PRODUCT CATALOGUE

2018-2019

NKP®

Leaders always, in all ways

A Technological Leap Ahead
But The Saying Shall Always Continue
"Leaders Always In All Ways"

www.nkppharma.com

The Preamble

Late Shri Natwarlal R. Mevada
Founder of N.K.P. Pharma Pvt. Ltd.

"N.K.P." was founded by Late Shri Natwarlal R. Mevada, a Visionary and an Exemplary Leader. A Technocrat by Profession, he was a Stalwart in the Pharma Industry having enormous experience of nearly 35 Years of designing and manufacturing of Pharmaceutical Packaging Machinery.

He developed the first Automatic Machine for Sterile Injectable Dry Powder Filling in NKP and since then he had made several significant technical value additions which made NKP one of the emerging players in Pharma Packaging Machineries in India.

Mr. Hitesh N. Mevada
Chairman and Jt. Managing Director

Hitesh N. Mevada took over the reins of the organization in the year 1992 and he has been heading the Team of Technical Experts who are involved in continuous research and development activities related to Pharma Packaging Machineries.

Passionate about incorporating latest innovations in the machines & his vision to convert concepts to a workable machine has brought the grandeur of "NKP" as a company and a Brand.His Intellectual approach, quest for technology, desire for excellence has not only benefitted many pharma companies but has rendered overall Indian pharmaceutical industry a great technical helping hand. In short he is appositely -The Brain and The Heart of NKP.

Mr. Darshan N. Mevada
Managing Director

Darshan N. Mevada – A Charismatic and Dynamic personality heads the team of Business Development, Marketing, HR, Administration and Finance since he joined NKP in 1996.

His customer oriented approach and his business acumen have increased the footsteps of NKP in domestic as well as international markets. His marketing strategies have established "NKP" as the most trustworthy and distinctive Brands in the industry giving a major edge in increasingly competitive markets.

Both the Brothers are determined to continue the legacy of their family business to a higher level and create a Benchmark, Globally in Quality, Innovation and Compliance to various stringent regulatory requirements thus promoting better healthcare and fulfilling the social responsibility.

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About Us

Health is an important factor in human life. The complexity of the human body necessitates extensive research and innovation in healthcare industry. To bring effective and safe healthcare solutions to the people it requires ingenuity and passion across every link of the manufacturing chain. We are NKP Pharma Private Limited and our name stands for Reliability, Innovation, Technological Excellence and Quality Service for the Pharmaceutical Packaging Industry. 28 years now we have always proven it to our esteemed customers.

Winning a customer and retaining them has always been more than supplying our machines. Inculcated to the core values of our company it has been our primary responsibility to meet challenges of the industry by delivering the most technologically advanced solutions in cost effective manner. It is now a small wonder that we have grown rapidly and have became a technology leader in pharmaceutical packaging machinery.

Product safety, Operator Safety and User friendliness have been the fundamental aspects of our machine design and manufacturing. With eyes boldly set on future we strongly believe in transforming dreams to reality through our constant endeavour of learning, R&D efforts and Innovation excellence. And nevertheless it has been the competence , enthusiasm and an attitude of team work of our employees which have been a boost in the successful development of the company.

Vision

To continuously improve in-house system and processes so as to delight every customer by finding innovative solutions to their requirements and also by providing growth and development opportunities to every employee in an environment that supports efficient and effective performance.

Mission

To be one of the premier provider of high quality machineries, spares and services with international standards and quality that would enable our customers to improve their global competitiveness.

Our History To An Innovative Future...

1970 "Automations – A dream for Indian sterile Injectables"

Automation was introduced and implemented for sterile injectables in India by the Germans and Americans in 1970. The indigenous industry was still at a nascent stage and miles behind foreign competition. Imported brands ruled the market for years.

1988 "Establishment of N.K.Engineering company by Late Shri N.R.Mevada"

Late Shri N.R.Mevada founded N.K.Engineering Co. in 1988. From the initial start, we had inculcated ourselves to stand apart in our responsiveness to the needs of the industry. We were well in pace with the internationally accepted norms and guidelines to improve and innovate the technology used in our products.

1991 "Renowned Indian Pharma Companies in our Clientele"

Introduction of automation into our products around the 90's was our prime goal. We succeeded and our products were built to save cost and time and to reduce human intervention in sterile areas. N.K.Engineering Co. supplied several low output sterile filling lines to various renowned Indian Pharma companies then. Summarizing the facts our machines were now cost effective and of competant quality at par with the American and German machine manufacturers.

1996 "Introduced higher output sterile Injectable lines"

1996 was a watershed year for N.K.Engineering Co. We introduced sterile injectable line of higher outputs in Indian market thus making ourselves leading manufacturers of Injectable machinery in India. We were a step close to enter international market.

2000 "A brand new venture N.K.Pharma Industries"

2000 was turning point with the start of N.K.Pharma Industries - a pharmaceutical formulation unit. Our R & D team, designers & engineers clubbed together to build user friendly machines. Using our own machines made us realize the role of our machines in formulation industry.

2005 "Developed comparative machines"

Globalization played an important role for formulation industries. Increased focus on regulatory markets to derive more profitability and hence expansions resulted in reintroduction of many imported brands. N.K.P challenged the growth oriented brands in India by developing comparative machines. Our machines were now better in quality with increased efficiency & reduced human interventions.

2010 "Enhancing and Excelling with Persistent R&D efforts"

NKP Pharma Pvt. Ltd. achieved a major Revenue Growth with constant efforts in R&D, Service, addition of Infrastructures and Team Building. A yet another technological leap ahead was achieved by developing Centralised Powder wheel for Powder Filling Machines, Seal pressure testing Mechanism in Vial Sealing machines and Web Rejection System in Vial Labelling Machines.

2015 "Technological Revolution with Expansions"

Since the Pharma companies focussed on regulatory market, NKP made it an easy and a remarkable period by upgrading most of the machines to Comply USFDA, 21 CFR Part-11 Standards thus keeping in pace with the Standard Compliances of Pharma Industry and achieving yet another milestone of challenging imported brands in the industry. In addition a separate Unit for Manufacturing Tunnels in Goa, India and three additional units for manufacturing of machines dedicatedly as per application were established.

2017 "A Major Leap of Transformation from Excellent to the most Superlative"

NKP made the year remarkable by developing High Precise Fully Automatic Sterile Filling Machine with 100% online weighing feature competent enough to challenge imported brands. In addition a manufacturing unit dedicated for Clean Room Equipments was established. Being an Year full of accomplishments NKP is now set to Develop State of Art Manufacturing Facility at Changodar, Ahmedabad, India expected to embark in 2018, thus making NKP - the Only Indian Pharmaceutical Machinery Manufacturer with colossal and the most technologically advanced infrastructure.

Why NKP?

LEADING WITH QUALITY

It has been in our nerves to deliver only the best quality machines to our customer. We are the only Indian packaging machinery manufacturers to have in-house laboratory & quality testing machines.

From senior management to a factory floor employee, each one believes and exercises precision based manufacturing practices and total quality management in the assigned tasks. Thus as a brand and as a company we are committed to deliver only the best. Our machines are well adapted to meet any regulatory approvals or any international quality standards.

LEADING BY TEAMWORK

Employees have been the real strength of any engineering company and at N.K.P Pharma Pvt. Ltd. this is infinitely true. Our team of extremely qualified, experienced designers & engineers ensure R&D excellence. The team has always been open to new ideas & thrive on challenges making them very much capable of delivering solutions to most challenging customer requirements.

LEADING BY TIMELY DELIVERY

Timely delivery has been one of the biggest strengths in Pharma industry. Our well defined protocols of gathering required information on requirements of customers, accurate designing to minimize production time losses, Team scalability, flexibility & dedicated infrastructure units have enabled us to meet toughest deadlines.

LEADING BY SERVICE

After sales service support has been the heart of NKP philosophy. Our team of experts support you right at the start of machine area layouting to ensure maximum user accessibility to the machines.

Unmatched service support has been always rendered to our customers through our well trained service engineers, readily available spares & timely troubleshoot of issues. We give full attention & consideration to the concerns & issues raised by our customers. Our efforts to minimize the risks & optimize the system breakdowns have always made our customers to value our range of services & hence our products.

Washing Machine

NKP manufactured Washing Machines are designed to handle Vials and Ampoules and are compliant to GMP standards. The Washing cycles can include Recycled water, Purified water, Water for Injection, Compressed air, Siliconization (Optional), Hot air drying (Optional) and can be adapted as per customer requirements. Pressure and Temperature of the cleaning agents are controlled & monitored to assure constant performances. These machines are designed to derive an output speed of upto 24000 units/hour. A variety of Optional features for specific process, interlocks and Interface controls as SCADA can be added to these machines to comply various Pharma standards.

Rotary Vial Washing Machine
Model - NKRVW-120H / 250H

Model No.	NKRVW-120H	NKRVW-250H
Direction	Left to Right	Left to Right
Production Rate	120 Vials/Min. for 10 ML Vial	240 Vials/Min. for 10 ML Vial
Electrical Supply	7.5 HP (5.5 KW)	7.5 HP (5.5 KW)
Power Requirement	415 Volts, 3 Phase with Neutral & Earthing (5 Wire system) 50 Hz.	415 Volts, 3 Phase with Neutral & Earthing (5 Wire system) 50 Hz.
Height Of Conveyor	Adjustable from 900 to 950 MM	Adjustable from 900 to 950 MM
Dimensions	2120 MM (L) X 2450 MM (W) X 1875 MM (H) (Without Tanks)	2120 MM (L) X 2450 MM (W) X 1875 MM (H) (Without Tanks)
Electrical Panel Dimension	815 MM (L) X 400 MM (W) X 1550 MM (H)	815 MM (L) X 400 MM (W) X 1550 MM (H)
Net Weight	1800 Kgs. (Approx)	1800 Kgs. (Approx)
Gross Weight	2400 Kgs. (Approx)	2400 Kgs. (Approx)

Rotary Ampoule Washing Machine
Model - NKRAW-120H / 250H

Model No.	NKRAW -120H	NKRAW-250H
Direction	Left to Right	Left to Right
Production Rate	Up to 160 Ampoules/Min for 2 ML Ampoule	Up to 320 Ampoules/Min for 2 ML Ampoule
Electrical Supply	7.5 HP (5.5 KW)	7.5 HP (5.5 KW)
Power Requirement	415 Volts, 3 Phase with Neutral & Earthing (5 Wire system) 50 Hz.	415 Volts, 3 Phase with Neutral & Earthing (5 Wire system) 50 Hz.
Height Of Conveyor	Adjustable from 900 to 950 MM	Adjustable from 900 to 950 MM
Dimensions	2200 MM (L) X 2380 MM (W) X 1900 MM (H)	2200 MM (L) X 2380 MM (W) X 1900 MM (H)
Electrical Panel Dimension	815 MM (L) X 400 MM (W) X 1550 MM (H)	815 MM (L) X 400 MM (W) X 1550 MM (H)
Net Weight	1800 Kgs. (Approx)	1800 Kgs. (Approx)
Gross Weight	2400 Kgs. (Approx)	2400 Kgs. (Approx)

Linear Vial Washing Machine
Model - NKLVW-150H / 250H

Model No.	NKLVW-150H	NKLVW-250H
Direction	Left to Right	Left to Right
Production Rate	Up to 120 Vials/Min for 10 ML Vial	Up to 250 Vials/Min for 10 ML Vial
Electrical Supply	4.5 HP (3.3 KW)	4.5 HP (3.3 KW)
Power Requirement	415 Volts, 3 Phase with Neutral & Earthing (5 Wire system) 50 Hz.	415 Volts, 3 Phase with Neutral & Earthing (5 Wire system) 50 Hz.
Height of Outfeed Conveyor	Adjustable from 900 to 950 MM	Adjustable from 900 to 950 MM
Height of Infeed Conveyor	Adjustable from 1000 to 1050 MM	Adjustable from 1000 to 1050 MM
Dimensions	2540 MM (L) X 2100 MM (W) X 1600 MM (H)	2540 MM (L) X 2100 MM (W) X 1600 MM (H)
Net Weight	800 Kgs. (Approx)	1200 Kgs. (Approx)
Gross Weight	1250 Kgs. (Approx)	1750 Kgs. (Approx)

Tunnel

NKST series of tunnels have been holistically designed and developed in accordance to the most demanding requirements as better candidates in the manufacturing of parenteral pharmaceutical products in the continuous production lines for glass containers such as Ampoules and Vials under ISO 5 (Class 100) cleanroom environment according to ISO 14644–1 throughout its length.

These Tunnels are Fast, and Effective for continuous aseptic processing, without Operator Interventions, ensuring greater degree of fulfilment at each zone of process such as Drying, Depyrogenating and Cooling. In fewer minutes, an untreated Glass Container from Washer enters into sterile area with pyrogen-free state.

As a background; any substance that can cause a fever is called Pyrogen. A Pyrogen can either be an endotoxin or an exotoxin, although most Pyrogens are endogenous. Endotoxins are molecules found as part of the cell wall of Gram-negative bacteria and are primarily released by destruction of cell.

In the manufacturing of parenteral pharmaceutical products, Depyrogenation is the process of removal of pyrogens from the product, its containers and closures; wherein Heat, over a period of time, destroys microorganisms. The rate of destruction is near logarithmic.

It means for a known time period and at a certain temperature, the same percentage of the bacterial population will be destroyed during the same period of time subsequently.

Design of NKST series of tunnels is based on E. coli endotoxin Pyrogens. Its resistance to Depyrogenation can be identified by their Cycle time (D-value = 5 minutes), which is the time required to reduce the initial load of pyrogens by one logarithm at a Reference temperature (Tref = 250°C constant). Importantly, a kinetic factor (Z = 46.4°C) is applied, which is the temperature increment over Reference temperature to reduce D-value by a factor of 10. To do this, Tunnels are designed with minimum actual instantaneous temperature (Tinst) inside the heating zone well over 300 °C.

Thus, the theoretical estimation of the equivalent time (FD in minutes), which is the time required to keep the container at a Reference temperature (Tref = 250°C) for overall time period (t=30 mins, for Log 6 reductions) necessary to obtain the same Depyrogenation process.

NKST series of tunnels can be used for up to 6-Log Pyrogens reduction. A 6-Log reduction means that containers are subjected to a thermal cycle equivalent to 30 minutes of treatment at a constant temperature of 250 °C.

Drying zone has been designed to achieve better Unidirectional downward flow that extracts all the water accumulated over the surfaces of the containers coming from Washer. With the design specific differential pressure with Hot zone, Drying zone is compact enough to ensure better drying and pre-heating of thecontainers. After passing around the containers, the outflow of air gets humid, which is then exhausted into the service floor by means of bottom side blowers. This blower also helps in managing the air parameters and zonal pressure difference.

Hot zone has been designed to facilitate Dry Heat Depyrogenation in a systematic way. Arrangement includes continuous recirculation of Hot air thru' high temperature Absolute HEPA Filters, producing Unidirectional Downward Flow. Heat is generated by Incoloy heating elements, which are three phase Thyristor regulated. Temperature sensors are integrated with Hot Zone for monitoring & controlling purpose.

The recirculated hot air is blown at a speed of approximately 0.5 to 0.7 m/s over the vials and remains within 5°C of its setpoint. Depending on production speed, time for each container to observe thermal cycle is sufficient enough to ensure Endotoxin reductions up to Log 6.

Cooling zone has been designed to progressively extract all the heat gained by containers during the thermal cycle to the level that is allowed to be discharged into the Sterile Filling area, without any damage. Air passing over the containers being cooled is forced to re enter in the room at similar temperature through the Chiller Unit. Controls of Cooling Zone blowers are well established so that containers experience lesser thermal stress.

Air Flow Units of both the Drying and Cooling zones are uniquely designed. It contains Smaller multiple fans that are efficiently placed upstream of Absolute Filters so as to fetch and provide the air with more uniform pressure distribution, resulting in better uniformity on downstream.

STANDARD FEATURES

- **Zones:** Modular units at In-feed (Drying/preheating Zone), Depyrogenation (Sterilization) Zone and at Cooling Zone (with integrated stabilizing Zone)

- Pre-Filters: Grade M5, Down to 5 Micron, Box Frame Type, Gasket at outlet, Washable

- Absolute Filters: At Drying and Cooling zones. Grade H14, with MPPS efficiency: 99.995%, Down to 0.3-micron, Gasket at Inlet, Face velocity of 0.5 m/s to 0.7 m/s

- Absolute Filters: At Hot zone. Grade H13, with MPPS efficiency: 99.97%, Down to 0.3-micron, Gasket at Inlet, Face velocity of 0.5 m/s to 0.7 m/s. Temperature resistance up to 350 °C

- Conveyor: Wire Loop Joint Mesh Conveyor Belt made in SS 316L

- Support Structure: Zinc Plated Plain Carbon Steel Load Bearing Members, fully concealed with SS 304 Cladding

- Laminar Air Flow Units: Complete Stainless Steel 304 Construction for Infeed (Drying Zone) and Outfeed (Cooling + Stabilizing Zone), Firmly integrated with Depyrogenation Zone

- DOP/ PAO Test: Provisions for Inlet and Outlet ports in all three zones

Right of technical improvements and modifications reserved. | Accessories shown in above photographs are optional. | All illustrations and dimensions are shown for information only.

- Hot Zone: Modular Double-Walled Structure Firmly Integrated with Support Structure, insulated with Asbestos free ceramic wool. Openings provided to access Heater Bank, Impeller, Absolute Filter, and Cleaning. Interior Air containing Passage Components are in SS 316L, Outer Components in SS 304

- Differential Pressure Gauges: Total Eight gauges across HEPA Filter, Zones, and Rooms

- Gates: Two Manually adjustable gates at Hot Zone Infeed and Outfeed | One at Outfeed manually adjustable from Sterile area as per Vial format and size.

- Proximity sensors, provided at in feed for dictation of vials/ampoules overload, and interlocked with START/STOP of conveyor operation.

- Integrated PT 100 temperature sensor to monitor temperature in the specified zone.

- HMI: with Different password levels combined with Washer.

OPTIONAL FEATURES

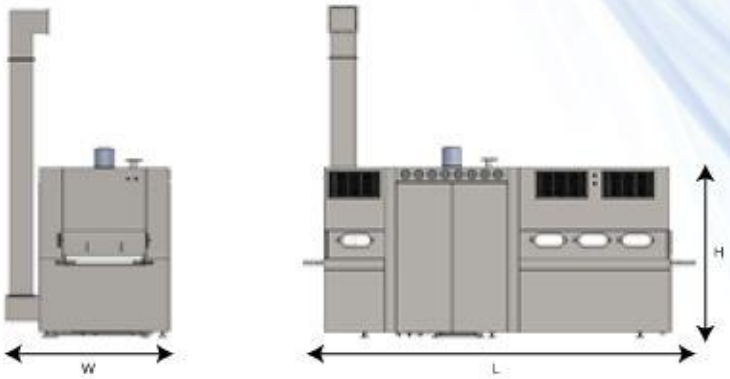
- Cooling Zone Sterilization: Dry Heat Sterilization of Cooling Zone with up to Log 6 spore reduction. Zone is insulated for normal external surface temperature

- Anemometers: One Velocity Sensor in each zone

- Automatic Gates: At Hot Zone Infeed, Outfeed, and at Tunnel outfeed

- Automatic Unloading: At Conveyor Outfeed to remove last set of containers

- Particle Counting Provision: Each chamber is equipped with a pipe below the filters to allow for particle counting using separate apparatus



Sterilizing & Depyrogenating Tunnel
Model - NKST-450/650/950

Model No.	NKST-450	NKST-650	NKST-950	NKST-1250
Working Direction	Left to Right	Left to Right	Left to Right	Left to Right
Working Height	920 MM (+30/-20) MM	920 MM (+30/-20) MM	920 MM (+30/-20) MM	920 MM (+30/-20) MM
Cleanroom Class	ISO 5 OR Class 100	ISO 5 OR Class 100	ISO 5 OR Class 100	ISO 5 OR Class 100
Primary Types of Glass Containers	Ampoules (1 to 30 ML)	Glass Vials: 2 to 100 ML (Tube Vials, and Molded Vials) Glass Bottles: 50 to 1000 ML (Light Infusion Bottles, Infusion Bottles)		
Output for 10R Vials (24 Ø x 45 H)	96	160	272	446
Major Length [MM]	2550	3300	4200	5175
Major Width [MM]	1200	1350	1600	2200
Major Height [MM]	2400	2400	2400	2500
Belt Width [MM]	450	650	950	1250
Connected Load (kW)	33	50	76	109
Length Infeed (Drying Zone) [MM]	460	530	610	770
Air Intake [CFM]	270	460	775	1320
Length Depyrogenating Zone (Hot Zone) [MM]	1186	1340	1500	1930
Air Flow [CFM]	620	966	1655	2757
Air Exhaust	70	100	145	190
Heater power (kW)	26.4	40.5	63	90
Weight (kg)	2600	4000	4600	7600

NOTES:
1. Kindly contact us to seek possible production rate for different glass container sizes
2. Due to continuous improvisations, above data is subject to change without prior notice.

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Injectable Dry Powder Filling Machine

NKP manufactures a wide range of Powder filling & stoppering machines for vials. Particularly suited to small, medium & large batch production, these machines are designed to derive outputs of upto 24000 fills/hour or 18000 vials/hour. All the filling machines are designed for Laminar flow operations namely oRABS or cRABS or Isolators. The fill accuracies match the accepted industry standards and for both small and large fill volumes. A variety of Optional features for specific process, interlocks and Interface controls as SCADA can be added to these machines to comply various Pharma standards.

Injectable Dry Powder Filling with Rubber Stoppering Machine
Model - NKPF-125

Model No.	NKPF-125
Direction	Left to Right
Production Rate	Up to 120 Fills/Min. for single dose. Up to 60 Fills/Min. for double dose. Up to 40 Fills/Min. for triple dose. Up to 30 Fills/Min. for four dose.
Fill Capacity	50 Mg. to 1.5 Gms. single dose (with change parts). 1.5 Gms. to 6 Gms. double, triple and four dose. Fill range depending upon vial opening and bulk density of powder.
Accuracy	± 2% depending upon powder characteristic and the uniformity of bulk density of injectable powder under controlled humidity for fill weight 250mg & above. (± 3% for fill weight 100mg to 250mg & ±5 % for fill weight 50mg to 100mg)
Electrical Supply	5.0 HP (4 KW)
Power Requirement	415 Volts, 3 Phase with Neutral & Earthing (5 Wire System), 50 Hz.
Height of Conveyor	Adjustable from 900 to 950 MM
Dimensions	3100 MM (L) X 995 MM (W) X 2500 MM (H)
Net Weight	800 Kgs. (Approx)
Gross Weight	1200 Kgs. (Approx)

Injectable Dry Powder Filling with Rubber Stoppering Machine
Model - NKPF-150DP

Model No.	NKPF-150DP
Direction	Left to Right
Production Rate	Up to 120 Fills/Min. for single dose. | Up to 60 Fills/Min. for double dose. Up to 40 Fills/Min. for triple dose. | Up to 30 Fills/Min. for four dose.
Fill Capacity	50 Mg. to 1.5 Gms. single dose (with change parts). 1.5 Gms. to 6 Gms. double, triple and four dose. Fill range depending upon vial opening and bulk density of powder.
Accuracy	± 2% depending upon powder characteristic and the uniformity of bulk density of injectable powder under controlled humidity for fill weight 250mg & above. (± 3% for fill weight 100mg to 250mg & ±5 % for fill weight 50mg to 100mg)
Electrical Supply	7.5 HP (5.5 KW)
Power Requirement	415 Volts, 3 Phase with Neutral & Earthing (5 Wire System), 50 Hz.
Air Requirement	6 Kg/Cm²
Height of Conveyor	Adjustable from 900 to 950 MM
Dimensions	3600 MM (L) X 840 MM (W) X 2500 MM (H)
Net Weight	1100 Kgs. (Approx)
Gross Weight	1300 Kgs. (Approx)

Injectable Dry Powder Filling with Rubber Stoppering Machine
Model - NKPF-150SP

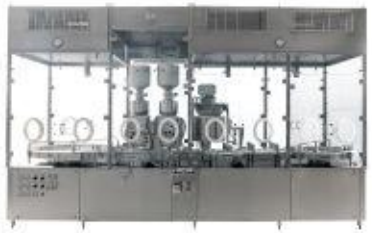
Model No.	NKPF -150SP
Direction	Left to Right
Production Rate	Up to 120 Fills/Min. for single dose. | Up to 60 Fills/Min. for double dose. Up to 40 Fills/Min. for triple dose. | Up to 30 Fills/Min. for four dose.
Fill Capacity	50 Mg. to 1.5 Gms. single dose (with change parts). 1.5 Gms. to 6 Gms. double, triple and four dose. Fill range depending upon vial opening and bulk density of powder.
Accuracy	± 2% depending upon powder characteristic and the uniformity of bulk density of injectable powder under controlled humidity for fill weight 250mg & above. (± 3% for fill weight 100mg to 250mg & ±5 % for fill weight 50mg to 100mg)
Electrical Supply	22 HP (17 KW)
Power Requirement	415 Volts, 3 Phase with Neutral & Earthing (5 Wire System), 50 Hz.
Air Requirement	6 Kg/Cm²
Height of Conveyor	Adjustable from 900 to 950 MM
Dimensions	4400 MM (L) X 1540 MM (W) X 2700 MM (H)
Electrical Panel Dimensions	1100 MM (L) X 500 MM (W) X 1650 MM (H)
Net Weight	960 Kgs. (Approx)
Gross Weight	1250 Kgs. (Approx)

Injectable Dry Powder Filling with Rubber Stoppering Machine
Model - NKPF-250D

Model No.	NKPF-250D
Direction	Left to Right
Production Rate	Up to 240 Fills/Min. for single dose. | Up to 120 Fills/Min. for double dose. Up to 80 Fills/Min. for triple dose. | Up to 60 Fills/Min. for four dose.
Fill Capacity	50 Mg. to 1.5 Gms. single dose (with change parts). 1.5 Gms. to 6 Gms. double, triple and four dose. Fill range depending upon vial opening and bulk density of powder.
Accuracy	± 2% depending upon powder characteristic and the uniformity of bulk density of injectable powder under controlled humidity for fill weight 250mg & above. (± 3% for fill weight 100mg to 250mg & ±5 % for fill weight 50mg to 100mg)
Electrical Supply	5.5 HP (4 KW)
Power Requirement	415 Volts, 3 Phase with Neutral & Earthing (5 Wire System), 50 Hz.
Height of Conveyor	Adjustable from 900 to 950 MM
Dimensions	3760 MM (L) X 1000 MM (W) X 2450 MM (H)
Net Weight	1050 Kgs. (Approx.)
Gross Weight	1550 Kgs. (Approx.)

Injectable Dry Powder Filling with Rubber Stoppering Machine
Model - NKPF-300DP

Model No.	NKPF-300DP
Direction	Left to Right
Production Rate	Up to 240 Fills/Min. single dose. | Up to 120 Fills/Min. for double dose. Up to 80 Fills/Min. for triple dose. | Up to 60 Fills/Min. for four dose.
Fill Capacity	50 Mg. to 1.5 Gms. single dose (with change parts). 1.5 Gms. to 6 Gms. double, triple and four dose. Fill range depending upon vial opening and bulk density of powder.
Accuracy	± 2% depending upon powder characteristic and the uniformity of bulk density of injectable powder under controlled humidity for fill weight 250mg & above. (± 3% for fill weight 100mg to 250mg & ±5 % for fill weight 50mg to 100mg)
Electrical Supply	14 HP (10.5 KW)
Power Requirement	415 Volts, 3 Phase with Neutral & Earthing (5 Wire System), 50 Hz.
Air Requirement	6 Kg/Cm²
Height of Conveyor	Adjustable from 900 to 950 MM
Dimensions	4550 MM (L) X 1375 MM (W) X 2550 MM (H)
Net Weight	1250 Kgs. (Approx)
Gross Weight	1450 Kgs. (Approx)



Injectable Dry Powder Filling with Rubber Stoppering Machine
Model - NKPF-300SP

Model No.	NKPF-300SP
Direction	Left to Right
Production Rate	Up to 240 Fills/Min. for 10 ML Vial
Fill Capacity	50 Mg. to 1.5 Gms. Single dose (with change parts). 1.5 Gms to infinite number of doses. Fill range depending upon vial mouth opening and bulk density of powder.
Accuracy	± 2% depending upon powder characteristic and the uniformity of bulk density of injectable powder under controlled humidity for fill weight 250mg & above. (± 3% for fill weight 100mg to 250mg & ±5 % for fill weight 50mg to 100mg)
Electrical Supply	22 HP (17 KW)
Power Requirement	415 Volts, 3 Phase with Neutral & Earthing (5 Wire System), 50 Hz.
Air Requirement	6 Kg/Cm²
Height of Conveyor	Adjustable from 900 to 950 MM
Dimensions	4400 MM (L) X 1540 MM (W) X 2700 MM (H)
Electrical Panel Dimension	1100 MM (L) X 500 MM (W) X 1650 MM (H)
Net Weight	1250 Kgs. (Approx)
Gross Weight	1450 Kgs. (Approx)

Injectable Dry Powder Filling with Rubber Stoppering Machine with cRABS
Model - NKPF-300SP cRABS

Model No.	NKPF-300SP cRABS
Direction	Left to Right
Production Rate	Up to 240 Fills/Min. for single dose. | Up to 120 Fills/Min. for double dose. Up to 80 Fills/Min. for triple dose. | Up to 60 Fills/Min. for four dose.
Fill Capacity	50 Mg. to 1.5 Gms. single dose (with change parts). 1.5 Gms. to 6 Gms. double, triple and four dose. Fill range depending upon vial opening and bulk density of powder.
Accuracy	± 2% depending upon powder characteristic and the uniformity of bulk density of injectable powder under controlled humidity for fill weight 250mg & above. (± 3% for fill weight 100mg to 250mg & ±5 % for fill weight 50mg to 100mg)
Electrical Supply	26.5 HP (20 KW)
Power Requirement	415 Volts, 3 Phase with Neutral & Earthing (5 Wire System), 50 Hz.
Air Requirement	6 Kg/Cm²
Height of Conveyor	Adjustable from 900 to 950 MM
Dimensions	4400 MM (L) X 1540 MM (W) X 2973 MM (H)
Electrical Panel Dimensions	1100 MM (L) X 500 MM (W) X 1650 MM (H)
Net Weight	2100 Kgs. (Approx)
Gross Weight	3200 Kgs. (Approx)

Injectable Dry Powder Filling with Rubber Stoppering Machine

Model - NKPF-400SP

Model No.	NKPF-400SP
Direction	Left to Right
Production Rate	Up to 240 Fills/Min. for single dose in each wheel for 1.5 gm. Up to 240 Fills/Min. for single dose in each wheel for 3 gm. Up to 120 Fills/Min. for double dose in each wheel for 6 gm. Up to 80 Fills/Min. for triple dose in each wheel for 10 gm. Up to 60 Fills/Min. for four dose in each wheel for 12 gm.
Fill Capacity	50 Mg. to 1.5 Gms. single dose (with change parts), 1.5 Gms. to infinite number of doses. Fill range depending upon vial mouth opening and bulk density of powder.
Accuracy	± 2% depending upon powder characteristic and the uniformity of bulk density of injectable powder under controlled humidity for fill weight 250mg & above. (± 3% for fill weight 100mg to 250mg & ±5 % for fill weight 50mg to 100mg)
Electrical Supply	26 HP (19.5 KW)
Power Requirement	415 Volts, 3 Phase with Neutral & Earthing (5 Wire System), 50 Hz
Air Requirement	6 Kg/Cm² | 2 M³/Hr
Height of Conveyor	Adjustable from 900 to 950 MM
Dimensions	4790 MM (L) X 1540 MM (W) X 2750 MM (H)
Electrical Panel Dimensions	1300MM (L) X 500 MM (W) X 1650 MM (H)
Net Weight	2800 Kgs. (Approx)
Gross Weight	3800 Kgs. (Approx)

Injectable Dry Powder Filling with Rubber Stoppering & Sealing Machine

Model - R Fill-4 Powder

Model No.	R Fill-4 Powder
Direction	Left to Right
Production Rate	Up to 15 to 20 Vials/Min. for 10 ML Vial
Fill Capacity	5 ML to 100 ML (with change parts)
No. of Powder Wheel	One 12 Port (Centralized wheel)
Accuracy	± 2% depending upon powder characteristic and the uniformity of bulk density of injectable powder under controlled humidity for fill weight 250mg & above. (± 3% for fill weight 100mg to 250mg & ±5 % for fill weight 50mg to 100mg)
Electrical Supply	5.5 HP (4 KW)
Power Requirement	415 Volts, 3 Phase with Neutral & Earthing (5 Wire System), 50 Hz.
Height of Conveyor	Adjustable from 900 to 950 MM
Dimensions	2000 MM (L) X 1100 MM (W) X 2050 MM (H)
Net Weight	700 Kgs. (Approx)
Gross Weight	900 Kgs. (Approx)

Injectable Liquid Filling Machine

NKP manufactures a wide range of Liquid filling & stoppering machines for vials. Particularly suited to small, medium & large batch production, these machines are designed to derive outputs of upto 14000 vials/hour. All the filling machines are designed for Laminar flow operations namely oRABS or cRABS or Isolators. All types of dosing system can be installed on the machine assuring in this way the highest possible range of applications. The fill accuracies match the accepted industry standards and for both small and large fill volumes. A variety of Optional features for specific process, filling pumps, interlocks and Interface controls as SCADA can be added to these machines to comply various pharma standards.

Injectable Liquid Filling with Rubber Stoppering Machine

Model - NKLFRS-120SP

Model No.	NKLFRS -120SP	NKLFRS-150SP
Direction	Left to Right	Left to Right
Production Rate	Up to 80 to 100 Vials / Min for 10 ML Vial Fill Size	Up to 100 – 120 Vials/Min. for 10 ML Vial fill size
Fill Capacity	0.5 ml to 50 ml in single dose with the help of change parts.	0.5 ML to 100 ML (Up to 50 ML single dose & for 100 ML double dose)
Accuracy	± 1.0 % (Depending upon the Viscosity of the Liquid)	± 1% (Depending upon the Viscosity of the Liquid)
Rubber Stoppering	Pick & Place Type	Pick & Place Type
Syringes available for Different Fill Volume	0.5 ml to 2.0 ml, 2.0 ml to 10.0 ml, 10.0 ml to 50.0 ml	0.5 ML to 2 ML 2 ML to 10 ML 10 ML to 50 ML
No. of Syringes	04 Nos.	06 Nos.
Electrical Supply	8.5 HP (6.5 KW)	10.5 HP (7.8 KW)
Power Requirement	415 Volts, 3 Phase with Neutral & Earthing (5 Wire System), 50 Hz	415 Volts, 3 Phase with Neutral & Earthing (5 Wire System), 50 Hz.
Height of Conveyor	Adjustable from 900 to 950 MM	Adjustable from 900 to 950 MM
Dimensions	3130 MM (L) X 1050 MM (W) X 2450 MM (H)	3130 MM (L) X 1050 MM (W) X 2200 MM (H)
Net Weight	850 Kgs. (Approx)	950 Kgs. (Approx)
Gross Weight	1150 Kgs. (Approx)	1250 Kgs. (Approx)

Eight Head Injectable Liquid Filling with Rubber Stoppering Machine

Model - NKLFRS-200SR

Model No.	NKLFRS-200SR
Direction	Left to Right
Product Rate	Up to 160 – 180 Vials/Min. for 10 ML Vial
Fill Capacity	0.5 ML to 100 ML (Up to 50 ML single dose & for 100 ML double dose)
Accuracy	± 1% (Depending upon the Viscosity of the Liquid)
Rubber Stoppering	Rotary Type
Syringes available for Different Fill Volume	0.5 ML to 2 ML 2 ML to 10 ML 10 ML to 50 ML
No. of Syringes	08 Nos.
Electrical Supply	13.5 HP (10 KW)
Power Requirement	415 Volts, 3 Phase with Neutral & Earthing (5 Wire System), 50 Hz
Height of Conveyor	Adjustable from 900 to 950 MM
Dimensions	3760 MM (L) X 1500 MM (W) X 2450 MM (H)
Net Weight	1200 Kgs. (Approx)
Gross Weight	1500 Kgs. (Approx)

Injectable Liquid Filling with Rubber Stoppering & Sealing Machine

Model - R Fill-4 Liquid

Model No.	R Fill-4 Liquid
Direction	Left to Right
Production Rate	Up to 15 to 20 Vials/Min. for 10 ML Vial
Fill Capacity	2 ML to 100 ML Vials (with change parts)
No. of Syringes	One
Accuracy	± 1% (Depending upon the Viscosity of the Liquid)
Electrical Supply	5.0 HP (3.7 KW)
Power Requirement	415 Volts, 3 Phase with Neutral & Earthing (5 Wire System), 50 Hz.
Height of Conveyor	Adjustable from 900 to 950 MM
Dimensions	2000 MM (L) X 1100 MM (W) X 2050 MM (H)
Net Weight	750 Kgs. (Approx)
Gross Weight	950 Kgs. (Approx)

Automatic Injectable Liquid Filling and Rubber Stoppering Machine with 100% Online Weighing and cRABS

VIKRANT

Key Highlights

- Specifically designed for Oncology products packaging.
- Production rate up to 120 vials per minute (10 ml).
- 100% online weighing of four individual vials at a time.
- Peristaltic pumps for accurate filling.
- Robotic arm type pick and place stoppering mechanism.
- Provision for on the go removal of rejected vials in to decontamination container.
- Constant elimination of static charge on the vials before packaging.
- All format parts made of Antistatic material.
- Tool-less adjustments and changeover of format parts, within 30 minutes.
- Equipped with NVPC, air sampler and media discs at critical locations.
- Servo controls for Vial Transportation and various Processing units.
- System programming in accordance with USFDA 21 CFR-Part 11.
- Packaging inside cRABS with containment class 100; with OEL 3.
- Loading options for both RFS and RFU stoppers.
- Complaint with US FDA 21 CFR-211 for cGMP practices.
- User friendly.

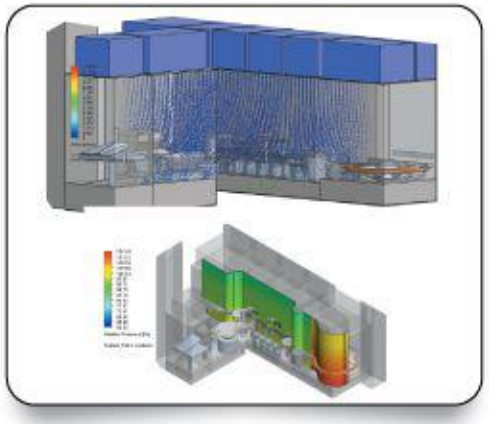
NKP Pharma introduces a very first of its kind of Liquid Filling and Stoppering System specifically designed and developed to achieve the stringent standards of ONCOLOGY Products with 100% online weighing capability. A master piece that has been well realized with in-depth design and hands on field experience in "Liquid Injectable Packaging Lines". products

For an Oncology Product packaging, demanding a very stringent Environment class coupled with operational and operator safety; this approach laid down the definite path for successful realization. Knowing the typical mechanisms that are needed, a layout was finalized which consisted the Vial Transport path right from infeed till outfeed and the stopper feeding, placement of weigh cell stations, sensors, stoppering unit, filling unit, rejection tray, peristaltic pump set and containment class monitoring equipment such as NVPC, Air Sampler, Media Disc etc. The machine has been designed focusing on usability aspects of operator. Every component geometry is well thought about to fulfil the needs of accessibility, ergonomics, handling and change overs.

Finite element analysis has been carried out to size the platform structure to make it rugged for handling and transportation. Motion analysis on various subsystems such as infeed units, Transport mechanism, Stoppering unit, Filling units and outfeed unit were carried out to estimate the motor power. Motion analysis has been also used iteratively in redesigning the components to remove jerks during vial transfers. With established component tolerances, good engineering practices, finishing processes Team NKP ensured that everything is in sync and lifelong.

With critical research in cRABS (Closed Restricted Access Barrier System), Team NKP thoughtfully differentiated and utilized the features of Isolator and existing cRABS. The knowledge gained has then been coupled with contemporary development techniques, in order to maintain the leak proofing much lesser than the acceptable level. The all customized HEPA filter are sized to keep the coverage area over 80% of the chamber area to avoid any separations in the laminarity.

CFD techniques have been extensively used to visualize the flow pattern to achieve the desired one by resizing the exit slit panels (controlling the opening area ratio and Inflow rates). The extracted data not only gave the tuning limits on blower speed but also on the leakage volumes from the mouse holes for vial entry and exit.



CFD techniques have been also extended towards the designing of the Filter Fan Units for each HEPA Filter. This ensures the uniform flow at the inlet of filter, thereby predicting the "flow uniformity" at the filter face-one of the design drivers in establishing the desired Laminar Air Flow over working spaces.

This system has been equipped with IPC screens dedicated to both cRABS and machine controls for online monitoring, recording and alarming, all to keep the system always ready for minimal rejections and maximum production.

"A Man Minimum, Machine Maximum Thinking, Aiming At Minimal Human Efforts!"

Above all, utmost care has been taken to make the system compliant with global standards; to name a few are, ISO 10648 - Part 2 (cRABS Test methods), USFDA 21 CFR-211 for cGMP and USFDA 21 CFR-Part 11 for Software Validation.

With this, VIKRANT, will always remain an ideal crusader for all new trends in Pharma Injectable Packaging.

Right of technical improvements and modifications reserved. | Accessories shown in above photographs are optional. | All illustrations and dimensions are shown for information only.

Ampoule Filling & Sealing Machine

NKP manufactured Ampoule filling and sealing machine are linear fillers suitable to process 4, 6 or 8 ampoules at each machine cycle, according to the output required.

The very accurate constructive concepts allow the machine to condition ampoules at high speed of up to 300 ampoules/min for open ampoules.

The filling of ampoules is carried out by means of volumetric pumps. All the filling machines are designed for Laminar flow operations namely oRABS or cRABS or Isolators. A variety of Optional features for specific process, filling pumps, interlocks and Interface controls as SCADA can be added to these machines to comply various Pharma standards.

Ampoule Filling & Sealing Machine
Model - NKAFS-200 / 300

Model No.	NKAFS-200	NKAFS-300
Direction	Left to Right	Left to Right
Production Rate	200 Ampoules/Min. for 2ML Ampoule	300 Ampoules/Min. for 2ML Ampoule
No. of Filling & Sealing Heads	Six	Eight
Fill Capacity	0.5 ML to 20 ML (with change parts)	0.5 ML to 10 ML (with change parts)
Accuracy	± 0.5 %	± 0.5 %
Electrical Supply	6.0 HP (4.5 KW)	6.5 HP (4.8 KW)
Power Requirement	415 Volts, 3 Phase with Neutral & Earthing (5 Wire system) 50 Hz.	415 Volts, 3 Phase with Neutral & Earthing (5 Wire system) 50 Hz.
Nitrogen Requirement	1 Kg / Cm² (Pressure)	1 Kg / Cm² (Pressure)
Oxygen Requirement	5 Bar (Pressure)	5 Bar (Pressure)
LPG Requirement	0.5 Bar (Pressure)	0.5 Bar (Pressure)
Height Of Conveyor	Adjustable from 900 to 950 MM	Adjustable from 900 to 950 MM
Dimensions	3150 MM (L) X 1055 MM (W) X 2250 MM (H)	3150 MM (L) X 1055 MM (W) X 2250 MM (H)
Net Weight	700 Kgs. (Approx)	800 Kgs. (Approx)
Gross Weight	900 Kgs. (Approx)	1000 Kgs. (Approx)

Sealing Machine

NKP vial sealing machines guarantee the hermetic sealing and therefore the integrity of the drug inside the vials. These machines are capable of handling the sealing of traditional aluminium caps, flip-off caps and even special design caps with low particle generation. All the sealing machines are designed for Laminar flow operations namely oRABS or cRABS or Isolators. A variety of Optional features for specific process, interlocks and Interface controls as SCADA can be added to these machines to comply various Pharma standards.

Single Head Vial Sealing Machine
Model - NKCS-80PR

Model No.	NKCS-80PR
Direction	Left to Right
Production Rate	Up to 30 to 40 Vials/Min. for 10 ML Vial
Electrical Supply	3 HP (2.6 KW)
No. of Sealing Heads	One
Power Requirement	415 Volts, 3 Phase with Neutral & Earthing (5 Wire System), 50 Hz.
Height of Conveyor	Adjustable from 900 to 950 MM
Dimensions	1075 MM (L) X 930 MM (W) X 2200 MM (H)
Net Weight	300 Kgs. (Approx)
Gross Weight	450 Kgs. (Approx)

Vial Sealing Machine
Model - NKCS-150 / 250 / 350

Model No.	NKCS-150	NKCS-250 | NKCS-350
Direction	Left to Right	Left to Right
Production Rate	Up to 120 Vials/Min. for 10 ML Vial	Up to 220 Vials/Min. for 10 ML Vial Up to 320 Vials/Min. for 10 ML Vial
Electrical Supply	2.0 HP (1.5 KW)	2.0 HP (1.5 KW)
No. of Sealing Head	Four	Six | Eight
Power Requirement	230 volts, single phase with Neutral & Earthing (3 wire system) 50Hz.	415 Volts, 3 Phase with Neutral & Earthing (5 Wire system) 50 Hz.
Height Of Conveyor	Adjustable from 900 to 950 MM	Adjustable from 900 to 950 MM
Dimensions	1525 MM (L) X 815 MM (W) X 2450 MM (H)	1525 MM (L) X 950 MM (W) X 2450 MM (H) 2030 MM (L) X 1020MM (W) X 2400MM (H)
Net Weight	450 Kgs. (Approx)	500 Kgs. (Approx)
Gross Weight	650 Kgs. (Approx)	700 Kgs. (Approx)

Vial Sealing Machine
Model - NKCS-250PR / 350PR / 500PR

Model No.	NKCS-250PR	NKCS-350PR | NKCS-500PR
Direction	Left to Right	Left to Right
Production Rate	160 Vials / Min for 10 ML Vials	250 Vials/Min. for 10 ML Vial 350 Vials/Min. for 10 ML Vial
Electrical Supply	4.0 HP (3 KW)	4.0 HP (3 KW)
No. of Sealing Head	Six	Eight | Twelve
Power Requirement	415 Volts, 3 Phase with Neutral & Earthing (5 Wire system) 50 Hz.	415 Volts, 3 Phase with Neutral & Earthing (5 Wire system) 50 Hz.
Height Of Conveyor	Adjustable from 900 to 950 MM	Adjustable from 900 to 950 MM
Dimensions	1525 MM (L) X 950 MM (W) X 2450 MM (H)	1525 MM (L) X 950 MM (W) X 2450 MM (H) 2030 MM (L) X 1000 MM (W) X 2450 MM (H)
Net Weight	850 Kgs. (Approx)	900 Kgs. | 1100 Kgs. (Approx)
Gross Weight	1050 Kgs. (Approx)	1100 Kgs. | 1300 Kgs. (Approx)

Vial Sealing Machine
Model - NKCS-350P2R / 500P2R

Model No.	NKCS-350P2R	NKCS-500P2R
Direction	Left to Right	Left to Right
Production Rate	250 Vials/Min. for 10 ML Vial	350 Vials/Min. for 10 ML Vial
Electrical Supply	5.0 HP (3.7 KW)	4.5 HP (3.7 KW)
No. of Sealing Head	Eight	Twelve
Power Requirement	415 Volts, 3 Phase with Neutral & Earthing (5 Wire system) 50 Hz.	415 Volts, 3 Phase with Neutral & Earthing (5 Wire system) 50 Hz.
Height Of Conveyor	Adjustable from 900 to 950 MM	Adjustable from 900 to 950 MM
Dimensions	2030 MM (L) X 910 MM (W) X 2450 MM (H)	2161 MM (L) X 1056 MM (W) X 2450 MM (H)
Net Weight	700 Kgs. (Approx)	900 Kgs. (Approx)
Gross Weight	900 Kgs. (Approx)	1100 Kgs. (Approx)

Vial Sealing Machine with cRABS
Model - NKCS-350PR / 500PR cRABS

Model No.	NKCS-350PR cRABS	NKCS-500PR cRABS
Direction	Left to Right	Left to Right
Production Rate	250 Vials/Min. for 10 ML Vial	350 Vials/Min. for 10 ML Vial
Electrical Supply	6.0 HP (4.5 KW)	6.0 HP (4.5 KW)
No. of Sealing Head	Eight	Twelve
Power Requirement	415 Volts, 3 Phase with Neutral & Earthing (5 Wire system) 50 Hz.	415 Volts, 3 Phase with Neutral & Earthing (5 Wire system) 50 Hz.
Height Of Conveyor	Adjustable from 900 to 950 MM	Adjustable from 900 to 950 MM
Dimensions	1525 MM (L) X 860 MM (W) X 1650 MM (H)	2030 MM (L) X 1000 MM (W) X 1950 MM (H)
Net Weight	900 Kgs. (Approx)	1100 Kgs. (Approx)
Gross Weight	1100 Kgs. (Approx)	1300 Kgs. (Approx)

External Washing Machine

External Washing Machines manufactured by NKP are designed to clean the external surface of vials/ampoules with an output capacity up to 15,000 vials/hour with effective drying, protection of seals from washing fluids and effective decontamination of vials/ampoules. Purified water, W.F.I. & cleaning agents are media options used for vial surface decontamination. Compressed air dries the decontaminated vials/ampoules.

The washing fluids spraying nozzles are specifically designed to avoid washing fluid passage into the seal of vials. The compressed air blowing nozzles remove the residual washing fluids from the outer glass surfaces of the vials/ampoules. A variety of Optional features for specific process, interlocks and Interface controls as SCADA can be added to these machines to comply various Pharma standards.

External Vial Washing & Drying Machine
Model - NKEW-100 / 200

Model No.	NKEW-100	NKEW-200
Direction	Left to Right	Left to Right
Production Rate	Up to 100 Vials/Min. for 10 ML Vial	Up to 200 Vials/Min. for 10 ML Vial
Electrical Supply	4.5 HP (3.3 KW)	4.5 HP (3.3 KW)
Power Requirement	415 Volts, 3 Phase with Neutral & Earthing (5 Wire system) 50 Hz.	415 Volts, 3 Phase with Neutral & Earthing (5 Wire system) 50 Hz.
Height Of Conveyor	Adjustable from 900 to 950 MM	Adjustable from 900 to 950 MM
Dimensions	2550 MM (L) X 750 MM (W) X 1530 MM (H)	2550 MM (L) X 750 MM (W) X 1530 MM (H)
Net Weight	550 Kgs. (Approx)	750 Kgs. (Approx)
Gross Weight	1211 Kgs. (Approx)	1400 Kgs. (Approx)
Air Requirement	35 CFM	70 to 75 CFM
PW in Lit.	250	750
Compressed Air In $M^3/Hr.$	10	20

External Vial Washing & Drying Machine
Model - NKREW-100 / 200

Model No.	NKREW-120	NKREW-250
Direction	Left to Right	Left to Right
Production Rate	Up to 120 Vials/Min. for 10 ML Vial	Up to 240 Vials/Min. for 10 ML Vial
Electrical Supply	4.0 HP (3 KW)	4.0 HP (3 KW)
Power Requirement	415 Volts, 3 Phase with Neutral & Earthing (5 Wire system) 50 Hz.	415 Volts, 3 Phase with Neutral & Earthing (5 Wire system) 50 Hz.
Height Of Conveyor	Adjustable from 900 to 950 MM	Adjustable from 900 to 950 MM
Dimensions	2180 MM (L) X 1555 MM (W) X 1500 MM (H)	2180 MM (L) X 1555 MM (W) X 1500 MM (H)
Net Weight	800 Kgs. (Approx)	800 Kgs. (Approx)
Gross Weight	1000 Kgs. (Approx)	1000 Kgs. (Approx)
Air Requirement	50 CFM	80 CFM
PW in Lit.	360	360
WFI in Lit.	360	360
Compressed Air In M^3/Hr	20	20

External Ampoule Washing & Drying Machine
Model - EW-250 / 400

Model No.	EW-250	EW-400
Direction	Left to Right	Left to Right
Production Rate	Up to 200 Ampoules/Min. for 2 ML Ampoule	Up to 300 Ampoules/Min. for 2 ML Ampoule
Electrical Supply	5.0 HP	13.0 HP
Power Requirement	415 Volts, 3 Phase with Neutral & Earthing (5 Wire system) 50 Hz.	415 Volts, 3 Phase with Neutral & Earthing (5 Wire system) 50 Hz.
Dimensions	2775 MM (L) X 1230 MM (W) X 1200 MM (H)	2775 MM (L) X 1230 MM (W) X 1200 MM (H)
Net Weight	550 Kgs. (Approx)	600 Kgs. (Approx)
Gross Weight	700 Kgs. (Approx)	800 Kgs. (Approx)

External Ampoule Washing, Drying & Labelling Machine
Model - EWL-400

Model No.	EWL-400
Production Rate	Up to 300 Ampoules/Min.
Electrical Supply	6.5 HP (4.8 KW)
Power Requirement	415 Volts, 3 Phase with Neutral & Earthing (5 Wire system) 50 Hz.
Dimensions	1930 MM (L) X 2105 MM (W) X 1450 MM (H)
Net Weight	600 Kgs. (Approx)
Gross Weight	800 Kgs. (Approx)

Visual Vial Inspection Machine

Visual Vial Inspection Machines manufactured by NKP are ideal for products/vials/ampoules requiring inspection. The particles and cosmetic imperfections in the vial such as cracks, pin holes, stopper defects, seal defects, etc. are visually checked by an operator with the help of a high magnification lens and a configuration adapted to the brightness. These machines provide greater flexibility with many adjustable parameters.

Visual Vial Inspection Machine
Model - NKINS-120 / 250

Model No.	NKINS-120	NKINS-250
Direction	Left to Right	Left to Right
Production Rate	100 to 120 Vials/Min (Depends on Operator Skills)	200 Vials/Min (Depends on Operator Skills)
Capacity	5 to 30 ml Vial	5 to 30 ml Vial
Electrical Supply	1.5 HP (1.1 KW)	2.0 HP (1.4 KW)
Power Requirement	230 Volts, Single Phase with Neutral & Earthing (3 Wire System), 50 Hz.	230 Volts, Single Phase with Neutral & Earthing (3 Wire System), 50 Hz.
Dimensions	3070 MM (L) X 1030 MM (W) X 1315 MM (H)	4290 MM (L) X 1320 MM (W) X 1315 MM (H)
Net Weight	450 Kgs. (Approx)	700 Kgs. (Approx)
Gross Weight	625 Kgs. (Approx)	1075 Kgs. (Approx)

Visual Ampoule Inspection Machine
Model - NKAINS-120 / 200

Model No.	NKAINS-120	NKAINS-200
Direction	Left to Right	Left to Right
Production Rate	100 to 120 Ampoules/Min. (Depends on Operator Skills)	200 Ampoules/Min. (Depends on Operator Skills)
Number of Operators	One	Two
Electrical Supply	3.0 HP (2.2 KW)	3.0 HP (2.2 KW)
Power Requirement	415 Volts, 3 Phase with Neutral & Earthing (5 Wire System), 50 Hz.	415 Volts, 3 Phase with Neutral & Earthing (5 Wire System), 50 Hz.
Height Of Conveyor	Adjustable from 900 to 950 MM	Adjustable from 900 to 950 MM
Dimensions	2914 MM (L) X 971 MM (W) X 1600 MM (H)	2914 MM (L) X 1900 MM (W) X 1600 MM (H)
Net Weight	500 Kgs. (Approx)	500 Kgs. (Approx)
Gross Weight	700 Kgs. (Approx)	700 Kgs. (Approx)

Labelling Machine

NKP manufactured labelling machines are fully automatic, versatile labelling system for the application of self-adhesive labels to a wide range of products including cylindrical,oval,square or rectangular containers in glass, plastic, metal or composite materials.

These labelling machines are specifically designed to meet the requirements of the international pharmaceutical industry and its regulatory bodies including the FDA and is equally suited to other industries where flexibility, high speed, accuracy and reliability are pre-requisites. A variety of Optional features for specific process for printing & inspections interlocks and Interface controls can be added to these machines to comply various packaging standards.

Self-Adhesive Vertical Labelling Machine
Model - ASAL-120 / 250

Model No.	ASAL-120	ASAL-250
Production Rate	Up to 120 Vials/Min.	Up to 240 Vials/Min.
Electrical Supply	2.0 HP (1.4 KW)	2.0 HP (1.4 KW)
Power Requirement	230 Volts, Single Phase with Neutral & Earthing (3 Wire System), 50 Hz.	230 Volts, Single Phase with Neutral & Earthing (3 Wire System), 50 Hz.
Dimensions	1830 MM (L) X 800 MM (W) X 1445 MM (H)	1830 MM (L) X 800 MM (W) X 1445 MM (H)
Net Weight	350 Kgs. (Approx)	350 Kgs. (Approx)
Gross Weight	575 Kgs. (Approx)	575 Kgs. (Approx)
Label Height	10 MM to 160 MM	10 MM to 160 MM
Label Length	12 MM to unlimited	12 MM to unlimited
Gap between Two Labels	Min. 5 MM	Min. 5 MM
Label Roll Dia.	300 MM Max.	300 MM Max.
Label Core Dia.	75 MM to 76 MM	75 MM to 76 MM
Container Dia.	20 MM to 90 MM	20 MM to 90 MM

Self Adhesive Vertical Vial Labelling Machine
Model - ATL-120 / 250

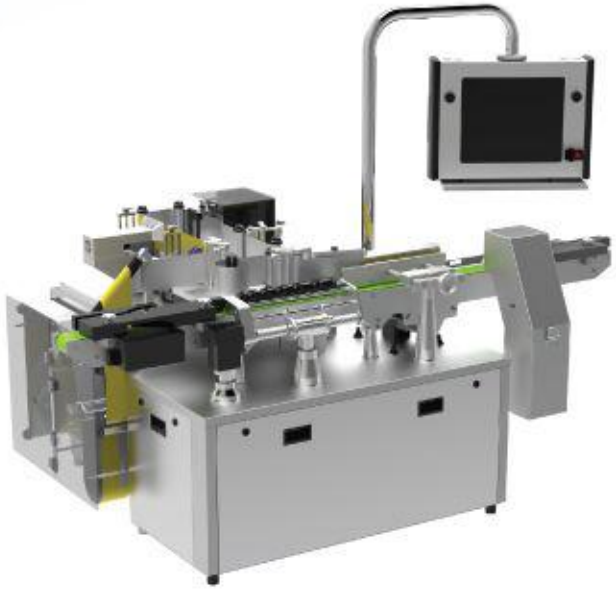
Model No.	ATL-120	ATL-250
Production Rate	Up to 120 Vials/Min. for 10 ml vials	Up to 240 Vials/Min. for 10 ml vials
Electrical Supply	2.5 HP (2 KW)	2.5 HP (2 KW)
Power Requirement	415 Volts, 3 Phase with Neutral & Earthing (5 Wire System), 50 Hz.	415 Volts, 3 Phase with Neutral & Earthing (5 Wire System), 50 Hz.
Height Of Conveyor	Adjustable from 900 to 950 MM	Adjustable from 900 to 950 MM
Dimensions	2600 MM (L) X 1150 MM (W) X 1450 MM (H)	2600 MM (L) X 1150 MM (W) X 1450 MM (H)
Electrical Panel Dimensions	455 MM (L) X 400 MM (W) X 1400 MM (H)	455 MM (L) X 400 MM (W) X 1400 MM (H)
Net Weight	450 Kgs. (Approx)	450 Kgs. (Approx)
Gross Weight	650 Kgs. (Approx)	650 Kgs. (Approx)
Label Height	10 MM to 160 MM	10 MM to 160 MM
Label Length	12 MM to unlimited	12 MM to unlimited
Gap Between Two Labels	Min. 5 MM	Min. 5 MM
Label Roll Dia.	300 MM Max.	300 MM Max.
Label Core Dia.	75 MM to 76 MM	75 MM to 76 MM
Container Dia.	20 MM to 90 MM	20 MM to 90 MM

Self Adhesive Vertical Vial Labelling Machine with Camera Inspection & Rejection System
Model - ATL-120CR / 250CR

Model No.	ATL-120CR	ATL-250CR
Production Rate	Up to 120 Vials/Min. for 10 ml vial	Up to 240 Vials/Min. for 10 ml vial
Electrical Supply	4.5 HP (3.3 KW)	4.5 HP (3.3 KW)
Power Requirement	415 Volts, 3 Phase with Neutral & Earthing (5 Wire System), 50 Hz.	415 Volts, 3 Phase with Neutral & Earthing (5 Wire System), 50 Hz.
Height Of Conveyor	Adjustable from 900 to 950 MM	Adjustable from 900 to 950 MM
Dimensions	2600 MM (L) X 1380 MM (W) X 1785 MM (H)	2600 MM (L) X 1380 MM (W) X 1785 MM (H)
Electric Panel Dimensions	604 MM (L) X 400 MM (W) X 1400 MM (H)	604 MM (L) X 400 MM (W) X 1400 MM (H)
Net Weight	450 Kgs. (Approx)	450 Kgs. (Approx)
Gross Weight	650 Kgs. (Approx)	650 Kgs. (Approx)
Label Height	10 MM to 160 MM	10 MM to 160 MM
Label Length	12 MM to unlimited	12 MM to unlimited
Gap Between Two Labels	Min. 5 MM	Min. 5 MM
Label Roll Dia.	300 mm Max.	300 MM Max.
Label Core Dia.	75 MM to 76 MM	75 MM to 76 MM
Container Dia.	20 MM to 90 MM	20 MM to 90 MM
Compressed Air In M^3/Hr.	2	2

Self Adhesive Vertical Labelling Machine with Camera Inspection & Rejection System

Model - ATL-300CRH



NKP Pharma introduces yet another marvel in Label Application "ATL-300CRH".

Key Highlights

Faulty Label Rejection - Faulty Labels are pasted back onto the secondary empty roll thus the Accountability and Reconciliation of every single label is achieved as per market regulatory norms & also making it easy to trace the rejected labels for IPQC. More importantly making it more viable rather than pasting rejected label on the vial and then rejecting the vial.

Label Splicing Device - Splicing Device Facilitates quick and easy changeover of label roll thus saving the time required for setting a new label roll as in case of other conventional labelling machines.

Label Splice Detector - Identifies and Rejects Partially or fully over lapped labels.

Secured System Access - Fingerprint Biometric Authentication required for system access through IPC thus securing the system against unauthorised access.

Label Freeing Device - This device maintains bare minimum label roll tension to avoid roll breakage during machine operation at high speeds.

Centralised IPC Control with SCADA - Single integrated system control for camera, printer and the machine through IPC with SCADA. USFDA 21CFR Part-11 Compliant Machine and Camera Software.

Label Release Counter - Identifies the number of labels discharged from the source label roll.

Smart Camera System - Enables quicker and accurate focus and inspection window arrangement.

The ATL-300CRH is a fully Automatic High Speed system with minimal Operator Interventions. Equipped with key components such as Primary Printer, Camera Inspection, and Cross Mark Printer.

Label motions are controlled by three independent Servo motors. As the initial setting for particular Label is achieved, the machine propels to apply up to 400 labels on vials in a minute. This has been achieved with a rugged combination of encoder-sensors-servo motors, leading to better degree of fulfilment in printing, faulty label rejection and label application on vial.

Integration of mechanical components such as feed worm with accident proof mechanism, vial pressing device for better wrapping of label, has all been thoughtfully done. Machine also provides ease of access to operator.

The new Labelling machine "ATL-300CRH" is compliant with all major standards for packaging.

Self Adhesive Vertical Ampoule Labelling Machine with Camera Inspection & Rejection System

Model - ATL-300CR

Model No.	ATL-300CR
Production Rate	Up to 300 Ampoule/Min. for 2 ml ampoule
Electrical Supply	5.0 HP (3.7 KW)
Power Requirement	415 Volts, 3 Phase with Neutral & Earthing (5 Wire System), 50 Hz.
Height Of Conveyor	Adjustable from 850 to 900MM
Dimensions	1895 MM (L) 2035 X MM (W) X 1785 MM (H)
Electrical Panel Dimension	604 MM (L) X 400 MM (W) X 1400 MM (H)
Label Height	8 MM to 90 MM
Label Length	12 MM to unlimited
Gap between Two Labels	Min. 5 MM
Label Roll Dia.	300 MM Max.
Label Core Dia.	75 MM to 76 MM
Container Dia.	10 MM to 22 MM
Net Weight	650 Kgs. (Approx)
Gross Weight	850 Kgs. (Approx)
Vacuum In M^3/Hr	0.9

Right of technical improvements and modifications reserved. | Accessories shown in above photographs are optional. | All illustrations and dimensions are shown for information only.

Self Adhesive Vertical Ampoule Labelling Machine
Model - ATAML-400

Model No.	ATAML-400
Production Rate	Up to 400 Ampoules/Min. for 2 ml ampoule
Electrical Supply	2.0 HP (1.8 KW)
Power Requirement	230 Volts, Single Phase with Neutral & Earthing (3 Wire System), 50 Hz.
Height Of Conveyor	Adjustable from 850 to 900 MM
Dimensions	1500 MM (L) X 1925 MM (W) X 1425 MM (H)
Label Height	8 MM to 90 MM
Label Length	12 MM to unlimited
Gap between Two Labels	Min. 5 MM
Label Roll Dia.	300 MM Max.
Label Core Dia.	75 MM to 76 MM
Container Dia.	10 MM to 22 MM
Net Weight	500 Kgs. (Approx)
Gross Weight	600 Kgs. (Approx)

Self Adhesive Vertical Labelling Machine with Online Camera Inspection & Rejection System for Pre-Filled Syringes
Model - ATL-300CR (PFS)

Model No.	ATL-300CR (PFS)
Production Rate	60 to 120 PFS/MIN
Electrical Supply	5.5 HP (4 KW)
Power Requirement	415 Volts, 3 Phase with Neutral & Earthing (5 Wire System), 50 Hz.
Dimensions	3050 MM (L) X 3050 MM (W) X 1850 MM (H)
Electrical Panel Dimensions	850 MM (L) X 700 MM (W) X 1800 MM (H)
Label Height	8 MM to 90 MM
Label Length	12 MM to unlimited
Gap between Two Labels	Min. 5 MM
Label Roll Dia.	300 MM Max.
Label Core Dia.	75 MM to 76 MM
Container Dia.	10 MM to 22 MM
Net Weight	600 Kgs. (Approx)
Gross Weight	750 Kgs. (Approx)

Airjet Cleaning Machine
Model - NKAC-120

Model No.	NKAC-120
Direction	Left to Right
Production Rate	Up to 60 to 120 Bottles/Min.
Electrical Supply	1.5 HP (1.1 KW)
Power Requirement	415 volts, 3 Phase with Neutral & Earthing (5 wire system) 50 Hz.
Height Of Conveyor	Adjustable from 900 to 950MM
Dimensions	2200 MM (L) with Infeed T.T. X 600 MM (W) X 1450 MM (H)
Net Weight	300 Kgs. (Approx)
Gross Weight	450 Kgs. (Approx)

Double Head Auger Type Dry Syrup Powder Filling Machine
Model - AF D-100

Model No.	AF D-100
Direction	Left to Right
Production Rate	40 to 45 Bottles/Min. for 15 gms filling
Fill Capacity	5 Gms. to 60 Gms. (with different set of Auger and Funnel) Fill range depending upon bottle opening and bulk density of powder.
Accuracy	± 3% depending upon powder characteristic and the uniformity of bulk density of powder under controlled humidity for fill weight 250mg & above. (± 3% for fill weight 100mg to 250mg & ±5 % for fill weight 50mg to 100mg)
Electrical Supply	4.0 HP (2.9 KW)
Power Requirement	415 volts, 3 Phase with Neutral & Earthing (5 Wire System), 50 Hz.
Height Of Conveyor	Adjustable from 900 to 950MM
Dimensions	2760 MM (L) X 1100 MM (W) X 2300 MM (H)
Net Weight	550 Kgs. (Approx)
Gross Weight	800 Kgs. (Approx)
Nitrogen In M^3/Hr	1
Vacuum In M^3/Hr	1

Rotary Dry Syrup Powder Filling Machine
Model - AHPF R-150

Model No.	AHPF R-150
Direction	Left to Right
Production Rate	120 to 150 Bottles/Min. for 15 to 20 Gms. Filling
Fill Capacity	5 Gms. to 60 Gms. on single dose considering bulk density of 0.6 Gm./ML (with change parts). Fill range depending upon bottle opening and bulk density of powder.
Accuracy	±3% depending upon powder characteristic and the uniformity of bulk density of powder under controlled humidity for fill weight 250mg & above. (± 3% for fill weight 100mg to 250mg & ±5 % for fill weight 50mg to 100mg)
Electrical Supply	12.5 HP (9.3 KW)
Power Requirement	415 volts, 3 Phase with Neutral & Earthing (5 Wire System), 50 Hz.
Height Of Conveyor	Adjustable from 900 to 950MM
Dimensions	2025 MM (L) X 1250 MM (W) X 2200 MM (H)
Net Weight	1300 Kgs. (Approx)
Gross Weight	1700 Kgs. (Approx)
Nitrogen In M^3/Hr	2
Vacuum In M^3/Hr	1

Six Head Screw Cap Sealing Machine
Model - NKCS-200S

Model No.	NKCS-200S
Direction	Left to Right
Production Rate	Up to 100 to 120 Bottles/Min.
No. of Screw Capping Heads	6 Nos.
Electrical Supply	2.5 HP (1.8 KW)
Power Requirement	415 volts, 3 Phase with Neutral & Earthing (5 wire system) 50 Hz.
Height Of Conveyor	Adjustable from 900 to 950MM
Dimensions	2450 MM (L) X 1200 MM (W) X 2250 MM (H)
Net Weight	700 Kgs. (Approx)
Gross Weight	900 Kgs. (Approx)

Track and Trace Solutions

Smart Track & Easy Trace Solution For ePedigree & Drug Counterfeiting

Fighting against drug counterfeiting needs end-to-end solution as that affects to the reputations of the company as well as creates health and safety issues. Drug traceability in supply chain helps us to fight against counterfeiting and our Track & Trace Solution for Primary, Secondary as well as Tertiary Packaging Barcoding requirements is as per country specific export guidelines along with DGFT / MoHW notification & GS1 International guidelines. Track & Trace is integration of various technologies like IT, Transportation, Printing, Inspection, Rejection & Scanning as well as synchronizing them wherein we have 25+ years of experience in pharmaceutical packaging machinery manufacturing.

We supply all types of Barcoding machines for Primary, Secondary & Tertiary packaging for Printing, Inspection & Rejection needs on any surface. Inspection of Barcode is done as per ISO/IEC 15415 for 2D codes & 15416 for various compliance reports & detailed logs to fully comply with 21 CFR part 11 guidelines. Aggregate ePedigree data can be uploaded on Life Sciences Cloud Data servers for supply chain visibility. Thus you get single vendor solutions for your country specific requirements.

Exporting to different parts of the world requires varied types of Barcoding and Data management solutions adhering to various Laws, Policies and Notifications. Our system is compliant to various regulations like US Federal Drug Quality & Security Act of 2013 (DQSA), Drug Supply Chain Security Act (DSCSA) Chinese SFDA, Argentina's ANMAT, Brazilian ANVISA, South Korean Ministry of Health and Welfare regulations, European directive 2011/62/EU, France AFSSAPS for CIP13, ITS by Turkish MOH and DGFT notification of India. GS1 global standards for each exporting country requirements are adhered.

GS1 Registered Solution Provider
GS1 Certified Professionals team

DAVA portal ready. Upload Parent Child data in XML as per DGFT requirements.

Key Features

- Setup at your premises for secured supply chain.
- Centralized Management & Data Storage.
- 3 Tier Client Server Software Architecture.
- Database designed to store Trillions of Serialized data.
- One software for Multi location / Multi Plant / Multi lines.
- High Speed Productive Unique Serial generation.
- Mass Data Encryption using Triple DES (3DES) algorithm.
- Compatible to all GS1 Application Identifiers.
- Printing Solutions on Ampoule, Vial, Blister and Carton.
- Camera Inspection as per GS1 guidelines.
- Low Rejection Ratio due to high quality standard machines.
- Aggregation (Parent Child) for "n" level of packaging.
- MIS & other compliance reports.
- Record level log keeping as per 21 CFR Part 11.
- User friendly GUI (Easy to learn & Train).

Offline Carton Coding Machine with Inspection & Rejection System

Model - ATECP-250CR

Model No.	ATECP-250CR
Direction	Left to Right
Production Rate	60 to 250 Cartons/min. Depends upon Carton size
Electrical Supply	2.0 HP (1.5 KW)
Power Requirement	230 Volts, Single Phase with Neutral & Earthing (3 Wire System), 50 Hz.
Height Of Conveyor	800 MM to 850 MM
Dimensions	1766 MM (L) X 840 MM (W) X 1730 MM (H)
Net Weight	400 Kgs. (Approx)
Gross Weight	650 Kgs. (Approx)
Compressed Air In M^3/Hr	At Pressure 6 Kg/CM^2

Online Carton Coding Machine with Inspection & Rejection System

Model - ATFCP-250CR

Model No.	ATFCP-250CR
Direction	Left to Right
Production Rate	60 to 250 Cartons/min. Depend upon Carton size
Electrical Supply	2.0 HP (1.5 KW)
Power Requirement	230 Volts, Single Phase with Neutral & Earthing (3 Wire System), 50 Hz.
Height Of Conveyor	800 MM to 850 MM
Dimensions	1766 MM (L) X 840 MM (W) X 1730 MM (H)
Net Weight	400 Kgs. (Approx)
Gross Weight	650 Kgs. (Approx)
Compressed Air In M^3/Hr	At Pressure 6 Kg/CM^2

Parent Child Relationship (PCR) / Aggregation Unit (Secondary Level)

Model - PCR-001 A

Model No.	PCR-001 A
No. of Stations and Type of Scanning	Single Station and Single Camera
Scanning Area	450 MM X 450 MM
Electrical Supply	1.5 HP (1.1 KW)
Power Requirement	230 Volts, Single Phase with Neutral & Earthing (3 Wire System), 50 Hz.
Illumination unit Up-Down Type	Motorized
Dimensions	1390 MM (L) X 1120 MM (W) X 2110 MM (H)
Net Weight	150 Kgs. (Approx)
Gross Weight	250 Kgs. (Approx)

Parent Child Relationship (PCR) / Aggregation Unit (Intermediate Level)

Model - PCR-002

Model No.	PCR-002
No. of Stations and Type of Scanning	Single Station and Hand Held Barcode Scanner
Scanning Area	NA
Electrical Supply	1.0 HP (0.7 KW)
Power Requirement	230 Volts, Single Phase with Neutral & Earthing (3 Wire System), 50 Hz.
Illumination unit Up-Down Type	NA
Dimensions	1325 MM (L) X 1075 MM (W) X 1585 MM (H)
Net Weight	100 Kgs. (Approx)
Gross Weight	200 Kgs. (Approx)

Parent Child Relationship (PCR) / Aggregation Unit (Secondary Level 2 Operator)

Model - PCR-003 / 003 D

Model No.	PCR-003	PCR-003 D
No. of Stations and Type of Scanning	Double Station and Single Camera Each	Double Station and Double Camera Each
Scanning Area	450 MM X 450 MM Each station	800 MM X 800 MM Each Station
Electrical Supply	1.5 HP (1.1 KW)	2.0 HP (1.5 KW)
Power Requirement	230 Volts, Single Phase with Neutral & Earthing (3 Wire System), 50 Hz.	230 Volts, Single Phase with Neutral & Earthing (3 Wire System), 50 Hz.
Illumination unit Up-Down Type	Motorized	Motorized
Dimensions	1600 MM (L) X 1500 MM (W) X 2110 MM (H)	1600 MM (L) X 1500 MM (W) X 2110 MM (H)
Net Weight	150 Kgs. (Approx)	150 Kgs. (Approx)
Gross Weight	250 Kgs. (Approx)	250 Kgs. (Approx)

Parent Child Relationship (PCR) / Aggregation Unit (Pallet Level)

Model - PCR-004

Tertiary packs-Shippers to be palletized will be scanned and upon scanning all the shippers a pallet label will be generated. Upon Scanning of this label by Handheld Barcode Scanner provided with PCR Unit, it would establish Parent Child Relationship between Shipper & Pallet.

The system includes

- Computer System with Smart Track Software.
- Barcode Label Printer.
- Industrial Wireless Bluetooth Scanner.

Online Carton Coding Machine with Inspection, Aggregation & Separate Rejection Bin

Model - PCR-005

Model No.	PCR-005
Direction	Left to Right
Production Rate	100 -120 Cartons/Min. (Depends on Carton Size)
Electrical Supply	Single Phase, Neutral + Earthing
Power Requirement	1.3 KW (1.74 HP)
Height of Conveyor	715 ± 30 mm
Dimensions	3960 MM (L) X 1405 MM (W) X 1600 MM (H)
Electric Panel Dimensions	NA
Net Weight	600 kg
Gross Weight	800 kg

Primary Parent Child Relationship - Bottle Helper Code Linkage System

Model - AHCL-360

Model No.	AHCL-360 (PCR-007)
Direction	Left to Right
Production Rate	Depends on packing style and operator skill
Electrical Supply	3 Phase, Neutal + Erthing
Power Requirement	4 KW (5.3HP)
Height of Conveyor	850 ± 30 mm
Dimensions	2172 MM (L) X 1143 MM (W) X 1613 MM (H)
Electric Panel Dimensions	NA
Net Weight	520 kg
Gross Weight	720 kg

Parent Child Relationship (PCR) / Aggregation Unit (Bulk Bottle Line)

Model - PCR-008

Model No.	PCR-008
Direction	Left to Right
Production Rate	Depends on Packing and Operator Skills
Electrical Supply	Single Phase, Neutral + Earthing
Power Requirement	1.2 KW (1.6 HP)
Height of Conveyor	850 ± 30 mm
Dimensions	1454 MM (L) X 1384 MM (W) X 1812 MM (H)
Electric Panel Dimensions	NA
Net Weight	150 kg
Gross Weight	350 kg
Compressed Air in M^3/Hr	NA

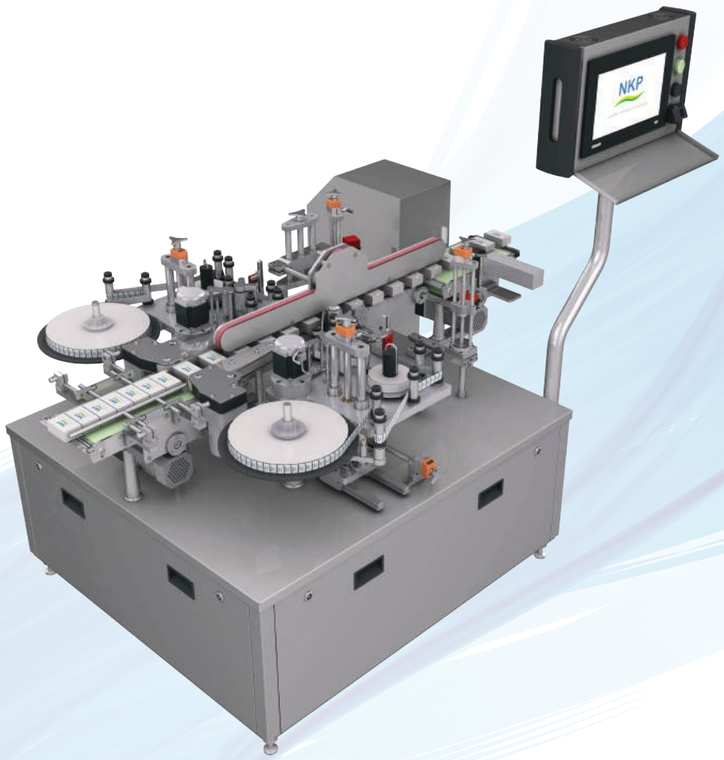
Parent Child Relationship (PCR) / Aggregation Unit (Bulk Bottle Line 2 Operators)

Model - PCR-009

Model No.	PCR-009
Direction	Left to Right
Production Rate	Depends on packing style and operator skill
Electrical Supply	Single Phase, Neutral + Earthing
Power Requirement	2.4 KW (3.2 HP)
Height of Conveyor	850 ± 30 mm
Dimensions	1540 MM (L) X 2300 MM (W) X 1823 MM (H)
Electric Panel Dimensions	NA
Net Weight	320 kg
Gross Weight	520 kg
Compressed Air in M^3/Hr	NA

Automatic Online Tamper Evident Labelling Machine with Inspection and Rejection System

Model - ATLTE-200CR



Model No.	ATLTE-200CR
Direction	Left to Right
Production Rate	200 Cartons/Min. (Depends on Carton size)
Electrical Supply	3 Phase, Neutral + Earthing
Power Requirement	4.5 KW (6 HP)
Height of Conveyor	800 ± 30 mm
Dimensions	1710 MM (L) X 1400 MM (W) X 1650 MM (H)
Electric Panel Dimensions	NA
Net Weight	600 kg
Gross Weight	800 kg
Compressed Air in M^3/Hr	2 M^3/Hr

Auto Winder (Label Print & Inspection System, For Secondary Label)

Model - AW 300

Model No.	ATLTE-200CR
Direction	Left to Right
Production Rate	300 Labels/Min. (100 MM Label Length)
Electrical Supply	0.75 HP (5 KW)
Power Requirement	220 Volts, Single Phase with Neutral + Earthing
Height of Conveyor	Table Top Model
Dimensions	1010 MM (L) X 610 MM (W) X 1100 MM (H)
Electric Panel Dimensions	NA
Net Weight	150 kg
Gross Weight	200 kg
Label Roll Dia	400 mm Max.
Label Roll Core ID	75 mm
Label Roll Dia	L - 30 mm to 275 mm W - 15 mm to 150 mm (Above dim are expandable)*

Tray Collection System
Model - NKTC-250

Model No.	NKTC-250
Production Rate	Up to 250 Vials/Min. for 10 ml vials
Electrical Supply	2.0 HP (1.5 KW)
Power Requirement	230 Volts, Single Phase with Neutral & Earthing (3 Wire System), 50 Hz.
Height Of Conveyor	Adjustable from 900 to 950 MM
Dimensions	1638 MM (L) X 968 MM (W) X 1460 MM (H)
Vial Sizes	2 ML to 100 ML
Net Weight	400 Kgs. (Approx)
Gross Weight	650 Kgs. (Approx)

Swing Conveyor / Fixed Conveyor/ Swing Type Wiremesh Conveyor with Pre-Inspection

Swing Conveyor

Fixed Conveyor

Swing Type Wiremesh Conveyor with Pre-Inspection

Pneumatic Tray Loaders / Turntable / Packaging Conveyor Belt

Pneumatic Tray Loaders

Turntable

Packaging Conveyor Belt

Clean Room Equipments

Clean rooms employ air filtration to limit the particles in the environmental air. Typically, this is through the use of either a HEPA (Highly Efficient Particulate Air) or ULPA (Ultra Low Particulate Air) filter. These filters can remove roughly 99.9% of all micro particles in room air by applying either Laminar Air Flow techniques to the environmental air.

Unidirectional Vertical Air Flow Unit
Model - NKVLAF

Unidirectional Air Flow Systems (Laminar Air Flow Units) are typically employed across 80% of a clean room ceiling to maintain constant air processing. There are various types of Air-flow systems with a variety of Airflow Patterns to prevent excess particles entering the air.

Unidirectional Vertical Air Flow (NKVLAF) is designed specifically for product protection. The Cabinet is a clean bench which provides ultra-clean sterile HEPA / ULPA filtered ISO class 100 air in an isolated area for operations requiring a particulate-free air directed vertically downwards onto the working area. The air can leave the working area via holes in the base. Vertical flow cabinates can provide greater operator protection.

Key Features

- Pre-filter.
- HEPA / ULPA filter (99.999%).
- Blower (Make: EBM OR equivalent).
- Interior Cold-rolled finished steel.
- Fluorescent Lighting.
- Differential Pressure Gauge.
- DOP / test report.
- Optional features include Audio / Visual alarm for blower tripping with Fault Acknowledgement / Reset Switch, Audio / Visual Velocity display with alarms, Filter blocked alarms (Audible and Visible).

Unidirectional Horizontal Air Flow Unit
Model - NKHLAF

Unidirectional Horizontal Air Flow (NKHLAF) Unit is designed specifically for highest product protection by providing ISO Class 5 particle free work area for handling critical process. The main HEPA / ULPA filters is situated immediately behind the work area; clean air is then blown across the work surface towards the operator. These units are suitable for the handling of non-hazardous products, sensible to dust and/or contamination wherever operator protection is not required.

Standard Features

- Pre-filter.
- HEPA / ULPA filter (99.999%).
- Blower (Make: EBM OR equivalent).
- Interior Cold-rolled finished steel.
- Fluorescent Lighting.
- Differential Pressure Gauge.
- DOP / PAO test report.
- Optional features include Audio / Visual alarm for blower tripping with Fault Acknowledgement / Reset Switch, Audio / Visual Velocity display with alarms, Filter blocked alarms (Audible and Visible).

Unidirectional Reverse Air Flow Unit
Model - NKRLAF

Unidirectional Reverse Air Flow (NKRLAF) Unit is designed to provide ISO Class 100 working environment at rest with built in scavenging system to ensure product, operator as well as surrounding environment protection. The RLAF Unit finds Major applications in sampling and dispensing units. Ideally used for mixed airflow stream to control the hazardous emission of dust powder during dispensing or sampling process. This ensures to draw powder aerosols away from the operator and the operating environment protecting products and providing safe working conditions for personnel. The system operates on a re-circulatory airflow principle providing containment by air movement.

Standard Features

- Pre-filter.
- HEPA / ULPA filter (99.999%).
- Blower (Make: EBM OR equivalent).
- Interior Cold-rolled finished steel.
- Fluorescent Lighting.
- Differential Pressure Gauge.
- DOP / PAO test report.
- Optional features include Audio / Visual alarm for blower tripping with Fault Acknowledgement / Reset Switch, Audio / Visual Velocity display with alarms, Filter blocked alarms (Audible and Visible).

Unidirectional Vertical Ceiling Air Flow
Model - NKHNLAF

Unidirectional Vertical Ceiling Air Flow (NKHNLAF) Unit is used for sterile packing /filling machine in the pharmaceutical industries where the minimal presence of bacteria & particles can cause large damages. This air flow unit is fixed or hung on the wall.

Standard Features

- Pre-filter.
- HEPA / ULPA filter (99.999%).
- Two Stage Filtration.
- Blower (Make: EBM OR equivalent).
- Fluorescent Lighting.
- Differential Pressure Gauge.
- DOP / PAO test report.
- Four adjustable chains and legs.
- Optional Features include Filter blocked alarms (Audible and Visible),Audio / Visual alarm for blower tripping with Fault Acknowledgement / Reset Switch, Audio / Visual Velocity Display Alarms.

Unidirectional Vertical Ceiling Air Flow
Model - NKHNLAF

Static Pass Box / Passive Pass Box / Ventilated Pass Box / Transfer Hatch is Simple Pass Box, mounted between Two Different Class Area. In pharmaceutical manufacturing facilities, it is essential to minimize man / material movement and avoid cross contamination between different classified areas to achieve desired classification and to maintain integrity of products and processes.

Standard Features

- Double Walled Construction.
- Electro-Magnetic Interlocking.
- Mechanical / Pneumatic interlocking.
- U.V. Light with Hour Meter used for bacteria / virus killing & interlocking arrangement to put UV Light if either side door opens.
- Buzzer indication to know the material is kept inside.
- Floor mounted construction with three side wall structure & Door drop seal.

Dynamic Pass Box / Active Pass Box

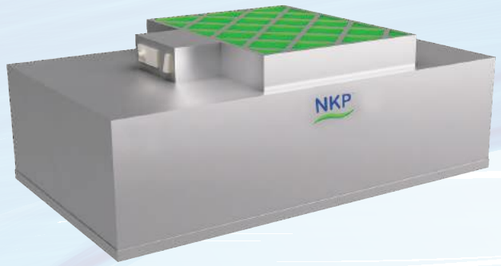
Dynamic Pass Box / Active Pass Box works like an Air Lock or Laminar Flow Unit. In pharmaceutical manufacturing facilities, it is essential to minimize man / material movement and avoid cross contamination between different classified areas to achieve desired classification and to maintain integrity of products and processes. Dynamic Pass Box is designed to allow material transfer without much personnel movement. It also aids controlling ingress of particulate contaminants into clean room and between different classified areas.

Standard Features

- Pre-filter.
- HEPA / ULPA filter (99.999%).
- Blower (Make: EBM OR equivalent).
- Electro-magnetic Interlocking.
- Differential pressure Gauge.
- DOP / PAO test port.
- U.V. Light with Hour Meter used for bacteria / virus killing & interlocking arrangement to put off UV Light if either side door opens.
- Buzzer indication to know the material is kept inside.
- Optional features Include Flange for sealing the gap between the pass box and the clean room wall, Floor mounted construction with three side wall structure & Door drop seal, Audio visual alarm indicating condition of HEPA / ULPA filters.

Fan Filter Unit (FFU)

A Fan Filter Unit (FFU) is a type of motorized Air Filtering equipment. It is used to supply purified air to clean rooms, laboratories, medical facilities or micro-environments by removing harmful airborne particles from re-circulating air. Mainly used to improve the air quality in closed areas and also to maintain the area protected under a greater pressure than the surrounding rooms, thus avoiding any cross contamination. These units are installed within the system's ceiling or floor grid and Integrated fully or partly with HVAC System.

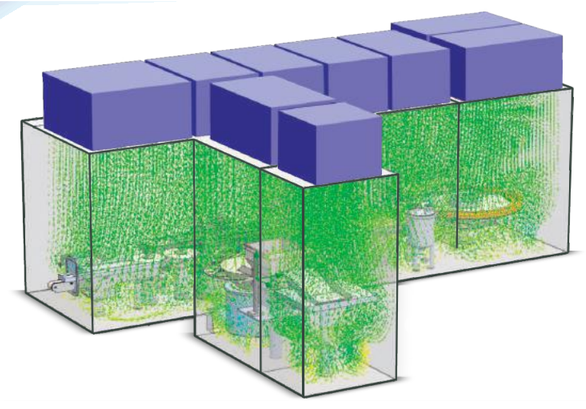


Standard Features

- HEPA / ULPA filter (99.999%).
- Blower (Make: EBM OR equivalent).
- Differential Pressure Gauge.
- DOP / PAO test port.
- Achieve part of compliance with USFDA 21 Part 11 .
- High depth filter for Longer Service life.
- Uniform Air Flow with desired velocity at below the HEPA is guaranteed.
- Velocity at Multiple points on Filter Face is within 10% of variance.
- Velocity on two different filters is within 20% of variance.

CFD Techniques

"LAF Equipments made by NKP Pharma are thoroughly validated for performance".



Engineering Simulation Experts at NKP Pharma extensively use CFD techniques for validating all the standard and customized equipment which exhibits Air Flow.

Typically, with the given layout and clean room class; Blowers and Filters are selected for estimated Air Flow. 3D CAD techniques are employed to achieve the preliminary design of the equipment, which involves numerous iterations on Filter-Fan Combinations.
This is followed by the integration of standard and customized features that meet the client requirements.

As a precursor for detailed design and development of the equipment; CFD techniques are extensively used to achieve best possible prediction of "flow uniformity" at the filter upstream face, for various fan speeds. Iterations are carried out on the internal flow containing passages to achieve required down stream flow parameters and flow pattern. This is done to establish not only the desired Laminar Air Flow over working spaces, but also to enhance uniform flow distribution across HEPA / ULPA filter face.

Clientele

- Abaris Healthcare Private Limited
- Aculife Healthcare Pvt Ltd
- Aditi Pharmaceuticals Pvt Ltd
- Aishwarya Healthcare
- Akorn India Pvt Ltd
- Akums Drugs & Pharmaceuticals Ltd
- Alembic Pharmaceuticals Ltd
- Alkem Laboratories Ltd
- Amneal Pharmaceuticals Private Limited
- Ananta Medicare Ltd
- ANG Lifesciences India Ltd
- Ankur Drugs & Pharmaceuticals Ltd
- Aqua Vitoe Laboratories
- Aristo Pharmaceuticals Pvt Ltd
- Ashish Lifescience Pvt Ltd
- Aspiro Pharma Ltd
- Aurobindo Pharma Ltd
- Auronext Pharma Pvt Ltd
- Baxter Pharmaceuticals India Private Limited
- Belco Pharma Ltd
- Beta Drugs Ltd
- Bharat Biotech Ltd
- Biological E. Ltd
- Brilliant Bio Pharma Pvt Ltd
- Brooks Laboratories Ltd
- Brucke Pharma Pvt Ltd
- Cadila Healthcare Ltd
- Cadila Pharmaceuticals Ltd
- Caplin Point Laboratories Ltd
- Celon Laboratories Pvt Ltd
- Claris Otsuka Ltd
- Contacare Opthalmics & Diagonistics (Care Group)
- Cronus Pharma Specialities India Private Limited
- Dano Vaccines & Biologicals Pvt Ltd
- Delta Biopharma Pvt Ltd
- Devbhoomi Pharmaceuticals
- Dr. Reddy's Laboratories
- Emcure Pharmaceuticals Ltd
- Epygen Biotech Pvt Ltd
- Eugia Pharma Specialities Ltd
- Fresenius Kabi Oncology Limited
- Geltec Pvt Ltd
- Gland Pharma Ltd
- Glenmark Pharmaceuticals Ltd
- GMH Organics
- Haffkine Pharma
- Hester Biosciences Ltd
- Hetero Drugs Ltd
- Hindustan Antibiotics Ltd
- Hospira Healthcare India Pvt Ltd
- Indian Immunologicals Ltd
- Indoco Healthcare Ltd
- Inject Care Parenterals Pvt Ltd
- Innova Captab Pvt Ltd
- Intas Pharmaceuticals Ltd
- IPCA Laboratories Ltd
- Jackson Laboratories Pvt Ltd
- Jodas Expoim Pvt Ltd
- Karnataka Antibiotics & Pharmaceuticals Ltd
- Kemwell Biopharma Pvt Ltd
- Korten Pharmaceuticals Pvt Ltd
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- Lupin Ltd
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- Medispray Laboratories
- MSN Laboratories Pvt Ltd
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- Nagarjuna Agrichem Ltd
- Naprod Life Sciences Pvt Ltd
- Natco Pharma Ltd
- Navin Saxena Research & Technology Pvt Ltd
- Nectar Lifesciences Ltd
- Nitin Lifesciences Ltd
- Orley Laboratoreis Pvt Ltd
- Panacea Biotec Ltd
- Polestar Power Industries
- Poly Medicure Ltd
- Premium Serums & Vaccines Pvt. Ltd.
- Rajasthan Antibiotics Ltd
- Ratnamani Healthcare Pvt Ltd
- Rica Enterprises
- Sakar Healthcare Pvt Ltd
- Sance Laboratories Pvt Ltd
- Sanvita Biotechnologies Pvt Ltd
- Scott-Edil Pharmacia Ltd
- Senate Laboratories
- Serum Institute Of India Pvt Ltd
- Shantha Biotechnics Ltd (Sanofi)
- Shivek Labs Ltd
- Shreya Lifesciences Pvt Ltd
- Sovereign Pharma Pvt Ltd
- Stanex Drugs & Chemicals Pvt Ltd
- Sun Pharmaceutical Industries Limited
- Sun Pharmaceuticals Medicare Ltd
- Supra Pharma Pvt Ltd
- Surya Pharma Ltd
- Suyog Pharmaceuticals Pvt Ltd
- Swiss Pharma Pvt Ltd
- Theon Pharmaceuticals Ltd
- Therdose Pharma Pvt Ltd
- Unichem Laboratories Ltd
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- USV Ltd
- Vapi Care Pharma Pvt Ltd
- Venkateshwara Hatcheries Pvt Ltd
- Venus Remedies Ltd
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- Vinkem Laboratories Pvt Ltd
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- Virchow Biotech Pvt Ltd
- Vital Healthcare Pvt Ltd
- Wexford Laboratories Pvt Ltd
- Windlas Biotech Ltd
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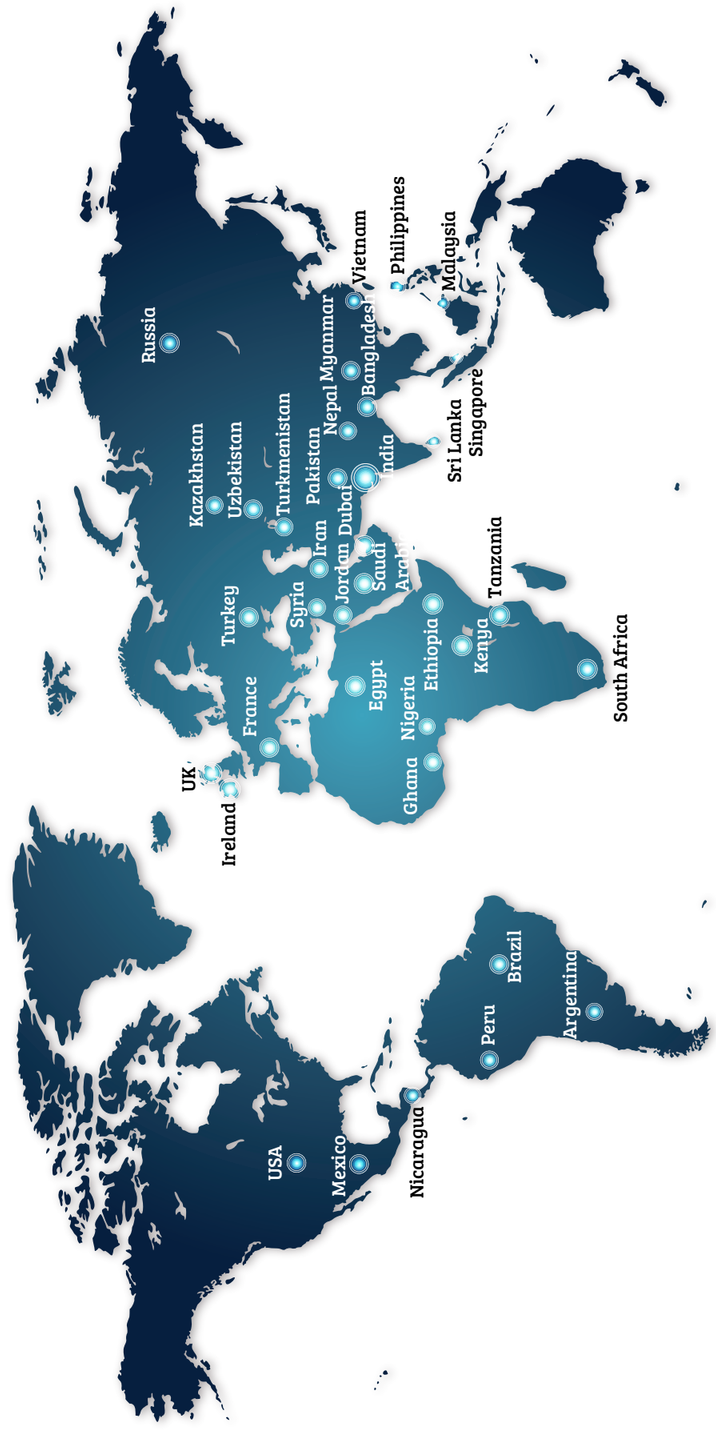

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