







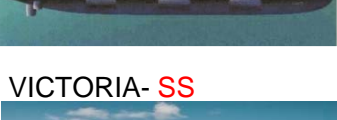







CARTRIDGE VALVE POPULATION

	INSTALLED BASE	NO. OF SUBMARINES/SHIPS	VALVES PER SUBMARINE	TOTAL NO. VALVES	DATE OF COMMISSION
U.K. 	• SWIFTSURE- SSN 	5	980	4,900	1 st Commissioned: 1973
	• TRAFALGAR- SSN 	7	1,750	12,250	1 st Commissioned: 1985
	• VANGUARD - SSBN 	4	2,067	8,268	1 st Commissioned: 1993
	• ASTUTE- SSN 	5	1,860	9,310	1 st Commissioned: 2010 5 Boats Confirmed
	• SEAWOLF- SSN 	3	4	12	1 st Commissioned: 1997
U.S.A. 	• VIRGINIA- SSN 	18	4	72	1 st Commissioned: 2004 18 Boats Confirmed
	• VICTORIA- SS 	4	1,260	5,040	formerly Upholder (UK): 1 st Commissioned: 1986 Victoria (Canada) Commissioned: 2000
CANADA 					
SPAIN 	• S-80 CLASS- SS 	4		580	1 st to be Commissioned 2013
FRANCE 	• BARRACUDA- SSN 	4		1,250	1 st to be Commissioned : Expected in 2017

INSTALLED BASE



- OHIO REPLACEMENT PROGRAM (ORP)—SSBN



NO. OF SUBMARINES/SHIPS

VALVES PER SUBMARINE

TOTAL NO. VALVES

DATE OF COMMISSION

Future Request

"To be Determined"



- OHIO REPLACEMENT PROGRAM (ORP)—SSBN



Future Request

"To be Determined"



- M-CLASS FRIGATES



7

925

6,475

1st Commissioned : 1991



- OFFSHORE PATROL VESSEL



8

95

760

1st Commissioned : 2009



- PROJECT 17



3

486

1,458

1st Commissioned : 2010

- AIRCRAFT CARRIER



1

360

1st to be Commissioned: Expected in 2014





- ROCKET LAUNCH



1

1,842



INSTALLED BASE	NO. OF SUBMARINES/SHIPS	VALVES PER SUBMARINE	TOTAL NO. VALVES	DATE OF COMMISSION
<ul style="list-style-type: none"> AIRCRAFT CARRIER-CVN 78 	1		680	1 st to be Commissioned: Expected in 2015
<ul style="list-style-type: none"> AIRCRAFT CARRIER-CVN 79 	1		680	

TOTAL INSTALLED BASE	No. of Submarines/Ships	Total No. of Valves
• Submarines	<u>54</u>	<u>41,682</u>
• Aircraft Carriers/ Naval Surface Ships	<u>21</u>	<u>10,413</u>
• Rocket Launch	<u>1</u>	<u>1,842</u>
TOTAL	76	53,937