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TITLE
A COMPARISON OF THE FIREPOWER
OF THE US AND SOVIET INFANTRY
DIVISION

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TABLE OF CONTENTS

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PREFACE

The basic strength of any army is its infantry. The combat effectiveness of infantry is largely dependent on firepower. This is a comparison between the firepower of an infantry organization of the Red Army and its counterpart in our own military forces. The division has been selected in order to present a unit large enough for valid comparison on a firepower basis. Necessarily, many other fields, such as organization, tactical doctrine, communication, and even national traits, as reflected in the two armies, are involved. These will be dealt with only to the extent necessary for clarity.

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INTRODUCTION

The greatest military asset of Soviet Russia is manpower. In the event of war with that nation, we can never expect to match their numbers, man for man, on the battlefield. Our efforts to overcome this manpower deficiency in our own armed forces have been directed toward quality instead of quantity, with the view in mind of increasing the effectiveness of the individual soldier by providing him with mobility and firepower, and by backing him with superior technology and greater industrial capacity.

Russia is narrowing the gap which gives us the advantage in the production field of military essentials. It is not generally realized that Russia's war effort in production during World War II compared favorably with our own (1); even though their country was partially overrun, and a significant portion of their industrial capacity destroyed or uprooted by war. Since that time, indications are that the Soviets have surpassed our estimates in progress in both the production and technological fields as witnessed by the early achievement of an atomic explosion (2), proficiency in quantity production of jet aircraft, and advancement in the field of electronics. Also, since World War II, a large portion of Europe's industrial capacity has come under Soviet control and more lies within reach in the event of war.

(1) U.S. Army, OCAFF, "Handbook of Foreign Military Forces, Volume II USSR", p. 21, undated, TIS Library.
(2) Ely L.B., "The Red Army Today", p. 264, The Military Service Publishing Co., Harrisburg, Penna., 1951, TIS Library.

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These facts emphazise a requirement that the American soldier possess the capability of overcoming on the battlefield many times his own number of an enemy who may be as well equipped as he. Firepower is one of the more important considerations in fulfilling this requirement.

DISCUSSION

How well does our infantry division compare with its Soviet counterpart in firepower? In order to approach the subject intelligently, one must take cognizance of a few general considerations which effect the comparison materially.

A listing of the principal armament of the two divisions (3) indicates that if the small arms in the hands of drivers, service personnel, and artillerymen which add but little to the firepower of a unit are discounted, the firepower capability of both units in tons of ammunition per minute which each can direct at its enemy is approximately equal (4). A study of the tables of organization and equipment of both divisions reveals, however, that the Red Army rifle division has some six thousand less personnel assigned than does our division. Conceding that there may be "fat" in our tables of organization, the Soviet division has a definite weakness in its firepower system as a result of the high ratio of weapons to

(3) See "Listing of Principal Armament of US and Soviet Infantry Divisions", Appendix, p. 19.
(4) U.S. Army, OCAFF, "Handbook of Foreign Military Forces, Volume II, USSR", p. 44, undated, TIS Library.

manpower. Insufficient personnel and equipment have been allotted to make full use of the firepower capability of the division. Observation, communication, and fire control systems have not been placed in effect to bring the flexibility and control of fires up to our standards. The Soviets possess the necessary theory to put these systems into effect. However, the average educational level within the Red Army precludes the universal adoption of this theory now, or in the near future (5). The above is only one example of the difficulty faced by Soviet forces in utilizing on a large scale the increasingly complicated methods and equipment of modern warfare. These difficulties have a decided effect on the design and employment of weapons.

Even taking such considerations into account, one might argue that the characteristic employment of many Red Army divisions on a narrow front, the holding out of small reserves, and the massive support a Soviet division usually receives from higher echelon artillery, will insure the Red Army fire superiority, through sheer mass and force of numbers, along the normal front of our infantry division. Obviously, this is true; if we allow such concentrations. However, I submit that through the proper exploitation of intelligence, and with the use of weapons we now possess which place a premium on dispersion of men and equipment, the Red Army will be forced to abandon, to a large extent, its doctrine of mass concentration

(5) Ely L.B., "The Red Army Today", p. 77 and 175, The Military Service Publishing Co., Harrisburg, Penna., 1951, TIS Library.

in depth on narrow fronts. Firepower capabilities would then be brought back more into balance on a divisional basis with the Soviet division somewhat at a disadvantage because of the necessity for fighting under unfamiliar circumstances.

For a more detailed comparison of firepower capabilities of the US and Soviet infantry division, the principal armament of both divisions have been divided into six categories: small arms, mortars, artillery, antiaircraft artillery, antitank weapons and armored vehicles. Each category will be discussed separately.

SMALL ARMS

First, it may be said that Soviet small arms are of the rough and ready variety. By our standards they are simple and some even crude in both design and construction. However, these arms lend themselves to mass manufacture, and have proven effective in the hands of the Russian soldier. A comparison of characteristics of the principal small arms found in the Red Army rifle division and in our own infantry division may be found in the appendix (6). All small arms in the Soviet division are 7.62 millimeter or 30 calibre. The principal divergence in types of small arms is the heavy Russian reliance on submachine guns. It should be noted, in this respect, that Russian ammunition is of poor quality subject to corrosion and rapid deterioration, and is not particularly adapted for use in automatic weapons (7). Frequent misfires and stoppages may

(6) See "Characteristics of Soviet and American Small Arms found in the Infantry Division", Appendix p.21.
(7) U.S. Army, D.A. Pamphlet 30-2, "The Soviet Army", p. 10, July 1949, TIS Library.

therefore be expected with these weapons. The short effective range of submachine guns has also resulted in high casualty rates among troops so armed (8). These casualties were accepted in return for the firepower developed.

The individual Soviet rifleman is armed principally with the Mossin Naggant model 1891/30 rifle, a manually operated weapon with a magazine of five rounds (9). The Tokarev rifle may be found in some units. It is a gas operated rifle which proved unsatisfactory for several reasons, and was withdrawn from production in 1943 (10). A shorter version of both these rifles have been produced as carbines. None of these weapons equal our standard rifle or carbine.

In the Soviet rifle squad, the armament is very similar to that found in our own squad. The main differences are that the Russian squad is armed with a light machine gun slightly superior to our Browning Automatic Rifle in firepower, and has a Panzerfaust type antitank weapon which exceeds our rifle grenade in armor penetration capability.

The light machine gun predominantly in use in the Soviet rifle division is the Degtyarev of a basic 1926/27 design, improved in 1944 (11). It is a gas operated,

(8) U.S. Army, DA Pamphlet 30-2, "The Soviet Army", p. 8, July 1949, TIS Library.
(9) Canadian Army, Canadian Army Journal, Volume 5, No. 10, "Firepower of the Soviet Army", p. 48, January 1952, TIS Library.
(10) U.S. Army, DA Pamphlet 30-2, "The Soviet Army", p. 10, July 1949, TIS Library.
(11) U.S. Army, DA Pamphlet 30-2, "The Soviet Army", p. 11, July 1949, TIS Library.

drum fed weapon weighing approximately twenty pounds with a maximum rate of fire of eighty rounds per minute. A new weapon known as the Company Light Machine Gun M1946 is coming into use. It is very similar to the Degtyarev, but can be fed by either belt or drum using the same forty seven round drum that is used with the Degtyarev. This gun also provides a faster barrel change than does the Degtyarev (12). In weight both these guns are comparable to our Browning Automatic Rifle and weigh some ten pounds less than our light machine gun. No tripod is provided with the Russian guns.

In the realm of heavy machine guns, the Maxim M1910 and Gorynov M1943 are in current use. The Gorynov is considered standard; however, the Maxim is preferred because of its dependability (13). These weapons have an effective direct fire range of twelve hundred yards. Both are mounted on Sokolov mounts which have inadequate traverse (14); otherwise, they compare favorably with our heavy machine gun.

The Soviet Rifle Company organization does not lend itself to the employment of machine guns in pairs reducing the overall effectiveness of these weapons within the company.

MORTARS

The Red Army in the debacle of 1941 lost a large amount of its artillery and was forced through the

(12) U.S. Army, DA Pamphlet 30-2, "The Soviet Army", p. 11, July 1949, TIS Library.
(13) U.S. Army, DA Pamphlet 30-2, "The Soviet Army", p. 12, July 1949, TIS Library.
(14) U.S. Army, DA Pamphlet 30-2, "The Soviet Army", p. 12, July 1949, TIS Library.

exigencies of war to replace much of this lost firepower with mortars - a weapon easy to manufacture in quantity. This weapon had a particular appeal to the Russian because of its simplicity, high rate of fire, and high ratio of weight of explosive charge to total weight of the projectile.

The Soviet division has no counterpart to our 60 millimeter mortar. A 50 millimeter company mortar was tried and rejected, presumably because of lack of power (15). Hence, the infantry company commander in the Soviet division has no organic weapon with which to reach into defilade. If he secures mortars through attachment, these are rather heavy and unwieldy for company use.

The Soviet infantry battalion is equipped with an 82 millimeter mortar of the conventional Stokes-Brandt type, with a circular base plate and wheels for displacement. One soldier can pull it over even ground. There are three types of this mortar, the M1937, M1941, and M1943. Of these, only the M1937 is equipped with panoramic or collimator type sights. The M1941 and M1943 mortars have mechanical azimuth sights similar to the sight of a rifle (16). The range of the 82 millimeter mortar is approximately the same as that of our 81 millimeter mortar.

Though mortars of higher calibre than 82 millimeter are considered as artillery under the Russian system of weapons classification, the other mortars of both the

(15) U.S. Army, DA Pamphlet 30-2, "The Soviet Army", p. 14, July 1949, TIS Library.
(16) U.S. Army, DA Pamphlet 30-2, "The Soviet Army", p. 14, July 1949, TIS Library.

American and Soviet infantry divisions will be discussed here.

The Russian counterpart to our 4.2 inch mortar is the 120 millimeter mortar M1943. An indication of the excellence of the 120 millimeter mortar may be found in the fact that it was adopted practically without modification by the German Army during World War II (17). It is superior to our 4.2 inch mortar in both range and weight of projectile; yet, does not weigh as much as our mortar. However, our division has greater firepower in 4.2 inch mortars than the Soviet infantry division has in its 120 millimeter mortars. We have a greater number of weapons in this class.

The American infantry division has no standard counterpart for the Russian 160 millimeter mortar M1943. It weighs 2381 pounds, but fires an 88 pound projectile to a range of 5500 yards. Mortars compose one third of the artillery organic to the Soviet division. A comparison of characteristics of Russian and American mortars of the infantry division may be found in the appendix (18).

ARTILLERY

Any study of Soviet division artillery must be prefaced by the statement that this artillery represents only a small portion of the artillery normally supporting a Red Army rifle division. The Russian division can expect more artillery support from higher echelon than does our division. However, our division commander has continuous

(17) U.S. Army DA Pamphlet 30-2, "The Soviet Army", p. 14, July 1949, TIS Library.
(18) See "Characteristics of Soviet and American Mortars found in the Infantry Division". Appendix p. 22.

influence on the fires supporting his command. The Soviet divisional commander usually has such influence over non-organic artillery only during the planning phase, and must rely on his own artillery to take care of any situation not provided for in the elaborate fire preplanning normal in Soviet operations.

Divisional artillery of the Russian division has the same number of pieces, seventy two, as does the American infantry division. The weapons themselves are 76, 122, and 160 millimeter as compared with our 105 and 155 millimeter pieces. Artillery weapons' characteristics may be found in the appendix (19).

The chief factors limiting the effectiveness of Soviet divisional artillery are the same as those limiting all Russian artillery - lack of flexibility, failure to exploit the range of their weapons, and lack of some refinements in materiel such as proximity fuzes, counter mortar radar, and adequate communications.

The Soviet fire control system presently in use was adopted from the German Army in 1941. It is similar to that used by our artillery in 1930 (20). Computation is necessary, which is inherently slow. Russian service schools are teaching an alternate system similar to our present system, but there are no indications that the Red Army will adopt it as standard in the near future (21).

(19) See "Characteristics of Soviet and American Artillery found in the Infantry Division", Appendix p. 23.

(20) Ely, L.B., "The Red Army Today", p. 182, The Military Service Publishing Co., Harrisburg, Penna., 1951, TIS Library.

(21) Ely L.B., "The Red Army Today", p. 77, The Military Service Publishing Co., Harrisburg, Penna., 1951, TIS Library.

Limitations of fire control destroy flexibility in Soviet artillery and because of the amounts of artillery used, require exhaustive preplanning of fires.

Due to the limited use of aircraft for fire adjustment, the Soviets cannot exploit the full range of their weapons as we can. This shortcoming forces frequent displacement and a jamming of artillery into forward areas. In mobile situations, a significant portion of Russian artillery must be on the move at any given time rendering that portion useless.

The combined result of these limitations forced the Russians in World War II to employ large amounts of artillery in direct fire roles. The success enjoyed by such employment ledto the adoption of this doctrine as standard. Necessarily, artillery weapons so employed are extremely vulnerable to destruction.

The Soviet artillery relies on exhaustive reconnaissance and aerial photography for counterbattery work. They possess no counter mortar radar (22). The present system is effective but slow. Our counter mortar and counterbattery systems have a decided superiority over the Russian system and the excellence of our fire control should give us a decided advantage in artillery. We certainly have the advantage in comparing only the artillery capabilities of the Soviet and American infantry division.

(22) Ely L.B., "The Red Army Today", p. 183, The Military Service Publishing Co., Harrisburg Penna., 1951, TIS Library.

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ANTITANK

There is a marked divergence between antitank defense doctrines as they exist in the Soviet and American infantry division which has an effect on the types and employment of antitank weapons in the two divisions. We depend heavily on the organic armor present within our division supplemented by recoilless rifles and 3.5 inch rocket launchers. The Russians depend, to a large extent, on towed, high velocity, antitank guns supplemented by 82 millimeter rocket type weapons and Panzerfausts. Comparative characteristics of antitank weapons may be found in the appendix (23).

The Soviet rifle division has twelve 57 millimeter and twelve 85 millimeter towed antitank guns. These weapons have excellent accuracy and a considerable armor piercing capability - 6 inches for the 57 millimeter gun using a shaped charge and 5 inches for the 85 millimeter gun. The Russian knack for camouflage, and the withholding of fire until the range has closed to five or six hundred yards makes these weapons effective.

However, both in number and types of weapons the American infantry division has a considerably greater antitank capability than does the Red Army rifle division.

ANTIAIRCRAFT

By our standards, the Soviet infantry division has, organically, only a token antiaircraft force. This is, most probably, a reflection of the Russian experience of

(23) See "Characteristics of Soviet and American Antitank Weapons found in the Infantry Division". Appendix p. 25.

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World War II when the majority of the German Luftwaffe was employed either on the western front or in the air defense of Germany, and made no serious air effort against the Russian Army after the initial onslaught.

Forty five 12.7 millimeter, or 50 calibre, Degtyarev M1938 machine guns are organic to the Soviet infantry division and are located within the rifle regiments. This weapon is belt-fed, air-cooled, has a ground range of 4000 yards, and an effective antiaircraft ceiling of 1800 feet.

The Soviet divisional antiaircraft battalion has sixteen 37 millimeter guns M1939, of the Bofors type with a maximum vertical range of 19800 feet and a rate of fire of 160 to 180 rounds per minute, a comparison of characteristics of these weapons with our divisional antiaircraft weapons may be found in the appendix (24).

Obviously, these weapons, both in number and capability, do not equal the thirty two full tracked motor carriages mounting twin 40 millimeter Bofors guns, the thirty two motor carriages mounting four 50 calibre machine guns each, and the three hundred and thirty nine other 50 calibre machine guns organic to our infantry division.

The real significance of this comparison is that within the American infantry division there is a large amount of antiaircraft artillery with a great firepower capability which can be used in a direct fire, ground support, role. The Soviet division does not possess a similar firepower capability.

(24) See "Characteristics of Soviet and American Antiaircraft Artillery found in the Infantry Division", Appendix p. 24.

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ARMORED VEHICLES

In armored firepower the Soviet rifle division is weak in comparison with our infantry division. The Russian division has only 52 medium tanks. We have 140 medium tanks and 9 light tanks. Russian divisional tanks are all armed with an 85 millimeter gun; 135 of our tanks within the division are armed with 90 millimeter guns. The remainder are armed with 76 millimeter guns. Russian armored strength is augmented by sixteen high velocity, 100 millimeter, self-propelled guns. The eighteen 76 millimeter self-propelled guns within the Soviet division occupy a somewhat separate category, being used almost exclusively for close fire support of infantry.

One cannot classify self-propelled guns as being equal to tanks. The self-propelled guns have lighter armor and a narrower traverse than does a tank.

The armored cars within a Soviet infantry division are of doubtful value from a firepower viewpoint. There are only ten, organically assigned. The old type, BA 10, mounts a 45 millimeter gun and a coaxial 7.62 millimeter machine gun. The new type, BA 64 mounts only a 7.62 millimeter machine gun (25).

Soviet armor is excellent and has often been ahead of that in other armies in essentials of design (26). The Red Army rifle division can expect material armored

(25) U.S. Army, DA Pamphlet 30-2, "The Soviet Army", p. 31, July 1949, TIS Library.
(26) U.S. Army, DA Pamphlet 30-2, "The Soviet Army", p. 8, July 1949, TIS Library.

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augmentation under the pooling system of supporting arms. Weapons characteristics of armored vehicles are compared in the appendix (27).

CONCLUSION

Though the firepower potential of the Soviet and American infantry divisions is approximately equal, the American division through the exploitation of the capabilities of each of its weapons, and through a better system of fire control, has developed a considerably greater effective firepower capability.

On a comparative basis, the Soviet rifle division has two striking weaknesses in its organic firepower - anti-aircraft artillery and armored armament. The American division has in its firepower a well-balanced weapon paralleling a well-rounded organization. The American division can perform a variety of missions without attachment; whereas the Russian division normally requires significant artillery and armored reinforcement for the performance of everyday combat tasks. Attachment inherently lessens teamwork which would be present if all necessary units were organic to the division.

Reinforcement that the Soviet division normally receives under the pooling system common in the Red Army may well overbalance our firepower advantage. Therefore, it is necessary that we increase our divisional firepower with added emphasis on counter mortar capabilities and the addition of weapons, such as machine guns and mortars,

(27) See "Characteristics of Soviet and American Main Armament Mounted on Armored Vehicles of the Infantry Division", Appendix p. 26.

having a high firepower ratio to number of personnel required to serve as crews. These weapons should be integrated into existing organizations for a maximum utilization of available manpower. With the elimination of unessential positions, and reallocation of personnel within the division, no significant increase in the assigned strength of the division would be necessary under this system.

No sacrifice in mobility should be made for additional firepower. The Soviet division can best develop its firepower capability in static situations where planning compensates for lack of flexibility. Mobile situations favor the American division on a firepower versus firepower basis. Here, communication, flexibility, and fire control advantages have a telling effect.

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APPENDIX

Listing of Principal Armament of US and Soviet Infantry Divisions (28)

US		USSR	
	SMALL ARMS		
Pistols	1809	Pistols	1750
Rifle/Carbine	14187	Rifle/Carbine	6672
SMG	913	SMG	2794
LMG	663	LMG	305
HMG	40	HMG	189
	MORTARS		
60mm	84	-	-
81mm	40	82mm	81
4.2 inch	36	120mm	18
-	-	160mm	12
	ARTILLERY		
105mm How	54	76mm Gun	24
155mm How	18	122mm How	36
	ANTIAIRCRAFT		
50 Cal	467	12.7mm	45
40mm	64	37mm	16
	ANTITANK		
3.5 inch Rocket Launcher	524	82mm Rocket wpn	36
57mm Recoilless Rifle	81	57mm Gun	36
75mm Recoilless Rifle	21	85mm Gun	12
105mm Recoilless Rifle	36	-	-
-	-	Panzerfaust	243

(28) The Infantry School, "Reference Data Infantry Regiment", p. 1, June 1952, personal copy.
U.S. Army OCAFF, "Handbook of Foreign Military Forces, Volume II USSR", p. 49, undated, TIS Library.

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Listing of Principal Armament of US and Soviet Infantry Divisions (contd.)

US		USSR	
	ARMORED VEHICLES		
Tank 76mm Gun	14	SP Gun 76mm	18
Tank 90mm Gun	135	Tank 85mm Gun	52
-	-	100mm SP Gun	16
-	-	Armored Car	10

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Characteristics of Soviet and American Small Arms

found in the Infantry Division (29)

Weapon	Effective Range in yards	Type of Feed	Effective Rate of Fire Rounds Per Minute
Tokarev Pistol	50	8 rd mag	10
Pistol Automatic Cal 45 M1911A1	50	7 rd mag	10
PPs Tommy Gun M1943	200	35 rd mag	100
PPsh Tommy Gun M1941	200	71 rd mag	100
Submachine Gun Cal 45 M3A1	100	30 rd mag	40-60
US Rifle Cal 30 M1	500	8 rd clip	16
Mossin Nagant M1891/30	400-500	5 rd mag	manual operation
US Carbine Cal 30 M2	300	30 rd mag	40-60
Degtyarev LMG M1944	900	47 rd mag	80
Browning Automatic Rifle Cal 30 M1918 A-2	500	20 rd mag	40-60
Company Light Machine Gun M1946	900	47 rd mag or 250 rd belt	80
Light Machine Gun Cal 30 M1919A6	2000	250 rd belt	60
Maxim Heavy Machine Gun M1910	1200	250 rd belt	150
Gorynov Heavy Machine Gun M1943	1200	250 rd belt	150
Heavy Machine Gun Cal 30 M1917A1	2000	250 rd belt	125

(29) The Infantry School, Weapons Department, Chart, "Characteristics of Infantry Weapons", August 1952, personal copy.
U.S. Army, DA Pamphlet 30-2, "The Soviet Army", p. 10, 11 and 12, July 1949, TIS Library.
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Characteristics of Soviet and American Mortars found in the Infantry Division (30)

Weapon	Maximum Rate of Fire in Rounds Per Minute	Weight in lbs	Maximum Range in yards	Bursting Radius in yards	Weight of Projectile
60mm M19	30	40	2000	20	2.95
81mm M29	30	115	3300	25	7.28
82mm M1943	25	128	3325	33	7.63
4.2 inch M30	20	650	6000	45	27.34
120mm M1943	12	606	6240	55	35.05
160mm M1943	3-4	2381	5500	?	88

(30) The Infantry School, Weapons Department, Chart, "Characteristics of Infantry Weapons", August 1952, personal copy.
U.S. Army, DA Pamphlet 30-2, "The Soviet Army", p. 15, July 1949, TIS Library.

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Characteristics of Soviet and American Artillery

found in the Infantry Division (31)

Weapon	Range in yards	Rate of Fire in Rounds Per Minute	Weight of HE Projectile in Pounds
76mm Gun M1942	14300	25	13.80
105mm Howitzer M2A2	12205	8	33
122mm Howitzer M1939	12900	6	47
155mm Howitzer M1A2	16355	4	94.75

(31) Department of the Army, TM 9-2300, "Artillery Material and Associated Equipment", p. 63 and 65, May 1949, TIS Library.
U.S. Army, DA Pamphlet 30-2, "The Soviet Army", p. 43, July 1949, TIS Library.

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Characteristics of Soviet and American Antiaircraft

Artillery found in the Infantry Division (32)

Weapon	Effective Antiaircraft Ceiling in yards	Rate of Fire in Rounds Per Minute
Heavy Machine Gun Cal 50 HB M-2	800	400-600
Degtyarev Machine Gun 12.7mm M1938	600	125
37mm Gun M1939	800 (Est.)	160-180
40mm Gun	1200	120

(32) U.S. Army, DA Pamphlet 30-2, "The Soviet Army", p. 24 and 43, July 1949, TIS Library.
The Infantry School, Tactical Department, "Tactical Employment of AAA(AW)", prob. 2668, p. 3, 1 Dec 1951, personal copy.

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Characteristics of Soviet and American Antitank

Weapons found in the Infantry Division (33)

Weapon	Range in yards	Armor Piercing Capability in inches	Rate of Fire in Rounds Per Minute
Rifle Grenade M9A1	350	3	4
VPG-S-41 HEAT Rifle Grenade	?	1.18	?
RPG-6 HEAT Hand Grenade	?	3.94	-
Panzerfaust	165	8	-
3.5 inch Rocket Launcher M20B1	900	11	8
57mm Rifle M18	4750	3	8
75mm Rifle M20	7200	4	8
105mm Rifle M27	9350	11	7
57mm Gun M1943	9200	5.55	25
85mm Gun M1945	17000	4.92	15

(33) The Infantry School, Weapons Department, Chart, "Characteristics of Infantry Weapons", August 1952, personal copy.
U.S. Army, DA Pamphlet 30-2, "The Soviet Army", p. 13 and 43, July 1949, TIS Library.

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Characteristics of Soviet and American Main Armament

Mounted on Armored Vehicles of the Infantry Division (34)

Weapon	Armor Piercing Capability in inches at 1000 yds	Rate of Fire in Rounds Per Minute
76mm Gun M1A2	5.2	8
90mm Gun M3	7.8 at 550 yds	8
76mm Gun M1942	3.6	25
85mm Gun M1942	4.9	15
100mm Gun M1944	6	8

(34) U.S. Army, DA Pamphlet 30-2, "The Soviet Army", p. 43, July 1949, TIS Library.
The Infantry School, Tactical Department, "Armored Reference Data", p. 53, February 1952, TIS Library.

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