

ARCHIVED REPORT

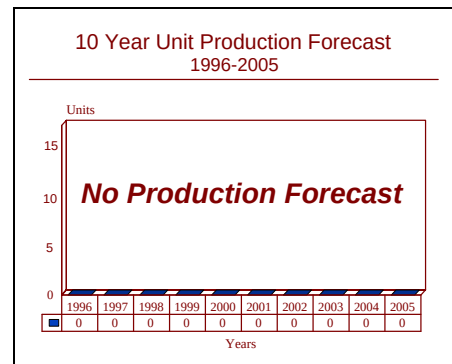
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T.62 - Archived 5/98

Outlook

- Production of the T.62 ended in 1984
- A total of 23,300 T.62 tanks manufactured
- This tank remains in service in at least 21 nations
- No additional significant modernization or retrofit programs are forecast



Orientation

Description. A tank

Sponsor. The development and procurement by the former Soviet Union of the T.62 was sponsored by the former Union of Soviet Socialist Republics Ministry of Defense through the Sixth Central Directorate of the Army supported by the Technical Institute for Armored Technology and the Military Transport Machine Building Research Institute.

Contractors. The T.62 was developed by the Kartsev design bureau. The tank was manufactured in the former Soviet Union at the Vagonka tank plant in Nizhniy Tagil (Zavod 183).

Licensees. The Zavody Tazkeho Strojartstva/Martin plant in the former Czechoslovakia manufactured the T.62 under license for export, while the Democratic People's Republic of Korea manufactured the T.62 for the domestic requirement as well as limited export.

Status. The production of the T.62 terminated in 1984. Thousands of these tanks remain in service around the

world. A number of modernization and retrofit programs are in various stages of development, implementation and completion for this tank.

Total Produced. A total of 23,300 T.62 tanks was manufactured by all sources.

Application. A tank for the projection of power as well as defensive missions.

Price Range. Recently released data reveals that, in equivalent 1978 United States dollars, the unit price for a serially produced T.62 tank was \$265,000. The only definitive open market price information we have obtained is a 1990 offer of five "as new" T.62 tanks at a unit price equivalent to 164,000 United States dollars to an unspecified African nation. This offer, which was not taken up, was through an international broker. In late 1990, large numbers of T.62 tanks began coming on the market as a result of the changing situation in Europe. Research indicates that some of the unit prices quoted for these tanks have been under the equivalent of a hundred thousand United States dollars.

Technical Data

Crew. Four: commander, gunner, loader, driver

Armor. The hull is fabricated from conventional rolled homogeneous steel alloy armor with the turret a single piece casting. The maximum thickness of the hull is 10.2 centimeters (4.02 inches) at 60° on the upper front; this is a 23.2 centimeter equivalent. The maximum thickness of the turret front is 24.2 centimeters (9.53 inches).

Dimensions. This data is for the T.62 model 1967. The fuel capacity figures are for the internal fuel plus the external fuel including that contained in the jettisonable drums. With preparation (including a schnorkel), the T.62 can ford five meters (16.4 feet) of water.

	<u>SI units</u>	<u>US units</u>
Length	9.34 meters	30.64 feet
Width	3.3 meters	10.82 feet
Height	2.4 meters	7.87 feet
Combat Weight	40 tonnes	44.09 tons
Fuel capacity	675/285 liters	179.5/75.8 gallons

Performance. The automotive performance is on a metalled road; the range figure is for without and with the extra fuel tanks.

Maximum speed	50 kilometers per hour	31.05 miles per hour
Maximum range	450/650 kilometers	279.5/403.7 statute miles
Step	80 centimeters	2.63 feet
Trench	2.85 meters	9.35 feet
Slope	38%	38%
Gradient	60%	60%
Fording	1.4 meters	4.59 feet

Engine. The basic model of the T.62 uses the V-55-5 liquid cooled V-12 diesel engine which is rated at 432.7 kilowatts (580 horsepower) at 33.34 revolutions per second (2,000 revolutions per minute); the power-to-weight ratio of the tank with this engine is 10.82 kilowatts per tonne (13.15 horsepower per ton). A compressed air system is used for starting this engine which is a product of an unknown design bureau of the Russian State Factories. A 24 volt electrical system with four 12 volt, 150 ampere hour batteries and a 1,500 watt generator is the standard electrical fit. The engine is fitted with a pre-heating system and smoke generation system, and a back-up electric starting system is standard.

Gearbox. This tank uses an unspecified manually operated unit with five forward and one reverse gear ratios. The clutch mechanism is pneumatically operated off the engine air compressor.

Suspension and Running Gear. The T.62 uses a torsion bar type Christie type suspension with five dual tired road wheels and no track return rollers on each side. The first and last road wheel stations are provided with hydraulic shock dampers. The track is of the dead type fabricated from non-magnetic Hadfield type steel.

Armament. The T.62 mounts the U-5TS (2A20) 115 millimeter smooth bore tank cannon; also called the Rapira 2, it is fitted with a fume extractor. The muzzle velocity with the BR-5 Hyper Velocity Armor Piercing Fin Stabilized Discarding Sabot ammunition is 1,615 meters per second (5,298.5 feet per second). An integral spent shell ejection system is fitted automatically and ejects the spent shell case through a door in the rear of the turret. After firing, the gun control equipment automatically reindexes the U-5TS cannon to a 3.5

degree elevation. This operation, as well as turret traverse, is electro-hydraulic in operation with manual back-up. The U-5TS cannon fires the BM-6 Armor Piercing Fin Stabilized Discarding Sabot, BK-4M High Explosive Anti-Tank, OF-18 and OF-11 High Explosive/fragmentation and BR-5 Hyper Velocity Armor Piercing Fin Stabilized Discarding Sabot ammunition. A total of 40 rounds is carried. This cannon is optimized for short (1.5 kilometer-1,640.4 yard) range accuracy. The U5-TS is fully stabilized in two planes. The secondary armament consists of a 7.62 millimeter PKT (SGMT) machine gun coaxially mounted, and one 12.7 millimeter DShKM machine gun mounted on the turret roof at the commander's position.

Fire Control. The fire control suite of the T.62, while sometimes criticized for its "primitive" technological level compared to similar Western tanks of the same era, is adequate for the missions envisioned for the T.62. The system consists of a variable power (seven power/nine degrees - day and 3.5 power/18 degrees - night) TSh2B-41u sight with rotating graticule and integral stadiametric rangefinder. The gunner also has a 5.5 power TPN-1-41-11 infrared monocular periscope which is being replaced with the newer IPN-22MI sight of the same type. The gunner also has one TNP-165 vision block. The commander is provided with a variable power (4.2 power/eight degree - day and five power/ten degrees - night) TKN-3 binocular sight with integral range stadia. The commander also has five TNP-165 vision blocks. The loader is provided with a TNP-165 vision block and a MK-4S periscope, and the driver is provided with a TVN-2 or -3 night driving periscope. A L2G infrared/white light searchlight is mounted to the right of the main armament; it has been replaced by the newer OU-3GK searchlight of the same

type. An unspecified ballistic computer and laser rangefinder were fitted by the former Soviet Union in a modernization and retrofit program somewhat similar to

that conducted by the United States Army for the M60 tank.

Variants/Upgrades

Production Models. The following is a breakout of the various production models of the T.62; they are presented in the general chronological order in which they appeared.

Ob'iekt 165 - Dating from 1958, this prototype/developmental tank is based on the T.55 albeit with a new chassis. An improved version of the D.10 100 millimeter tank cannon of the T.55 is fitted.

Ob'iekt 166 - This is a further modified T.55, again with a new chassis dating from 1959. A prototype of the 115 millimeter 2A20 (U5TS) tank cannon is fitted.

T.62 - Also called the T.62 Model 1962, this is the basic production model based on the Ob'iekt 166; this tank is described in the technical data section above.

T.62 - Dating from 1967, this model is also called the T.62 Model 1967. The main feature of this model is a new deck over the engine; other minor improvements are also incorporated.

T.62 - This model, dating from 1970, is also called the T.62 Model 1970. This model adds the DShHK 12.7 millimeter machine gun mount at the loader's hatch; other minor improvements are also incorporated.

Ob'iekt 167 - Several developmental versions of the T.62 tank were manufactured under this designation. One version incorporated a number of extensive automotive changes including a more powerful multi-fuel engine rated at 522.2 kilowatts (700 horsepower), changed gear ratios in the gearbox, different (larger) drive sprocket, and a six roadwheel running gear featuring more strengthened shock dampers. This tank had a top speed of 64 kilometers per hour (39.8 miles per hour). Another version of the Ob'iekt 167 integrated a vehicular gas turbine and new gearbox with the tank.

T.62K - Introduced in 1973, this command tank features additional communications equipment and the TNA-3 land navigation system. The ammunition capacity is reduced to 37 or 32 rounds depending on the internal fit.

T.62 - Also called the T.62 Model 1975, this was the final serial production model of the T.62. This tank was fitted with the KTD-1 laser rangefinder.

T.62D - This is the first major upgrade of the T.62; the upgrades were accomplished from 1983 through 1988. The main enhancement is the integration of the Dzrod

active defense system. The Dzrod is designed for defense against incoming anti-tank missiles. It consists of motion sensors to detect the incoming missile, and four launch tubes mounted on each side of the turret. Once the sensor detects an incoming missile, one of the launch tubes is activated, firing a shotgun-like blast of small projectiles toward the incoming missile. This upgraded tank also features additional appliqué armor as described above, the upgraded V-55U engine and the R-173 radio suite.

T.62D1 - This upgrade began shortly after the D upgrade described above and ran into 1988. It is the same as the D upgrade except that the V-46-5M engine as used in the T.72 is used.

T.62M - This is the second major T.62 upgrade program, albeit in several different permutations. All T.62M upgrades were undertaken between 1983 and 1988. This basic level of the M upgrades features the integration of the Sheksna anti-tank guided missile system and fire control upgrades described above. The R-173 radio suite, uprated V-55U engine, complete appliqué armor suite and live track are also retrofitted. The T.62M, called T.62A by NATO, can also be fitted with mine clearance equipment like the T.54 and T.55.

T.62M-1 - This is almost the same upgrade as described immediately above; the only difference is that the V-46-5M engine is used.

T.62M1 - This tank is the same as the T.62M described above but without the Sheksna anti-tank missile system.

T.62M1-1 - This version of the T.62M tank upgrades is the same as the T.62M-1 described above but without the Sheksna anti-tank missile system.

T.62M1-2 - This version of the T.62M enhancement program is the same as the T.62M1 except that it deletes the Sheksna anti-tank guided missile system and fits appliqué armor to the turret and belly of the tank only.

T.62M1-2-1 - This upgraded T.62 is the same as the T.62M1 except that the Sheksna anti-tank guided missile system is deleted, the V-46-5M engine is used and appliqué armor is fitted to the turret and belly of the tank only.

T.62MV - This upgraded tank has the Sheksna anti-tank guided missile system and associated components, the V-55U engine, R-173 radio suite and fitted for explosive reactive armor.

T.62MV-1 - This is the same upgrade as the T.62MV described immediately above except that the V-46-5M engine is used.

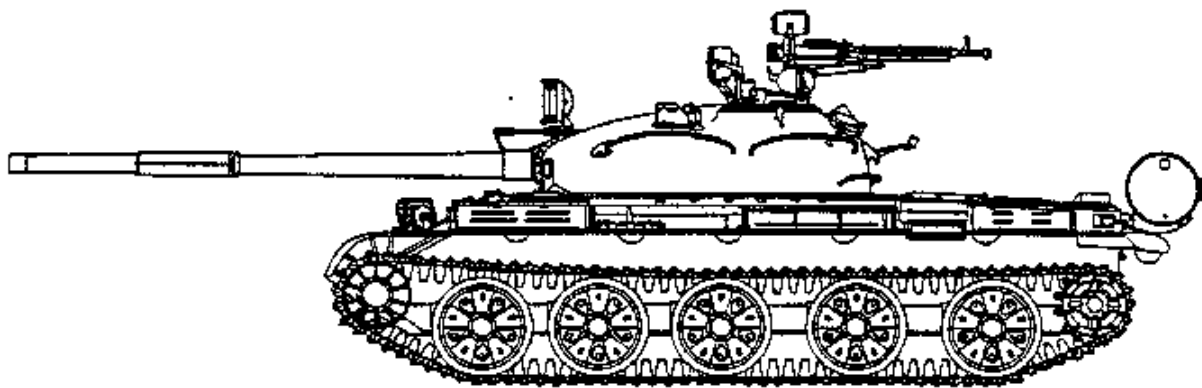
Variants. The T.62 was not developed and manufactured in the large number of specialized variants that the T.54 and T.55 has; the following list is in alphabetical form and was complete as of early 1996.

TO.62 - A flamethrower tank based on the T.62. This tank is fitted with a flamethrower in addition to the U-5TS cannon. A tank with a capacity of approximately 500 liters (133 gallons) holds the fuel for the flamethrower. Due to the inclusion of the flamethrower

equipment, the internal ammunition capacity is diminished.

IT.2 - This missile armed tank destroyer was based on the chassis of the T.62. On top of the chassis, one of several types of anti-tank guided missile launchers was mounted. Although some hundreds of the IT.2 were manufactured between 1968 and 1970, this vehicle was phased out of service years ago.

NOTE: The T-62T, also known as the M-1977 ARV, is an armored recovery vehicle without a crane, but it carries other specialized recovery equipment. It is not actually a T.62 variant but a conversion of the IT-130 tank destroyer which was based on the T.55.



T.62

Source: Forecast International

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