

ARCHIVED REPORT

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Military Sidearms (Europe)

Outlook

- Consumer loyalty tends to trump innovation and aggressive marketing, favoring established European players in this market
- Survival in an expanding market continues to force corporate consolidation among European players
- We expect production of military-pattern pistols and revolvers from all European sources to average 138,000 weapons annually

Orientation

Description. Pistols (semi-automatic and automatic) and service revolvers for military use.

Sponsor. European contractors and government arsenals develop, produce, and market various pistol and revolver designs.

Licensees. Several international contractors produce European designs, with or without license.

Status. Development through serial production.

Total Produced. Through 2023, we estimate European contractors produced at least 9.2 million

military-pattern pistols and revolvers since 1980 inclusive.

Application. Sidearms provide close-range self-defense for personnel who normally do not carry a shoulder weapon (rifle, carbine, submachine gun, or shotgun). Sidearms also serve as secondary weapons, supplementing the primary shoulder weapons.

Price Range. In 2024 U.S. dollars, European military-pattern sidearms carry unit prices ranging from \$64 to \$1,392, depending on the sales terms.

Contractors

Prime

Beretta Holding SA	http://www.berettaholding.com , 9 rue Sainte Zithe, Luxembourg, Luxembourg, Tel: + 352 030 8341 1, Fax: + 352 030 8341 399, Prime
Carl Walther GmbH	http://www.waltherarms.com , Im Lehrer Feld 1, Ulm, Germany, Tel: + 49 07 31 15 39 0, Fax: + 49 07 31 15 39 109, Email: sales@carl-walther.de , Prime
Ceska Zbrojovka AS	http://www.czub.cz , Svatopluka Cecha 1283, Uhersky Brod, Czech Republic, Tel: + 420 572 65 11 11, Fax: + 420 572 63 36 65, Email: info@czub.cz , Prime
FN Herstal SA	http://www.fnherstal.com , Voie de Liège 33, Herstal, Belgium, Tel: + 32 4 240 81 11, Fax: + 32 4 240 88 99, Email: info@fnherstal.com , Prime
Fabryka Broni "Lucznik" - Radom Sp.z.o.o	ul Grobickiego 23, Radom, Poland, Tel: + 48 48 38 99 100, Fax: + 48 48 38 99 334, Email: zarzad@fabrykabroni.pl , Prime

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Federal State Unitary Enterprise, Rosoboronexport, Rosoboronexport State Corp	http://www.roe.ru , 27/3 Stromynka St, Moscow, Russian Federation, Tel: + 7 495 534 6183, Fax: + 7 495 534 6153, Prime
Glock GesmbH	http://eu.glock.com , Gaston Glock Platz 1, Deutsch-Wagram, Austria, Tel: + 43 2247 90300 0, Fax: + 43 2247 90300 300, Prime
Heckler & Koch GmbH	http://www.heckler-koch.com , Heckler & Koch Strasse 1, Oberndorf a. Neckar, Germany, Tel: + 49 74 23 79 0, Fax: + 49 74 23 79 23 50, Email: hkinfoboard@heckler-koch.de , Prime
SIG Sauer GmbH & Co KG	http://www.sigsauer.de , Sauerstrasse 2-6, Eckernfoerde, Germany, Tel: + 49 043 51 471 0, Fax: + 49 043 51 471 160, Email: info@sigsauer.de , Prime

Contractors are invited to submit updated information to Editor, International Contractors, Forecast International, 75 Glen Road, Suite 302, Sandy Hook, CT 06482, USA; rich.pettibone@forecast1.com

Technical Data

Note: In the following table, *ACP* denotes Automatic Colt Pistol cartridges.

<u>Caliber</u>	<u>Designation</u>	<u>Type (Action/Fire Modes)</u>
<u>Manufacturer – Carl Walther GmbH</u>		
5.66x15.11mm (.22 Long Rifle)	TPH	Double action, semi-auto
6.37x15.62mm (.25 ACP)	TPH	Double action, semi-auto
7.65x17mm Browning (.32 ACP)	PP	Double action, semi-auto
7.65x17mm Browning (.32 ACP)	PPK	Double action, semi-auto
7.65x17mm Browning (.32 ACP)	P5	Double action, semi-auto
9x19mm Parabellum	P38/P1	Double action, semi-auto
9x19mm Parabellum	P1A1	Double action, semi-auto
9x19mm Parabellum	P5	Double action, semi-auto
9x19mm Parabellum	P5 Compact	Double action, semi-auto
9x19mm Parabellum	P88 Compact	Double action, semi-auto
9x19mm Parabellum	P99	Double action, semi-auto
9x21mm IMI	P5	Double action, semi-auto
9x21mm IMI	P88	Double action, semi-auto
9x21mm IMI	P99	Double action, semi-auto
9x17mm Short (.380 ACP)	PP	Double action, semi-auto
9x17mm Short (.380 ACP)	PPK	Double action, semi-auto
10.11x21.6mm (.40 S&W)	P99	Double action, semi-auto
<u>Manufacturer – Ceska Zbrojovka AS</u>		
7.65x17mm Browning (.32 ACP)	Model 83	Double action, semi-auto
7.65x17mm Browning (.32 ACP)	Model 92	Double action, semi-auto
9x19mm Parabellum	Model 75	Double action, semi-auto
9x19mm Parabellum	Model 75 Compact	Double action, semi-auto
9x19mm Parabellum	Model 75 Auto	Selective fire
9x19mm Parabellum	Model 83	Double action, semi-auto
9x19mm Parabellum	Model 85	Double action, semi-auto
9x19mm Parabellum	Model 85 Auto	Selective fire
9x19mm Parabellum	Model 100	Double action, semi-auto
9x19mm Parabellum	Model 101	Double action, semi-auto
9x21mm	Model 75	Double action, semi-auto
9x21mm	Model 75 Compact	Double action, semi-auto
9x17mm Short (.380 ACP)	Model 83	Double action, semi-auto
9x18mm Makarov	Model 83	Double action, semi-auto
10.11x21.6mm (.40 S&W)	Model 75	Double action, semi-auto
10.11x21.6mm (.40 S&W)	Model 100	Double action, semi-auto
10.11x21.6mm (.40 S&W)	Model 101	Double action, semi-auto
11.43x22.79mm (.45 ACP)	Model 97B	Single/double action, semi-auto

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<u>Caliber</u>	<u>Designation</u>	<u>Type (Action/Fire Modes)</u>
<u>Manufacturer – Fabbrica D'Armi Pietro Beretta SpA</u>		
5.66x15.11mm (.22 Long Rifle)	Model 87BB	Single action, semi-auto
5.66x15.11mm (.22 Long Rifle)	Model 87LB	Single action, semi-auto
5.66x15.11mm (.22 Long Rifle)	Model 89	Single action, semi-auto
7.65x17mm Browning (.32 ACP)	Model 82BB	Single/double action, semi-auto
7.65x17mm Browning (.32 ACP)	Model 82F	Single/double action, semi-auto
7.65x17mm Browning (.32 ACP)	Model 84BB	Single/double action, semi-auto
7.65x17mm Browning (.32 ACP)	Model 86	Double action, semi-auto
7.65x17mm Browning (.32 ACP)	Model 98F Target	Single/double action, semi-auto
7.65x21mm Parabellum (7.65mm Luger)	Model 81	Single/double action, semi-auto
7.65x21mm Parabellum (7.65mm Luger)	Model 81BB	Double action, semi-auto
7.65x21mm Parabellum (7.65mm Luger)	Model 98	Single/double action, semi-auto
7.65x21mm Parabellum (7.65mm Luger)	Model 98F	Single/double action, semi-auto
7.65x21mm Parabellum (7.65mm Luger)	Model 99	Single/double action, semi-auto
9x19mm Parabellum	Model 93R	Selective fire
9x19mm Parabellum	Centurion	Double action, semi-auto
9x19mm Parabellum	Model 92	Single/double action, semi-auto
9x19mm Parabellum	Model 92S	Single/double action, semi-auto
9x19mm Parabellum	Model 92SB	Single/double action, semi-auto
9x19mm Parabellum	Model 92SB-C	Single/double action, semi-auto
9x19mm Parabellum	Type M	Single/double action, semi-auto
9x19mm Parabellum	Model 8000 Cougar	Single/double action, semi-auto
9x19mm Parabellum	Model 8040 Cougar	Single/double action, semi-auto
9x19mm Parabellum	Model 92F	Single/double action, semi-auto
9x19mm Parabellum	Model 92D	Double action, semi-auto
9x19mm Parabellum	Model 92DS	Double action, semi-auto
9x19mm Parabellum	Model 92FS	Single/double action, semi-auto
9x19mm Parabellum	Model 92F Compact	Single/double action, semi-auto
9x19mm Parabellum	Model 92G	Single/double action, semi-auto
9x19mm Parabellum	Model 951R	Selective fire
9mm IMI	Model 8000 Cougar	Single/double action, semi-auto
9mm IMI	Model 98	Single/double action, semi-auto
9x17mm Short (.380 ACP)	Model 83FS	Single/double action, semi-auto
9x17mm Short (.380 ACP)	Model 84BB	Double action, semi-auto
9x17mm Short (.380 ACP)	Model 84 FS Cheetah	Double action, semi-auto
9x17mm Short (.380 ACP)	Model 85BB	Single/double action, semi-auto
9x17mm Short (.380 ACP)	Model 85FS	Single/double action, semi-auto
9x17mm Short (.380 ACP)	Model 86	Double action, semi-auto
10.11x21.6mm (.40 S&W)	Model 96	Single/double action, semi-auto
10.11x21.6mm (.40 S&W)	Model 8040 Cougar	Single/double action, semi-auto
10.41x22mm (.41 Action Express)	Model 8040 Cougar	Single/double action, semi-auto
11.43x22.79mm (.45 ACP)	Model 8045 Cougar	Single/double action, semi-auto
<u>Manufacturer – Fabryka Broni "Lucznik" – Radom Sp.z.o.o</u>		
9x17mm Short (.380 ACP)	P-64	Single/double action, semi-auto
9x17mm Short (.380 ACP)	VANAD P-83	Single/double action, semi-auto
9x18mm Makarov	P-64	Single/double action, semi-auto
9x18mm Makarov	VANAD P-83	Single/double action, semi-auto
9x18mm Makarov	P-93	Single/double action, semi-auto
9x19mm Parabellum	MAG-95	Double action, semi-auto
9x19mm Parabellum	MAG-98	Double action, semi-auto
9x19mm Parabellum	MAG-98c	Double action, semi-auto
<u>Manufacturer – FN Herstal SA</u>		
5.7x28mm FN P90	FN Five-seveN®	Double action, semi-auto
7.65x17mm Browning (.32 ACP)	Model 140	Double action, semi-auto
7.65x17mm Browning (.32 ACP)	BDA 380	Double action, semi-auto
9x19mm Parabellum	High-Power	Single action, semi-auto
9x19mm Parabellum	High-Power Mk 2	Single action, semi-auto
9x19mm Parabellum	High-Power Mk 3	Single action, semi-auto
9x19mm Parabellum	BDA 9	Double action, semi-auto
9x19mm Parabellum	BDAO	Double action, semi-auto

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<u>Caliber</u>	<u>Designation</u>	<u>Type (Action/Fire Modes)</u>
10.11x21.6mm (.40 S&W)	MR-445 Varyag	Double action, semi-auto
10.11x21.6mm (.40 S&W)	MR-445S	Double action, semi-auto
<u>Manufacturer – SIG Sauer GmbH</u>		
5.66x15.11mm (.22 Long Rifle)	P210	Double action, semi-auto
7.65x21mm Parabellum (7.65mm Luger)	P210	Double action, semi-auto
7.65x21mm Parabellum (7.65mm Luger)	P220	Single/double action, semi-auto
7.65x21mm Parabellum (7.65mm Luger)	P232	Single/double action, semi-auto
9x19mm Parabellum	P210	Single action, semi-auto
9x19mm Parabellum	P220	Single/double action, semi-auto
9x19mm Parabellum	P225	Single/double action, semi-auto
9x19mm Parabellum	P226	Single/double action, semi-auto
9x19mm Parabellum	P228	Single/double action, semi-auto
9x19mm Parabellum	P229	Single/double action, semi-auto
9x19mm Parabellum	P239	Single/double action, semi-auto
9x19mm Parabellum	Pro 2009	Single/double action, semi-auto
9x17mm Short (.380 ACP)	P230	Single/double action, semi-auto
9x17mm Short (.380 ACP)	P232	Single/double action, semi-auto
9.07x21.84mm (.357 SIG)	Pro 2340	Single/double action, semi-auto
9.07x21.84mm (.357 SIG)	P226	Single/double action, semi-auto
9.07x21.84mm (.357 SIG)	P229	Single/double action, semi-auto
9.07x21.84mm (.357 SIG)	P239	Single/double action, semi-auto
9.09x22.86mm (.38 Super Auto)	P220-1	Single/double action, semi-auto
9.09x22.86mm (.38 Super Auto)	P230	Single/double action, semi-auto
10.11x21.6mm (.40 S&W)	P229	Single/double action, semi-auto
10.11x21.6mm (.40 S&W)	P239	Single/double action, semi-auto
10.11x21.6mm (.40 S&W)	Pro 2340	Single/double action, semi-auto
11.43x22.79mm (.45 ACP)	P220-1	Single/double action, semi-auto
11.43x22.79mm (.45 ACP)	P245	Single/double action, semi-auto
<u>Manufacturer – KBP Instrument Design Bureau (Rosoboronexport)</u>		
5.45x18mm MPTs	PSM	Double action, semi-auto
5.45x18mm MPTs	Izh-75	Double action, semi-auto
5.45x18mm MPTs	OTs-23 Drotik	Selective fire
9x17mm Short (.380 ACP)	P-96S	Single action, semi-auto
9x17mm Short (.380 ACP)	R-92	Double action, revolver
9x17mm Short (.380 ACP)	OTs-01S Kobalt	Double action, revolver
9x18mm Makarov	Stechkin (APS)	Selective fire
9x18mm Makarov	Makarov (PM)	Double action, semi-auto
9x18mm Makarov	OTs-01 Kobalt	Double action, revolver
9x18mm Makarov	OTs-21 Malysh	Double action, semi-auto
9x18mm Makarov	OTs-27 Berdysh	Selective fire
9x18mm Makarov	OTs-33 Pernach	Selective fire
9x18mm Makarov	OTs-35	Double action, semi-auto
9x18mm Makarov	R-92	Double action, revolver
9x19mm Parabellum	OTs-27 Berdysh	Selective fire
9x19mm Parabellum	P-96	Single action, semi-auto
12.3x50mm	UDAR	Double action, revolver
12.5x40mm	OTs-20 GNOM	Double action, revolver
<u>Manufacturer – Molot Engineering Plant (Rosoboronexport)</u>		
9x19mm Parabellum	PMS-1	Single action, semi-auto
12.5x35mm	DOG-1	Double action, revolver
<u>Manufacturer – TsNIITochMash (Rosoboronexport)</u>		
4.5x39mm SPS	SPP-1	Double action, 4-barrel
4.5x39mm SPS	SPP-1M	Double action, 4-barrel
7.62x42mm SP-4	PSS	Single action, semi-auto
7.62x42mm SP-4	PSS	Double action, semi-auto
7.62x42mm SP-4	NRS-2	Pistol-knife (single-shot)
7.62x42mm SP-4	PSS	Single/double action, semi-auto
7.62x62.8mm PZAM	S4M	Derringer, 2-barrel

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Caliber

9x19mm Parabellum
9x21mm Gyurza
9x21mm Gyurza
12.3x50mm

Designation

6P35
P-9 Gyurza
SR-1 Vektor
UDAR

Type (Action/Fire Modes)

Double action, semi-auto
Single/double action, semi-auto
Single/double action, semi-auto
Double action, revolver

Variants/Upgrades

Variants. Not generally applicable. To have the greatest degree of product differentiation and the largest range of products, small arms manufacturers usually give modified or upgraded models of their weapons different designations.

Modernization and Retrofit Overview. Not generally applicable. Contractors usually integrate upgrades as production cut-ins.

Program Review

Background. Given its limited effective range, the military sidearm (like its civilian counterpart) is primarily a defensive weapon. European arms manufacturers offer a bewildering array of pistols and revolvers in a wide range of calibers. In this report, we limit our discussion to the more significant or noteworthy programs to provide the reader a sense of the trends in the European military sidearm market.

Austria

Glock GesmbH. The Glock firm achieved notoriety as the first firm to market a so-called plastic handgun. Despite this erroneous reputation (only the pistol frame is synthetic; the barrel, frame, and other key components are ordnance steel), Glock has earned a reputation for producing high-quality weapons. In addition to military sales, Glock has sold well over 1.4 million sidearms to police forces, internal security units, and individuals worldwide.

Glock 17 Series

The 9x19mm Parabellum Glock 17 semi-automatic pistol remains the basis for the Glock pistol line. All Glock pistols are derivatives of the basic Glock 17 design. The pistol features a locked-breech design using a cam-dropped barrel; the safety is a component of the trigger mechanism. The Austrian Army and police have procured over 50,000 Glock 17 pistols to replace their long-serving Walther P1 pistols. This series of pistols is in service in one form or another with military and internal security forces in at least 49 nations.

In January 2013, the U.K. Ministry of Defence formally chose the Glock 17 as the new standard sidearm for British military forces. The initial procurement contract, worth \$13.96 million, specified the purchase of 25,000 pistols and holsters.

Glock 18C

This is a selective-fire version of the Glock 17 with a cyclic rate of around 1,300 rounds per minute. For security reasons, Glock ensured the internal components of the Glock 18C are not interchangeable with those of any other Glock pistol. Despite the questionable utility of such a weapon, demand continues. To meet consumer needs, Glock is developing 19- and 33-round magazines for the weapon.

Belgium

FN Herstal SA. FN Herstal (formerly Fabrique Nationale) remains a force to be reckoned with in the military sidearm market. After emerging intact from its business tribulations in the 1990s, the firm is looking toward a period of significant growth.

Browning High-Power

The 9x19mm Parabellum P35 High-Power pistol was John Moses Browning's last pistol design. Like its American predecessor, the Colt 11.43x22.79mm (.45 ACP) M1911A1, the single-action semi-automatic Browning High-Power pistol continues to set the standard to which other designs must aspire. Entering service in 1935, the High-Power has required little alteration over its long service life.

FN Herstal has nevertheless introduced two improved versions, the Mk 2 and Mk 3; the Mk 3 remains in production. The double-action 9x19mm Parabellum BDA 9, a further derivative of the High-Power, entered production in 1990. The Browning High-Power remains in service with at least 64 nations worldwide. Since 1935, FN Herstal and several foreign-licensed manufacturers have produced over 10 million High-Power pistols. The demand for the High-Power continues; the United Kingdom placed an order for 2,000 pistols in 2001.

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Model 140

The Model 140 double-action pistol, a recent addition to the FN line, is a blowback-operated weapon, available in two chamberings: 7.65x17mm Browning (.32 ACP) and 9x17mm Short (.380 ACP). Though FN has made some sales of this pistol to military organizations, police and internal security organizations have been the primary customers.

FN Five-seveN®

Introduced in 1995, this 5.7x28mm pistol is one of the newer designs in FN's line. A unique feature of this pistol – an advanced design featuring extensive use of synthetic materials – is its ability to fire the contractor's new 5.7x28mm FN P90 round. The small size of the cartridge allows the weapon to carry a 20-round magazine. In 1997, FN began offering the FN Five-seveN® on the open market. At the June 1998 Satory weapons fair, FN introduced a suppressed version of the Five-seveN, reputedly 30 percent quieter than the standard pistol. The Five-seveN is in serial production, and FN has launched an aggressive marketing effort. Greek Cyprus is a known customer.

FN Forty-Nine

Introduced in 1999, the FN Forty-Nine is the newest entry in the FN sidearm line. Originally firing the 10.11x21.6mm (.40 Smith & Wesson) cartridge, the Forty-Nine is also now available for use with the 9x19mm Parabellum. Of advanced design integrating composite materials, the Forty-Nine features the Repeatable Secure Striker system, in which the firing pin is under no tension until the shooter pulls the trigger.

Czech Republic

Ceska Zbrojovka AS. This famous old arms company aggressively re-entered the international market subsequent to the realignment of former Warsaw Pact states. CZ is currently producing six different semi-automatic pistols, including two that are arguably among the best in the world. The Omnipol organization handles the international marketing of CZ weapons.

Model 75/Model 85

Originally chambered for the 9x19mm Parabellum cartridge, the Model 75 is an indigenous design incorporating the best features from a number of other designs, with some new ideas as well. CZ now offers eight Model 75 variants in a number of chamberings, resulting in over 100 possible permutations. This series of pistols displays CZ's usual excellent workmanship; the pistols are reportedly easy to maintain and shoot. Although the Czech military has not purchased the

Model 75, CZ has made export sales to various internal security organizations, including some in the West.

The 9x19mm Parabellum Model 85 pistol is essentially an improved Model 75, and arguably one of the best pistols available today. Though the general design of the Model 85 is the same as that of the Model 75, CZ has modified the manual safety mechanism and slide stop to allow for ambidextrous operation. Further, CZ has refined the components to enhance reliability and ease of operation. CZ offers eight versions of the Model 85 in seven different chamberings.

Model 83

CZ offers this series of compact, blowback-type pistols in three chamberings. The double-action design features an automatic safety that blocks the hammer until the shooter completely squeezes the trigger. The Model 83 is popular with military police and other specialized units.

Model 92

This 7.65x17mm Browning (.32 ACP) design is a compact semi-automatic pistol for close-range defense. It has proven popular with special military and police units. Though the design provides no internal manual safety per se, this double-action-only weapon has a magazine safety and other features to prevent accidental discharge.

Model 100/Model 101

These latest CZ designs may be some of the best semi-automatic pistols currently available. In addition to advanced synthetic-material construction and a user-friendly design, they feature an unusually clean profile, with no protrusions to snag the shooter or his clothing. The Model 100 and Model 101 also provide the option of mounting a laser spot projector device. Both models are available chambered in either 9x19mm Parabellum or 10.11x21.6mm (.40 Smith & Wesson). Their primary difference is in the firing mode: the Model 100 fires double-action only; the Model 101 features single/double-action capability. Both models have been in serial production since 1995.

Federal Republic of Germany

Carl Walther GmbH. The major manufacturer of pistols in the Federal Republic of Germany since before World War II, Carl Walther GmbH continues its tradition of producing a variety of high-quality service pistols.

PP, PPK, and TPH

Perhaps the most famous, and still most popular, of the Walther pistol line are the PP (Polizei Pistole) and PPK

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(Polizei Pistole Kriminal), both available chambered in either 7.65x17mm Browning (.32 ACP) or 9x17mm Short (.380 ACP). Although Walther ceased production of these two icons of the European pistol craft in 1999, they remain in service with a number of nations. As a successor to the PPK in the backup weapon role, Walther now offers the TPH, essentially a miniature PP. This double-action pistol is available in 5.66x15.11mm (.22 Long Rifle) and 6.37x15.62mm (.25 ACP) chamberings.

Walther USA still offers the PPK for American commercial sales. In fact, Walther USA is virtually the only source for genuine, Walther-made PP and PPK pistols outside Germany.

In Turkey, Makina ve Kimya Endustrisi Kurumu continues to produce unlicensed copies of the PP and PPK pistols; Daewoo in the Republic of Korea produces both pistols under license. Walther has sold significant quantities of both models to Chad, Central African Republic, Chile, the Democratic Republic of the Congo, Guyana, Madagascar, Venezuela, and Germany, as well as to many unspecified customers. The popularity and reliability of the pistols have prompted workshops in several areas of the world, particularly in the Far East, to produce numerous unlicensed copies.

P38/P1

Walther continues to produce the 9x19mm Parabellum double-action P38/P1, the primary sidearm of German forces since 1938. The P38 officially replaced what is easily the most famous German sidearm of all time – the 9x19mm Parabellum P08 Luger. In addition to providing the primary sidearm of the Bundeswehr and many state police forces in the Federal Republic of Germany, Walther has sold the P1 to several other nations, including Norway (replacing the M1911), Chile, Lebanon, Mozambique, Pakistan, Portugal, and Zaire. The Austrian armed forces only recently phased out their use of the P1, in favor of the Glock 17 pistol. The P38/P1 will soldier on well into the 21st century.

P88 Series

The 9x19mm Parabellum P88 and P88 Compact semi-automatic pistols mark a departure for Walther in that they are essentially Colt-Browning designs. Our research indicates that Walther terminated the original P88 in the early 1990s when it failed to meet marketing expectations. However, the P88 Compact remains in production, with a significant sale reported to sub-Saharan Africa. Walther is also producing a competition version of the P88.

P99

Walther developed this 9x19mm Parabellum semi-automatic pistol to meet the requirements of the German police and other internal security units. The ambidextrous P99 is available in a single/double-action configuration or a double-action-only configuration. This hammerless pistol incorporates an anti-stress trigger system, which allows the trigger to remain in the double-action position after the shooter cocks the weapon.

The pistol is reportedly easy to fieldstrip and clean; a corrosion-resistant finish is standard. The P99 accepts 10- or 16-round magazines, as well as a tactical light or laser-aiming device. The P99 entered serial production in December 1996. More recently, Walther introduced a version chambered for the 10.11x21.6mm (.40 Smith & Wesson) cartridge.

P5 Series

Prompted by German police specifications for a new service pistol, Walther developed the 9x19mm Parabellum P5 as a double-action pistol. The P5 integrates a number of safety features, including:

- A safety notch on the hammer
- A trigger bar that remains disconnected until the slide is fully closed and barrel locked
- A firing pin that is retained and held out of line with the hammer nose until firing; it cannot move unless the trigger is actuated

These safety features have made the P5 series very popular. The German police purchased both the P5 and P5 Compact in quantity, as have internal security units in the Netherlands (around 40,000), Nigeria, Portugal, and the United States. In addition, the British Ministry of Defence procured 2,600 P5 Compact pistols by 1993. Walther also introduced the 9x19mm Parabellum P1A1 as an improved P5 variant featuring a cross-bolt safety that acts directly on the firing pin.

Heckler & Koch GmbH. This world-famous firm, mainly known for its military rifles, is also quite active in the production of military pistols.

P11

In 1997, information surfaced that Heckler & Koch had developed and sold an underwater pistol, the P11. The weapon fires electrically via two dry cell batteries in the grip, providing 24 volts of electricity. The P11 features standard post and notch sights; its fire is virtually silent

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when used out of water. H&K has sold the P11 to specialized military units in Denmark, France, Germany, Israel, the Netherlands, Norway, the United Kingdom, and the United States. One source indicates that Italian special service units purchased around 200 P11 pistols.

P7 Series

The P7 semi-automatic pistols are delayed-blowback weapons available in a number of chamberings for police and internal security forces. These weapons are self-locking, using some of the propellant gases to actuate a locking mechanism. The series also features adjustable sights and a unique squeeze-cocking mechanism. These pistols have sold well in parts of Africa and Asia. Hellenic Arms of Greece continues licensed production. Although H&K terminated P7 M13 production in favor of the P7 K3, a pirated version of Southwest Asian origin has surfaced.

The 9x17mm Short (.380 ACP) P7 K3 is the latest manifestation of the P7 series. It is a rugged design of simplified construction, featuring a simple blowback mechanism. Despite export sales of the P7 K3 to Latin America and southern Asia, H&K terminated its production in 2003.

P9/P9S

Despite its rather low magazine capacity of nine rounds, the 9x19mm Parabellum P9S has acquired cachet as an undercover weapon of special operations forces in several countries, including the U.K. and Germany. The P9 is single-action; the P9S is double-action. H&K completed the P9/P9S production run in 1999; licensed production continues with Hellenic Arms in Greece. The delayed-blowback P9 features a two-part breechblock and polygonal rifling. Besides military procurement, the P9 has developed a significant civilian following.

USP

The Universal Self-loading Pistol (USP) series of semi-automatic pistols is the latest major line of military sidearms in the Heckler & Koch inventory. H&K began development of the USP in 1990. The weapons are currently available in three chamberings, and in both standard and compact configurations. In addition to using polymer materials in the construction of these modular pistols, H&K treats the weapons with a heavy-duty anti-corrosion coating supplied by Dow Corning. The current-production USP pistols feature a new recoil reduction system and H&K's polygonal bore. The USP remains in production; Germany and Spain have placed the largest orders to date.

Mk 23 Mod 0/USP45

This single- or double-action, 11.43x22.79mm (.45 ACP) semi-automatic pistol won the 1990-1991 competition to supply the U.S. Special Operations Command with a specialized handgun, designated Mk 23 Mod 0. This weapon features a detachable sound suppressor and a laser-aiming module. USSOCOM has procured at least 7,500 units to date. Heckler & Koch subsequently introduced an almost identical version of the Mk 23 Mod 0, the USP45, for the commercial market. For more information on the USSOCOM Mk 23 Mod 0 program, see the "Military Small Arms (United States)" report in this service.

Italy

Fabbrica D'Armi Pietro Beretta SpA. Reputedly the oldest family-owned small arms business in Europe (in continuous operation since the 16th century), Beretta has a long-established reputation for high-quality firearms, including its military sidearms. Beretta (through its subsidiary Beretta USA) supplied the U.S. Department of Defense and U.S. Coast Guard with its 9x19mm Parabellum Model 92F pistol, designated M9, as the standard U.S. military sidearm for over 20 years. In addition, numerous police and internal security organizations worldwide have followed suit and adopted the Model 92F.

Model 92 Series

The 9x19mm Parabellum Model 92 series of double-action, semi-automatic pistols has achieved considerable commercial success. The Italian armed forces have procured the Model 92, 92S, and 93R pistols. Nexter Munitions (formerly Giat Industries) produces the Model 92F under license for the French Army and Gendarmerie. Mexico procured 7,000 in 1996. Brazil, which has purchased Italian weapons in the past, will likely commence licensed production of the Model 92S.

Beretta has also sold the Model 92 series to several other nations, including Egypt (licensed production), Israel, Nigeria, Tunisia, and Yemen. Given the projected service life of the Model 92 series pistols, current users of Beretta sidearms will likely be seeking replacement weapons in the next 10 to 15 years.

951R and 93R

Despite the doubtful utility of selective-fire handguns, contractors still respond to a perceived demand for them. Beretta has superseded its earlier 9x19mm Parabellum 951R, based on the old Model 1951 semi-automatic pistol, with the newer 9x19mm Parabellum Model 93R. The Model 93R features semi-automatic or three-round burst firing modes; it cannot fire full-automatic. It can accept a folding carbine-like stock,

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along with 15- and 20-round magazines. The Special Operations Forces of the Italian Army, as well as those of several other nations, have procured the Model 93R.

8000 Series Cougar

This semi-automatic pistol series includes Beretta's first 11.43x22.79mm (.45 ACP) product. Beretta offers full-frame and compact (Mini Cougar) versions of this Model 92 variant in a range of chamberings. However, the .45 ACP model, the 8045, has been the series' hottest seller since its introduction in 1997, with significant sales to various internal security organizations.

Poland

The world-famous Radom name has been around since 1920; it is attracting increasingly more interest in Western military and other publications. The government-owned firm persevered through the Warsaw Pact era. Now operating under the Fabryka Broni "Lucznik" organization, Radom is currently offering a number of sidearms that exhibit the company's reputation for quality.

Fabryka Broni "Lucznik" – Radom Sp.z.o.o. Among the offerings of this famous firm is the VIS P-35, an older yet still quite effective semi-automatic design based on the Czech vz/24. The VIS P-35, like the newer design MAG-95, fires the popular 9x19mm Parabellum cartridge. The 9x18mm Makarov P-64 bears a close resemblance to the Soviet Makarov; it also incorporates a number of design features of the Walther PP. Since the late 1980s, production of the P-64 pistol has been on an as-needed basis.

Makarov & Browning

The Polish armed forces adopted the 9x18mm Makarov VANAD P-83 (as well as its improved version, the P-93) as its standard-issue sidearm. Both pistols are essentially Polish developments of the basic Makarov design. The newest military sidearms from Lucznik are the 9x19mm Parabellum double-action MAG-95 and MAG-98 series. These series represent a break from the Makarov base design. As essentially an adaptation of the classic Browning design, these series incorporate many of the safety features normally absent from Russian designs. The MAG-95 and MAG-98 series are in serial production for undisclosed military clients.

Russian Federation

The Russian State Arsenals have now reorganized into a number of semi-autonomous organizations of various descriptions. Prior to the reorganization, the State Arsenals were engaged in the manufacture of two pistols, the PM (Makarov) and the newer PSM. The 9x18mm Makarov PM remains the standard sidearm in

the Russian Army, despite the selection by the Russian Federation Ministry of Defense in 2001 of the 9x19mm Parabellum MR-443 as its next sidearm.

FSUE Rosoboronexport. This organization acts as the primary conduit between the Russian defense industry and the international market. All individual Russian contractors thus effectively operate under the auspices of Rosoboronexport. A major Russian contractor involved in the military-pattern sidearm market is Izhevsk Mechanical Plant. This firm, formerly part of the State Arsenals organization, is now a component of the IZHMASH/Kalashnikov small arms consortium.

PM (Makarov) and PMM

IZHMASH/Izhevsk continues to produce the popular 9x18mm Makarov PM semi-automatic pistol (also known simply as the Makarov) under the company's Baikal trademark. A 1950s design, the Makarov remains the standard military sidearm for the Russian Federation and many of the former Warsaw Pact nations, as well as for most of the other members of the Commonwealth of Independent States. The former Soviet Union freely distributed the PM worldwide.

In the late 1980s, an improved version of the Makarov entered production. Known as the PMM-8 and PMM-12 (the numbers refer to the magazine capacity), the new 9x18mm pistols accommodate the newer, more powerful 57-N-181 series cartridges. While much of the production is now for the commercial export market, significant military sales continue.

PSM

Firing a unique 5.45x18mm bottleneck cartridge, the PSM is a blowback, double-action weapon that resembles the Walther PP pistol. Serial production of the PSM began in 1994. The Russian Ministry of Defense intends to use the PSM as the standard sidearm for security forces and other specialized units in the Russian military, as well as for some other members of the Commonwealth of Independent States. More recently, IZHMASH developed an export version of the PSM, designated Izh-75 and marketed as the Baikal-441, chambered for the 6.37x15.62mm (.25 ACP) cartridge.

MR-443/PYa

In 2001, the Russian Federation Ministry of Defense selected this 9x19mm Parabellum semi-automatic pistol as the Pistolet Yarygina (PYa), the new standard military sidearm for the Russian Federation. The MR-443 is a conventional double-action design using a modified Browning lock mechanism. The weapon fires a Russian version of the 9x19mm Parabellum cartridge,

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designated 7N21. The MR-443 is an ambidextrous design, with a 17-round magazine. Given the economic realities of the Russian Federation, whether the Russian Army will ever actually field this new sidearm remains open to question.

KBP Instrument Design Bureau. This organization is another major source of military sidearms in the Russian Federation. KBP manufactures a large number of pistols and service revolvers, some designed by other bureaus. Among the latter are the PSM and the original PM Makarov, and the UDAR service revolver (see **TsNIITochMash** entry).

Selective-Fire Pistols

KBP currently produces three selective-fire pistols. The original 9x18mm Makarov Stechkin is no longer in production, but is still available for orders. The 5.45x18mm MPTs OTs-23 Drotik can fire three-round bursts at a rate of 1,700 rounds per minute. In addition, the 9x18mm Makarov OTs-33 Pernach can fire the improved 57-N-181SM rounds at a cyclic rate of 800 rounds per minute.

All three selective-fire pistols are currently in service with the Russian Federation Ministry of Internal Affairs (MVD), as well as with special units of the Russian Army. Low-rate production of all three models continues; KBP also offers the three models for export.

OTs-27 Berdysh

The 9x18mm Makarov OTs-27 Berdysh fires the 57-N-151S and 57-N-181SM rounds; by changing the supplied barrel and magazine, the Berdysh can also fire standard 9x19mm Parabellum ammunition.

S4M

The S4M silent pistol is apparently a development of the earlier MSP; both weapons feature an "over-under" barrel arrangement and appear very similar in design. The S4M fires a unique improved 7.62x62.8mm PZAM cartridge with an integral firing pin/piston that propels the bullet silently out of the weapon.

GNOM

This is a specialized service revolver that fires a new 12.5x40mm round based on a Russian-pattern brass 32-gauge shotgun cartridge. Three rounds are available: armor piercing, anti-personnel (shot), and anti-personnel (slug).

The GNOM carries five rounds; it can fire in either single- or double-action mode. KBP is currently offering the GNOM on the export market.

R-92

Developed by the MVD for special military police and internal security-related missions, the double-action R-92 is a very light and compact weapon available in two chamberings: 9x18mm Makarov and 9x17mm Short (.380 ACP). The R-92 is produced on an as-needed basis.

OTs-21 Malysh

The 9x18mm Makarov OTs-21 Malysh is a very compact semi-automatic pistol designed for concealed-carry applications. The blowback, double-action Malysh features an internal hammer and a magazine capacity of five 57-N-151S cartridges. Due to the nature of its intended use, the Malysh has no safety or sights.

Molot Engineering Plant. This organization produces an updated version of the Stechkin selective-fire pistol and a unique-design revolver.

DOG-1

The DOG-1 is a conventional-design, five-round revolver that fires a unique 12.5x35mm round based on a shotgun cartridge. The maximum effective range of the DOG-1 is only around 20 meters (21.9 yd). Molot may have designed the DOG-1 for personnel with limited firearms training. Molot is offering the DOG-1 on the export market.

TsNIITochMash. This organization appears to be primarily a design house, with limited production capability of its own. TsNIITochMash apparently contracts various production facilities to manufacture its weapons.

UDAR

This new five-chamber service revolver fires a unique 12.3mm series of cartridges. Currently, five cartridges are available:

- 12.3x50mm standard ball
- 12.3x50mm standard blank
- 12.3x46mm paint
- 12.3x46mm plastic baton
- 12.3x50mm "pyroliquid" irritant

The UDAR is 21 centimeters (8.27 in) in length and weighs 950 grams (2.09 lb) loaded with standard ball ammunition. The production facility associated with the UDAR is the KBP firm.

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PSS Vul

The PSS suppressed semi-automatic pistol fires the special 7.62x44mm SP-4 cartridge. The pistol's unique design, combined with the SP-4 round, allows for near-silent operation without a suppressor (only the cycling of the slide is audible). The PSS is especially well suited to short-range (under 25 m), silent attack. The PSS (also known as the Vul) is in serial production and is available for export.

NRS-2

Also chambered for the unique 7.62x44mm SP-4 cartridge, this unusual weapon is a heavy-duty utility knife containing a single-shot pistol. The NRS-2 is an awkward weapon meant for point-blank use only. This specialized single-shot pistol/knife weapon is in serial production by an unidentified firm; it is available for export.

SPP-1M

Still another unusual TsNIITochMash design is the SPP-1 underwater pistol. Firing a unique 4.5x115mm SPS dart-like cartridge, this four-barrel weapon is effective at ranges up to 17 meters (18.59 ft) underwater. The SPP-1 is a double-action weapon with a four-round magazine. The issue weapon kit includes a sling, a holster, a loading device, and three loaded ammunition containers. This highly specialized weapon is in serial production; it is reportedly available for export.

Switzerland

Schweizerische Industrie-Gesellschaft (SIG). Now operating as a component of the German manufacturer J.P. Sauer & Sohn GmbH, this established Swiss player remains highly active in the world market. The SIG Sauer collaboration currently produces a wide range of handguns for military use.

P220 Series

SIG Sauer currently produces the P220 (the Model 75 in Swiss service), P225, P226, and P228 single/double-action semi-automatic pistols in a variety of chamberings. The P220 has enjoyed widespread success, with over 420,000 in service with the armed forces of Denmark, France, Japan, Nigeria, and other nations. Switzerland has procured 35,000 pistols.

However, the 9x19mm Parabellum P226 was an unsuccessful candidate for both the U.S. M1911 replacement program and the French sidearm replacement competition; it lost to the Beretta Model 92F in both cases. SIG Sauer maintains that its P226 is one of the best handguns in the world. The

P226 is a natural successor to the P220 and P225, whose parts form 80 percent of the P226's construction.

The P226 remains in production. The British Ministry of Defence procured the P226 and P228 for its armed forces, marking the first time the British procured double-action pistols for general service. In July 1992, the U.S. Department of Defense adopted the 9x19mm Parabellum P228 as the M11 for special concealed-carry use, with an initial procurement of 16,380 pistols. In 1998, the U.S. Naval Warfare Center purchased 2,500 P226 pistols.

P229, P239

The P229 and P239 represent improved versions of the standard SIG Sauer semi-automatic pistol design. Both pistols are available in a variety of chamberings. The P239 differs from the P229 only in its narrower profile and reduced magazine capacity. In 1998, the U.S. Secret Service purchased an undisclosed number of P229 pistols under a contract worth \$8.6 million. Both weapons are in serial production.

P230, P232

SIG Sauer designed these two semi-automatic pistols for concealed-carry applications. The pistols are available in a variety of chamberings and with a range of grip and finish options. In 1997, the P232 replaced the P230; the P232 remains in production.

P245

Introduced in 1998, the 11.43x22.79mm (.45 ACP) P245 is a compact sidearm, available with a range of grip, sight, and finish options. The P245 is currently in production.

Pro Series

SIG Sauer introduced the Pro series of polymer-framed single/double-action semi-automatic pistols at the June 1998 Satory weapons fair. As an extension of the existing P200 series designs, the Pro series is available in a range of chamberings. The Pro series, which are currently in serial production, boast a 25 to 30 percent lower unit price than other SIG Sauer semi-automatic pistols. At least two U.S. government agencies have procured the 9x19mm Parabellum Pro 2009.

Analysis. Despite the increasing dominance of the battle carbine in military service, the sidearm remains a viable weapon for self-defense and close combat. Indeed, for the serious small arms aficionado, the sidearm may be preferable to the battle carbine for close-range engagements. When firing an effective large-caliber cartridge, such as the 11.43x22.79mm (.45 ACP) round, the sidearm can deliver close-range

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decisive stopping power far beyond the capabilities of even the most effective intermediate-caliber weapon.

Further, the shooter *wears* the sidearm; he does not carry it. Thus, by its very nature, the sidearm is always available to the "well-dressed" soldier; the soldier does not have to pick it up or retrieve it.

Perhaps more so than with any other military small arm, the effectiveness of the sidearm is dependent upon the training and abilities of the individual shooter. Proficiency with the sidearm demands a serious level of individual dedication and practice. That the sidearm is such an individual-oriented weapon flies in the face of modern, more egalitarian training doctrines. Yet, perhaps for that very reason, the sidearm remains an extremely popular military weapon; the military and civilian markets for the pistol and revolver remain correspondingly strong.

Timeless Icons

This market does not suffer the stresses of obsolescence so evident in other weapon markets. Superior sidearms such as the Browning/Colt M1911, the Browning/FN P35 High-Power, and the Walther PPK remain timeless icons of small arms design. Many "new" sidearms are simply modifications of decades-old designs and operating principles. As a result, sidearm

replacement programs tend to be cyclical in nature and largely independent of the sort of major technological leaps that govern other small arms programs.

Customer Loyalty

Although the European market boasts a number of successful and commercially popular sidearm designs, there are no clear market leaders in this segment.

Procurement of sidearms by European governments has tended to favor historical relationships between vendor and purchaser. Because the major manufacturers all offer a generally equivalent array of sidearms, historical business relationships often supplant innovation and marketing strategies in the procurement process. Interestingly, civilian purchasers of pistols and revolvers also tend to exhibit this brand identification and loyalty, especially when selecting handguns for self-defense.

We expect the European military sidearm market to be generally stable throughout the forecast period, supported by its historical procurement patterns. The market will remain highly competitive, but it will also remain rather conservative in comparison with other small arms markets, as technological innovation remains evolutionary rather than revolutionary.

Funding

The various contractors, some of which are government-owned enterprises or state-owned arsenals, fund the development of military-pattern pistols and revolvers in Europe.

Contracts/Orders & Options

Contractual information from European ministries of defense and contractors is generally not available.

Timetable

The basic military sidearm designs currently available should remain in serial production throughout the forecast period. Unlike in other small arms market segments, the licensed production of proven designs will likely continue, with development of indigenous designs generally remaining a secondary goal.

Worldwide Distribution/Inventories

Export Potential. The tried-and-true European pistol designs continue to dominate the international market. Given the high level of brand identification and customer loyalty inherent in this market, we believe that existing designs will continue to enjoy healthy export sales throughout the forecast period.

Countries. The distribution of major European military-pattern pistols and revolvers – especially the products of Beretta, FN Herstal, Glock, Heckler & Koch, SIG Sauer, and Walther – is worldwide in scope. Because most contracts go unreported and the distribution of many designs is so widespread, it is virtually impossible to determine their precise distribution.

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Forecast Rationale

Europe continues to lead the world in the development and production of military-pattern pistols and revolvers. Indeed, many of the international players base their products on proven European designs, such as the Browning P35 High-Power.

In the European sidearms market, there are no clear market leaders. Although the major players all offer a generally equivalent array of military-pattern pistols and revolvers, historical business relationships tend to supplant technical innovation and marketing strategies in the procurement process. Likewise, civilian purchasers of pistols and revolvers also tend to exhibit this brand identification and loyalty, especially when selecting handguns for self-defense.

Stable Market

The Forecast International Weapons Group expects the European military sidearms market to remain generally

stable, supported by its historical procurement patterns. Though the market will remain highly competitive, it will also remain rather conservative relative to other small arms markets. The established European players will continue as leaders in the industry, as technological innovation remains evolutionary rather than revolutionary.

We expect a continued steady demand by military, paramilitary, and police forces worldwide for European military-pattern pistols and revolvers. In addition, we see a continuing strong civilian demand for these weapons. The combined output of the European manufacturers in this market segment will average 138,000 weapons per year.

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