

## **SUBMACHINE GUN AS A SUPPORT WEAPON FOR THE ESCORT TEAM**

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### **ABSTRACT**

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Submachine gun, next to classic pistol, is a regular support weapon in an escort team. This type of weapon is issued in the case of elevated level of threat for the protected person. It is used as the main weapon to equip at least one of the protection employees in an escort team. The task of a protection employee equipped with this type of weapon is to “pin down” the assailant(s) and enable evacuation of the protected person from the danger zone to a safe place. In order to allow it, the submachine gun has to meet the criteria, among others those concerning reliability. To put it shortly, it has to be a good submachine gun.

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To many people a personal protection specialist<sup>1</sup> is unequivocally associated

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<sup>1</sup> Personal protection specialist – a person entered on the list of qualified personal protection specialists performing protection tasks within the framework of internal protection service or for an entrepreneur who obtained a licence to conduct business related to personal and property protection services or a person performing protection tasks within the scope requiring no entry on these lists for an entrepreneur who obtained a licence to conduct business related to personal and property protection services

with someone equipped with a firearm<sup>2</sup>, a bodyguard<sup>3</sup>. A few of such personal protection specialists make up a protection team. For the most part, personal protection<sup>4</sup> specialists in a protection team are armed with handguns<sup>5</sup> in the form of pistols<sup>6</sup> and revolvers<sup>7</sup>. However, in the course of performance of protection tasks are often enough “forced to use firearms

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(v. Ustawa z 22 sierpnia 1997 r. o ochronie osób i mienia – Dz. U. 2016 poz. 1432) [Act of 22 August 1997 on protection of people and property – Journal of Laws of 2016, item 1432].

- <sup>2</sup> Firearm – any portable barrelled weapon intended for launching or one that can be adapted in order to launch one or more projectiles or substances as a result of action of a propellant (v. Ustawa z dnia 5 stycznia 2011 r. o zmianie ustawy o broni i amunicji oraz ustawy o wykonywaniu działalności gospodarczej w zakresie wytwarzania i obrotu materiałami wybuchowymi, bronią, amunicją oraz wyrobami i technologią o przeznaczeniu wojskowym lub policyjnym – Dz. U. 38 poz. 195) [Act of 5 January 2011 on the amendment of the act on arms and ammunition and the act on the implementation of business activity in the scope of production and trade of explosives, weapon, ammunition, products and technologies used by Armed Forces and Police – Journal of Laws No. 38, item 195].
- <sup>3</sup> Bodyguard – a person employed as a personal protection specialist, as well as an official of services dealing with personal protection.
- <sup>4</sup> Personal protection – actions aimed at ensuring security of life and health and physical integrity (v. Ustawa z dnia 22 sierpnia 1997 r. o ochronie osób i mienia – Dz. U. 2016 poz. 1432) [Act of 22 August 1997 on protection of people and property – Journal of Laws of 2016, item 1432].
- <sup>5</sup> Handgun – a barrelled firearm with a length of no more than 30 cm or with a total length of no more than 60 cm, including centre-fire pistols and revolvers with calibre ranging from 6.35 mm to 11.43 mm (0.45”), 26 mm flare guns and 5.6 mm (0.22”) rimfire pistols and revolvers for shooting Long Rifle or Short ammunition (v. Rozporządzenie Ministra Spraw Wewnętrznych i Administracji z dnia 24 kwietnia 2007 r. w sprawie rodzajów broni palnej odpowiadających kategoriom broni palnej określonym w dyrektywie w sprawie kontroli nabywania i posiadania broni – Dz. U. 86 poz. 578) [Regulation of the Minister of Internal Affairs and Administration of 24 April 2007 on the types of firearms corresponding to the categories of firearms specified in the directive on control of acquisition and possession of weapons – Journal of Laws of 2007 No. 86, item 578].
- <sup>6</sup> Pistol – a short, small firearm characterised by short barrel, small external dimensions and a grip (handle) allowing to hold the weapon with one hand at the time of shooting. [...] It used to be a single-shot weapon, nowadays almost all pistols are multi-shot, semi-automatic weapons, utilising the principle of blowback or short recoil operation (v. *Leksykon broni od A do Z*, Wydawnictwo MUZA SA, Warszawa 2000, p. 248).
- <sup>7</sup> Revolver – a multi-shot, repeating firearm in which the role of a magazine is played by a barrel containing five or more bullets (v. *Leksykon...*, p. 294).

characterised by, among other things, greater fire-power and facilitating effective shooting at greater distances”<sup>8</sup>, so among the members of such a team, usually armed with handguns, there is usually at least one personal protection specialist equipped with a submachine gun. Apart from being a component in a personal protection team, it also constitutes additional fire support allowing to tip the scale of “winning” in favour of the protection team. This advantage is possible on one basic condition – the submachine gun being an element of armament in a protection team has to meet the criteria appropriate to the particular profession. “It has to be a reliable, convenient, and most of all effective weapon. It has to ensure safety of use, appropriate manoeuvrability and strength in service. Such extensive requirements will not be met by every pistol or revolver, therefore not all of them are appropriate for the purposes of performing tasks within the scope of personal protection”<sup>9</sup>. This article is aimed to introduce the subject of submachine guns used in personal protection.

A submachine gun is carried by people being members of uniformed public services<sup>10</sup>, on a daily basis performing tasks allowing to maintain the appropriate level of security<sup>11</sup>, which often enough requires special equipment<sup>12</sup>.

A submachine gun is recognised as a firearm, and more precisely as an individual, auto-loading small arm, loaded with pistol ammunition. It is meant for combating personnel with continuous fire at a distance of up to 100 m, and with single fire at a distance of up to 200 m<sup>13</sup>. “The primary type of fire for a submachine gun is short bursts with the use of both hands with additional support for the weapon on the shoulder

<sup>8</sup> P. Rybicki, P. Salamonik, *Podstawowe wiadomości o pistoletach maszynowych będących w uzbrojeniu polskiej policji*, Police School in Słupsk, Słupsk 2011, p. 5.

<sup>9</sup> P. Pajorski, „Klamka” bodyguarda, „Kultura Bezpieczeństwa. Nauka – Praktyka – Refleksje”, November-December 2012, p. 51–52.

<sup>10</sup> Cf. J. Prońko, *Natura współczesnego bezpieczeństwa*, „Kultura Bezpieczeństwa. Nauka – Praktyka – Refleksje”, 2012, no. 9, p. 24; J. Piwowarski, *Bezpieczeństwo jako pożądaný stan oraz jako wartość*, [in:] *Bezpieczeństwo jako wartość*, A post-conference publication from the 2nd Scientific Conference in the series “Security as a value”, organised by the Apeiron Academy of Security of Public and Individual in Kraków, 18 April 2008, p. 56–57.

<sup>11</sup> J. Piwowarski, *Bezpieczeństwo jako pożądaný...*

<sup>12</sup> Cf. P. Pajorski, „Klamka”..., p. 54.

<sup>13</sup> Cf. S. Kochański, *Automatyczna broń strzelecka*, SIGMA NOT, Warszawa 1991, p. 147.

or the hip. Submachine guns are usually equipped with a permanent or collapsible stock<sup>14</sup>. There are also submachine guns without a stock, for example HK MP5KA4, HK MP5SFA3 or Micro UZI. It should be kept in mind that in single-fire action “a submachine gun is much more accurate than a regular pistol shooting the same bullet, and the bullet trajectory is more flat. Greater accuracy results from a longer barrel of a submachine gun and the flat trajectory results from the greater initial velocity of the bullet”<sup>15</sup>. The advantage of a submachine gun over a pistol increases with the distance of the shot<sup>16</sup>. At the same time, it is worth mentioning that “a submachine gun is used as a ‘carbine’ for accurate single fire at short distance, but this ‘carbine’ can immediately be used to open very strong burst fire, pinning the opponent to the ground and disabling its actions”<sup>17</sup>. As aptly mentioned by Stanisław Kocharński “From the tactical point of view a submachine gun is meant for combat at short distance of several dozen meters, especially in situations which require major density of fire, but obtained with a weapon that can be easily manoeuvred”<sup>18</sup>. In protective actions this is a weapon that is perfect for combat in all kinds of “closed spaces”, such as for example: buildings, railway carriages, aircraft boards<sup>19</sup>. It is hard to disagree here with Stanisław Kocharński, who stated that “The particularly useful equipment in such tactical situations are the so-called mini submachine guns, the lighter and shortened versions of the basic models”<sup>20</sup>.

In the opinion of the authors of this study, the armament of the members of protection teams should, apart from mini submachine guns, also include the *PDW-class*<sup>21</sup> submachine guns.

Submachine guns used in protection of people are “mainly used in fairly specific conditions, mostly characterised by small firing distance and direct threat to health and/or life posed by the opponent”<sup>22</sup>. In such

<sup>14</sup> Ibidem.

<sup>15</sup> S. Kocharński, *Brygady antyterrorystyczne. Operacje, uzbrojenie*, SIGMA NOT, Warszawa 1992, p. 139.

<sup>16</sup> Cf. Ibidem.

<sup>17</sup> Ibidem.

<sup>18</sup> Ibidem, p. 139–140.

<sup>19</sup> Cf. Ibidem, p. 140.

<sup>20</sup> Ibidem.

<sup>21</sup> PDW – Personal Defence Weapon.

<sup>22</sup> P. Pajorski, *„Klamka”...*, p. 55.

conditions a shot from a submachine gun “should be made as soon as possible, it should be accurate and cause immediate incapacitation of the opponent”<sup>23</sup>.

A personal protection specialist with such a responsible task as direct protection of a person should carry a good submachine gun, which guarantees not only the personal safety of the wielder, but also, as aptly observed in an analysis of the issues related to the selection of handguns for personal protection specialists, “the possibility of appropriate and safe response with fire to a real, direct and unlawful attack on the protected person”<sup>24</sup>. At the same time, it is worth mentioning that a submachine gun is one of the manifestations of the third, material pillar of security culture<sup>25</sup>.

What submachine gun can therefore be recognised as good for implementation of tasks within the scope of protection of people? The answer seems to be relatively simple. In the opinion of the author, a submachine gun recognised as good that should be used to implement tasks within the scope of personal protection:

- shoots an effective bullet,
- allows for major density of fire,
- allows for quick replacement of an empty magazine with a spare one,
- allows to open fire immediately,
- is reliable and safe in operation,
- is equally accessible to right- and left-handed shooters,
- allows for targeting in bad visibility conditions,
- allows for quick reloading,
- allows for both easy concealment and drawing it from concealment,
- has a loaded chamber indicator,

<sup>23</sup> Ibidem.

<sup>24</sup> Ibidem.

<sup>25</sup> The first pillar – is formed by specific ideas, values and spirituality of a human; The second pillar – refers to the influence of social organisations and legal systems; The third pillar – covers the material aspects of human existence, Cf. M. Cieślarczyk, *Fenomen bezpieczeństwa i zjawisko kryzysów postrzegane w perspektywie kulturowej*, [in:] *Jedność i różnorodność. Kultura vs. kultury*, E. Reklajtis, R. Wiśniewski J. Zdanowski (ed.), ASPRA – JR, Warszawa 2010, p. 96; S. Jarmoszko, *Nowe wzory kultury bezpieczeństwa a procesy deterioracji więzi społecznej*, [in:] *Jedność i różnorodność. Kultura vs. kultury*, E. Reklajtis, R. Wiśniewski, J. Zdanowski (ed.), ASPRA – JR, Warszawa 2010; J. Piwowarski, *Trzy składowe kultury bezpieczeństwa*, „Kultura Bezpieczeństwa. Nauka – Praktyka – Refleksje”, 2012, no. 9, p. 4.

- has measures preventing accidental and premature discharge,
- is constructed so as to allow it to be reloaded with a single hand,
- is constructed so as to allow its magazine to be replaced with a single hand,
- has a capacious magazine,
- is characterised by major manoeuvrability<sup>26</sup>,
- is characterised by major fire manoeuvrability<sup>27</sup>,
- is characterised by reliability<sup>28</sup>,
- is characterised by ease of dismantling and assembly,
- is durable.

Moreover, assuming that a submachine gun is supposed to be carried constantly “ready to use, it should therefore be lightweight, have small dimensions and a high level of handling safety”<sup>29</sup>.

A good submachine gun is most of all an accurate submachine gun. Weapon accuracy<sup>30</sup> is the basic criterion of combat properties. Weapon accuracy cannot be clearly isolated from general shooting accuracy, which depends both on the properties of the weapon and the skill of the shooter<sup>31</sup>. Weapon accuracy is influenced by its construction, in particular:

- shape,
- mass,
- location of the centre of gravity,
- location of the point of support in relation to the axis of the barrel,

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<sup>26</sup> Manoeuvrability – properties of a weapon allowing its transport on the battlefield and its manipulation in closed-space conditions (confined rooms, cars, etc.). It mainly depends on the mass, size and shape of the weapon (v. T. Świdorski, A. Witkiewicz, *Szkolenie strzeleckie dla kandydatów na pracowników ochrony, Część I. Teoria i przykładowe pytania egzaminacyjne*, Przedsiębiorstwo Wielobranżowe PYTHON TM, Kielce 1999, p. 14).

<sup>27</sup> Fire manoeuvrability – capability of a weapon to deliver the first shot as soon as possible, to shift fire to subsequent targets and perform maintenance tasks (e.g. magazine replacement) as soon as possible. Depends on the construction of the weapon and aiming devices. (v. Ibidem, p. 14).

<sup>28</sup> Reliability – no jamming attributed to the weapon, correctly operating weapon mechanisms in different service conditions, for example rain, snow, frost, heat, sand, mud (v. Ibidem, p. 14).

<sup>29</sup> P. Pajorski, „Klamka”..., p. 57 [after:] S. Kocharński, *Automatyczna...*, p. 96.

<sup>30</sup> Accuracy – meaning good precision (depending on the quality and condition of the weapon) and properly located average hit point (depending on properly regulated aiming devices) (v. T. Świdorski, A. Witkiewicz, *Szkolenie strzeleckie...*, p. 14).

<sup>31</sup> Ibidem, p. 32.

- vibrations of the barrel,
- movement and shocks of the recoil assembly<sup>32</sup>.

Apart from accuracy, a significant feature of a submachine gun is the effectiveness of delivery<sup>33</sup>. One cannot deny the truth of the statement that “From the point of view of a personal protection specialist (bodyguard) the delivery capability should be understood as the capability of such delivery after which the struck loses the capability of any resistance immediately or within a split second after the received hit<sup>34</sup>. This is associated with the fact that even a deadly wounded opponent can for a certain time (even up to a few minutes) present real danger. Even after total and immediate cut-off of blood supply to the brain, for example as a result of heart stoppage, a person can still function for 10 to 15 seconds. The ability to see and make movements with hands is retained for 5 to 8 seconds, and this is sufficient to return fire – make one, or even two shots<sup>35</sup>. The textbook for American special forces titled *Street Survival* contains an image of a person hit with 33 9 mm jacketed soft point bullets<sup>36</sup>. Regardless of such a large number of hits the individual was still dangerous<sup>37</sup>. It is worth mentioning here that he was not knocked down until he was hit with two slug bullets<sup>38</sup> shot from a 12 gauge smoothbore rifle<sup>39</sup>. Therefore, the arising question is that of effectiveness of delivery – what kind of bullet will be most effective and when?

In response to the question stated in such a way it is hard not to observe that “Effectiveness of delivery depends, to a large extent, on the knock

<sup>32</sup> Ibidem, p. 33.

<sup>33</sup> Effectiveness of delivery – depends on the calibre and length of the barrel (bearing influence on the kinetic energy of the bullet) and the type of ammunition used (v. Ibidem, p. 14).

<sup>34</sup> Ibidem, p. 36.

<sup>35</sup> Cf. S. Kocharński, *Brygady...*, p. 45.

<sup>36</sup> Calibre – a number close to the diameter of the weapon barrel bore, which combined with additional numerical, and often also verbal designation characterises the precisely specified ammunition, which can be found under such name in professional informational and normative literature and commercial directories (v. M. Kulicki, L. Stęпка, D. Stucki, *Kryminalistyczno-prawna problematyka broni strzeleckiej*, Kantor Wydawniczy ZAKAMYCZE, Zakamycze 2003, p. 84).

<sup>37</sup> P. Pajorski, „Klamka”..., p. 58.

<sup>38</sup> Slug – a projectile for smoothbore barrels designed at Brenneke, originally used for hunting large game (v. *Leksykon broni...*, p. 36).

<sup>39</sup> S. Kocharński, *Brygady...*, p. 45.

down power of a bullet, which means its capability of immediate incapacitation, and this in turn depends on:

- the calibre of the bullet,
- the amount of energy<sup>40</sup>, transferred to the target ( $E_k$ ),
- the type of the bullet,
- the depth of penetration.

It should be remembered that the larger the calibre of the bullet, the greater permanent cavity<sup>41</sup> is formed, which causes more serious internal injury to the body. The calibre of the bullet also affects the size of the temporary cavity<sup>42</sup>, causing extensive internal tissue contusion with disruption of their blood supply and a significant area of tissues in which molecular shock occurred. During the penetration of the bullet through the semi-fluid environment of the majority of the issues of the organism, hydrodynamic phenomena occur which damage the tissues (even at a considerable distance from the cavity of the wound) through severe shaking. The greater the water content in the tissues, the stronger the hydrodynamic impact of the bullet due to the non-compressibility of the liq-

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<sup>40</sup> Kinetic energy – depends on velocity ( $v$ ) and mass ( $m$ ) of the bullet ( $E_k = \frac{1}{2} mv^2/1000$ ).

<sup>41</sup> Permanent cavity – after a bullet hits a tissue, the tissue is crushed, and the radiant temporary displacement of the tissue occurs, originating in the place where the bullet hit the tissue. As a result of the crush a permanent cavity of the gunshot wound is created (gunshot wound channel, permanent cavity) which walls are made up of permanently damaged tissue. Within the light of the permanent cavity are fragments of tissues, clotted blood, foreign bodies (fibres of the clothing, hair, parts of the bullet) carried by the energy of the bullet (v. *Medycyna ratunkowa i medycyna katastrof*, A. Rasmus, W. Gaszyński, E. Balcerzyk-Bardzo, J. Hołyński (ed.), Uniwersytet Medyczny w Łodzi, Zakład Medycyny Ratunkowej i Medycyny Katastrof, Katedry Anestezjologii i Intensywnej Terapii, Polskie Towarzystwo Farmaceutyczne Oddział w Łodzi, Sekcja Technologii Farmaceutycznej i Medycznej, Łódź 2003, p. 142).

<sup>42</sup> Temporary cavity – as a result of a radiant displacement of the tissues, just behind the bullet, a so called temporary cavity of the wound appears (temporary explosive cavity, temporary pulse cavity), whose diameter can be over 10 times larger than the diameter of the bullet (depending on the speed of the bullet). The temporary cavity of the wound causes a rise of hydrodynamic pressure in the tissues, and afterwards a negative pressure of a smaller strength appears, after which again a bit smaller rise of pressure occurs and so on. Those oscillations of pressure last merely hundredths of a second, however they cause damage to the tissues far from the gunshot wound channel. Those oscillations in pressure tears the tissues in coronal and sagittal plane, forcing air and foreign objects over substantial distances from the gunshot wound channel (v. *Medycyna...*, p. 142).

uid”<sup>43</sup>. It is worth pointing out that in the liquid environment, the effect of the passing of the bullet is similar to an explosion (the pressure is uniform in all directions)<sup>44</sup> So it is safe to say that the wider the diameter of the permanent cavity, the more effective the bullet performance. “It should be remembered, however, that the enlargement of the diameter [of] the bullet reduces the depth of penetration”<sup>45</sup>.

When discussing the effectiveness of a bullet, the following combination should be taken into the consideration: the weapon – the ammunition. “This combination guarantees effective incapacitation of the assailant. According to Dr. Martin L. Fackler<sup>46</sup>, who researches the ballistics of gunshot wounds, in order to successfully discourage the enemy from aggressive actions, a pistol bullet must penetrate so deep that it reaches the vital organs, preferably the large blood vessels, ruptures them and causes a severe haemorrhage with a large blood flow through the inlet opening”<sup>47</sup>. Apart from brain and stem injuries, this mechanism is considered to be the most effective<sup>48</sup>. When discussing a good submachine gun, one should also consider its safety of operation, which, according to Stanisław Kochański, consists primarily of:<sup>49</sup>

- the strength of the barrel and lock,
- the shooter is not injured by powder gases in case of puncturing of a primer or cracking of a shell and without opening of a lock in pistols with a bolt in such cases,
- reliable prevention of an accidental and premature shot by a safety mechanism (internal or external),
- no possibility of improper assembly of parts,
- no capability for fire in case of improper or incomplete assembly of a gun,
- an indicator of a bullet’s presence in a chamber.

<sup>43</sup> P. Pajorski, „Klamka”..., p. 59–60.

<sup>44</sup> *Medycyna*..., p. 143.

<sup>45</sup> S. Kochański, *Brygady*..., p. 55.

<sup>46</sup> Martin L. Fackler – a military doctor, worked during the Vietnam War as a surgeon in field hospital, developed a method of researching the impact of modern bullets on the human body with use of ballistic gelatin, named Fackler Method after him, he was a director of (Wound Ballistic Laboratory at the Letterman Army Institute of Research, Presidio of San Francisco, California) (v. S. Kochański, *Brygady*..., p. 48–49).

<sup>47</sup> P. Pajorski, „Klamka”..., p. 60–61.

<sup>48</sup> Vide S. Kochański, *Brygady*..., p. 54–55.

<sup>49</sup> Vide idem, *Automatyczna*..., p. 52.

On the other hand, when it comes to easy assembly and disassembly of a gun, one should take into consideration:

- no excessively fine and delicate parts that could get lost or damaged,
- the capability of disassembly of a gun without use of tools, and in winter conditions while wearing gloves.

“It is important also to meet the condition of the capability for cleaning and wiping the barrel’s channel from the inlet with the lock removed”<sup>50</sup>.

The next important requirements that a good submachine gun must meet is the replaceability of the parts understood as the capability for repair of the weapon “in the field” without sending it to a workshop and the strength of the weapon, understood as the lifetime of the gun<sup>51</sup>:

- possibly highest wear resistance of the barrel,
- resistance to inattentive or even brutal handling of the gun,
- resistance to atmospheric and environmental conditions such as heat, frost, rain, snow, sand, mud, lack of cooling etc.

Beforehand, a high density of fire was also mentioned as an essential feature of a submachine gun. This is achieved thanks to a practical rate of fire of about 100 rounds / min. It is achieved by using capacious magazines [...] and swift replacement of the empty magazine with a spare magazine”<sup>52</sup>. The “manoeuvrability of submachine guns results from the small mass and small size”<sup>53</sup>. Small submachine guns weigh approx. 2.5 kg with a full magazine and are approx. 325 mm long. “These parameters make it easier to use the pistols in difficult combat conditions, such as in rooms, during the march, while entering and exiting vehicles and in broadly defined urban areas”<sup>54</sup>. It is worth mentioning here that “The principle of operation of the submachine guns is based on the use of recoil energy of a blowback system. In a few cases a delayed blowback system is used which is opened with a delay”<sup>55</sup>.

Submachine guns are fed by removable box or drum cartridges with capacities from 15 to 100 bullets. However, for the protection of persons, box cartridges are used almost exclusively, mainly due to:<sup>56</sup>

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<sup>50</sup> P. Pajorski, „Klamka”..., p. 62.

<sup>51</sup> Ibidem.

<sup>52</sup> S. Kočański, *Brygady...*, p. 140.

<sup>53</sup> Idem, *Automatyczna broń...*, p. 147.

<sup>54</sup> P. Rybicki, P. Salamonik, *Podstawowe...*, p. 5.

<sup>55</sup> S. Kočański, *Automatyczna...*, p. 149.

<sup>56</sup> Cf. Ibidem, p. 150.

- lower unladen mass,
- lower dead mass per bullet,
- fewer jams,
- ease of loading,
- smaller dimensions, allowing for concealing the weapon.

As soon as you have determined which submachine gun is good, you should consider what type and model you choose.

In the case of submachine guns designed to arm physical security officers workers, two tendencies can be observed. The first is the use of submachine guns based on classic pistols. The second is the use of designs typical for submachine guns.

When discussing the guns used by the supporters of the use of machine guns based on classic pistols, it is impossible to overlook the material of their frames. As with classic pistols, this class of submachine guns is based on a steel frame, a plastic frame and a light metal alloy frame. Each of these frames, and in essence every submachine gun based on one of those types of material from which the frame is made, has its advantages and disadvantages.

Machine guns based on a steel frame are relatively heavier in comparison to the other two, which causes obvious discomfort while carrying them, implying that the user tires faster. However, during firing, especially with continuous fire, they are more stable which increases the accuracy of the weapon. Possible discomfort of this type of frame is also the thermal discomfort of the operator, as the steel frames heat up and cool quickly. It should be also mentioned that one of the shortcomings of a submachine gun based on a steel frame is the weakest corrosion resistance among the three discussed materials.

Submachine guns based on a plastic frame are largely devoid of drawbacks of guns based on a steel frame. The advantage of such a gun includes, among other things:<sup>57</sup>

- smaller mass compared to submachine guns with similar dimensions based on a steel frame and a metal alloy frame (the weapon's "mass" grows with fatigue and lapse of operating time),
- relatively good thermal comfort (a plastic frame is not too cooled or warmed up by atmospheric conditions),

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<sup>57</sup> P. Pajorski, „*Klamka*” ..., p. 63.

– “corrosion resistance, absorption of parts of the energy of the recoil”<sup>58</sup>.

Pistols of this type are classified as automatic pistols and constitute a combination of a self-repeating pistol with a submachine gun.

Good weapons which meet the above mentioned requirements are, among others, automatic pistols such as:

- Glock 18,
- Beretta 93R,
- CZ 75 Automatic,
- Colt M911 MP.

In the case of submachine guns built in a classic way, the following firearms meet the above-mentioned requirements:

- HK MP5K,
- HK MP5KA1,
- HK UMP,
- Steyr TMP,
- PM 98,
- PM 06,
- SIG MPX-K,
- B&T MP9/TP9,
- B&T APC,
- Bulldog SMG,
- Magpul FMG9,
- Kriss Vector SMG,
- TAURUS SMT9,
- TAURUS SMT40,
- SR-2 Weresk,
- Kedr,
- CZ Scorpion EVO3A1,
- UZI PRO SMG,
- Ruger MP9.

So which submachine gun should we choose?

This question should be answered taking into account a number of factors, such as for example<sup>59</sup>:

- the type of protective tasks to be carried out,

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<sup>58</sup> J. Nawrotek, F. Kazimierski, *Krótką broń palną. Zagadnienia wybrane*, TNOiK „DOM ORGANIZATORA”, Toruń 2011, p. 230.

<sup>59</sup> P. Pajorski, *„Klamka”* ..., p. 67.

- the way of carrying the gun,
- the real threat level,
- the ability to use a particular type of gun,
- fire manoeuvrability and mobility,
- the individual preferences of the bodyguard.

Several sentences should be also dedicated to the new type of submachine guns classified as PDW (Personal Defense Weapon).

When defining submachine guns it should be stated that submachine guns weighing not less than 3 kg, with magazines with a capacity not smaller than 20 rounds of ammunition are classified within this family<sup>60</sup>. PDW machine guns were intended to serve as a last resort weapon in critical situations where persons armed with them are directly endangered by an enemy (up to 50 meters) and / or to allow for defence in close range combat (up to 150 meters)<sup>61</sup>. “Add to this the flat trajectory of the bullet, the reduced recoil (thanks to which even a person after a short training can fire accurately) and small weight”<sup>62</sup>. It should be also noted that on principle “irrespective of the model, the design of the gun should allow to carry it without an involvement of hands (on the waist, braces or other harness) in such a way that it does not interfere in any way with the performance of official duties”<sup>63</sup>. In addition, the submachine guns of this type should “function reliably in all types of land, sea and air operations in all conditions and all environments”<sup>64</sup>.

Among the submachine guns of the PDW family that can be used to perform tasks within the scope physical security of individuals, the following models may be mentioned:

- 224VOB,
- CBJ-MS,
- B&T TMP-46,
- HK MP7A1,
- FH P90.

As it can be easily noted, the choice of a suitable submachine gun as a weapon for the support of a pedestrian escort team is a difficult task

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<sup>60</sup> R. Wilk, *Personal Defence Weapon*, „Raport. Wojsko – Technika – Obronność” 8/2004.

<sup>61</sup> Cf. *Ibidem*.

<sup>62</sup> *Ibidem*.

<sup>63</sup> *Ibidem*.

<sup>64</sup> *Ibidem*.

and depends to a large extent on the subjective feelings and preferences of the person who will act in the security team as the fire support. So it is impossible to say that the ideal solution in every situation for every security worker will be a one particular model. The member of the team who will work with this kind of a weapon should find the one that suits them best.

Finally, it is worth noting that there is a very interesting technical-tactical solution, which is placing of a HK MP5K machine gun in a special case that allows the use of the weapon without pulling it out. The suitcase from the outside looks like a normal briefcase while its construction allows to install the aforementioned submachine gun inside the case, and a proper layout of the straight line mechanisms allows to “lift” the trigger to the transport handle and fire “with a hand”. The suitcase does not bring much attention to it and may be a big surprise for potential bombers.

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