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hibot

Float Arm

One tool,
infinite possibilities

7m

EXTENDED
REACH



OUTDOOR
APPLICATIONS



WEIGHT
COMPENSATION



SNAKE-LIKE
MOBILITY

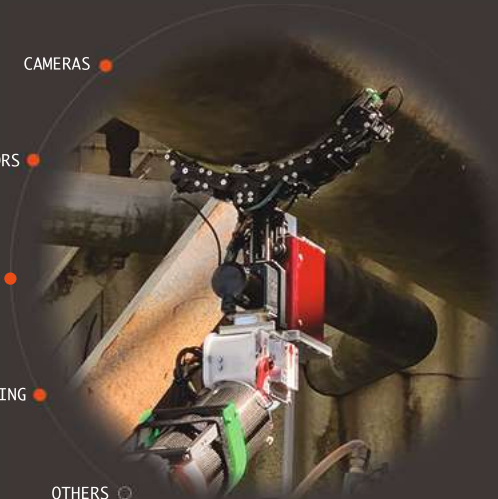
Float Arm - long-reach snake manipulator

Float Arm is hibot's new snake manipulator, designed for long-reach applications in confined spaces. With hibot's proprietary snake-motion control and unique self-balancing mechanism, it is able to navigate in complex environments and acquire detailed data for inspection and maintenance.

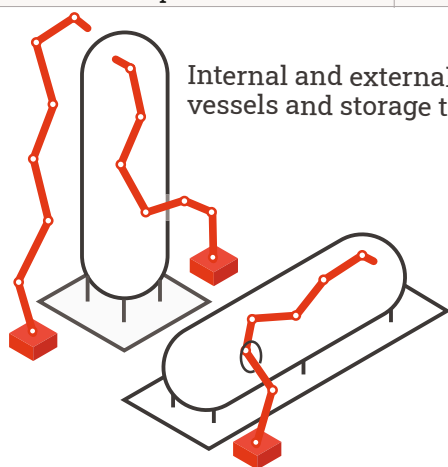
Float Arm is lightweight, fast and highly portable, making it an ideal tool for integration with other systems already in operation in the field, or simply as a stand-alone inspection device.

PAYLOAD

- CAMERAS
- UT SENSORS
- THERMO VISION
- 3D DATA SENSING
- OTHERS

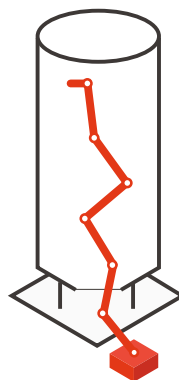


Electric Power			
Electrical rating	AC 100-240V, 50/60Hz, 10A		
Voltage tolerance	±10%		
Over-voltage	Category II (IEC 60664-1)		
Connector	IEC 60309 16A 250V 2P+E plug		
Power consumption	400W (average), 1kW (max)		
Pneumatic Power			
Input air pressure	8-10bar (800kPa-1MPa)		
Flow rate	30nL/min		
Internal pressure	7bar (700kPa)		
Control Modes			
Manual Joint Control (RPL)			
Automatic (pre-programmed)*1			
Manual Steering (IK)*1			
Move to Home*1 (automatic)			
Click'n'Go*1 (automatic)			
Tank Entrance*1 (semi-automatic)			
Tip Motion			
	Default speed	Max. speed	Repeatability
Translation	50mm/s	100mm/s	±5mm (horizontal), ±10mm (vertical)
Rotation	2.5°/s	5°/s	N/A
Sensors			
	Location	Resolution	Zoom
Inspection camera	End-Effector	1920x1080	30x (optical)
Navigation camera	UT Gripper	640x480	N/A
	End-Effector (x2)	640x480	N/A
	Unit 3 (x2)	640x480	N/A
	Location	Meas. range	
LiDAR	End-Effector	10cm ~ 30m	
UT probe	UT Gripper	Transd.: D791-RM; Gauge: 38DL PLUS (1mm ~ 508mm)	

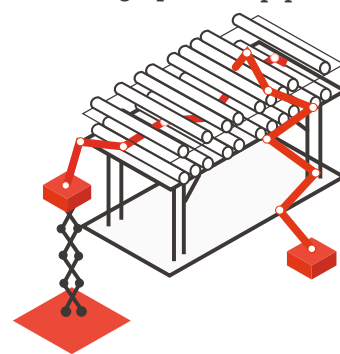


Internal and external pressure vessels and storage tanks

Silos and access shafts



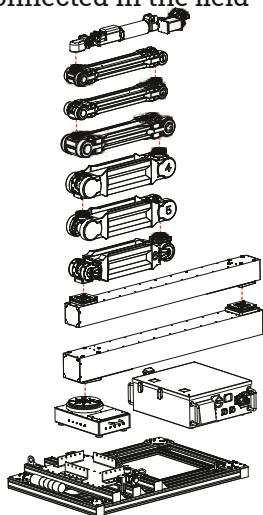
High places / pipe racks



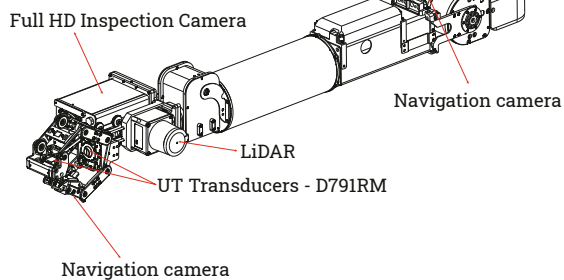
Dimensions			
	Horizontal	Vertical	
Maximum reach	7m	5m	
	Length	Width	Height
Size when folded	1.7m	0.8m	1.6m
Operating Conditions			
Temperature range	-10°C to 40°C		
Humidity	up to 90% at 20°C		
Wind Speed	up to 7m/s		
Altitude	up to 2,000m		
Storage temperature	-25°C to 55°C		
Pollution Degree	3, according to IEC 60664-1		
Noise Level	Less than 60dB*2		
IP Rating	65		
Applicable Directives			
Machine Directive 2006/42/EC			
EMC Directive 2014/30/EU			
RoHS Directive 2011/65/EU			

*1 Collision Avoidance feature available
*2 Excluding external sources of electricity (generator) and air (compressor), not included in the set

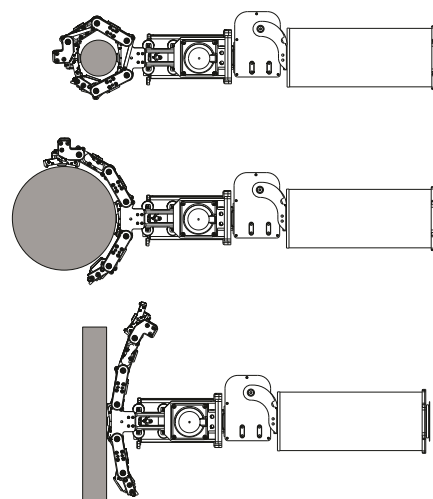
The links can be easily connected in the field



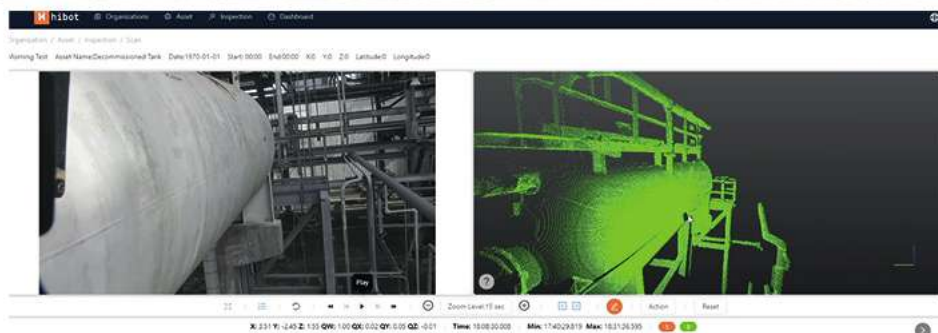
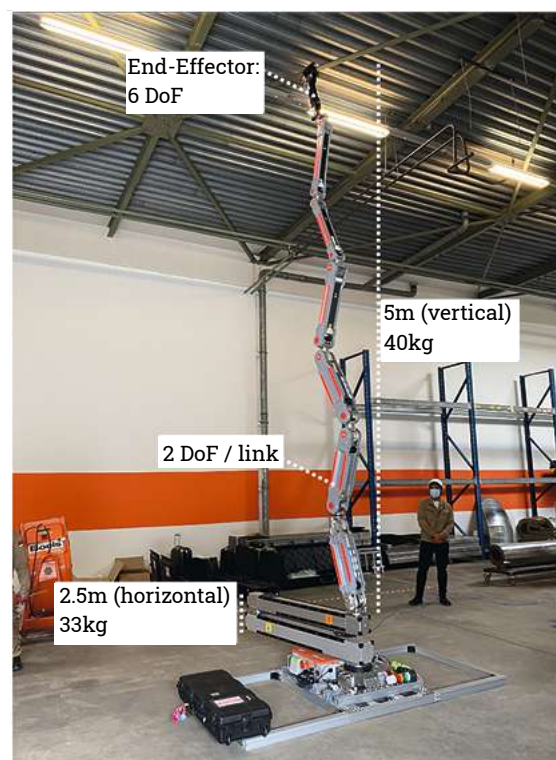
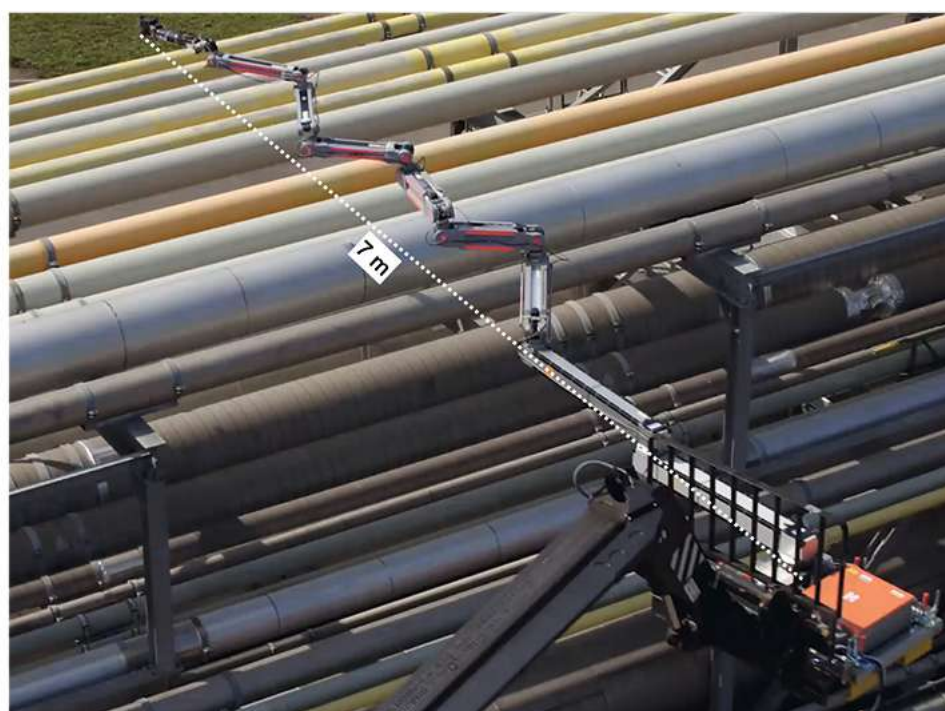
Details of the end effector



Simultaneous measurements of wall metal thickness on flat surfaces and on pipes (from 2" diameter)



The base can be easily clamped or fixed to different lifter mechanisms, such as cherrypickers, man lifters or long booms



Safer, Cheaper and Innovative

With Float Arm, hazardous works performed at heights or in confined spaces, with cost-demanding equipment, become faster and cheaper, supporting the digital transformation of your organization.

"Works of 5~6 days, including safety process, permits and scaffoldings, can now be completed in a few hours."

Asset owner



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Float Arm module