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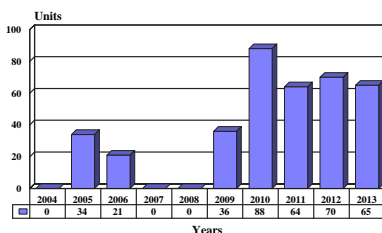
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ASP-30[®] 30 mm Cannon - Archived 7/2004

Outlook

- Marketing is ongoing, albeit without any sales to date
- Serial production will likely commence by the mid-term of the forecast period
- Licensed production in the United Kingdom is also likely
- Production forecast (at right) reflects production from all sources

10 Year Unit Production Forecast
2004 - 2013



Orientation

Description. A lightweight, multi-purpose 30mm cannon.

Sponsor. Alliant Techsystems (ATK) is developing the ASP-30[®] as a private venture. ASP-30 is a registered trademark.

Status. In development; available for production orders.

Total Produced. Through 2003, ATK has produced a total of 23 prototype and development ASP-30 cannon.

Application. A multi-purpose combat support weapon system, designed to replace the 12.7x99mm (.50 caliber) M2HB heavy machine gun and the 40mm Mark 19 automatic grenade launcher on ground tactical vehicles.

Price Range. In 2003 U.S. dollars, the ASP-30 carries a projected unit price of \$31,200.

Contractors

Alliant Techsystems (ATK) Precision Systems Group, 5050 Lincoln Drive, Edina, MN 55436 United States, Tel: 1 (952) 351-2911, Fax: 1 (952) 351-3009, Prime

RO Defence (Royal Ordnance) plc, Nottingham, United Kingdom, Licensee

Technical Data

Crew. Per platform application.

Muzzle Brake. Multi-port.

Recoil System. Hydro-mechanical

Breech Mechanism. Rotating bolt.

Method of Operation. Gas, straight expansion.

Ammunition. The ASP-30 fires NATO-standard 30x113mm ADEN/DEFA ammunition, in all types.

Dimensions. The following data reflect the latest prototype ASP-30 ordnance.

	<u>SI units</u>	<u>US units</u>
Caliber:	30 millimeters	1.18 inches
Length:	2.03 meters	6.65 feet
Width:	20.32 centimeters	8.0 inches

Height:	24.13 centimeters	9.5 inches
Weight:	52.21 kilograms	115 pounds

Performance. The effective range data reflects firing the M789 High Explosive Dual Purpose (HEDP) round. The ASP-30 can also be fire semi-automatically.

	<u>SI units</u>	<u>US units</u>
Rate of fire:	400-450 rounds per minute	400-450 rounds per minute
Effective range:	2,000 meters	2,187.2 yards

Variants/Upgrades

Variants. None. The ordnance may exhibit minor structural changes to accommodate a specific platform application.

Modernization and Retrofit. Not applicable at this time.

Program Review

Background. The former Hughes Helicopters began developing a new advanced attack helicopter in the early 1970s. Concurrent with this development was a company-funded program to develop a new cannon system of revolutionary design for the helicopter. Light weight, ruggedness, simplicity, and reliability were stressed in the design. This program was started in December 1972 and was accelerated through the mid-1970s. In December 1976, Hughes' AH-64 was selected as the United States Army's next attack helicopter. At the same time, the then-designated XM230 Chain Gun® was also selected to be the cannon armament on the new aircraft. Since the early 1970s, additional weapons operating on the unique Chain Gun® principle have been developed. In 1984, Hughes Helicopters was purchased by McDonnell Douglas. The new firm built on the phenomenal success and reputation gained from the development of the original Chain Gun®, which had been developed into a number of highly versatile variants. In mid-1997, the McDonnell Douglas Helicopter firm was purchased by the Boeing Company, and in March 2002, it was announced that Alliant Techsystems had acquired the Mesa operation of Boeing. The Mesa operation has been integrated into Alliant's Precision Systems Group. The firm is considered the largest producer of automatic cannon in the world.

This development effort began in 1984. The new cannon, designated the Automatic Self-Powered 30 millimeter Cannon but now universally referred as the ASP-30, was publicly unveiled at the Association of the United States Army convention in October 1984.

Description. The ASP-30 is an extremely versatile weapon. Operating on the straight expansion gas system with a rotating bolt, the ASP-30 can be fired single-shot in a semi-automatic mode or in the automatic mode at 400 to 450 rounds per minute. While designed to replace the 12.7 millimeter M2HB on light vehicles, the ubiquitous M113 is an obvious candidate for upgunning almost any light armored vehicle. The weapon can be mounted on any standard pintle mount that will accept the M2HB with some minor modifications. It can also be mounted on the standard Mark 3 tripod or the Mark 16 Mod 2 naval deck mount. Firing the M789 High Explosive Dual Purpose ammunition, the ASP-30 can effectively deal with BMP threat-level targets out to 2,000 meters (2,187.2 yards). In addition, the ASP-30 can fire the popular ADEN/DEFA pattern 30 millimeter ammunition, greatly easing the ammunition logistics and further enhancing the versatility of the weapon. The lightweight, low-cost ASP-30 is easy to operate and maintain in the field. The weapon can be field stripped into five subassemblies in two minutes.

One of the initiatives of the new powerhouse in the field of medium-caliber cannon was the development of a new, lightweight yet powerful weapon suitable for mounting on very light vehicles.

Several sights have been integrated with the ASP-30 weapon. Among these are the Multi-Purpose Universal Gunner's Sight from Electro-Optic Systems of Australia. This sight incorporates an intensified charge-coupled device, a laser rangefinder, a Global Positioning System component, and an internal ballistic computer to aid in the fire control solution. Another sight is the Kern Red Spot reflex sight, offered by Wild Leitz of the United Kingdom. This device uses the so-

Due to the M230's electrical requirements, it was not considered feasible to mount it. Therefore, the engineers at McDonnell Douglas Helicopters decided to design a new weapon chambered for the same 30 millimeter ammunition that is used in the M230 on the AH-64.

called red dot technology which superimposes a red dot on the target in order to improve accuracy.

Platforms. Among the armored vehicle platforms that have been integrated with the ASP-30 are the M109, M113, M151, M992, M998, AAV7, and a variety of light strike vehicles. There is potential to fit this cannon in coaxial mounts on tanks and other heavy armored

vehicles. The ASP-30 cannon also has significant potential in cupola mounts on armored vehicles. Furthermore, the weapon can be mounted on an M3 tripod for infantry use. Finally, the ASP-30 cannon has been integrated with several naval platforms.

Funding

Funding for the development of the ASP-30 is being provided by the prime contractor.

Recent Contracts

None

Timetable

<u>Month</u>	<u>Year</u>	<u>Major Development</u>
April	1984	McDonnell Douglas Helicopters begins the private development of ASP-30
October	1984	ASP-30 publicly unveiled
April	1989	License agreement with RO Defence (Royal Ordnance) concluded
Mid	2003	Development and integration ongoing; marketing continues

Worldwide Distribution

Export Potential. The ASP-30 has long had significant potential on the export market. This weapon's versatility and attractive unit price are its prime marketing assets. It appears that the ASP-30 is the answer to how to deal with BMP and similar class vehicles. The ASP-30 can accept the same ammunition as the M230 as well as the popular ADEN/DEFA ammunition, a significant and attractive cost advantage. While no export sales have yet been made, the evidence indicates that they should be forthcoming.

License Agreement. In April 1989, (then) McDonnell Douglas Helicopter Company and (then) Royal Ordnance reached an agreement for the joint marketing and manufacture of the ASP-30. In addition to the previously mentioned applications, Royal Ordnance (now RO Defence) is promoting the ASP-30 mounted on the Universal Gun Mount, a product of North American Dynamics.

Countries. Prototypes only in the United States and United Kingdom.

Forecast Rationale

The undeniably effective ASP-30 has yet to make its first sale. But we wish to note that this is not really out of the norm for a new weapon, especially one that represents such a change in caliber for the targeted platforms. Basically, it boils down to the fact that the ASP-30 must first be embraced by at least one buyer before it is purchased by others.

In addition to having an attractive unit price, the ASP-30 is a very light weapon for its punch, allowing it to be mounted on almost any light armored vehicle even down to Land Rover and similar class vehicles. In the current armored vehicle marketplace, which has a high and growing interest in lighter vehicles, the ASP-30

could find a future with any number of new vehicles or in a variety of modernization and retrofit programs, particularly in a program applicable to the ubiquitous M113.

However, because the weapon has yet to find a customer, we must again slip the start date for serial production of the ASP-30. The forecast delivery of the new weapon is being moved to 2004 in our **Ten-Year Outlook** chart. The first sale could well be on the export market since RO Defence, the licensee, continues to heavily promote the weapon internationally.

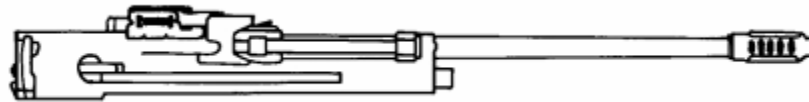
Until serial production of this weapon begins, we will list all the forecast production on a single line.

Ten-Year Outlook

ESTIMATED CALENDAR YEAR PRODUCTION

Ordnance	(Engine)	thru 03	High Confidence Level				Good Confidence Level				Speculative			Total 04-13
			04	05	06	07	08	09	10	11	12	13		
ALLIANT TECHSYSTEMS														
ASP-30 ^(a)	NO ENGINE	23	0	34	21	0	0	36	88	64	70	65	378	
Total Production		23	0	34	21	0	0	36	88	64	70	65	378	

(a) Production through 2003 reflects the initial developmental prototypes, and includes several pieces transferred to RO Defence.



ASP-30

Source: Forecast International