



HYDROPONIC PRODUCTION SYSTEM

COMPONENT LIST



*The system is suitable for growing leafy vegetables and culinary herbs



General

TAPKIT is a turnkey hydroponic system, designed for growing leafy vegetables and culinary herbs. TAPKIT was developed in Israel, based on extensive knowledge and over 20 years of experience in CEA with heavy emphasis on NFT hydroponics.

TAPKITs are installed and successfully operated all over the world in various climate conditions. Most of TAPKIT owners/growers had no previous experience in agriculture in general and in hydroponics in particular. TAPKIT's experts developed a methodology and supporting system to bring anyone who has the desire to grow hydroponics to do it successfully, right from the beginning.

TAPKIT's mission is to make hydroponic micro-farming accessible and affordable for agripreneurs to produce fresh and clean leafy vegetables, with a reliable supply throughout the year.

The TAPKIT should be installed in an area that has water supply, electricity and is suitable for agricultural activity. Customers need to ascertain the building permits that will be required prior to purchase of the unit.

Standard TAPKIT models

MODEL	GREENHOUSE Dimensions	Planting holes		
TAPKIT	35'X168'	22,272		
TAPKIT –retrofit (existing greenhouse)	30'X90'	9,568		

* Estimated- depends on climate and local regulations

Expected Yield

Products	Annual Yield	
	TAPKIT	Retrofit
Lettuce, Bok Choi (heads)	133,632	59,600
Fresh herbs (Lbs.)	29,400	13,000



Equipment and Services

Documents and Drawings:

- Instructions for site preparation
- Installation instructions
- Production protocol
- Fertilizing formula adapted to the local source water

Equipment and Growing System

Item	Details
Growing System	<ul style="list-style-type: none"> • NFT channels, gutters, covers and connectors • Seedling trays for growing of plantlets in the nursery section • Germination chamber • Ground cover for prevention of weed growth
Irrigation System	<ul style="list-style-type: none"> • Fully automated irrigation water pumps • Automatic water filtration system • Peristaltic pump • Water distribution system • Service pipes (x2) • Water collection and recycling tanks • Filter Set for water recirculation
Electrical System	<ul style="list-style-type: none"> • Main switch board • Service lights (x2) • Service power outlets (x2)
Equipment and Tools	<ul style="list-style-type: none"> • EC/pH monitoring kits • Packing table • Substrate filling tub • Digital scale • Master crates
Professional Support	<ul style="list-style-type: none"> • Recommendations based on source-water analysis • One year online technical and agronomy support and unlimited use of the management App.



Optional equipment

Item	Details	
Temperature-isolated, service room for packing / office	9'x12'm. Build with sandwich panels and equipped with, wind curtain, light, service power outlet and 1.5HP AC	
Refrigerator		
Heat sealer for bags		
Water chiller	Capable of reducing water temperature by >40°C	
Pressure boosting pump for fresh water supply	If the water pressure at source is lower than 3bar (45PSI) at a flow of 44 GPM we recommend installing a booster pump	
Stainless steel sink		

OPTIONAL SERVICES

Installation supervision (not including greenhouse)	On-site (2 weeks)	
	On-line (21 days)	
Production Training	On-site training (30 days)	
Operational Support	Mobile App for on-line agronomy/technical support starting from the 2 nd year	

Customer's Responsibilities

Ground and Concrete Preparation

- Ground levelling and compacting according to TAPKIT's instructions
- Concrete slabs ~1,000ft² for service areas.

Utilities (per TAPKIT unit)

- Power Supply: 3-phase (data on each location - local grid required)



- Water Supply:
 - Installed at the position where the controls of the irrigation systems are located.
 - Capacity and pressure: 44 GPM/hr., 3 Atm. (45PSI) (required for automatic-filter flushing, short intervals 24/7)
 - Fresh water daily consumption of ~ 400 gallons/1520 liters per day
- Gas tank, regulators and piping to the heater
- Emergency power generator – recommended

Construction Crew

- Labor - 6 workers for 2-3 weeks
- Certified electrician for 1 working day
- Certified gas technician

Logistics

- Specified area to unload the TAPKIT components
- Protected storage for sensitive equipment and supplies (for the duration of the installation)

Construction tools

- 'Truper' Steel measuring tape 100m. (300') long
- Extension cable drum 100m. (300') long
- Impact driver 24V (x2)
- Folding ladder 6m. (18') long (x2)
- Bolt cutter

The Company

TAPKIT Hydroponic Systems Ltd. is a subsidiary of the Israeli-based Teshuva Agricultural Projects (TAP) Ltd. A 2nd generation agricultural company which possesses vast experience in CEA including nurseries, plant propagation, vegetables in soilless culture, hydroponics and microgreens. TAP has installed and operated greenhouses in North America, South-East Asia, Israel, Western Europe and more. TAP's holistic approach combines careful engineering of the greenhouse and growing system with best-practice growing methods and go-to-market strategy for the crops grown. TAP's perfect track record of successful operations globally, differentiates TAP from other greenhouse/equipment suppliers.