

Comparison of the Mobile Flood Protection Products - Value for Money and Resources (linear structure 100 x 1 x 1 m)

	sand bags	sand bags	big bag	RAPID DRY	RAPID H2O	rubber bag/pillow "Rubena"	rubber modules 2-1
Type	single cell	double cell	Harbeck 4,5 x 0,9 x 0,9 m	RAPID DRY 1.0	RAPID H2O 1.0	Model A	Model CF 015 C with ZIP
number of linear modules used	min. 2	min. 1	1	1	1	1	2-1
Size of the structure	100 x 1 x 1 m						
number of bags/units	6000 – 6500	6000	4 pallets (1 pallet = 27 m - 22 units 4,5x0,9x0,9)	1 pallet (10 - 20 units each 5 m long)	1 pallet (10 - 20 units each 5 m) 1 pallet (50 - 100 containers(means polymeric bags))	20 x 5m	10 x 10m
unit price in CZK	10,00 Kč	17,00 Kč	6 912,00 Kč	16 875,00 Kč	34 690,00 Kč	51 500,00 Kč	34 790,00 Kč
price of the product excl. filling material	60 000,00 Kč	102 000,00 Kč	158 976,00 Kč	337 500,00 Kč	693 800,00 Kč	1 030 000,00 Kč	1 043 700,00 Kč
filling material	sand	sand	sand	material available in the location (sand, aggregate, soil)	untreated water	clean or drinkable water without mechanical particals	clean or drinkable water without mechanical particals
unit price per m3 of the filling material	350,00 Kč	350,00 Kč	350,00 Kč	350,00 Kč	0,00 Kč	0,00 Kč	0,00 Kč
price of the filling material	35 000,00 Kč	35 000,00 Kč	35 000,00 Kč	35 000,00 Kč	0,00 Kč	0,00 Kč	0,00 Kč
total price = product + filling material	95 000,00 Kč	137 000,00 Kč	190 250,00 Kč	372 500,00 Kč	693 800,00 Kč	1 030 000,00 Kč	1 043 700,00 Kč
total time needed for deployment and filling	115 hours *	115 hours *		2 hours	2 hours	14 hours	
number of manpower needed	4	4	4	4	4	4	4
tools	3 x filling equipment, shovels, truck and loader	3 x filling equipment, shovels, truck and loader	truck, loader and crane nákladní vozidlo nebo 1-2 nakladače	1 – 2 loaders (Bobcat/UNC)	pump	pump	pump
repeated use	NO	NO	NO	YES	YES	YES	YES
comments	filling equipment gets stuffy, * = 2 teams (each 10 hours) each 23 people = 46 people in total	filling equipment gets stuffy, * = 2 teams (each 10 hours) each 23 people = 46 people in total	linear structure only 0.9 m high, filling has to be done with loader and removal and cleaning from the location must be done with heavy machinery (crane/loader)	Filling and removal/cleaning has to be done with loader, linear structure can be easily reinforced with ribbs created with the same barrier units, no crane needed for removal	can stop the flood water up to 0,75 m only, linlinear structure can be easily reinforced with ribbs created with the same barrier units, no crane needed for removal, untreated water or any water can be used for filling with simple pump	Can stop the flood water up to 0,8 m only. Linear structure has to be connected with tapes between each other, high sensitivity to mechanical damage, must be anchored to the ground.	tubes have to be connected with tapes to erect a linear structure, high sensitivity to mechanical damage, must be anchored to the ground.