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Foreign Firing Table FT-F-50, Soviet Gun, Tank, 100mm, Model 1944, (A-10); Gun, Tank, 85mm, Model 1944 (ZIS-S53); Gun, Tank, 76mm, Model 1941, (ZIS-5) firing 100mm fragmentation high explosive shell OΦ-412; 100mm armor piercing tracer shell BP-412; 85mm fragmentation shell O-365 and O-365K; 85mm armor piercing tracer shell BP-365 and BP-365K; 76mm fragmentation shell O-350; [and] 76mm armor piercing tracer shell BP-350; June 1951

Ordnance Intelligence, Ordnance Corps, Department of the Army

Robert Bolin, depositor

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FT-F-50
~~FT-F-100-85-76~~

FOREIGN FIRING TABLES

for

S O V I E T

Gun, Tank, 100mm, Model 1944, (II -10)
Gun, Tank, 85mm, Model 1944, (ZIS-S53)
Gun, Tank, 76mm, Model 1941, (ZIS-5)

firing

100mm Fragmentation High Explosive Shell OΦ-412
100mm Armor Piercing Tracer Shell EP-412
85mm Fragmentation Shell O-365 and O-365K
85mm Armor Piercing Tracer Shell EP-365 and
EP-365K
76mm Fragmentation Shell O-350
76mm Armor Piercing Tracer Shell EP-350

WARNING! DO NOT USE THESE TABLES BEFORE
READING NOTES INSIDE THIS COVER

Prepared by

ORDNANCE INTELLIGENCE

ORDNANCE CORPS, DEPARTMENT OF THE ARMY

June 1951

~~RESTRICTED~~

SAH

R E S T R I C T E D

N O T E S

1. The following notes apply to this firing table only.
2. The Soviet mil system differs from the U. S. system in that the circle is divided into 6000 parts instead of 6400.
3. The charges shown in this table are Soviet charges and compare to U. S. charges as follows:

Soviet Full Charge equals - U.S. Normal Charge
Soviet Reduced Charge equals - U.S. Reduced Charge
4. These tables are a translation from the original Soviet firing tables, however the data has not been checked by United States Army Ordnance Corps Firing Tests.

R E S T R I C T E D

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1. BASIC INFORMATION

a. This publication contains firing tables for the following weapons:

- (1) The Model 1944 (Д -10) 100mm gun mounted in the Model SU-100 self-propelled gun. This gun is ballistically identical to the Model 1944, 100mm anti-tank gun, and uses the same ammunition. However, the AT gun has a maximum elevation of plus 40 degrees whereas the self-propelled gun is limited to a maximum elevation of plus 17 degrees.
- (2) The Model 1944 (ЗМС -С 53) 85mm gun mounted in the Т34/85 and the Т-44 medium tanks. This gun is ballistically identical to the Model 1939, 85mm AA gun, and uses the same ammunition. However, the AA gun has a maximum elevation of plus 82 degrees, whereas both the Т34/85 and the Т-44 tank guns have a maximum elevation of plus 25 degrees.
- (3) The Model 1941 (ЗМС -5) 76.2mm gun mounted in the Т34/76 medium tank and the KB-76 heavy tank. This gun is the same ballistically as the Model 1939, 76.2mm field gun.

2. WEAPONS CHARACTERISTICS

a. The weapons covered in this publication have the following characteristics:

Characteristics	100mm Gun	85mm Gun	76mm Gun
Max. Range (yds)	15,316	17,716	14,545
Normal Range (yds)	4,000	5,200	4,000
Tube Length (Cals)	53	49	39
Muzzle Vel. (fps)	2,953	2,625	2,231
Ammunition	HE, AP-T, HVAP-T	HE, AP-T, HVAP-T	HE, AP-T, HVAP-T, HEAT
Rate of fire (rpm)	6	8	12
Elevation (deg.)	/ 17	/ 25	/ 30
Depression (deg.)	- 2	?	?
Traverse (deg.)	16	360	360
Proj. Wt. (HE)	35.1 lbs	21.2 lbs	13.7 lbs
Proj. Wt. (AP-T)	34.6 lbs	20.3 lbs	14.3 lbs
Mod Sight Used	TII-19	TII-15	?

b. The maximum ranges listed above are the maximum ranges of which the weapons are ballistically capable, however in firing from tanks and self-propelled guns the maximum range cannot be attained due to the limited elevation of the weapons in these mounts.

c. The HVAP-T and HEAT projectiles listed above are not covered in these tables; these rounds are used at short ranges, and visual sighting is used.

3. SIGHTS

a. The sights used in firing the weapons covered in

these tables are direct fire telescopic sights. They are mounted on brackets attached to the non-recoiling part of the gun mount. These sights contain a reticle on which is shown the scales used with the different types of projectiles. These scales are in the form of a series of graduations, each main graduation being numbered with the range at which used, and sub-divisions of the main graduation being properly indicated. The following table lists the model of sight used, projectile used, and the sight scale to be used with that projectile. On the sight reticle proper, the identifying sight scale symbol will be shown directly over the scale to be used, while the firing table lists the sight scale to be used with each projectile. This scale is shown in the upper left corner of the first page of each table.

Weapon	Model of Sight	Projectile Used	Charge Used	Sight Scale to be Used
100mm	TIII-19	OΦ-412	Full	<u>OΦ</u> ΠΕΛΗ
100mm	TIII-19	OΦ-412	Reduced	<u>OΦ</u> ΥΜ
100mm	TIII-19	BP-412	Full	BP
85mm	TIII-15	BP-365K	Full	BPΟΓ
85mm	TIII-15	BP-365	Full	BPΟΓ
85mm	TIII-15	O-365	Full	BPΟΓ
85mm	TIII-15	O-365K	Full	BPΟΓ
76mm	*	BP-350	Full	BPΔΓ
76mm	*	O-350	Full	BPΔΓ

* The model number of the sight used with the 76mm gun is unknown. The sight scale listed is shown in the original Soviet firing table for this gun.

4. AMMUNITION

a. The ammunition listed in these tables is of the fixed type. A full charge weighing 12.04 pounds and a reduced charge weighing 8.17 pounds are used with the 100mm gun. The 85mm and the 76mm guns use only a full charge weighing 5.70 pounds and 2.38 pounds respectively.

b. The propellant powders are composed of tubular grains of the progressive burning type, and the grains range in size from $4/1$, $7/1$, $7/7$, $9/7$, $12/7$ to $14/7$. The numerator gives the grain web size in 0.1 of a millimeter, and the denominator indicates the number of perforations, e.g., $4/1$ indicates a grain with a 0.4mm web size and a single perforation while $12/7$ means a 1.2mm web size and seven perforations.

c. Soviet complete rounds are identified by an index made up of figures and letters of the Soviet alphabet. Below is a table listing the complete rounds covered in these tables.

Caliber	Complete Round Index	Projectile Index	Type of Projectile	Charge Index	Type of Powder	Weight of Powder (lbs)	Fuze Used
100mm	Y0Φ-412	0Φ-412	HE	Ж-412	7/1	12.04	PTM
100mm	Y0Φ-412	0Φ-412	HE	Ж-412	7/7	8.17	PTM
100mm	YBP-412	BP-412	AP-T	Ж-412	7/1	12.04	МЦ-8
85mm	YBP-365K	BP-365K	AP-T	Ж-365	14/7	5.70	МЦ-8
85mm	YBP-365	BP-365	AP-T	Ж-365	12/7	5.70	МЦ-8
85mm	Y0-365K	0-365K	HE	Ж-365	14/1	5.70	T-5
85mm	Y0-365	0-365	HE	Ж-365	12/7	5.70	T-5
76.2mm	YBP-350	BP-350	AP-T	Ж-354	9/7	2.38	МЦ-5
76.2mm	Y0-350	0-350	HE	Ж-354	7/7	2.38	KTM-1

FIRING TABLES

Table 1

100mm Tank Gun, Model 1944 (D -10)
firing

Fragmentation High Explosive Shell 00-412

Sight Scale $\frac{00}{11111}$

Full Charge
Muzzle Velocity 900 m/sec

Model TH-19 Sight

Angle of Jump
Minus 3 Minutes

Range (Meters)	Sight Setting (Grad.)	Maximum Ordinate (Meters)	Direction Corrections (Mils)		Angle of Sight (Mils)	Angle of Fall (Mils)			Terminal Velocity (m/sec)	Time of Flight (Seconds)
			Lateral Corrections	For Lateral Wind - 10 m/sec		Degrees	Minutes	Mils		
X	h	Y	ΔZ_b	ΔW_z	c	e			Vk	t _c
100	1	0	0	0	1	0	02	1	891	0.1
200	2	0.1	0	0	2	0	04	1	883	0.2
300	3	0.1	0	0	2	0	06	2	874	0.3
400	4	0.2	0	1	3	0	09	2	866	0.4
500	5	0.3	0	1	4	0	12	3	858	0.5
600	6	0.5	0	1	4	0	15	4	850	0.7
700	7	0.7	0	1	5	0	17	5	842	0.8
800	8	1.0	0	1	6	0	20	6	834	0.9
900	9	1.3	0	1	6	0	22	6	826	1.0
1000	10	1.6	0	1	7	0	25	7	818	1.1
100	11	1.9	0	1	8	0	27	8	810	1.2
200	12	2.3	0	1	8	0	30	8	802	1.4
300	13	2.7	0	1	9	0	32	9	794	1.5
400	14	3.2	0	2	10	0	35	10	786	1.6
500	15	3.7	0	2	10	0	38	11	778	1.7

Full Charge										
Range (Meters)	Sight Setting (Grad.)	Maximum Ordinate (Meters)	Direction Corrections (Mils)		Angle of Sight (Mils)	Angle of Fall (Mils)			Terminal Velocity (m/sec)	Time of Flight (Seconds)
			Lateral Corrections	For Lateral Wind " 10 m/sec		Degrees	Minutes	Mils		
X	h	Y	ΔZ_b	ΔW_z	c	e			V _k	t _c
600	16	4.3	0	2	11	0	41	11	771	1.9
700	17	5.0	0	2	12	0	44	12	763	2.0
800	18	5.7	0	2	13	0	47	13	756	2.2
900	19	6.5	0	2	13	0	50	14	748	2.3
2000	20	7.4	1	2	14	0	53	15	741	2.4
100	21	8.4	1	2	15	0	56	16	733	2.6
200	22	9.5	1	2	16	1	00	17	726	2.7
300	23	11	1	2	16	1	03	18	719	2.9
400	24	12	1	2	17	1	07	19	712	3.0
500	25	13	1	2	17	1	11	20	705	3.2
600	26	14	1	3	18	1	15	21	698	3.3
700	27	15	1	3	19	1	19	22	691	3.5
800	28	16	1	3	20	1	23	23	684	3.6
900	29	17	1	3	21	1	27	24	677	3.7
3000	30	18	1	3	22	1	32	25	670	3.8
100	31	19	1	3	23	1	36	27	663	4.0
200	32	21	1	3	24	1	41	28	656	4.1
300	33	22	1	3	25	1	46	30	649	4.3
400	34	24	1	3	26	1	51	31	642	4.4
500	35	26	1	3	27	1	56	32	635	4.6
600	36	28	1	3	28	2	01	34	628	4.8
700	37	30	1	4	28	2	06	35	621	4.9
800	38	32	1	4	29	2	12	37	614	5.1
900	39	34	1	4	30	2	17	38	607	5.2
4000	40	37	1	4	31	2	23	40	600	5.4
100	41	39	2	4	32	2	29	41	594	5.5
200	42	42	2	4	34	2	35	43	587	5.7

Full Charge

Range (Meters)	Sight Setting (Grad.)	Maximum Ordinate (Meters)	Direction Corrections (Mils)		Angle of Sight (Mils)	Angle of Fall (Mils)			Terminal Velocity (m/sec)	Time of Flight (Seconds)
			Lateral Corrections	For Lateral Wind - 10 m/sec		Degrees	Minutes	Mils		
X	h	Y	ΔZ_b	ΔW_z	c	ω			Vk	t_c
300	43	45	2	4	35	2	41	45	581	5.9
400	44	48	2	4	36	2	48	47	574	6.1
500	45	51	2	4	37	2	55	49	568	6.2
600	46	54	2	4	38	3	02	51	561	6.4
700	47	57	2	4	39	3	09	52	555	6.6
800	48	61	2	5	41	3	16	54	548	6.8
900	49	64	2	5	42	3	24	57	542	7.0
5000	50	68	2	5	43	3	31	59	536	7.2
100	51	72	2	5	44	3	39	61	530	7.4
200	52	76	2	5	46	3	47	63	524	7.6
300	53	80	2	5	47	3	55	65	518	7.7
400	54	84	2	5	48	4	04	68	512	7.9
500	55	88	2	5	49	4	12	70	506	8.1
600	56	93	2	5	51	4	21	72	501	8.3
700	57	97	2	5	52	4	30	75	495	8.5
800	58	102	2	6	54	4	39	77	490	8.8
900	59	107	2	6	55	4	48	80	485	9.0
6000	60	112	2	6	56	4	58	83	479	9.2
100	61	117	3	6	58	5	08	86	473	9.4
200	62	122	3	6	59	5	18	88	468	9.6
300	63	127	3	6	61	5	29	91	463	9.8
400	64	133	3	6	62	5	39	94	458	10.1
500	65	138	3	6	63	5	50	97	453	10.3
600	66	144	3	6	65	6	01	100	448	10.5
700	67	150	3	6	66	6	13	104	443	10.8
800	68	156	3	6	68	6	24	107	438	11.0
900	69	162	3	6	69	6	36	110	433	11.3
7000	70	168	3	7	71	6	48	113	429	11.5

Table 2

100mm Tank Gun, Model 1944 (II-10)
 firing
 Fragmentation High Explosive Shell OO-412

Sight Scale $\frac{\text{OO}}{\text{YM}}$

Reduced Charge
 Muzzle Velocity 600 m/sec

Model TIII-19 Sight

Angle of Jump
 Minus 3 Minutes

Range (Meters)	Sight Setting (Grad.)	Maximum Ordinate (Meters)	Direction Corrections (Mils)		Angle of Sight (Mils)	Angle of Fall (Mils)			Terminal Velocity (m/sec)	Time of Flight (Seconds)
			Lateral Corrections	For Lateral Wind - 10 m/sec		Degrees	Minutes	Mils		
X	n	Y	ΔZ_b	ΔW_z	c	w			V _k	t _c
100	1	0	0	0	2	0	05	1	592	0.2
200	2	0.1	0	0	3	0	10	3	584	0.4
300	3	0.3	0	0	5	0	15	4	576	0.5
400	4	0.5	0	1	6	0	20	6	569	0.7
500	5	0.8	0	1	8	0	25	7	561	0.9
600	6	1.3	0	1	9	0	31	9	554	1.1
700	7	1.8	0	1	10	0	36	10	547	1.2
800	8	2.4	0	1	12	0	42	12	540	1.4
900	9	3.1	0	1	13	0	48	13	533	1.6
1000	10	3.9	0	1	15	0	54	15	527	1.8
100	11	4.8	0	1	17	1	00	17	520	2.0
200	12	5.8	0	2	18	1	07	19	514	2.2
300	13	6.9	0	2	20	1	14	20	507	2.4
400	14	8.1	0	2	22	1	21	22	501	2.6
500	15	9.4	0	2	23	1	28	24	495	2.8
600	16	11	0	2	25	1	36	26	489	3.0
700	17	12	0	2	27	1	44	29	483	3.2

Reduced Charge

Range (Meters)	Sight Setting (Grad.)	Maximum Ordinate (Meters)	Direction Corrections (Mils)		Angle of Sight (Mils)	Angle of Fall (Mils)			Terminal Velocity (m/sec)	Time of Flight (Seconds)
			Lateral Corrections	For Lateral Wind - 10 m/sec		Degrees	Minutes	Mils		
X	h	Y	ΔZ_b	ΔW_z	C	G			V _k	t _c
800	18	14	0	3	28	1	52	31	477	3.4
900	19	15	0	3	30	2	00	33	471	3.6
2000	20	17	1	3	32	2	09	36	466	3.8
100	21	19	1	3	34	2	18	38	460	4.0
200	22	21	1	3	35	2	27	41	455	4.2
300	23	23	1	3	37	2	36	43	449	4.4
400	24	26	1	3	39	2	46	46	444	4.7
500	25	28	1	4	42	2	56	49	438	4.9
600	26	31	1	4	44	3	07	52	433	5.1
700	27	34	1	4	46	3	18	55	428	5.4
800	28	37	1	4	48	3	29	58	423	5.6
900	29	40	1	4	50	3	41	61	418	5.8
3000	30	44	1	4	52	3	53	65	413	6.0
100	31	48	1	4	55	4	05	68	408	6.3
200	32	52	1	4	57	4	18	72	403	6.5
300	33	56	1	5	59	4	31	75	398	6.7
400	34	61	1	5	62	4	44	79	394	7.0
500	35	66	2	5	64	4	58	83	389	7.2
600	36	71	2	5	66	5	12	87	385	7.5
700	37	76	2	5	69	5	26	91	381	7.8
800	38	82	2	5	71	5	41	95	377	8.1
900	39	88	2	6	73	5	56	99	373	8.3
4000	40	94	2	6	76	6	12	103	369	8.6

Table 3

100mm Tank Gun, Model 1944 (II-10)
 firing
 Armor Piercing Tracer Pointed Shell BP-412
 with MU-8 Fuze

Sight Scale BP
 Model TIII-19 Sight

Full Charge
 Muzzle Velocity 895 m/sec

Angle of Jump
 Minus 3 Minutes

Range (Meters)	Sight Setting (Grad.)	Maximum Ordinate (Mils)	Direction Correc- tions (Mils)		Angle of Sight (Mils)	Angle of Fall (Mils)			Terminal Velocity (m/sec)	Time of Flight (Seconds)	Armor Penetra- tion	
			Lateral Corrections	For Lateral Wind - Vel. 10 m/sec		Degress	Minutes	Mils			At 0° (mm)	At 30° (mm)
X	h	Y	ΔZ_b	ΔW_z	c	e			V_k	t_c	l	l
100	1	0	0	0	1	0	02	1	879	0.1	172	140
200	2	0.1	0	0	2	0	05	1	864	0.2	167	136
300	3	0.2	0	0	3	0	08	2	848	0.3	163	133
400	4	0.3	0	0	4	0	11	3	833	0.5	159	129
500	5	0.4	0	0	4	0	13	4	817	0.6	155	126
600	6	0.6	0	0	5	0	16	4	802	0.7	151	122
700	7	0.8	0	0	6	0	19	5	786	0.8	147	119
800	8	1.1	0	1	6	0	22	6	771	1.0	143	116
900	9	1.4	0	1	7	0	25	7	756	1.1	139	113
1000	10	1.8	0	1	8	0	29	8	741	1.2	135	110
100	11	2.2	0	1	9	0	32	9	726	1.3	131	107
200	12	2.7	0	1	9	0	36	10	711	1.5	127	104
300	13	3.3	0	1	10	0	40	11	696	1.6	123	101
400	14	3.9	0	2	11	0	44	12	682	1.8	119	98
500	15	4.6	0	2	12	0	48	13	668	1.9	116	95
600	16	5.4	0	2	12	0	53	15	654	2.1	112	92

Full Charge

Range (Meters)	Sight Setting (Grad.)	Maximum Ordinate (Mils)	Direction Corrections (Mils)		Angle of Sight (Mils)	Angle of Fall (Mils)			Terminal Velocity (m/sec)	Time of Flight (Seconds)	Armor Penetration	
			Lateral Corrections	For Lateral Wind - Vel. 10 m/sec		Degrees	Minutes	Mils			At 0° (mm)	At 30° (mm)
700	17	6.3	0	2	13	0	58	16	640	2.2	108	89
800	18	7.2	0	2	14	1	03	18	627	2.4	105	86
900	19	8.2	0	2	15	1	08	19	613	2.6	102	83
2000	20	9.3	1	3	16	1	13	20	600	2.8	99	81
100	21	10	1	3	17	1	18	22	587	2.9	96	78
200	22	12	1	3	19	1	24	23	574	3.1	94	76
300	23	13	1	3	20	1	30	25	562	3.3	91	74
400	24	15	1	3	21	1	37	27	549	3.5	88	72
500	25	16	1	3	22	1	44	29	537	3.7	86	70
600	26	18	1	4	23	1	52	31	525	3.9	83	68
700	27	20	1	4	24	2	00	33	513	4.1	81	66
800	28	22	1	4	26	2	08	36	502	4.3	78	64
900	29	24	1	4	27	2	17	38	491	4.5	76	62
3000	30	27	1	4	29	2	26	41	480	4.7	74	60
100	31	30	1	4	30	2	36	43	469	4.9	72	58
200	32	33	1	5	32	2	46	46	459	5.1	70	57
300	33	36	1	5	33	2	57	49	449	5.3	68	55
400	34	39	1	5	35	3	09	52	440	5.6	66	54
500	35	42	1	5	36	3	21	56	431	5.8	64	52
600	36	46	1	5	38	3	34	59	422	6.1	62	51
700	37	50	1	5	40	3	48	63	413	6.3	60	49
800	38	54	1	6	42	4	02	67	405	6.6	58	48
900	39	58	1	6	44	4	17	71	397	6.9	56	46
4000	40	63	1	6	46	4	32	76	389	7.2	55	45

Table 4

100mm Tank Gun, Model 1944 (II -10)

Table of Corrections for Mean Deviation

Range (Meters)	Frag/HE Shell						APT Shell	
	Full Charge			Reduced Charge			Full Charge	
	Range (Meters)	Vertical (Meters)	Azimuth (Meters)	Range (Meters)	Vertical (Meters)	Azimuth (Meters)	Vertical (Meters)	Azimuth (Meters)
X	U _g	U _w	U _s	U _g	U _w	U _s	U _w	U _s
200	41	0.1	0.1	21	0.1	0.1	0.1	0.1
400	40	0.1	0.2	20	0.1	0.2	0.2	0.1
600	40	0.2	0.3	20	0.2	0.3	0.3	0.2
800	39	0.2	0.4	19	0.2	0.4	0.4	0.2
1000	39	0.3	0.4	19	0.3	0.4	0.4	0.2
200	38	0.3	0.5	19	0.4	0.5	0.5	0.3
400	38	0.4	0.6	18	0.4	0.6	0.5	0.4
600	37	0.4	0.7	18	0.5	0.7	0.6	0.5
800	37	0.5	0.8	17	0.5	0.8	0.6	0.5
2000	37	0.6	0.9	17	0.6	0.9	0.7	0.6
200	36	0.6	1.0	17	0.7	1.0	0.8	0.7
400	36	0.7	1.1	17	0.8	1.1	1.0	0.7
600	36	0.8	1.2	17	0.9	1.2	1.1	0.8
800	35	0.9	1.3	17	1.0	1.3	1.2	0.8
3000	35	0.9	1.3	17	1.2	1.3	1.3	0.9
200	35	1.0	1.4	18	1.3	1.4	1.6	1.0
400	35	1.1	1.5	18	1.5	1.5	1.8	1.0
600	34	1.2	1.6	18	1.7	1.6	2.1	1.1
800	34	1.3	1.7	19	1.9	1.7	2.3	1.1
4000	33	1.4	1.8	19	2.1	1.8	2.6	1.2

NOTE: Range Dispersion of AP Projectile disregarded.

Table 5

100mm Tank Cannon, Model 1944 (II-10)

Tables of increase in maximum ordinate in meters above
line of sight for AP-T Pointed Shell EP-412

Muzzle Velocity 900 m/sec

Range	100	200	300	400	500	600	700	800	900	1000
100	0	-0.1	-0.4							
200	0.1	0	-0.2	-0.6						
300	0.1	0.1	0	-0.3	-0.7					
400	0.2	0.3	0.2	0	-0.4	-0.8				
500	0.2	0.4	0.4	0.3	0	-0.4	-0.9			
600	0.3	0.5	0.6	0.6	0.3	0	-0.4	-1.1		
700	0.4	0.7	0.8	0.8	0.7	0.4	0	-0.6	-1.3	
800	0.5	0.8	1.0	1.1	1.0	0.9	0.5	0	-0.7	-1.6
900	0.6	1.0	1.2	1.4	1.4	1.3	1.1	0.6	9	-0.8
1000	0.7	1.2	1.5	1.7	1.8	1.8	1.6	1.3	0.8	0
100	0.7	1.3	1.7	2.0	2.2	2.2	2.1	1.9	1.5	0.8
200	0.8	1.5	2.0	2.4	2.6	2.7	2.7	2.6	2.3	1.6
300	0.9	1.6	2.2	2.7	3.0	3.2	3.3	3.2	3.0	2.4
400	1.0	1.8	2.5	3.0	3.4	3.7	3.9	3.9	3.8	3.3
500	1.1	2.0	2.8	3.4	3.9	4.2	4.5	4.6	4.6	4.2
600	1.2	2.2	3.1	3.7	4.3	4.8	5.1	5.3	5.4	5.1
700	1.3	2.4	3.4	4.1	4.8	5.4	5.8	6.1	6.2	6.0
800	1.4	2.6	3.7	4.5	5.3	6.0	6.5	6.9	7.1	7.0
900	1.5	2.8	4.0	4.9	5.8	6.6	7.2	7.7	8.0	8.0
2000	1.6	3.0	4.3	5.4	6.4	7.3	8.0	8.6	8.9	9.1
100	1.7	3.2	4.6	5.8	7.0	7.9	8.8	9.5	9.9	10.2
200	1.8	3.4	4.9	6.3	7.6	8.6	9.6	10.4	10.9	11.3
300	1.9	3.6	5.3	6.8	8.2	9.3	10.4	11.3	11.9	13.5
400	2.0	3.9	5.6	7.3	8.8	10.1	11.3	12.3	13.0	13.7
500	2.1	4.1	6.0	7.8	9.4	10.9	12.2	13.3	14.1	14.9
600	2.2	4.4	6.3	8.3	10.0	11.7	13.1	14.3	15.2	16.2
700	2.3	4.6	6.7	8.8	10.7	12.5	14.0	15.4	16.4	17.5
800	2.4	4.9	7.1	9.3	11.4	13.3	15.0	16.5	17.7	18.9
900	2.6	5.2	7.5	9.9	12.1	14.1	16.0	17.6	19.0	20.3
3000	2.7	5.5	7.9	10.4	12.8	15.0	17.0	18.8	20.4	21.7

Table 5

100mm Tank Cannon, Model 1944 (II -10)

Tables of increase in maximum ordinate in meters above
line of sight for AP-T Pointed Shell BP-412

Muzzle Velocity 900 m/sec

1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	Range
										100
										200
										300
										400
										500
										600
										700
										800
-1.8										900
-0.9	-2.0									1000
0	-1.0	-2.1								100
0.9	0	-1.1	-2.2							200
1.8	1.0	0	-1.1	-2.4						300
2.7	1.9	1.0	0	-1.2	-2.7					400
3.7	2.9	2.1	1.2	0	-1.4	-3.1				500
4.7	3.9	3.2	2.4	1.3	0	-1.6	-3.5			600
5.7	5.0	4.4	3.7	2.7	1.5	0	-1.8	-3.8		700
6.8	6.2	5.7	5.1	4.2	3.1	1.7	0	-1.9	-4.2	800
7.9	7.4	7.0	6.6	5.7	4.8	3.5	1.9	0	-2.1	900
9.0	8.7	8.4	8.1	7.3	6.5	5.4	3.8	2.0	0	2000
10.2	10.0	9.8	9.7	9.0	9.3	7.3	5.8	4.1	2.2	100
11.4	11.4	11.3	11.3	10.7	10.1	9.2	7.9	6.3	4.5	200
12.7	12.8	12.8	13.0	12.5	12.0	11.2	10.0	8.5	6.9	300
14.0	14.3	14.4	14.7	14.3	13.9	13.2	12.2	10.8	9.3	400
15.4	15.8	16.0	16.5	16.2	15.9	15.3	14.5	13.2	11.8	500
16.8	17.4	17.7	18.3	18.2	17.9	17.4	16.8	15.6	14.4	600
18.3	19.0	19.5	20.2	20.2	20.0	19.6	19.2	18.1	17.1	700
19.8	20.6	21.3	22.1	22.3	22.2	21.9	21.6	20.7	19.8	800
21.3	22.3	22.2	24.1	24.4	24.5	24.3	24.1	23.4	22.6	900
22.9	24.0	25.1	26.1	26.6	26.8	26.8	26.7	26.2	25.5	3000

Range	100	200	300	400	500	600	700	800	900	1000
100	2.9	5.8	8.4	11.0	13.6	15.9	18.1	20.0	21.8	23.2
200	3.1	6.1	8.9	11.6	14.4	16.8	19.2	21.3	23.3	24.7
300	3.3	6.4	9.4	12.2	15.2	17.8	20.4	22.6	24.8	26.3
400	3.5	6.8	10.0	12.9	16.1	18.8	21.6	24.0	26.4	28.0
500	3.7	7.1	10.6	13.6	17.0	19.8	22.8	25.4	28.0	29.8
600	3.9	7.5	11.2	14.4	17.9	20.9	24.1	26.9	29.7	31.6
700	4.2	7.9	11.9	15.2	18.9	22.1	25.4	28.4	31.4	33.5
800	4.4	8.3	12.6	16.0	19.9	23.3	26.8	30.0	33.2	35.6
900	4.7	8.7	13.3	16.8	20.9	24.6	28.2	31.6	35.0	37.7
4000	5.0	9.1	14.0	17.7	21.9	25.9	29.7	33.3	36.8	39.9

1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	Range
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24.6	25.8	27.0	28.2	28.9	29.2	29.4	29.4	29.4	28.5	100
26.4	27.7	29.0	30.4	31.3	31.7	32.1	32.2	32.1	31.6	200
28.2	29.7	31.1	32.7	33.8	34.3	34.9	35.1	35.2	34.8	300
30.1	31.7	33.3	35.0	36.4	37.1	37.8	38.2	38.4	38.2	400
32.1	33.8	35.6	37.4	39.1	40.0	40.8	41.4	41.7	41.7	500
34.1	36.0	38.0	40.0	41.9	42.9	43.9	44.7	45.1	45.4	600
36.2	38.3	40.5	42.7	44.8	46.0	47.2	48.1	48.7	49.2	700
38.4	40.7	43.1	45.5	47.8	49.2	50.6	51.7	52.5	53.2	800
40.7	43.2	45.8	48.4	50.9	52.5	54.1	55.4	56.4	57.4	900
43.1	45.8	48.6	51.4	54.0	55.9	57.8	59.2	60.4	61.7	4000

Range	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000
-------	------	------	------	------	------	------	------	------	------	------

100										
200										
300										
400										
500										
600										
700										
800										
900										
1000										
100										
200										
300										
400										
500										
600										
700										
800										
900	-4.5									
2000	-2.3	-4.9								
100	0	-2.5	-5.3							
200	2.4	0	-2.7	-5.7						
300	4.9	2.6	0	-2.9	-6.1					
400	7.5	5.2	2.8	0	-3.1	-6.6				
500	10.2	7.9	5.6	3.0	0	-3.4	-7.0			
600	12.9	10.8	8.6	6.0	3.2	0	-3.5	-7.5		
700	15.7	13.8	11.7	9.1	6.5	3.5	0	-3.8	-8.0	
800	18.6	16.8	14.8	12.4	9.9	7.0	3.6	0	-4.1	-8.5
900	21.5	19.9	18.0	15.8	13.4	10.6	7.4	3.9	0	-4.3
3000	24.5	23.1	21.3	19.2	16.9	14.4	11.3	7.9	4.2	0
100	27.6	26.4	24.7	22.8	20.6	18.3	15.3	12.1	8.5	4.5
200	30.8	29.8	28.3	26.5	24.4	22.3	19.4	16.4	13.0	9.1
300	34.1	33.3	32.0	30.4	28.4	26.5	23.7	20.9	17.7	13.9
400	37.6	37.0	35.9	34.4	32.6	30.8	28.2	25.6	22.6	18.9
500	41.3	40.8	39.9	38.6	37.0	35.3	32.9	30.5	27.7	24.1
600	45.1	44.8	44.1	43.0	41.6	40.1	37.9	35.7	33.1	29.6
700	49.1	49.0	48.5	47.6	46.4	45.1	43.1	41.1	38.7	35.3
800	53.3	53.4	53.1	52.4	51.4	50.3	48.5	46.7	44.5	41.3
900	57.7	58.0	57.9	57.5	56.7	55.7	54.1	52.6	50.5	47.6
4000	62.2	62.8	62.9	62.8	62.2	61.4	60.0	58.7	56.8	54.1

3100 3200 3300 3400 3500 3600 3700 3800 3900 4000 Range

100
200
300
400
500
600
700
800
900
1000
100
200
300
400
500
600
700
800
900
2000
100
200
300
400
500
600
700
800
900
3000

-9.0
-4.6 -9.7
0 -4.9 -10.5
4.8 0 -5.3 -11.3
9.8 5.2 0 -5.8 -12.2
15.0 10.6 5.6 0 -6.2 -13.1
20.4 16.3 11.4 6.0 0 -6.7 -14.1
26.1 22.2 17.5 12.2 6.5 0 -7.2 -15.0
32.0 28.3 23.8 18.7 13.2 7.0 0 -7.6 -15.7
38.2 34.7 30.4 25.4 20.1 14.2 7.4 0 -7.9 -16.3
44.7 41.3 37.3 32.4 27.3 21.7 15.0 7.7 0 -8.2
51.5 48.2 44.5 39.7 34.7 29.4 22.9 15.6 8.0 0 4000

Table 6

85mm Tank Gun, Model 1944 (ZIS-S53)
 firing
 Armor Piercing Tracer Pointed Shell EP-365K
 with MII-8 Fuze

Sight Scale BPOF
 Model III-15 Sight

Full Charge
 Muzzle Velocity 792 m/sec

Angle of Jump
 Minus 9 Minutes

Range (Meters)	Sight Setting (Grad.)	Maximum Ordinate (Meters)	Direction Correc- tions (Mils)		Angle of Sight (Mils)	Angle of Fall (Mils)			Terminal Velocity (m/sec)	Time of Flight (Seconds)	Corr. for target mov- ing at 10 km/hr (Mils)	Armor Penetration at 0 Degrees (mm)
			Lateral Corrections	For Lateral Wind - Vel. 10 m/sec		Degrees	Minutes	Mils				
X	h	Y	ΔZ_b	ΔW_z	C	G			Vk	t _c	ΔR_c	l
100	1	0.02	0	0	3	0	03	1	774	0.1	3	117
200	2	0.08	0	0	4	0	06	2	756	0.3	3	113
300	3	0.23	0	0	5	0	09	2	738	0.4	4	109
400	4	0.32	0	0	6	0	12	3	721	0.5	4	105
500	5	0.5	0	0	6	0	15	4	704	0.6	4	101
600	6	0.9	0	0	7	0	19	5	687	0.8	4	97
700	7	1.3	0	1	8	0	23	6	670	0.9	4	93
800	8	1.6	0	1	9	0	27	7	653	1.1	4	90
900	9	2.0	0	1	10	0	31	9	636	1.2	4	87
1000	10	2.4	0	1	11	0	36	10	620	1.4	4	84
100	11	3.2	0	1	12	0	41	11	604	1.6	4	81
200	12	3.9	0	1	13	0	46	13	588	1.7	4	78
300	13	4.7	0	2	14	0	52	14	573	1.9	4	75
400	15	5.4	0	2	15	0	58	16	558	2.0	4	72
500	16	6.2	0	2	17	1	04	18	543	2.2	4	69
600	17	7.3	0	2	18	1	11	20	529	2.4	4	66

Full Charge

Range (Meters)	Sight Setting (Grad.)	Maximum Ordinate (Meters)	Direction Corrections (Mils)		Angle of Sight (Mils)	Angle of Fall (Mils)			Terminal Velocity (m/sec)	Time of Flight (Seconds)	Corr. for target moving at 10 km/hr (Mils)	Armor Penetration at 0 Degrees (mm)
			Lateral Corrections	For Lateral Wind - Vel. 10 m/sec		Degrees	Minutes	Mils				
X	h	Y	ΔZ_b	ΔW_z	c	ω			Vk	t _c	ΔR_c	l
700	18	8.4	0	2	19	1	18	22	515	2.6	4	63
800	19	10	0	2	20	1	25	24	501	2.8	4	61
900	21	11	0	3	22	1	33	26	488	3.0	4	59
2000	22	13	0	3	23	1	41	28	475	3.2	5	57
100	23	15	1	3	24	1	50	30	462	3.4	5	55
200	25	17	1	3	26	2	00	33	450	3.6	5	53
300	26	19	1	3	28	2	10	36	438	3.9	5	51
400	28	21	1	4	29	2	21	39	427	4.1	5	49
500	29	23	1	4	31	2	32	42	416	4.3	5	47
600	30	26	1	4	33	2	44	45	406	4.5	5	45
700	32	28	1	4	34	2	56	49	396	4.8	5	44
800	33	31	1	4	36	3	09	52	387	5.0	5	42
900	34	34	1	5	38	3	22	56	378	5.3	5	41
3000	36	37	1	5	40	3	36	60	370	5.5	5	40
100	37	41	1	5	42	3	51	64	362	5.8	5	39
200	39	46	1	6	44	4	06	68	355	6.1	5	38
300	40	50	1	6	47	4	21	72	348	6.3	5	37
400	41	55	1	6	49	4	38	77	341	6.6	6	36
500	43	59	1	7	51	4	56	82	334	6.9	6	35
600	44	65	1	7	54	5	15	87	328	7.2	6	34
700	46	71	1	7	56	5	34	93	322	7.5	6	33
800	47	76	1	8	59	5	55	99	316	7.7	6	32
900	48	82	2	8	61	6	16	104	310	8.0	6	31
4000	50	88	2	8	64	6	38	110	305	8.3	6	30

Table 7

85mm Tank Gun, Model 1944, (ZIS-S53)
firing

Armor Piercing Tracer Round Nose Shell BP-365
with MII-8 Fuze, and Fragmentation Shell O-365
with T-5 Fuze

Sight Scale BPOF
Model TIII-15 Sight

Full Charge
Muzzle Velocity 792 m/sec

Angle of Jump
Minus 9 Minutes

Range (Meters)	Sight Setting (Grad.)	T-5 Fuze Setting (Grad.)	Maximum Ordinate, Frag. Shell (Meters)	Maximum Ordinate, AP-T Shell (Meters)	Direction Corrections		Angle of Sight (Mils)
					Lateral Corrections (Mils)	For Lateral Wind - Vel. 10 m/sec (Mils)	
X	H	N	Y	Y	ΔZ_b	ΔW_z	C
100	1		0.2	0.1	0	0	1
200	2		0.4	0.2	0	0	2
300	3		0.6	0.3	0	0	3
400	4	6	0.9	0.5	0	0	4
500	5	7	1.2	0.7	0	0	5
600	6	9	1.5	0.9	0	0	6
700	7	10	1.8	1.2	0	0	7
800	8	12	2.1	1.5	0	0	8
900	9	13	2.5	1.9	0	1	9
1000	10	15	2.9	2.3	0	1	10
100	11	16	3.3	2.8	0	1	11
200	12	18	3.8	3.3	0	1	12
300	13	19	4.4	3.9	0	1	13
400	14	21	5.0	4.6	0	1	14
500	15	22	5.7	5.4	0	2	15

Table 7

85mm Tank Gun, Model 1944, (ZIS-S53)
firing

Armor Piercing Tracer Round Nose Shell BP-365
with MII-8 Fuze, and Fragmentation Shell O-365
with T-5 Fuze

Sight Scale EPOI
Model TII-15 Sight

Full Charge
Muzzle Velocity 792 m/sec

Angle of Jump
Minus 9 Minutes

Angle of Fall			Terminal Velocity (m/sec)	Time of Flight (Seconds)	Corrections for Moving Target, 10 km/hr. (Mils)	Armor Penetration at 0 (mm)	Range (Meters)
Degrees	Minutes	Mils					
ω			V_k	t_c	ΔR_c	l	X
0	03	1	783	0.1	1	119	100
0	06	2	774	0.2	2	117	200
0	09	3	764	0.3	3	115	300
0	13	4	755	0.5	3	113	400
0	16	4	745	0.6	3	111	500
0	20	5	736	0.8	3	109	600
0	23	6	726	0.9	4	107	700
0	27	7	717	1.1	4	105	800
0	31	9	707	1.2	4	103	900
0	35	10	698	1.4	4	102	1000
0	39	11	688	1.5	4	100	100
0	43	12	679	1.7	4	99	200
0	47	13	670	1.8	4	97	300
0	51	14	661	2.0	4	95	400
0	55	15	652	2.1	4	93	500

Full Charge

Range (Meters)	Sight Setting (Grad.)	T-5 Fuze Setting (Grad.)	Maximum Ordinate, Frag. Shell (Meters)	Maximum Ordinate, AP-T Shell (Meters)	Direction Corrections		Angle of Sight (Mils)
					Lateral Corrections (Mils)	For Lateral Wind - Vel. 10 m/sec (Mils)	
X	h	N	Y	Y	ΔZ_b	ΔW_z	c
600	16	24	6.4	6.2	0	2	16
700	17	25	7.2	7.1	0	2	17
800	18	27	8.1	8.0	0	2	18
900	19	28	9.0	9.0	0	2	19
2000	20	30	10	10	0	2	20
100	21	31	11	11	0	2	21
200	22	33	12	12	0	2	22
300	23	34	13	13	0	3	23
400	24	36	15	15	0	3	24
500	25	37	16	17	1	3	25
600	26	39	18	19	1	3	26
700	27	40	19	21	1	3	27
800	28	42	21	24	1	3	29
900	29	43	23	28	1	4	30
3000	30	45	25	32	1	4	31
100	31	47	27		1	4	32
200	32	49	29		1	4	34
300	33	50	31		1	4	35
400	34	52	34		1	4	36
500	35	53	37		1	4	37
600	36	55	40		1	4	39
700	37	57	43		1	4	40
800	38	59	46		1	5	42
900	39	60	49		1	5	44
4000	40	62	53		1	5	46

Full Charge

Angle of Fall			Terminal Velocity (m/sec)	Time of Flight (Seconds)	Corrections for Moving Target, 10 km/hr. (Mils)	Armor Penetration at 0° (mm)	Range (Meters)
Degrees	Minutes	Mils					
ω			V_k	t_c	ΔR_c	l	X
1	00	17	643	2.3	4	91	600
1	04	18	634	2.4	4	90	700
1	09	19	625	2.6	4	88	800
1	14	21	616	2.7	4	86	900
1	19	22	608	2.9	4	85	2000
1	24	23	599	3.0	4	83	100
1	29	25	591	3.2	4	81	200
1	34	26	583	3.3	4	80	300
1	40	28	575	3.5	4	78	400
1	46	29	567	3.6	4	77	500
1	52	31	559	3.8	4	75	600
1	58	33	551	4.0	4	74	700
2	05	35	543	4.2	4	72	800
2	12	37	535	4.4	4	71	900
2	19	39	528	4.6	4	70	3000
2	26	40	520	4.8	4		100
2	34	43	513	5.0	4		200
2	42	45	506	5.2	4		300
2	51	47	499	5.4	4		400
3	00	50	492	5.6	4		500
3	09	52	485	5.8	4		600
3	18	55	478	6.0	5		700
3	28	58	472	6.2	5		800
3	38	60	465	6.4	5		900
3	49	64	459	6.6	5		4000

Full Charge

Range (Meters)	Sight Setting (Grad.)	T-5 Fuze Setting (Grad.)	Maximum Ordinate, Frag. Shell (Meters)	Maximum Ordinate, AP-F Shell (Meters)	Direction Corrections		Angle of Sight (Mils)
					Lateral Corrections (Mils)	For Lateral Wind " Vel. 10 m/sec (Mils)	
X	h	N	Y	Y	ΔZ_b	ΔW_z	c
100	41	63	57		1	5	47
200	42	65	61		1	5	49
300	43	67	65		1	5	50
400	44	69	70		1	5	52
500	45	70	75		1	5	54
600	46	72	80		2	6	56
700	47	74	85		2	6	58
800	48	76	90		2	6	60
900	49	78	95		2	6	62
5000	50	80	100		2	6	64

Full Charge

Angle of Fall			Terminal Velocity (m/sec)	Time of Flight (Seconds)	Corrections for Moving Target, 10 km/hr. (Mils)	Armor Penetration at 0° (mm)	Range (Meters)
Degrees	Minutes	Mils					
ω			V_k	t_c	ΔR_c	t	X
4	00	67	453	6.8	5		100
4	11	70	447	7.0	5		200
4	22	73	441	7.2	5		300
4	34	76	435	7.5	5		400
4	46	79	429	7.7	5		500
4	59	83	424	7.9	5		600
5	12	87	418	8.1	5		700
5	25	90	413	8.4	5		800
5	38	94	408	8.7	5		900
5	52	98	403	8.9	5		5000

Table 8

85mm Tank Gun, Model 1944 (ZIS-S53)

Table of corrections for mean deviation for

AP-T Shell BP-365K

Range	Range Corrections	Vertical Corrections	Lateral Corrections
X	U _g	U _w	U _s
100	35	0	0
200	35	0.1	0.1
300	34	0.1	0.1
400	34	0.1	0.1
500	34	0.1	0.1
600	33	0.2	0.2
700	33	0.2	0.2
800	33	0.3	0.2
900	32	0.3	0.2
1000	32	0.3	0.3
100	31	0.4	0.3
200	31	0.4	0.3
300	31	0.4	0.3
400	30	0.4	0.4
500	30	0.4	0.4
600	30	0.5	0.4
700	29	0.5	0.5
800	29	0.6	0.5
900	29	0.6	0.5
2000	29	0.6	0.6
100	28	0.7	0.6
200	28	0.7	0.6
300	27	0.7	0.7
400	27	0.7	0.7
500	27	0.8	0.8
600	26	0.8	0.8
700	26	0.8	0.8
800	26	0.9	0.9
900	25	0.9	0.9
3000	25	0.9	0.9

Table 8

85mm Tank Gun, Model 1944 (ZIS-S53)

Table of corrections for mean deviation for

Frag Shell O-365K

Range	Range Corr.	Verti- cal Corr.	Lateral Corr.	Range	Range Corr.	Verti- cal Corr.	Lateral Corr.
X	U _g	U _w	U _s	X	U _g	U _w	U _s
100	25	0	0.1	600	25	0.8	0.9
200	25	0	0.1	700	25	0.8	0.9
300	25	0.1	0.1	800	25	0.9	1.0
400	25	0.1	0.2	900	25	0.9	1.0
500	25	0.1	0.2	3000	25	1.0	1.0
600	25	0.1	0.2				
700	24	0.2	0.3	100	26	1.1	1.1
800	24	0.2	0.3	200	26	1.2	1.1
900	24	0.2	0.3	300	26	1.3	1.1
1000	24	0.2	0.4	400	26	1.4	1.2
				500	26	1.4	1.2
100	24	0.3	0.4	600	27	1.5	1.2
200	24	0.3	0.4	700	27	1.6	1.3
300	24	0.3	0.5	800	27	1.7	1.3
400	24	0.4	0.5	900	27	1.7	1.3
500	24	0.4	0.5	4000	27	1.8	1.3
600	24	0.4	0.6				
700	24	0.4	0.6	100	28	1.9	1.4
800	24	0.5	0.6	200	28	2.0	1.4
900	24	0.5	0.7	300	28	2.1	1.4
2000	24	0.5	0.7	400	28	2.2	1.4
				500	28	2.4	1.4
100	24	0.6	0.7	600	29	2.5	1.5
200	24	0.6	0.8	700	29	2.6	1.5
300	24	0.7	0.8	800	29	2.7	1.5
400	24	0.7	0.8	900	29	2.8	1.6
500	25	0.7	0.9	5000	29	3.0	1.6

Table 10

85mm Tank Gun, Model 1944 (ZIS-S53)

Tables of increase in maximum ordinate in meters above
the line of sight for AP-T Round Nose Shell BP-365
and Fragmentation Shell O-365

Muzzle Velocity 792 m/sec

Range	100	200	300	400	500	600	700
100	0	-0.18	-0.52				
200	0.09	0	-0.26	-0.7			
300	0.18	0.18	0	-0.35	-0.9		
400	0.28	0.35	0.26	0	-0.45	-1.0	
500	0.36	0.52	0.5	0.35	0	-0.5	-1.1
600	0.44	0.7	0.75	0.7	0.4	0	-0.6
700	0.52	0.88	1.0	1.0	0.85	0.5	0
800	0.60	1.1	1.3	1.4	1.3	1.0	0.6
900	0.67	1.2	1.5	1.7	1.7	1.5	1.2
1000	0.75	1.4	1.8	2.1	2.2	2.4	1.8
1100	0.82	1.5	2.0	2.4	2.5	2.6	2.4
1200	0.9	1.7	2.3	2.8	3.0	3.1	3.0
1300	1.0	1.9	2.6	3.1	3.4	3.7	3.6
1400	1.1	2.1	2.9	3.5	3.9	4.2	4.3
1500	1.2	2.3	3.2	3.9	4.4	4.8	5.0
1600	1.3	2.5	3.5	4.3	4.9	5.4	5.7
1700	1.4	2.7	3.8	4.7	5.4	6.0	6.4
1800	1.5	2.9	4.1	5.1	5.9	6.6	7.1
1900	1.6	3.1	4.4	5.5	6.4	7.2	7.8
2000	1.8	3.3	4.7	5.9	6.9	7.9	8.6
2100	1.9	3.5	5.0	6.4	7.5	8.6	9.5
2200	2.0	3.8	5.4	6.9	8.2	9.3	10.0
2300	2.1	4.1	5.8	7.5	8.8	10.1	11.1
2400	2.2	4.4	6.2	8.1	9.5	11.0	12.2
2500	2.3	4.6	6.6	8.6	10.3	11.8	13.4
2600	2.4	4.9	7.0	9.1	11.0	12.6	14.1
2700	2.6	5.2	7.4	9.6	11.8	13.4	15.0
2800	2.7	5.5	7.8	10.1	12.4	14.2	15.8
2900	2.9	5.8	8.2	10.6	12.9	15.0	16.5
3000	3.0	6.0	8.6	11.1	13.4	15.8	17.5

Table 10

85mm Tank Gun, Model 1944 (ZIS-S53)

Tables of increase in maximum ordinate in meters above
the line of sight for AP-T Round Nose Shell BP-365
and Fragmentation Shell O-365

Muzzle Velocity 792 m/sec

800	900	1000	1100	1200	1300	1400	Range
							100
							200
							300
							400
							500
-1.4							600
-0.7	-1.5						700
0	-0.8	-1.7					800
0.7	0	-0.9	-1.9				900
1.4	0.8	0	-1.0	-2.1			1000
							1100
2.1	1.5	0.8	0	-1.1	-2.3		1100
2.8	2.3	1.7	1.0	0	-1.1	-2.4	1200
3.5	3.1	2.6	1.9	1.0	0	-1.3	1300
4.2	4.0	3.5	2.9	2.1	1.2	0	1400
5.0	4.8	4.5	4.0	3.3	2.4	1.4	1500
5.8	5.7	5.5	5.1	4.5	3.7	2.8	1600
6.6	6.6	6.5	6.2	5.7	5.1	4.2	1700
7.4	7.5	7.6	7.4	7.0	6.5	5.7	1800
8.2	8.4	8.6	8.5	8.2	7.8	7.1	1900
9.1	9.4	9.6	9.6	9.4	9.1	8.5	2000
							2100
10.0	10.0	11.0	11.0	11.0	10.0	10.0	2100
11.0	12.0	12.0	12.0	12.0	12.0	12.0	2200
12.2	12.7	13.0	13.0	13.0	13.0	13.0	2300
13.5	14.2	14.9	15.0	15.0	15.0	15.0	2400
14.5	15.2	16.0	16.0	16.0	16.0	16.0	2500
15.5	16.3	17.2	17.7	18.0	18.0	18.0	2600
16.5	17.5	18.5	19.0	19.0	19.0	19.0	2700
17.5	18.6	19.8	20.6	21.0	21.0	21.0	2800
18.5	19.8	21.1	22.0	22.9	23.0	23.0	2900
19.5	21.0	22.4	23.4	24.5	25.0	25.0	3000

Range	1500	1600	1700	1800	1900	2000	2100	2200
-------	------	------	------	------	------	------	------	------

100								
200								
300								
400								
500								
600								
700								
800								
900								
1000								
1100								
1200								
1300	-2.9							
1400	-1.5	-3.2						
1500	0	-1.6	-3.4					
1600	1.5	0	-1.7	-3.7				
1700	3.0	1.6	0	-1.9	-3.9			
1800	4.5	3.3	1.7	0	-2.0	-4.1		
1900	6.0	4.9	3.4	1.8	0	-2.1	-4.6	
2000	7.5	6.5	5.2	3.7	2.0	0	-2.2	-5.1
2100	9.1	8.2	7.1	5.7	4.1	2.3	0	-2.6
2200	11.0	10.0	9.1	7.9	6.4	4.7	2.7	0
2300	12.7	12.0	11.1	9.9	8.4	7.0	4.8	2.6
2400	14.6	14.1	13.1	12.0	10.7	9.4	7.4	5.3
2500	16.0	15.9	15.0	14.1	13.1	11.7	9.9	7.8
2600	18.0	17.7	16.9	16.2	15.4	14.0	12.2	10.4
2700	19.0	19.0	19.0	18.5	17.5	16.6	15.0	13.2
2800	21.0	21.0	21.0	20.9	20.0	19.2	17.6	16.1
2900	23.0	23.0	23.0	23.0	22.5	21.8	20.0	18.9
3000	25.0	25.0	25.0	25.0	24.9	24.4	23.0	21.8

2300	2400	2500	2600	2700	2800	2900	3000	Range
								100
								200
								300
								400
								500
								600
								700
								800
								900
								1000
								1100
								1200
								1300
								1400
								1500
								1600
								1700
								1800
								1900
								2000
								2100
-5.4								2200
-2.7	-5.7							2300
0	-2.8	-5.8						2400
2.6	0	-2.9	-6.0					2500
5.4	2.7	0	-3.0	-7.0				2600
8.2	5.5	2.8	0	-3.6	-7.3			2700
10.7	8.6	6.0	3.4	0	-3.6	-7.5		2800
13.6	11.7	7.3	6.4	3.5	0	-3.9	-7.8	2900
16.8	14.8	12.4	10.1	6.8	3.6	0	-3.9	3000
20.0	18.0	15.7	13.5	10.4	7.3	3.6	0	

Table 9

85mm Tank Gun, Model 1944 (ZIS-S53)

Tables of increase in maximum ordinate in meters above
the line of sight for AP-T Pointed Shell BP-365K

Muzzle Velocity 792 m/sec

Range	100	200	300	400	500	600	700	800
100	0	-0.17	-0.52					
200	0.08	0	-0.26	-0.6				
300	0.16	0.17	0	-0.3	-0.72			
400	0.24	0.31	0.2	0	-0.44	-1.0		
500	0.32	0.47	0.43	0.35	0	-0.52	-1.2	
600	0.41	0.64	0.68	0.7	0.44	0	-0.62	-1.5
700	0.50	0.83	0.98	1.1	0.92	0.58	0	-0.8
800	0.60	1.0	1.3	1.5	1.4	1.1	0.71	0
900	0.71	1.2	1.6	1.9	1.9	1.8	1.5	0.85
1000	0.82	1.5	1.9	2.3	2.4	2.4	2.2	1.6
100	0.93	1.7	2.3	2.8	3.0	3.2	3.0	2.6
200	1.0	2.0	2.6	3.3	3.6	3.7	3.7	3.5
300	1.2	2.2	3.0	3.7	4.2	4.5	4.5	4.4
400	1.3	2.4	3.3	4.2	4.8	5.2	5.3	5.3
500	1.4	2.6	3.7	4.6	5.4	5.9	6.1	6.2
600	1.5	2.8	4.0	5.1	6.0	6.6	7.0	7.2
700	1.6	3.1	4.4	5.6	6.6	7.4	8.0	8.2
800	1.8	3.4	4.8	6.2	7.3	8.2	8.9	9.3
900	1.9	3.7	5.2	6.7	8.0	9.1	9.9	10.5
2000	2.1	4.0	5.7	7.3	8.7	9.9	11.0	11.6
100	2.3	4.3	6.2	7.9	9.4	10.8	12.0	13.0
200	2.5	4.6	6.7	8.6	10.3	11.8	13.1	14.1
300	2.7	5.0	7.2	9.3	11.2	12.8	14.3	15.5
400	2.9	5.3	7.7	10.0	12.1	13.9	15.5	16.9
500	3.1	5.7	8.3	10.7	13.0	15.0	16.8	18.3
600	3.4	6.1	8.8	11.4	13.8	16.0	18.0	19.8
700	3.7	6.5	9.3	12.1	14.7	17.1	19.1	20.8
800	3.9	6.9	9.9	12.8	15.6	18.2	20.5	22.6
900	4.1	7.3	10.5	13.6	16.6	19.3	21.8	24.2
3000	4.3	7.9	11.4	14.6	17.8	20.5	23.5	26.0

Table 9

85mm Tank Gun, Model 1944 (ZIS-S53)

Tables of increase in maximum ordinate in meters above
the line of sight for AP-T Pointed Shell BP-365K

Muzzle Velocity 792 m/sec

900	1000	1100	1200	1300	1400	1500	1600	Range
								100
								200
								300
								400
								500
								600
-1.8								700
-0.9	-2.0							800
0	-1.2	-2.6						900
1.0	0	-1.3	-2.8					1000
2.1	1.2	0	-1.4	-3.0				100
3.1	2.3	1.3	0	-1.5	-3.3			200
4.2	3.5	2.6	1.4	0	-1.6	-3.5		300
5.2	4.6	3.8	2.8	1.5	0	-1.8	-3.7	400
6.2	5.8	5.1	4.2	3.0	1.6	0	-1.9	500
7.2	7.0	6.4	5.6	4.5	3.3	1.7	0	600
8.3	8.2	7.8	7.1	6.1	5.0	3.5	1.9	700
9.5	9.4	9.2	8.7	7.9	6.8	5.6	4.2	800
10.7	10.7	10.6	10.4	9.8	8.8	7.8	6.5	900
11.8	11.9	12.0	12.0	11.7	11.0	10.0	8.8	2000
13.7	14.2	14.5	14.6	14.2	13.4	12.3	11.2	100
14.9	15.6	16.2	16.5	16.1	15.6	14.8	13.9	200
16.5	17.2	17.7	18.1	18.5	18.0	17.4	16.7	300
18.1	19.1	19.8	20.2	20.4	20.2	19.7	19.1	400
19.7	20.8	21.7	22.3	22.6	22.8	22.6	22.3	500
21.4	22.7	23.9	24.9	25.6	25.0	25.3	25.0	600
23.2	24.5	25.7	26.6	27.3	27.8	28.0	27.8	700
24.6	26.4	27.8	29.0	30.0	30.5	31.0	31.0	800
26.4	28.4	30.0	31.4	32.5	33.3	33.8	34.0	900
28.2	30.3	32.3	34.0	35.2	36.2	36.8	37.2	3000

Range	1700	1800	1900	2000	2100	2200	2300
100							
200							
300							
400							
500							
600							
700							
800							
900							
1000							
100							
200							
300							
400							
500	-3.9						
600	-2.0	-4.7					
700	0	-2.6	-5.5				
800	2.5	0	-2.8	-5.8			
900	4.9	2.6	0	-2.9	-6.3		
2000	7.4	5.2	2.8	0	-3.1	-7.0	
100	10.0	8.2	5.8	3.1	0	-3.5	-7.6
200	12.6	11.2	9.6	6.6	3.4	0	-3.8
300	15.6	14.2	12.3	10.0	7.3	3.7	0
400	18.4	17.5	16.0	13.8	11.2	7.9	3.9
500	21.6	20.4	18.8	16.9	14.5	11.6	8.1
600	24.5	23.7	22.2	20.4	18.2	15.5	12.2
700	27.4	26.3	25.5	24.0	22.0	19.5	16.5
800	30.5	29.8	29.0	27.6	25.8	23.4	20.8
900	33.8	33.3	32.6	31.3	29.6	27.4	24.8
3000	37.2	36.8	36.0	35.0	33.7	31.8	29.4

2400	2500	2600	2700	2800	2900	3000	Range
							100
							200
							300
							400
							500
							600
							700
							800
							900
							1000
							100
							200
							300
							400
							500
							600
							700
							800
							900
							2000
							100
							200
							300
							400
							500
							600
							700
							800
							900
							3000
-8.2							100
-4.7	-8.8						200
0	-4.3	-9.3					300
4.1	0	-4.5	-9.7				400
8.3	4.2	0	-4.6	-10.0			500
12.8	8.8	4.7	0	-4.7	-10.2		600
17.6	13.6	9.4	4.8	0	-4.8	-10.6	700
21.8	18.5	14.6	10.1	5.3	0	-5.0	800
26.8	23.9	20.4	16.3	11.5	6.0	0	900
							3000

Table 11

76mm Tank Gun, Model 1941 (ZIS-5)
firing
Armor Piercing Tracer Shell EP-350

Sight Scale EP-III

Full Charge
Muzzle Velocity 662 m/sec

Angle of Jump
Minus 13 Minutes

Range (Meters)	Sight Setting (Grad.)	Maximum Ordinate (Meters)	Direction Corrections (Mils)		Angle of Sight (Mils)	Angle of Fall (Mils)	Terminal Velocity (m/sec)	Time of Flight (Seconds)	Corr. for Target Mov- ing at 10 km/hr (Mils)	Armor Penetration at 0° (mm)
			Lateral Corrections	For Lateral Wind - Vel. 10 m/sec						
X	h	Y	ΔZ_b	ΔW_z	c	ω	V_k	t_c	ΔR_c	l
100	0.9	0.1	0	1	5	1	651	0.1	3	75
200	1.9	0.1	0	1	6	2	641	0.3	4	74
300	3.0	0.2	0	1	7	4	631	0.4	4	73
400	4.0	0.4	0	1	8	5	621	0.6	4	71
500	5.1	0.7	0	1	9	6	612	0.7	4	69
600	6.2	1.0	0	1	10	8	602	0.9	4	67
700	7.2	1.4	0	1	11	9	593	1.1	4	65
800	8.3	1.9	0	1	13	10	583	1.3	4	63
900	9.4	2.5	0	1	14	12	574	1.4	4	62
1000	10.4	3.2	0	1	15	14	564	1.6	4	61
100	11.4	4.0	0	2	17	15	555	1.8	5	60
200	12.4	4.8	0	2	18	17	546	2.0	5	59
300	13.4	5.8	0	2	20	19	537	2.2	5	57
400	14.4	6.8	0	2	21	20	528	2.4	5	55
500	15.4	8.0	0	2	23	22	519	2.6	5	54
600	16.4	9.2	0	3	24	24	511	2.8	5	53
700	17.3	10	0	3	26	26	502	3.0	5	51
800	18.3	12	0	3	27	29	494	3.2	5	50

Full Charge

Range (Meters)	Sight Setting (Grad.)	Maximum Ordinate (Meters)	Direction Corrections (Mils)		Angle of Sight (Mils)	Angle of Fall (Mils)	Terminal Velocity (m/sec)	Time of Flight (Seconds)	Corr. for Target Mov- ing at 10 km/hr (Mils)	Armor Penetration at 0° (mm)
			Lateral Corrections	For Lateral Wind - Vel. 10 m/sec						
X	h	Y	ΔZ_b	ΔW_z	c	ω	V_k	t_c	ΔR_c	l
900	19.2	14	0	3	29	31	486	3.4	5	49
2000	20.2	16	0	3	30	33	478	3.6	5	48
100	21.2	18	0	4	32	36	470	3.8	5	47
200	22.2	20	0	4	34	38	462	4.0	5	46
300	23.2	22	0	4	35	41	454	4.2	5	45
400	24.3	25	0	4	37	44	447	4.4	5	44
500	25.4	27	0	4	39	47	439	4.6	5	43
600	26.5	30	0	5	41	50	432	4.9	5	42
700	27.6	33	0	5	43	53	425	5.1	5	41
800	28.7	36	0	5	45	57	418	5.4	5	40
900	29.8	39	0	5	47	60	411	5.6	5	39
3000	30.8	43	0	5	50	64	404	5.9	5	38
100	31.9	47	0	5	52	68	397	6.1	5	
200	32.9	51	0	5	54	72	391	6.4	6	
300	33.9	55	0	5	56	76	384	6.6	6	
400	35.0	60	0	5	59	80	378	6.9	6	
500	36.0	65	0	5	61	84	372	7.2	6	
600	37.1	70	1	6	64	89	366	7.5	6	
700	38.1	75	1	6	66	94	360	7.7	6	
800	39.2	81	1	6	69	99	355	8.0	6	
900	40.3	87	1	6	72	104	350	8.3	6	
4000	41.4	93	1	6	75	109	345	8.6	6	
100	42.4	100	1	7	77	115	340	8.9	6	
200	43.5	107	1	7	80	120	336	9.2	6	
300	44.6	114	1	7	84	126	332	9.5	6	
400	45.6	122	1	7	87	132	328	9.8	6	
500	46.7	130	1	7	90	139	324	10.1	6	
600	47.7	139	2	8	93	145	320	10.5	6	
700	48.8	148	2	8	96	152	316	10.8	6	
800	49.8	157	2	8	100	158	313	11.2	6	
900		166	2	8	103	165	310	11.5	7	
5000		176	2	8	107	172	307	11.9	7	

Table 12

76mm Tank Gun, Model 1941 (ZIS-5)
firing
Fragmentation Shell 0-350

Sight Scale BP III

Full Charge
Muzzle Velocity 680 m/sec

Angle of Jump
Minus 13 Minutes

Range (Meters)	Sight Setting (Grad.)	Maximum Ordinate (Meters)	Direction Corrections (Mils)		Angle of Sight (Mils)	Angle of Fall (Mils)	Terminal Velocity (m/sec)	Time of Flight (Seconds)	Corr. for Target Moving at 10 km/hr (Mils)
			Lateral Corrections	For Lateral Wind 10 m/sec					
X	n	Y	ΔZ_b	ΔW_z	ϵ	ω	V_k	t_c	ΔR_c
100	1	0.1	0	2	5	1	665	0.1	3
200	2	0.1	0	2	6	2	651	0.2	3
300	3	0.2	0	2	7	4	638	0.4	3
400	4	0.4	0	3	8	5	625	0.5	3
500	5	0.7	0	3	9	6	613	0.7	4
600	6	1.0	0	4	10	7	601	0.8	4
700	7	1.4	0	4	11	8	590	1.0	4
800	8	1.9	0	4	12	10	579	1.2	4
900	9	2.5	0	4	14	11	568	1.4	4
1000	10	3.1	0	5	15	13	558	1.6	4
100	11	3.8	0	5	16	14	548	1.8	5
200	12	4.6	0	5	18	16	538	2.0	5
300	13	5.5	0	5	19	17	529	2.2	5
400	14	6.5	0	5	20	19	520	2.4	5
500	15	7.6	0	5	22	21	511	2.6	5
600	16	8.9	0	5	24	23	503	2.8	5
700	17	10	0	5	25	25	495	3.0	5
800	18	12	0	5	27	27	487	3.2	5
900	19	14	0	5	29	29	480	3.4	5
2000	20	16	0	5	30	31	473	3.6	5

Full Charge

Range (Meters)	Sight Setting (Grad.)	Maximum Ordinate (Meters)	Direction Corrections (Mils)		Angle of Sight (Mils)	Angle of Fall (Mils)	Terminal Velocity (m/sec)	Time of Flight (Seconds)	Corr. for Target Moving at 10 km/hr (Mils)
			Lateral Corrections	For Lateral Wind 10 m/sec					
X	h	Y	ΔZ_b	ΔW_z	c	ω	V _K	t _c	ΔR_c
100	21	18	0	6	32	33	466	3.8	5
200	22	20	0	6	34	35	459	4.0	5
300	23	22	0	6	35	38	452	4.2	5
400	24	25	0	6	37	41	446	4.4	5
500	25	27	0	6	39	44	439	4.6	5
600	26	30	0	6	40	47	433	4.8	5
700	27	33	0	6	42	50	427	5.0	5
800	28	36	0	6	44	53	421	5.2	5
900	29	39	0	6	46	56	415	5.4	5
3000	30	43	0	6	48	60	409	5.7	5
100	31	46	0	7	50	64	403	5.9	5
200	32	50	0	7	52	68	397	6.1	5
300	33	54	0	7	54	71	391	6.4	5
400	34	58	0	7	57	75	386	6.6	5
500	35	62	0	7	59	80	380	6.9	5
600	36	67	0	7	61	84	375	7.2	6
700	37	72	0	7	64	89	370	7.4	6
800	38	77	0	7	66	93	365	7.7	6
900	39	82	0	7	69	98	360	8.0	6
4000	40	88	0	7	71	103	355	8.3	6
100	41	94	1	8	74	108	350	8.5	6
200	42	101	1	8	76	113	346	8.8	6
300	43	108	1	8	79	119	341	9.1	6
400	44	115	1	8	82	124	337	9.4	6
500	45	123	1	8	85	129	333	9.7	6
600	46	131	1	8	88	135	329	10.1	6
700	47	139	1	8	91	141	325	10.4	6
800	48	148	1	8	94	147	322	10.7	6
900	49	157	1	8	97	153	318	11.0	6
5000	50	167	1	8	100	159	315	11.4	6

Table 13

76mm Tank Gun, Model 1941 (ZIS-5)

Table of corrections for mean deviation for

AP-T Shell BP-350

Range	Range Corr.	Verti- cal Corr.	Lateral Corr.	Range	Range Corr.	Verti- cal Corr.	Lateral Corr.
X	U _g	U _w	U _s	X	U _g	U _w	U _s
100	24	0.1	0.1	600	17	0.9	0.8
200	24	0.1	0.1	700	17	1.0	0.9
300	24	0.1	0.1	800	17	1.0	0.9
400	24	0.2	0.1	900	17	1.0	0.9
500	23	0.2	0.1	3000	17	1.1	1.0
600	23	0.2	0.2				
700	22	0.3	0.2	100	17	1.1	1.0
800	22	0.3	0.2	200	17	1.2	1.0
900	21	0.3	0.2	300	17	1.3	1.1
1000	21	0.3	0.3	400	17	1.4	1.1
				500	17	1.5	1.1
100	21	0.4	0.3	600	17	1.6	1.2
200	20	0.4	0.3	700	17	1.7	1.2
300	20	0.4	0.3	800	17	1.8	1.2
400	20	0.4	0.3	900	17	1.9	1.2
500	20	0.5	0.4	4000	17	2.0	1.3
600	19	0.5	0.4				
700	19	0.5	0.4	100	18	2.1	1.4
800	19	0.6	0.5	200	18	2.2	1.4
900	19	0.6	0.5	300	18	2.3	1.4
2000	19	0.7	0.6	400	18	2.4	1.4
				500	18	2.6	1.5
100	18	0.7	0.6	600	19	2.8	1.5
200	18	0.8	0.7	700	19	2.9	1.5
300	18	0.8	0.7	800	19	3.1	1.6
400	18	0.8	0.7	900	19	3.3	1.6
500	18	0.9	0.8	5000	19	3.5	1.6

Table 13

76mm Tank Gun, Model 1941 (ZIS-5)

Table of corrections for mean deviation for

Frag Shell 0-350

Range	Range Corr.	Verti- cal Corr.	Lateral Corr.	Range	Range Corr.	Verti- cal Corr.	Lateral Corr.
X	U _g	U _w	U _s	X	U _g	U _w	U _s
100	23	0.1	0.1	600	18	0.8	0.7
200	23	0.1	0.1	700	18	0.9	0.7
300	23	0.1	0.1	800	18	0.9	0.8
400	23	0.1	0.1	900	18	1.0	0.8
500	22	0.2	0.2	3000	17	1.1	0.8
600	22	0.2	0.2				
700	22	0.2	0.2	100	17	1.1	0.8
800	22	0.3	0.3	200	17	1.2	0.9
900	22	0.3	0.3	300	17	1.3	0.9
1000	21	0.3	0.3	400	17	1.3	0.9
				500	17	1.4	1.0
100	21	0.4	0.3	600	17	1.5	1.0
200	21	0.4	0.4	700	17	1.6	1.0
300	21	0.4	0.4	800	17	1.7	1.1
400	21	0.4	0.4	900	17	1.7	1.1
500	20	0.5	0.4	4000	17	1.8	1.2
600	20	0.5	0.5				
700	20	0.5	0.5	100	18	1.9	1.2
800	20	0.5	0.5	200	18	2.0	1.2
900	20	0.5	0.5	300	18	2.1	1.3
2000	19	0.6	0.6	400	18	2.2	1.3
				500	18	2.4	1.3
100	19	0.6	0.6	600	19	2.6	1.4
200	19	0.6	0.6	700	19	2.8	1.4
300	19	0.7	0.6	800	19	2.9	1.5
400	19	0.7	0.6	900	19	3.1	1.5
500	18	0.8	0.7	5000	19	3.2	1.6

Table 14

76mm Tank Gun, Model 1941 (ZIS-5)

Tables of Increase in Maximum Ordinate in Meters
above the Line of Sight

Range	100	200	300	400	500	600	700	800
100	0	-0.2	-0.7					
200	0.1	0	-0.4	-0.9				
300	0.2	0.2	0	-0.5	-1.2			
400	0.3	0.4	0.4	0	-0.6	-1.5		
500	0.5	0.7	0.7	0.5	0	-0.8	-1.8	
600	0.6	1.0	1.0	1.0	0.7	0	-0.9	-2.1
700	0.7	1.2	1.4	1.4	1.3	0.8	0	-1.1
800	0.9	1.5	1.9	1.9	1.9	1.6	1.0	0
900	1.0	1.8	2.4	2.5	2.5	2.4	1.9	1.2
1000	1.2	2.1	2.8	3.2	3.2	3.2	3.0	2.2
100	1.3	2.4	3.2	3.8	4.0	4.0	4.0	3.5
200	1.5	2.7	3.7	4.4	4.8	4.8	4.8	4.6
300	1.6	3.0	4.1	5.0	5.7	5.8	5.8	5.8
400	1.8	3.3	4.6	5.7	6.5	6.8	6.8	6.8
500	1.9	3.6	5.1	6.3	7.3	7.8	8.0	8.0
600	2.1	3.9	5.6	7.0	8.1	8.9	9.2	9.2
700	2.2	4.2	6.1	7.6	8.9	9.8	10.0	10.0
800	2.4	4.6	6.5	8.2	9.7	10.8	11.8	12.0
900	2.6	4.9	7.0	8.8	10.6	11.7	12.9	13.6
2000	2.7	5.2	7.5	9.5	11.3	12.7	14.1	14.9
100	2.8	5.6	8.0	10.2	12.2	13.8	15.3	16.3
200	3.1	5.9	8.6	11.0	13.1	15.0	16.5	17.7
300	3.2	6.2	9.1	11.6	14.0	16.9	17.6	18.9
400	3.4	6.6	9.7	12.4	15.0	17.1	19.0	20.5
500	3.6	6.8	10.3	13.2	16.0	18.3	20.4	22.1
600	3.8	7.5	10.9	14.1	17.0	19.6	21.9	23.8
700	4.0	7.9	11.5	14.9	18.0	20.8	23.3	25.4
800	4.3	8.3	12.2	15.8	19.2	22.2	25.0	27.3
900	4.5	8.7	12.8	16.6	20.2	23.4	26.4	28.9
3000	4.7	9.2	13.5	17.6	21.4	24.8	28.0	30.8

Table 14

76mm Tank Gun, Model 1941 (ZIS-5)

Tables of Increase in Maximum Ordinate in Meters
above the Line of Sight

900	1000	1100	1200	1300	1400	1500	Range
							100
							200
							300
							400
							500
							600
-2.5							700
-1.3	-2.9						800
0	-1.5	-3.2					900
1.3	0	-1.6	-3.5				1000
							100
2.5	1.5	0	-1.7	-3.9			200
3.9	2.8	1.6	0	-1.9	-4.3		300
5.2	4.4	3.2	1.8	0	-2.1	-4.7	400
6.8	6.1	4.7	3.6	2.0	0	-2.3	500
8.0	7.6	6.7	5.6	4.0	2.2	0	600
9.2	9.2	8.6	7.7	6.4	4.4	2.4	700
10.0	10.0	10.0	9.4	8.3	6.5	4.8	800
12.0	12.0	12.0	11.5	10.6	9.0	7.4	900
13.9	14.0	13.8	13.3	12.5	11.0	9.6	2000
15.4	15.7	15.7	15.4	14.7	13.8	12.2	
							100
17.0	17.5	17.5	17.4	17.0	15.9	14.8	200
18.6	19.2	19.5	19.5	19.3	18.8	17.5	300
20.0	20.7	21.2	21.3	21.6	20.8	20.1	400
21.8	22.7	23.5	23.7	24.1	23.7	23.1	500
23.6	24.7	25.6	26.2	26.8	26.5	26.1	600
25.5	26.8	27.9	28.7	29.5	29.4	29.6	700
27.3	28.8	30.1	31.1	32.1	32.2	32.3	800
29.5	31.2	32.8	34.0	35.2	35.6	35.8	900
31.3	33.2	35.0	36.4	37.8	38.4	38.8	3000
33.3	35.5	37.5	39.1	40.7	41.6	42.3	

Range	1600	1700	1800	1900	2000	2100	2200	2300
100								
200								
300								
400								
500								
600								
700								
800								
900								
1000								
100								
200								
300								
400	-5.1							
500	-2.5	-5.5						
600	0	-2.7	-5.9					
700	2.6	0	-2.9	-6.3				
800	5.2	2.8	0	-3.2	-6.7			
900	7.4	5.6	3.0	0	-3.4	-7.2		
2000	10.3	8.4	6.2	3.3	0	-3.6	-7.7	
100	13.0	11.4	8.9	6.6	3.5	0	-3.8	-8.0
200	15.8	14.3	12.0	9.9	7.0	3.7	0	-4.1
300	18.7	17.3	15.3	13.3	10.6	7.3	3.9	0
400	21.9	20.7	18.9	17.1	14.6	11.5	8.4	4.6
500	25.1	24.1	22.5	20.9	18.6	15.7	12.8	9.2
600	30.0	27.7	25.4	24.9	22.8	20.2	17.4	14.0
700	31.7	31.1	29.9	28.7	26.8	24.4	21.8	18.6
800	35.5	35.5	34.2	33.3	31.6	29.4	27.0	24.2
900	38.7	38.6	37.8	37.0	35.6	33.6	31.4	28.7
3000	42.4	42.5	42.0	41.5	40.2	38.4	36.5	34.0

2400	2500	2600	2700	2800	2900	3000	Range
							100
							200
							300
							400
							500
							600
							700
							800
							900
							1000
							100
							200
							300
							400
							500
							600
							700
							800
							900
							2000
							100
							200
							300
							400
							500
							600
							700
							800
							900
							3000
-9.1							100
-4.8	-10.0						200
0	-5.0	-10.7					300
4.8	0	-5.4	-11.1				400
9.8	5.2	0	-5.5	-12.3			500
14.6	10.2	5.2	0	-5.7	-12.7		600
20.4	16.3	11.4	5.4	0	-5.8	-12.9	700
25.2	21.2	16.6	11.9	5.6	0	-6.9	800
30.7	27.0	22.6	18.1	12.0	6.7	0	900
							3000

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