

Bi-MODULAR CHARGE SYSTEM (BMCS)

for 155mm Cannon Howitzer

BMCS is a further developmental stage of the design of charge systems for separated ammunition. These are the 2nd generation modular charges. The complete Bi-Modular Charge System (BMCS) represents in its design substance the solution of charge systems by two types of modules: A bottom Charge module – BC-E and a top Charge module – TC-F. The BC-E module serves for covering of small ranges of fire (it consists of one Zone-1 module and two Zone-2 modules). Type of TC-F module serves for covering of long and maximum ranges of fire (it comprises of three to six modules – Zone – 3, 4, 5 and 6).

BMCS is advantageous over conventional cloth bag charges because of simpler operation and reduced logistics during storage, transportation and war scenario.

BMCS enables fire on distances from 5 to 43 km and ensures sufficient range overlap.



155mm 52cal/23 dm³

HEERFB-BT equivalent L15A1/A2		BC-E	2xBC-E	3xTC-F	4xTC-F	5xTC-F	6xTC-F
Zone							
Muzzle Velocity	m/s	315	470	560	690	822	940
Pressure (max.)	MPa	60	140	95	150	230	355
Range (max.)	km	8.0	13.0	15.5	20	24.5	>30
Overlap	%		min. 15	min. 30	min. 30	min. 30	min. 30

Maximum range with HEERFB-BB is 43 km.

Basic characteristics:

	BC-E (XE)	TC-F (XF)
Diameter	158 mm	158 mm
Length	155 mm	177 mm
Modules can be connected	NO	6 x TC-F
Type of powder charge	Single base	Triple base
Additives	YES	YES
Ignition	CBI+black powder	CBI+black powder
Weight of charge	1.9 kg	2.8 kg
Propellant weight	1 500g	2 300g
Powder charge weight	2 500 EFC value	
Shelf life	>15 years of storage in original undamaged containers (average temperature 25°C)	

Warning: The combination of charge TC-F or BC-E with other type of charge is not allowed.

