

DTIG

Defense Threat
Informations Group

Factsheet

Ballistic Missile Proliferation

Year 2005 Report

Special Report

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System	Status	Range (km)	Payload / Type of Warhead	Country of origin	Notes
Afghanistan					
FROG-7	O	65	435kg HE or submun	Russia	
SS-1c Scud B	O	280	985kg HE or submun	Russia	
Algeria					
SS-1c Scud B	O	280	985kg HE	Russia	
Argentina					
Alacran	D/T	200	500kg HE or submun	Domestic	
Armenia					
SS-1c Scud B	O	280	985kg HE	Russia	
Azerbaijan					
SS-1c Scud B	O	280	985kg HE	Russia	
Bahrain					
MGM-140A ATACMS	O	165	560kg submunitions	USA	
Belarus					
SS-1c Scud B	S	280	985kg HE	Russia	
SS-21 Scarab	O	120	485kg HE or submun	Russia	
Bulgaria					
SS-1c Scud B	O	280	985kg HE or submun	Russia	
SS-23 Spider	O/S	480	450kg HE or submun	Russia	banned by INF Treaty
China, People's republic of					
B611	D/T	150	450kg HE or submun	Domestic / Turkey	
CSS-2 / DF-3	O	2900	nuc 3.3MT / 1 RV	Domestic	
CSS-3 / DF-4	O	8100	nuc 3.3MT / 1 RV	Domestic	
CSS-4 / DF-5	O	11500	nuc 5.0MT / 1 RV	Dom/Russia	
CSS-4 / DF-5A	O	11500	nuc 1.0MT / 6 MIRV	Dom/Russia	
CSS-5 / DF-21	O	1800	nuc 300KT / 1 RV	Domestic	
CSS-6 / DF-15 / M-9	O	600	950kg HE or nuc	Domestic	
CSS-7 / DF-11 / M-11	O	280	800kg HE or nuc	Domestic	
CSS-8	O	160	190kg HE	Dom / Russia	from Russian SA-2 SAM
CSS-N-3 / JL-1	O	3000	nuc 300KT / 1 RV	Dom / Russia	SLBM
CSS-NX-5 / JL-2	D/T	8000	nuc 200KT / 1 RV	Domestic	SLBM
CSS-X-9 / DF-31	D/T	8000	nuc 500KT / 1 RV	Dom / Russia	from Russian SS-13 ICBM
CSS-X-10 / DF-41	D	12000	nuc 100KT / 6 MIRV	Domestic	
CSS-X-12 / DF-25	D	1700	nuc / 1 RV	Domestic	
M-18	D/T	1000	400kg HE or submun	Domestic	developed for exports
Congo, Democratic Republic of					
Hwasong 5 / Scud B	O	340	985kg HE	DPRK / Iran	
Cuba					
FROG-4	S	61	362kg HE	Russia	
FROG-7	S	65	435kg HE	Russia	
Czech Republic					
FROG-7	S	65	435kg HE or submun	Russia	
SS-21 Scarab	O	120	485kg HE or submun	Russia	
Egypt					
FROG-7	S	65	435kg HE or submun	Russia	being retired
Hwasong 6 / Scud C	O	550	770kg HE	DPRK	mod SS-1d Scud C
Project T	D/T	450	985kg HE	Dom / DPRK	
Sakr-80	O	80	200kg HE or submun	Dom / Russia	mod FROG
SS-1c Scud B	O	280	985kg HE	Russia	
Georgia					
SS-1c Scud B	O	280	985kg HE	Russia	
Greece					
MGM-140B ATACMS ER	O	300	160kg submunitions	USA	
France					
MSBS M-4B	O	5000	nuc 150KT / 1 RV	Domestic	SLBM
MSBS M-45	O	6000	nuc 100KT / 6 MIRV	Domestic	SLBM
MSBS M-5/51	D/T	11000	nuc 100KT / 8-10 MIRV	Domestic	SLBM

System	Status	Range (km)	Payload / Type of Warhead	Country of origin	Notes
India					
Agni-1	O	1500	1000kg HE or nuc	Dom / USA / France	
Agni-2	D/T	2000	1000kg HE or nuc	Domestic	
Prithvi-150	O	150	1000kg HE or nuc	Dom / Russia	from Russian SA-2 SAM
Prithvi-250	D/T	250	1000kg HE or nuc	Dom / Russia	from Russian SA-2 SAM
Prithvi-350	D	350	500kg HE or submun	Dom / Russia	from Russian SA-2 SAM
Sagarika	D	300	500kg HE or submun	Dom / Russia	SLBM
Surya	D	12000	nuclear	Domestic	
Indonesia					
B611	D	150	450kg HE or submun	China	Development with China
Iran					
CSS-8	O	160	190kg HE	China	
Fateh-110	D/T	200	500kg HE or submun	Dom / Russia / China	
Hwasong 5 / Scud B	O	340	985kg HE or chem	DPRK	mod SS-1c Scud B
Hwasong 6 / Scud C	O	550	770kg HE or chem	DPRK	mod SS-1d Scud C
Mushak 160	D/T	160	500kg HE	Dom / China	
Mushak 200 / Zelzal 1	D/T	200	600kg HE	Dom / China	
Shahab 2	O	500	700kg HE	Dom / DPRK	mod SS-1b Scud B
Shahab 3 / Zelzal 3	O	1300	1000kg HE	Dom / DPRK	from Korean Nodong
Shahab 3A	D/T	1500	1000kg HE	Dom / China	
Shahab 3B	D	1700-2500	500kg HE	Dom / China	
Shahab 4	D	2000	1000kg HE	Dom / Russia	from Russian SS-4 IRBM
Shahab 5 / Tondar 68	D	5500	n.k.	Dom / Russia	from Russian SS-5 IRBM
SS-1c Scud B	O	280	985kg HE	Russia	
Israel					
MGM-52C Lance	O/S	120	450kg HE or submun	USA	
Jericho-1	O	500	500kg HE or submun	Dom / France	
Jericho-2	O	1500	1000kg HE or nuc	Dom / France	
Jericho-3	D	3500	nuc?	Domestic	
Kazakhstan					
SS-21 Scarab	O	120	485kg HE or submun	Russia	
SS-1c Scud B	O	280	985kg HE	Russia	
Libya					
FROG-7	O	65	435kg HE or submun	Russia	being retired
Al Fatah	D	950	500kg HE	Dom / DPRK	Development stopped
Al Mjira	D	300	n.k.	Dom / DPRK	Development stopped
SS-1c Scud B	S	280	985kg HE or chem	Russia	being retired
Hwasong 5 / Scud B	O	340	985kg HE or chem	DPRK	being retired
Netherlands					
MGM-140A ATACMS	O	165	560kg submunitions	USA	
North Korea, People's republic of					
FROG-5	O/S	55	450kg HE	Russia	
FROG-7	O	65	435kg HE or submun	Russia	
Hwasong 5 / Scud B	O	340	985kg HE or chem	Dom / Russia	mod SS-1c Scud B
Hwasong 6 / Scud C	O	550	770kg HE or chem	Dom / Russia	mod SS-1d Scud C
Nodong 1	O	1000	770kg HE or chem	Domestic	
Nodong 2	D/T	1500	770kg HE or chem	Domestic	
SS-1c Scud B	O	280	985kg HE or chem	Domestic	
Taepodong 1	D/T	2000	770kg HE or chem	Domestic	
Taepodong 2	D	3500	1000kg HE	Domestic	
Taepodong 3	D	6000	n.k.	Domestic	

Pakistan					
Babri / Tipu	D	4000	HE or nuclear	Dom / DPRK	
Ghauri 1	O	1500	750kg HE or nuc	Dom / DPRK	from Korean Nodong
Ghauri 2	D/T	2300	750kg HE or nuc	Dom / DPRK	from Korean Nodong
Hatf-1	O	80	500kg HE or submun	Dom / France	
Hatf-2	O	290	500kg HE	Dom / China	
Hatf-3	D/T	500	600kg HE	Dom / China	
Hatf-4 / Shaheen 1	O	750	750kg HE or nuc	Dom / China	from Chinese CSS-6
Hatf-5 / Shaheen 2	D/T	2500	750kg HE or nuc	Dom / China	from Chinese M-18
Romania					
FROG-7	S	65	435kg HE or submun	Russia	
SS-1c Scud B	S	280	985kg HE or submun	Russia	
Russian Federation					
FROG-7	S	65	435kg HE or submun	Domestic	being retired
SS-1c Scud B	S	280	985kg HE or submun	Domestic	being retired
SS-18 Satan	O	11000	nuc 750KT / 10 MIRV	Domestic	
SS-19 Stiletto	O	10000	nuc 550KT / 6 MIRV	Domestic	
SS-21 Scarab	O	120	485kg HE or submun	Domestic	
SS-24 Scalpel	O	10000	nuc 100KT / 8-10 MIRV	Domestic	being retired
SS-25 Sickle	O	10500	nuc 550KT / 1 RV	Domestic	
SS-26 Stone	D/T	415	800kg HE or submun	Domestic	
SS-27 Sickle B	O	10500	nuc 550KT / 1 MaRV	Domestic	Improved SS-25
SS-X-29	D	10500	nuc / 3 MaRV	Domestic	Improved SS-27
SS-N-8 Sawfly	S	8000	nuc 800KT / 1 RV	Domestic	being retired
SS-N-18 Stingray	O	6500	nuc 100KT / 7 MIRV	Domestic	SLBM
SS-N-20 Sturgeon	O	8300	nuc 100KT / 10 MIRV	Domestic	SLBM
SS-N-23 Skiff	O	8300	nuc 100KT / 4 MIRV	Domestic	SLBM
SS-NX-30 / Bulava	D	10000	nuc / 1 MaRV	Domestic	SLBM
Saudi Arabia					
CSS-2 / DF-3A	O	2650	2150kg HE	China	
Serbia					
FROG-7	S	65	435kg HE	Russia	
K-15 Kraijna	O	150	n.k.	Domestic	from Russian SA-2 SAM
Slovakia					
FROG-7	S	65	435kg HE or submun	Russia	
SS-21 Scarab	O	120	485kg HE or submun	Russia	
SS-1c Scud B	S	280	985kg HE or submun	Russia	
SS-23 Spider	S	480	450kg HE or submun	Russia	Banned by INF Treaty
South Korea					
HJ-1	O	45	550kg HE	Dom / USA	from Honest John
NHK-1 Hyunmoo	O	180	500kg HE	Dom / USA	from Nike Hercules SAM
NHK-2	O	260	500kg HE	Domestic	from Nike Hercules SAM
NHK-A	D/T	300	200kg HE	Domestic	
MGM-140A ATACMS	O	165	560kg submunitions	USA	
MGM-140B ATACMS ER	O	300	160kg submunitions	USA	
Syria					
FROG-7	S/O	65	435kg HE or submun	Russia	
Hwasong 6 / Scud C	O	550	770kg HE or chem	Dom / Russia	mod SS-1d Scud C
SS-21 Scarab	O	120	485kg HE or submun	Russia	
SS-1c Scud B	O	280	985kg HE or chem	Russia	
CSS-6 / DF-15 / M-9	O	600	950kg HE or chem	China	
Taiwan, Republic of China					
Ching Feng	O	130	270kg HE or submun	Dom / Israel / USA	from U.S. Lance
Tien Chi	D	300	500kg HE	Domestic / USA	
Tien Ma	D	950	500kg HE	Domestic	
Turkey					
MGM-140A ATACMS	O	165	560kg submunitions	USA	
MGM-140B ATACMS ER	O	300	160kg submunitions	USA	
Project J	D	150	450kg HE or submun	China / Indonesia	Mod. B611 missile

Turkmenistan					
SS-1c Scud B	O	280	985kg HE or chem	Russia	
United Arab Emirates					
SS-1c Scud B	S	280	985kg HE or submun	Russia	
United Kingdom					
UGM-133 Trident	O	12000	nuc 200KT / 1-10 MIRV	USA	SLBM
Ukraine					
SS-1c Scud B	S	280	985kg HE	Russia	
SS-21 Scarab	O	120	485kg HE or submun	Russia	
USA					
MGM-140A ATACMS	O	165	560kg submunitions	Domestic	
MGM-140B ATACMS ER	O	300	160kg submunitions	Domestic	
MGM-168A ATACMS IVA	D/T	300	227kg HE	Domestic	
LGM-30G Minuteman III	O	12900	nuc 337KT / 3 MIRV	Domestic	
LGM-118A Peacekeeper	O	11000	nuc 400KT / 10 MIRV	Domestic	being retired
UGM-96A Trident C-4	O	7400	nuc 100KT / 8 MIRV	Domestic	SLBM, being retired
UGM-133A Trident D-5	O	12000	nuc 475KT / 10 MIRV	Domestic	SLBM
Minuteman IV	D	n.k.	Nuclear / MIRV	Domestic	
Trident E6	D	n.k.	Nuclear / MIRV	Domestic	SLBM
Vietnam					
SS-1c Scud B	S	280	985kg HE	Russia	
Yemen					
FROG-7	S	65	435kg HE	Russia	
SS-1c Scud B	S	280	985kg HE	Russia	
SS-21 Scarab	O	120	485kg HE	Russia	
Zaire					
Hwasong 5 / Scud B	O	340	985kg HE	DPRK	

Major Ballistic Missile systems



SS-1c Scud-B / R-300 9K72 Elbrus	
Development Country:	Former UDSSR
Design Bureau:	Korolyev Design Bureau
Deployment Year:	1955
Total length:	11.16 m
Diameter:	884 mm
Range:	280 km
Payload:	985 kg
Warhead:	Nuclear / chemical / submunitions / FRAG-HE
Propellants:	1 Stage storable Liquid
Accuracy / CEP:	450 m
Reaction time	60 minutes
Deployment:	20 Countries
Remarks:	Used in the Iran-Iraq war



FROG-7 / 9K52 Luna-M	
Development Country:	Former UDSSR
Design Bureau:	Moscow Institute of thermal Technology (MIT)
Deployment Year:	1965
Total length:	9.39 m
Diameter:	544 mm
Range:	65 km
Payload:	457 kg
Warhead:	Nuclear / chemical / submunitions / FRAG-HE
Propellants:	1 Stage solid
Accuracy / CEP:	700 m
Reaction time	30 to 40 minutes
Deployment:	13 Countries
Remarks:	Short-range battlefield support artillery rocket



SS-21 Scarab / 9K79 Tochka	
Development Country:	Former UDSSR
Design Bureau:	Kolomna Design Bureau
Deployment Year:	1976
Total length:	6.40 m
Diameter:	650 mm
Range:	120 km
Payload:	485 kg
Warhead:	Nuclear / submunitions / FRAG-HE
Propellants:	1 Stage solid
Accuracy / CEP:	95 m
Reaction time	15 min
Deployment:	9 Countries
Remarks:	Successor of FROG-7



MGM-140A ATACMS Block I	
Development Country:	USA
Design Bureau:	Lockheed-Martin (LTV)
Deployment Year:	1991
Total length:	3.96 m
Diameter:	610 mm
Range:	165 km
Payload:	560 kg
Warhead:	950 M74 Submunitions
Propellants:	1 Stage solid
Accuracy / CEP:	More than 150 m
Reaction time	10 min
Deployment:	6 Countries
Remarks:	First used in Operation Desert Storm



Hwasong-5	
Development Country:	North Korea, People's republic of
Design Bureau:	Defence Industries Organisation
Deployment Year:	1984
Diameter:	884 mm
Launch weight:	5860 kg
Range:	340 km
Payload:	985 kg
Warhead:	Chemical / submunitions / FRAG-HE
Propellants:	1 Stage Storable Liquid
Accuracy / CEP:	Less than 900 m
Reaction time	60-80 minutes
Deployment:	5 Countries
Remarks:	Copy of Russian SS-1c Scud-B

Key:

D: In Development
n.k. not know
O: Operational
S: in Storage
T: Tested

Glossary:

Chem: Chemical Agents
Dom: Domestic Production
DPRK: North Korea, People's republic of
HE: High Explosive
KT: Kilotons
MaRV: Maneuverable Reentry Vehicle
MIRV: Multiple Independently Targetable Reentry Vehicles
MT: Megatons
Nuc: Nuclear
SAM: Surface-to-Air Missile
SLBM: Submarine Launched Ballistic Missile
RV: Reentry Vehicle

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FAS - Federation of American Scientists; <http://www.fas.org>

CDI - Center for defense Information; <http://www.cdi.org>

The Missile Threat; <http://www.missilethreat.com>

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