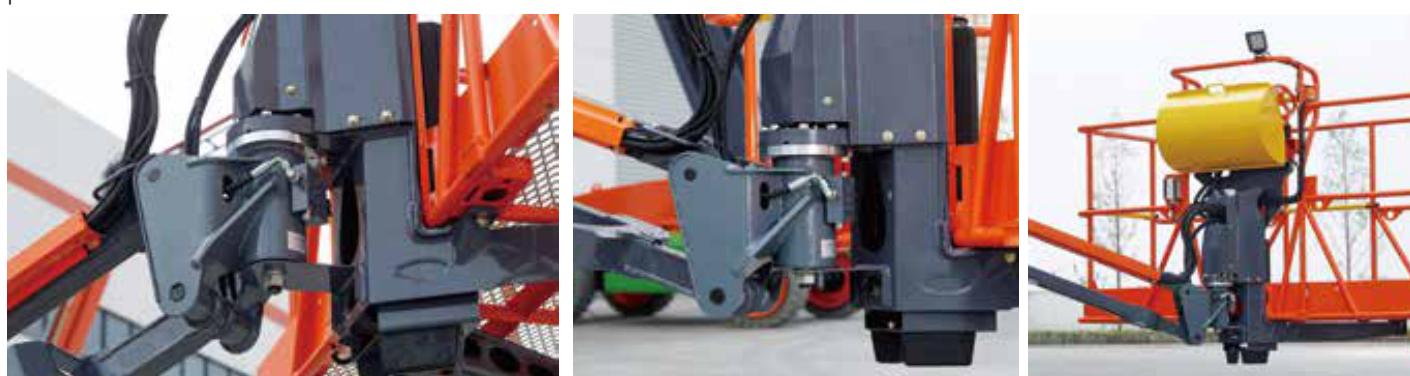


Introduction



Innovative independent design Independent intellectual property rights obtained

The SAM series rotary actuator is independently designed and developed for articulated aerial working platform for arm and platform control. According to customer installation and performance requirement, customized design can be realized accordingly to ensure suitable and flexible operation. Design based on metric unit, unique seal and structure allows a low friction coefficient and high output torque. In addition, the FEA analysis and endurance test contribute to the product stability and reliability. Compared to similar products on the market, the SAM series rotary actuator provides a 10% to 20% higher output torque and requires a 50% lower cracking pressure under same product size, allowing a stable operation with higher efficiency and better cracking pressure, which ultimately guarantees a safe, reliable and efficient working of the aerial working platform.





Features

Low friction coefficient

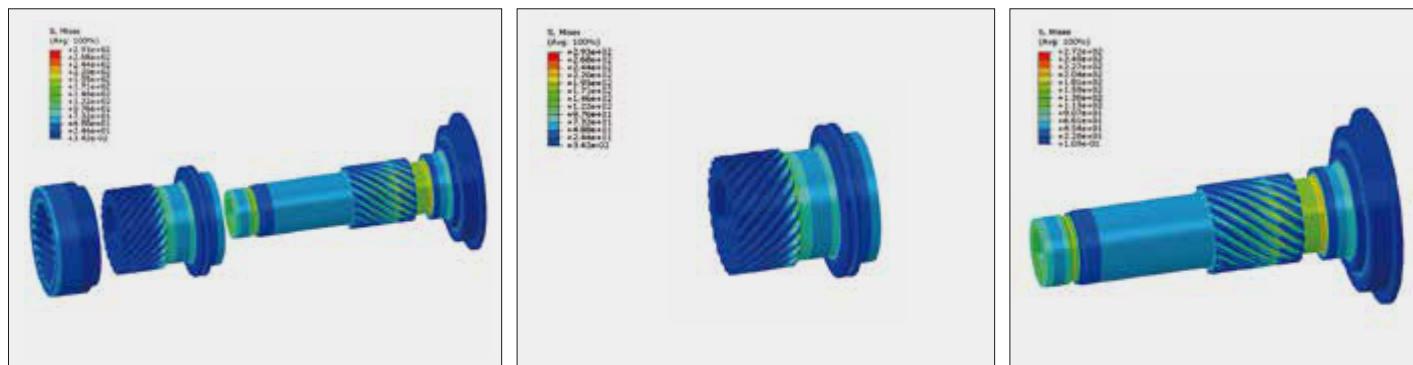
The key component of the SAM series rotary actuator - the spiral spline for rotation and torque transmission, features in excellent precision, balanced stress distribution and stable transmission. Together with the low-friction axial bearings and a unique sealing system design, the SAM series rotary actuator has a low friction coefficient during transmission process.

High output torque

Through continuous innovative research and validations, the SAM series rotary actuator is designed in compact structure to make full use of the limit internal space and transmit high output torque via fluid pressure. Compared to similar products on the market, the SAM series rotary actuator provides a 10% to 20% higher output torque under same product size.

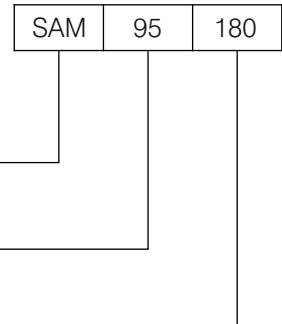
Long service life

In THM, comprehensive analysis and calculation on each size of the SAM rotary actuator are implemented in assist of FEA software during design process. Besides, product optimization is continuously carried out to ensure that each size of the product can meet the long service life requirements. Except for normal factory test, two dedicated rotary actuator endurance test benches are available for tests according to customer and application requirements, ensuring excellent durability and long service life.





Ordering code



Series code

Size

Rotation

Note:

the ordering code above refers only the basic specification and rotary angle. Valve, bushings and other accessories can be customized according to corresponding requirements

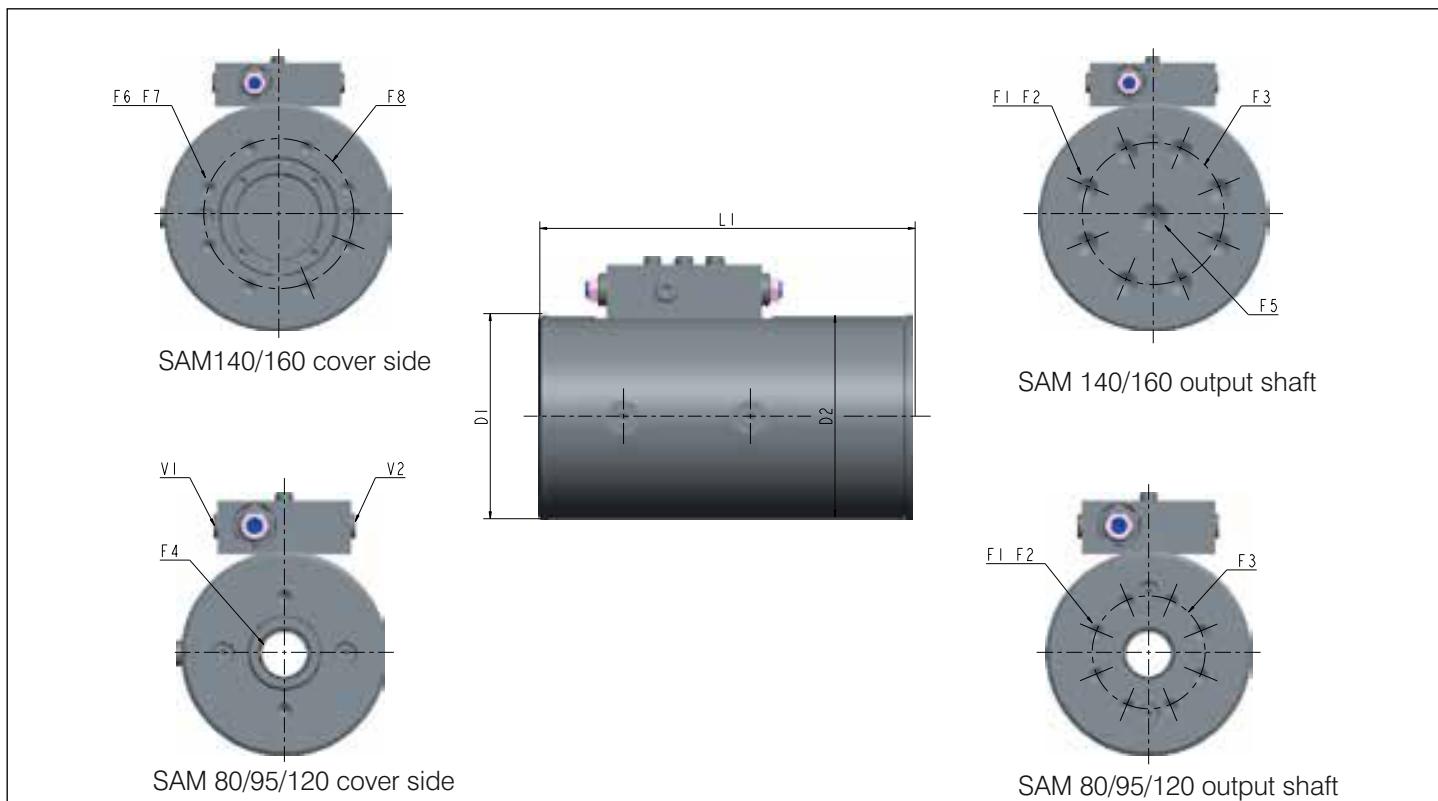
Specifications

Size	80	95	120	140	160
Maximum output torque (Nm)	626	1034	2074	3337	5063
Maximum moment capacity straddle mounting (Nm)	2540	4520	10170	22600	31640
Maximum moment capacity cantilever mounting (Nm)	1360	2490	5420	11300	15820
Radial force (kg)	1380	2130	4190	5580	9520
Axial force (kg)	500	680	1000	1400	1770
Rotation (°)	180	180	180	180	180
Displacement (cc/rev)	155	256	513	827	1253



Unit Dimensions

(Dimensions in mm)

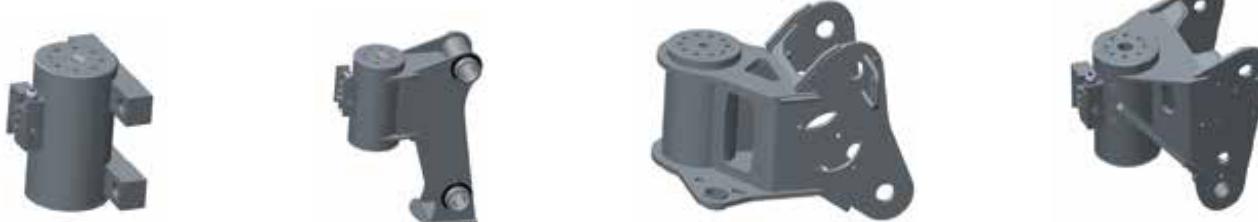


Size	80	95	120	140	160
D1(Cover diameter)	103	118	144	168	192
D2(Barrel diameter)	101	116	142	166	190
L1(Rotary actuator total length)	188	216	248	298	337
F1(Output shaft thread)	M10 depth 15	M10 depth 15	M12 depth 18	M20 depth 28	M20 depth 28
F2(Output shaft thread)	6	8	8	8	10
F2(Output shaft thread pitch diameter)	54	65	85	102	121
F4(Output shaft through hole)	21	25	25	/	/
F5(Output shaft screw hole)	/	/	/	M24 depth 25	M30 depth 50
F6(Cover side screw size)	/	/	/	M12 depth 18	M16 depth 24
F7(Cover side screw quantity)	/	/	/	8	10
F8(Cover side thread pitch diameter)	/	/	/	108	121



Customization Service

According to customer and application requirements, the SAM series rotary actuators can be customized with special material and optimized structure to deal with various even harsh operating conditions. Meanwhile according to the installation positions, tripod and horseshoe mounting frames in different forms can also be customized.



Product Testing

Two dedicated endurance test benches are available in THM for various life time test requirements from customer side. During THM internal rotary actuator endurance test according to the THM standard "Q/HL 1011316-2020", the SAM series rotary actuator fully meets all the requirements, no obvious failure or wear is found during appearance inspection and disassembly test after 60,000 times of durability test.





The specified data is for product description purposes only and may not be deemed to be guaranteed unless expressly confirmed in the contract.

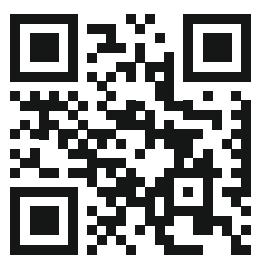


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