

Aspect/Function	Option 1	Option 2	Option 3	Option 4	Option 5
Mechanical					
EndEffector Type	1DOF Clamping Mechanism	Suction Mechanism	Hook	5 Finger Mechanical Hand	Jamming Mechanism
(Dexterity 1-10, Simplicity 1-5, Durability 1-5)	(2, 5, 5) = 12	(2, 4, 3) = 9	(1, 5, 5) = 11	(10, 1, 2) = 13	(8, 3, 2) = 13
Driving Mechanism	Direct Motor Drive	Indirect Motor Drive (Lines)	Pneumatic Drive	Hydraulic Drive	Air Muscle
(Precision 1-10, Speed 1-10, Torque/Force 1-10, System Size 1-5)	(10, 10, 6, 5) = 31	(10, 10, 6, 4) = 30	(5, 10, 8, 1) = 24	(5, 8, 10, 1) = 24	(5, 10, 7, 3) = 25
Software					
Kinematic Processing	Average PC	Microprocessor	FPGA	Cloud Computing	Analog Electronic Circuits
(Processing Power 1-10, Response Time 1-10,Size 1-10, Cost 1-10)	(8, 8, 4, 4) = 24	(4, 8, 10, 10) = 32	(8, 10, 8, 10) = 32	(10, 3 10, 8) = 31	(2, 10, 5, 6) = 23
Sensing					
Endeffector Position Control	Accelerometer and Gyroscope	Vision Control	Flex Sensor	Tensometers	Inductive Sensor
(Usability 1-5, Accuracy 1-10, Responsivness 1-10, Cost 1-5)	(4, 8, 9, 4) = 26	(5, 6, 8, 5) = 24	(4, 3, 7, 1) = 15	(4, 1, 9, 2) = 16	(3, 6, 8, 4) = 21
	Option 6	Option 7	Option 8	Option 9	
Mechanical					
EndEffector Type	Precision Probes	Excavator Bucket	Three Fingered Hand	Friction Gripper	
(Dexterity 1-10, Simplicity 1-5, Durability 1-5)	(5, 4, 3) = 12	(1, 5, 5) = 11	(9, 2, 3) = 14	(2, 4, 4) = 10	
Driving Mechanism	Smart material heat responsive	Smart material electric sensitive			
(Precision 1-10, Speed 1-10, Torque/Force 1-10, System Size 1-5)	(3, 2, 4, 5) = 14	(3, 4, 4, 5) = 16			
Software					
Kinematic Processing					
(Processing Power 1-10, Response Time 1-10,Size 1-10, Cost 1-10)					
Sensing					
Endeffector Position Control	Joystick	Keyboards	Artificial Intelligence	Electrodes	
(Usability 1-5, Accuracy 1-10, Responsivness 1-10, Cost 1-5)	(1, 8, 10, 3) = 22	(4, 1, 10, 5) = 20	(5, 6, 8, 5) = 24	(5, 10, 10, 5) = 30	