





Important notice

Disclaimer

The information in this presentation is for general purposes only and should be read in conjunction with Fisher & Paykel Healthcare Corporation Limited's (FPH) Annual Report 2024 and accompanying market releases. Nothing in this presentation should be construed as an invitation for subscription, purchase or recommendation of securities in FPH.

This presentation includes forward-looking statements about the financial condition, operations and performance of FPH and its subsidiaries. These statements are based on current expectations and assumptions regarding FPH's business and performance, the economy and other circumstances. As with any projection or forecast, the forward-looking statements in this presentation are inherently uncertain and susceptible to changes in circumstances. FPH's actual results may differ materially from those expressed or implied by those forward-looking statements.

Non-GAAP financial information

Constant currency information included within this presentation is non-GAAP financial information, as defined by the NZ Financial Markets Authority, and has been provided to assist users of financial information to better understand and track the company's comparative financial performance without the impacts of spot foreign currency fluctuations and hedging results and has been prepared on a consistent basis each year. The company's constant currency framework can be found on the company's website at www.fphcare.com/ccf.

Underlying net profit after tax, referenced within this presentation, is a non-GAAP performance measure and is not defined or specified under the requirements of NZ IFRS. FPH believes that this non-GAAP measure, which is not considered to be a substitute for or superior to NZ IFRS measures, provides stakeholders with additional helpful information on the performance of the business.

A reconciliation between reported results and constant currency/underlying net profit after tax is available in the company's Annual Report 2024.



Business highlights



IMPACTED the lives of approximately 20 million patients around the world.



UNVEILED revolutionary new F&P Solo™ mask in New Zealand and Australia.



INTRODUCED the Airvo™ 3 into more of our key markets, including the US.



OBTAINED regulatory clearance in the US for the 950™.



LAUNCHED new selection and sizing tools in the F&P myMask™ app.



OPENED third manufacturing facility in Tijuana, Mexico and continued to progress new manufacturing facility in Guangzhou, China.



RELEASED our online Education Hub in 22 languages to support clinicians globally.



COMMENCED global exports from our new distribution centre in Tijuana, Mexico.



Key full year financial results

	Donoutod		Adjustments for abnormal items		ustments for abnormal items		l Indoubing	Undoubing
FY24 (12 months to 31 March 2024)	Reported (NZ\$M)	Growth △CC*	Product recall (NZ\$M)	Revaluation of land (NZ\$M)	Deferred tax** (NZ\$M)	Underlying (NZ\$M)	Underlying growth △PCP^	Underlying growth △CC*
Operating revenue	1,742.8	8%	-	-	-	1,742.8 10%		8%
Hospital operating revenue	1,087.9	5%	-	-	-	1,087.9	6%	5%
Homecare operating revenue	652.3	16%	-	-	-	652.3	18%	16%
Cost of sales	(698.4)	6%	20.0	-	-	(678.4)	6%	3%
Gross profit	1,044.4	10%	20.0	-	-	1,064.4	13%	12%
Gross margin	59.9%	+95 bps	-	-	-	61.1%	+172 bps	+216 bps
SG&A	(492.8)	13%	-	-	-	(492.8)	14%	13%
R&D	(198.2)	14%	-	-	-	(198.2)	14%	14%
Total operating expenses	(691.0)	13%	-	-	-	(691.0)	14%	13%
Operating profit	353.4	3%	20.0	-	-	373.4	12%	10%
Operating margin	20.3%	-85 bps	-	-	-	21.4%	+41 bps	+36 bps
Revaluation of land	(98.1)	-	-	98.1	-	-	-	-
Profit before financing and tax	255.3	-31%	20.0	98.1	-	373.4	12%	10%
Net financing expense	(19.6)	-	-	-	-	(19.6)	-	-
Profit before tax	235.7	-35%	20.0	98.1	-	353.8	8%	7%
Tax expense	(103.1)	33%	(5.6)	-	19.3	(89.4)	(89.4) 15%	
Profit after tax	132.6	-56%	14.4	98.1	19.3	264.4	6%	5%

^{*} CC = constant currency



^{**} Building tax depreciation change

[^] PCP = prior comparable period

Hospital product group





Hospital product group





- Hospital Consumables continued to see solid demand across the product portfolio
- New applications consumables* revenue made up 72% of FY24 Hospital consumables revenue, 70% in FY23
- Hospital hardware revenue was down 33% on FY23 in constant currency as we lapped a period with COVID-19-driven demand in certain markets

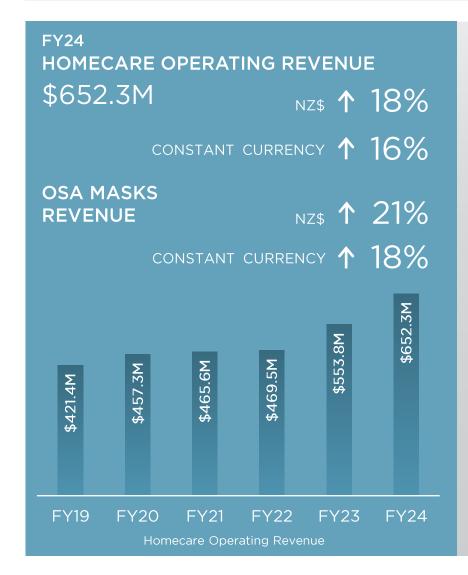


Homecare product group





Homecare product group





- F&P Evora™ Full contributed significantly to strong OSA mask revenue growth during FY24
- Revolutionary F&P Solo™
 OSA mask launched in NZ &
 Australia
- In early FY25, F&P Nova
 Micro™ was launched in NZ,
 and the first sales of Solo
 were made in the US



Impact of abnormal items on FY24 reported NPAT

Voluntary recall provision

A provision of \$20M has been included in cost of goods sold for a recall of Airvo 2 and myAirvo 2 devices manufactured before 14 August 2017.

The cost of the recall has been revised based on responses from customers received to date indicating the number of affected devices to be replaced.



Karaka land valuation

A \$98M reduction in the carrying value of the Karaka land due to:

- Changed market conditions for development land
- Higher interest rate environment
- Current zoning status

Owning this site mitigates risk to future growth in light of the current uncertainty around potential development sites in Auckland.

Carrying amounts of land:

	Historical cost FY24 NZ\$M	Fair value FY24 NZ\$M
East Tāmaki (42 ha)	86.4	263.9
Karaka* (79 ha)	220.1	122.0
Total New Zealand	306.5	385.9
Mexico (15 ha)	27.4	37.7
Total land	333.9	423.6

^{*}Approximately 79 hectares has been acquired to date. The balance of land (approximately 25 hectares) will be settled in instalments due in January 2026 and December 2026.

Building tax depreciation change

A \$19.3M increase to tax expense due to a legislative change in NZ on 27 March 2024.

This removed depreciation deduction for our New Zealand buildings from FY25, though must be recognised in the FY24 financial statements.

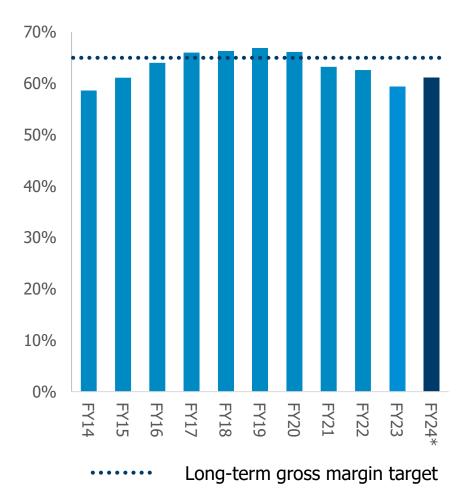
No material annual impact from FY25 onwards.





Gross margin

GROSS MARGIN



- Underlying* gross margin increased by 172bps to 61.1%. This is a 216bps increase in constant currency on FY23
- Freight costs reduced, and benefits from manufacturing efficiencies and pricing more than offset cost increases starting to impact gross margin
- Including the \$20M product recall provision, gross margin was 59.9%, a 58bps increase on FY23, or 95bps in constant currency



Operating margin

OPERATING (EBIT) MARGIN 40% 35% 30% 25% 20% 15% 10% 5% 0% FY18 FY19 FY20

· Long-term operating margin target

*Underlying operating margin excludes the product recall provision

Operating expenses

- \$691.0M, +14% (+13% CC)
- Underlying operating margin increased by 41bps to 21.4%. This is a 36bps increase in constant currency on FY23
- Including the \$20M product recall provision, operating margin was 20.3%, a 73bps decrease on FY23, or 85bps in constant currency

Research & Development expenses

- \$198.2M, +14% (+14% CC)
- Estimate ~60% of R&D spend eligible for tax credit

Selling, General & Administrative expenses

\$492.8M, +14% (+13% CC)



Cash flow and balance sheet

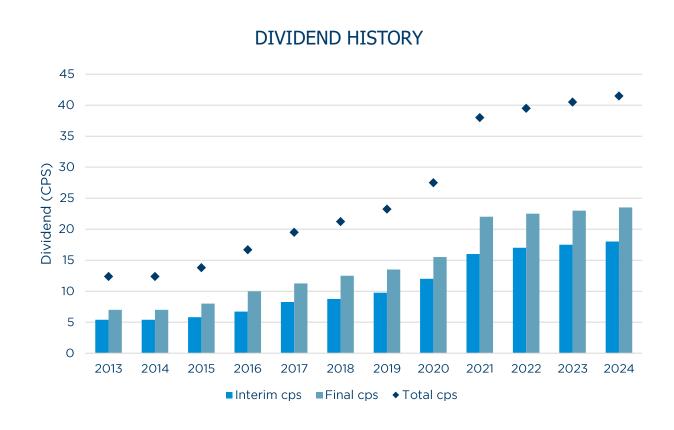
	FY23 NZ\$M	FY24 NZ\$M
Operating cash flow	238.2	429.6
Capital expenditure (including purchases of intangible assets)	(211.3)	(339.0)
Lease liability payments	(14.4)	(16.8)
Free cash flow	12.5	73.8
	FY23 NZ\$M	FY24 NZ\$M
Net cash / (debt) (including short-term investments)	37.7	(32.2)
Total assets	2,204.5	2,281.7
Total equity	1,753.4	1,759.1
Gearing (net debt / net debt + equity)*	-2.3%	1.8%
Undrawn committed debt facilities	624.5	544.3

^{*} Calculated using net interest-bearing debt (debt less cash and cash equivalents) to net interest-bearing debt and equity (less hedge reserve).



Dividend

- Increased final dividend by 2% compared with FY23
 - 23.5 cps + 9.14 cps imputation credit for NZ residents (gross dividend of NZ 32.64 cps)
 - Fully imputed
 - 4.15 cps non-resident supplementary dividend
- Total dividend for the year increased by 2% to 41.5 cps
- The company's dividend reinvestment plan remains available for eligible shareholders with a 3% discount





Foreign exchange effects

	FY23	FY24	Change
Reconciliation of Constant Currency to Reported Revenue	NZ\$M	NZ\$M	NZ\$M
Revenue (constant currency)	1,523.7	1,651.6	127.9
Spot exchange rate effect	53.9	99.4	45.5
Foreign exchange hedging result	(7.5)	(15.3)	(7.8)
Balance sheet revaluation	11.0	7.1	(3.9)
Total impact of foreign exchange	57.4	91.2	33.8
Revenue (as reported)	1,581.1	1,742.8	161.7
	FY23	FY24	Change
Reconciliation of Constant Currency to Reported Profit After Tax	NZ\$M	NZ\$M	NZ\$M
Profit after tax (constant currency)	213.9	93.6	(120.3)
Spot exchange rate effect	31.7	36.5	4.8
Foreign exchange hedging result	2.6	1.4	(1.2)
Balance sheet revaluation	2.1	1.1	(1.0)
Total impact of foreign exchange	36.4	39.0	2.6
Profit after tax (as reported)	250.3	132.6	(117.7)



Outlook FY25

Operating revenue and net profit after tax guidance

- Guidance assumptions result in:
 - operating revenue in the range of approximately \$1.9 billion to \$2.0 billion at May 2024 exchange rates*; and
 - net profit after tax in the range of approximately \$310 million to \$360 million.
- Guidance assumptions for the 2025 financial year include no significant respiratory disease events and a further improvement in gross margin.

Capital expenditure

Expected to be approximately \$150 million



^{*}At 1 May 2024 exchange rates of NZD:USD 0.59, NZD:EUR 0.56, NZD:MXN 10.14.





Key second half financial results

H2 FY24 (6 months to 31 March 2024)

	% of Revenue	NZ\$M	△PCP^	△CC**
Operating revenue	100%	939.1	5%	3%
Hospital operating revenue	64%	600.4	3%	0%
Homecare operating revenue	36%	337.9	11%	8%
Hospital new applications consumables revenue			12%	9%
OSA masks revenue			14%	10%
Underlying gross profit*	62%	578.3	260bps	244bps
SG&A	27%	256.2	12%	11%
R&D	11%	101.3	12%	12%
Total operating expenses	38%	357.5	12%	11%
Underlying operating profit*	24%	220.8	7%	0%
Underlying profit after tax*	17%	157.1	2%	-3%

^{*} Underlying gross profit excludes the voluntary recall provision. Underlying operating profit and underlying profit after tax also excludes the revaluation of the Karaka land, and the removal of building depreciation deductibility.



^{**} CC = constant currency

[^] PCP = prior comparable period

Hedging cover

49% of operating revenue in US\$ (FY23: 45%) and 19% in € (FY23: 20%).

	Year to 31 March					
Hedging position for our main exposures (as at 13 May 2024)	FY25	FY26	FY27	FY28	FY29	FY30- FY35*
USD % cover of estimated exposure	80%	75%	60%	45%	20%	0%
USD average rate of cover	0.621	0.607	0.597	0.584	0.564	0.523
EUR % cover of estimated exposure	90%	75%	60%	40%	40%	5%
EUR average rate of cover	0.532	0.532	0.526	0.524	0.507	0.465
MXN % cover of estimated exposure	55%	30%	0%	-	-	-
MXN average rate of cover	13.77	12.65	11.41	_	_	

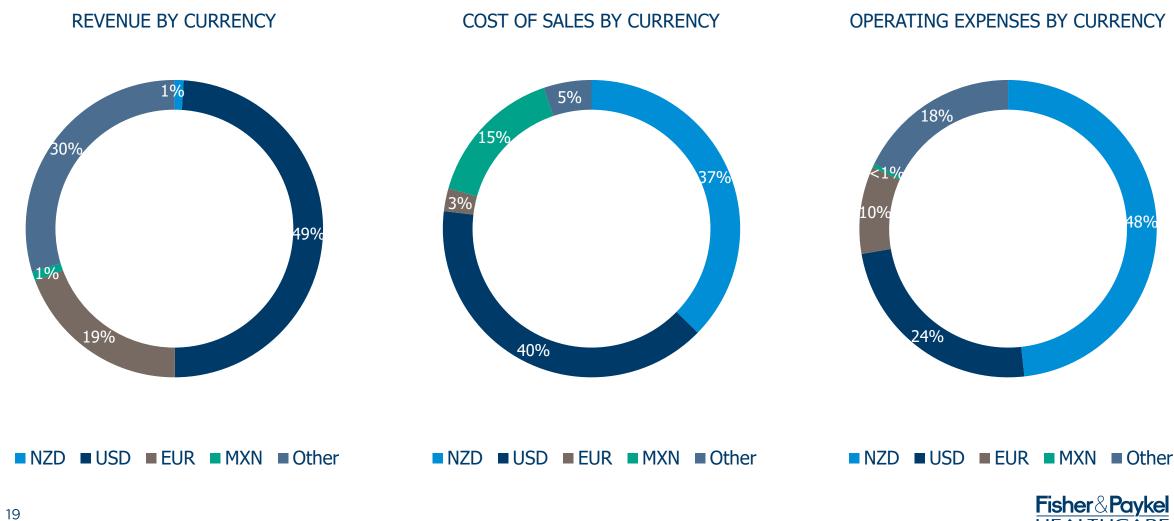
Hedging cover percentages have been rounded to the nearest 5%



^{* 2030 – 2035} shows average % cover of expected exposure and rate of cover for the five-year period.

Revenue and expenses by currency

FY24 (for the year ended 31 March 2024)







Fisher & Paykel Healthcare at a glance

Global leader in respiratory humidification devices

- Medical device manufacturer with leading positions in respiratory care and obstructive sleep apnea
- >50 years' experience in changing clinical practice to solutions that provide better clinical outcomes and improve effectiveness of care
- Estimated NZ\$25+ billion and growing market opportunity driven by demographics
- Significant organic long-term growth opportunities in acute and chronic respiratory care, OSA and surgery
- Large proportion (89%) of revenue from recurring items, consumables and accessories
- High level of innovation and investment in R&D with strong product pipeline
- High barriers to entry

Global presence

Our people are located in **54 countries**



3,544 in New Zealand

2,675 in North America, including Mexico

389 in Europe

533 in the rest of the world

Strong financial performance

- Continued target, and history of, doubling our revenue (in constant currency terms) every 5 to 6 years
- Targeting gross margin of 65% and operating margin of 30%
- Growth company with a strong history of increasing dividend payments



~NZ\$25+ billion and growing market opportunity

Total addressable market estimates

HOSPITAL HOMECARE

~150+ million patients

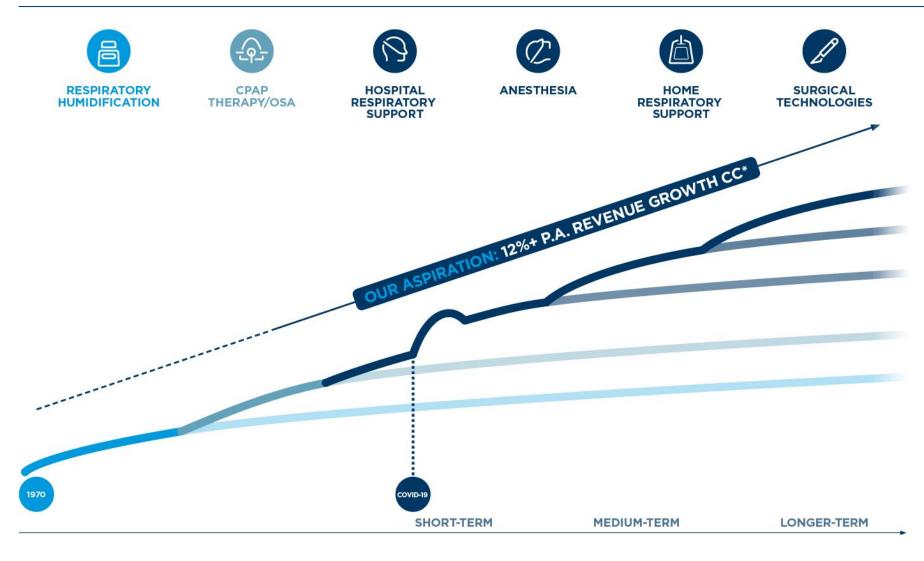
~100+ million patients







Our aspiration

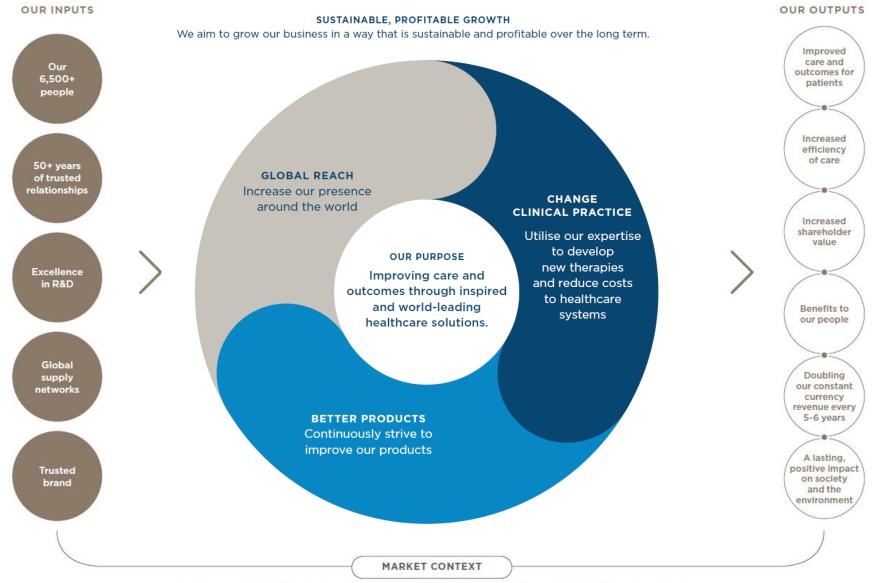


OUR ASPIRATION: Sustainably DOUBLING our constant currency revenue

every 5-6 years.



Consistent growth strategy





F&P product fundamentals



What are we here to do?

A drive to not only improve, but transform, clinical practice.

Provide products with protected value differentiation.

Get our products, including the evidence, knowledge and supporting tools, into the hands of the customer

______ A deep understanding of the problem and knowing what we _____ are trying to achieve, leads to valued, innovative solutions

A patient-focused approach

A drive to deliver and improve

Long-term thinking



Innovative new product releases



HOSPITAL



The F&P 950™ System launched into the US in H1 FY25.



F&P Solo™ mask launched into NZ, Australia, Canada and certain European countries in H2 FY24, followed by the US in H1 FY25.

HOMECARE



F&P Airvo 3™ nasal high flow device launched into the US in H2 FY24 following a positive reception in early markets.



F&P Nova Micro™ mask launched into NZ in H1 FY25, with launches in Canada, Australia and Europe to follow in the coming months.



F&P Optiflow Duet[™] asymmetric nasal cannula granted 510(k) by the US FDA in H2 FY24.



F&P myAirvo™ 3 nasal high flow device granted 510(k) by the US FDA in H1 FY25.



F&P 820™ System launched in Australia and certain European countries in H2 FY24.



F&P myMaskApp updated to offer mask selection and sizing functionality to complement educational content.



High level of innovation and investment in R&D



- R&D represents 11% of operating revenue*: NZ\$198.2M
- Product pipeline includes:
 - Humidifier controllers
 - Masks
 - Respiratory consumables
 - Flow generators
 - Compliance monitoring solutions
- 601 US patents, 557 US pending, 2,815 Rest of World patents, 1,862 Rest of World pending[†]

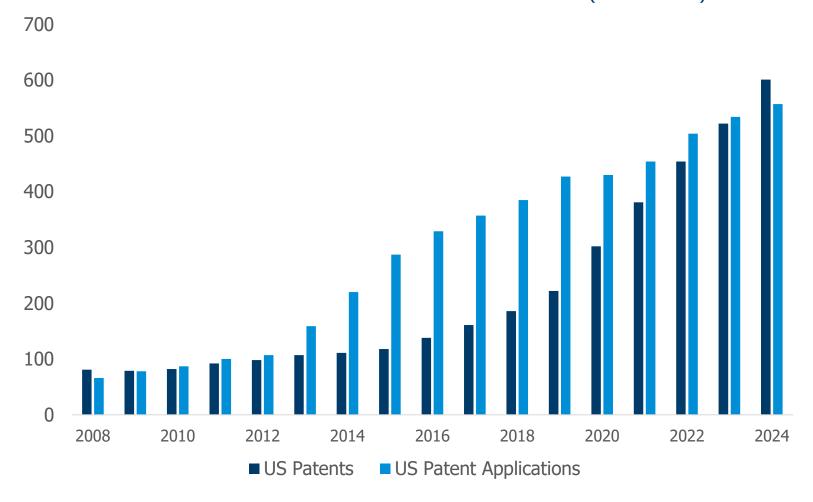




Growing patent portfolio



FISHER & PAYKEL HEALTHCARE US PATENT PORTFOLIO (2008 – 2024)



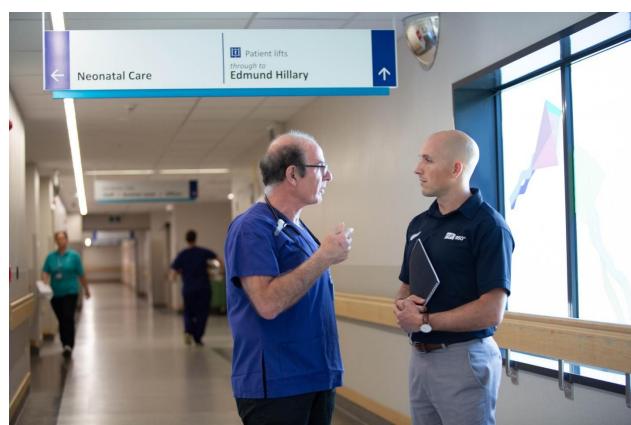
Average remaining life of FPH patent portfolio (all countries): 10.8 years*



Changing clinical practice



- Using clinical evidence to drive change
- Multi-layered with multiple stakeholders
- Building confidence with usage inline with the evidence, demonstrating value
- Products in each care area builds familiarity and confidence
- Customer experience builds trust and confidence
- Online F&P Education Hub available in 21 languages and currently accessed by professionals in more than 90 countries





Strong global presence

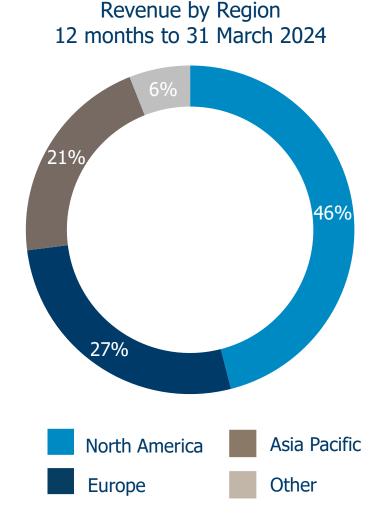


Direct/offices

- Hospitals, home care dealers
- Sales/support offices in North
 America, Europe, Asia, South
 America, Middle East and
 Australasia, 21 distribution centres
- ~1,400 employees in 54 countries
- Ongoing international expansion

Distributors

- +180 distributors worldwide
- Original Equipment Manufacturers
 - Supply most leading ventilator manufacturers
- Sell in more than 120 countries





Manufacturing and operations



New Zealand

- Four buildings: 110,000 m² / 1,180,000 ft²
- Co-location of R&D and manufacturing
- Continued development of East Tāmaki campus
- Received Overseas Investment Office approval in April 2023 for the purchase of land in Karaka for our second New Zealand campus

Tijuana, Mexico

- Three buildings: 63,000 m² / 690,000 ft²
- Hosted formal opening ceremony for third building in September 2023

Guangzhou, China

 Continued to progress development of new manufacturing facility in China







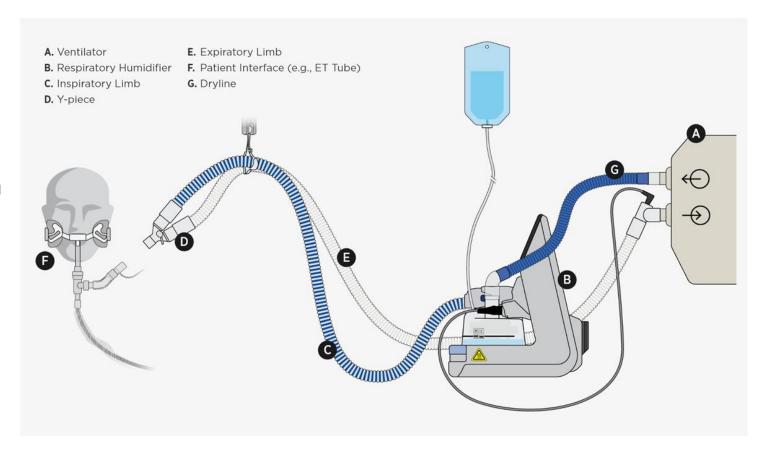


Invasive ventilation



Invasive ventilation refers to respiratory support delivered directly to a patient's lower airways via an endotracheal (ET) or tracheostomy tube.

- Normal airway humidification is bypassed or compromised during ventilation
- Mucociliary transport system operates less effectively
- Need to deliver gas at physiologically normal levels
 - 37°C body core temperature
 - 44mg/L 100% saturated





New applications consumables

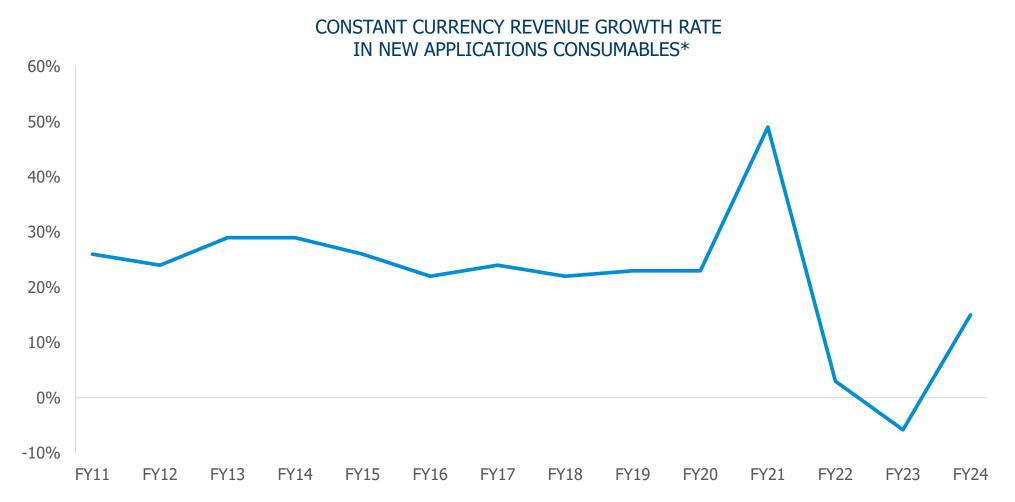
New applications consist of:











Fisher & Paykel

Noninvasive ventilation

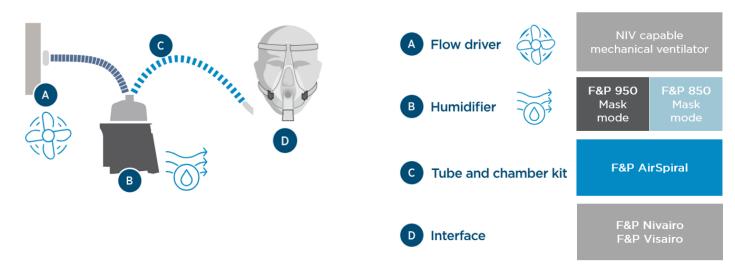


Noninvasive ventilation involves the delivery of oxygen (ventilation support) via a face mask and without the need for endotracheal intubation.

Why would somebody require noninvasive ventilation:

- Acute and chronic respiratory failure, chronic obstructive pulmonary disease, cystic fibrosis, Duchenne muscular dystrophy, neuromuscular disease, obesity hypoventilation syndrome, respiratory distress syndrome (typically due to preterm birth), restrictive thoracic disorders.
- The ERS ATS and AARC guidelines recommend the use of humidification during NIV.

Humidified noninvasive ventilation





Our NIV masks and their unique features









RollFit™ autoadjusting seal



Patented TubeFit™ technology



Bridge-free™ NIV







Optiflow nasal high flow therapy

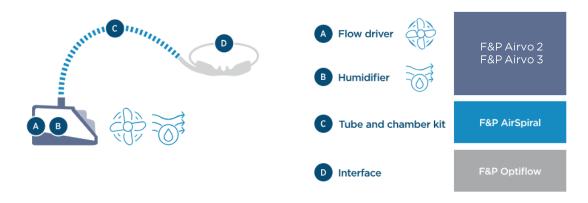


Optiflow nasal high flow therapy provides respiratory support to patients by delivering heated, humidified air and oxygen at flow rates up to 70 L/min via an Optiflow nasal cannula and a system such as the Airvo 2, Airvo 3, F&P 850 or 950.

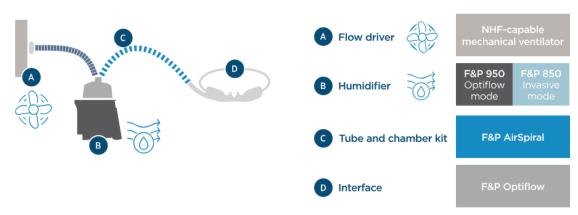
Patient groups who may benefit from Optiflow:

 Acute respiratory failure, asthma, atelectasis, bronchiectasis, bronchiolitis, bronchitis, burns, carbon monoxide poisoning, COPD, chest trauma, emphysema, infant respiratory distress, palliative care, pneumonia, pulmonary embolism, respiratory compromise, viral pneumonia

Airvo Optiflow NHF Therapy system



Vent-driven Optiflow NHF Therapy system





Optiflow - displacing conventional oxygen therapy 🚳



CONVENTIONAL **OXYGEN THERAPY**







Simple face mask



Rebreather mask

NON-INVASIVE VENTILATION









% ~6+million

Estimated patients were treated with our Optiflow high flow therapy over the past year



Clinical practice guidelines: NHF therapy



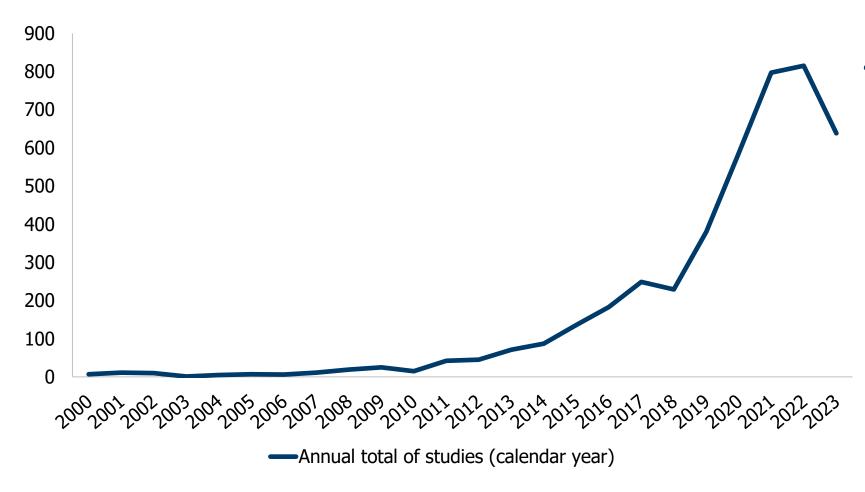
		SUPPORTING CLINICAL PRACTICE GUIDELINES	EMERGENCY DEPARTMENT	ICU/HDU	RESPIRATORY	GENERAL
	Primary support E	SICM, ERS, SSC, AARC, ACP, TSANZ, WHO	⊘			
0	Primary support POST-OPERATIVE	ESICM, ERS		⊘		
B	Pre-escalation support/ Peintubation	ri- ESICM	⊘	⊘		
	Post-extubation/ De-escalation support	ESICM, ERS, AARC, ACP		⊘		
\bar{\bar{\bar{\bar{\circ}}}}	Complementary support (NIV-rested/proning)	ERS	Ø			⊘
0	Prophylactic support (Require oxygen/avoid esc	alation)	Ø	⊘	Ø	⊘



A growing body of clinical evidence



NASAL HIGH FLOW CLINICAL PAPERS PUBLISHED ANNUALLY



The publication of 638 clinical papers on NHF during the 2023 calendar year signifies ongoing clinical interest in the therapy

Source: PubMed. Includes adult and paediatric/neonatal studies.



Optiflow in Anesthesia



The F&P Optiflow THRIVE™ system enables users to deliver THRIVE™ transnasal humidified rapid-insufflation ventilatory exchange and nasal high flow (NHF) therapy, which has been shown to optimize oxygenation during general anesthesia and procedural sedation.





- Optimize oxygenation
- Reduce risk of desaturation
- Reduce the incidence of airway related interventions







In General Anesthesia

- Effective preoxygenation
- Reduce risk of desaturation
- Extend safe apnea time





Surgical humidification

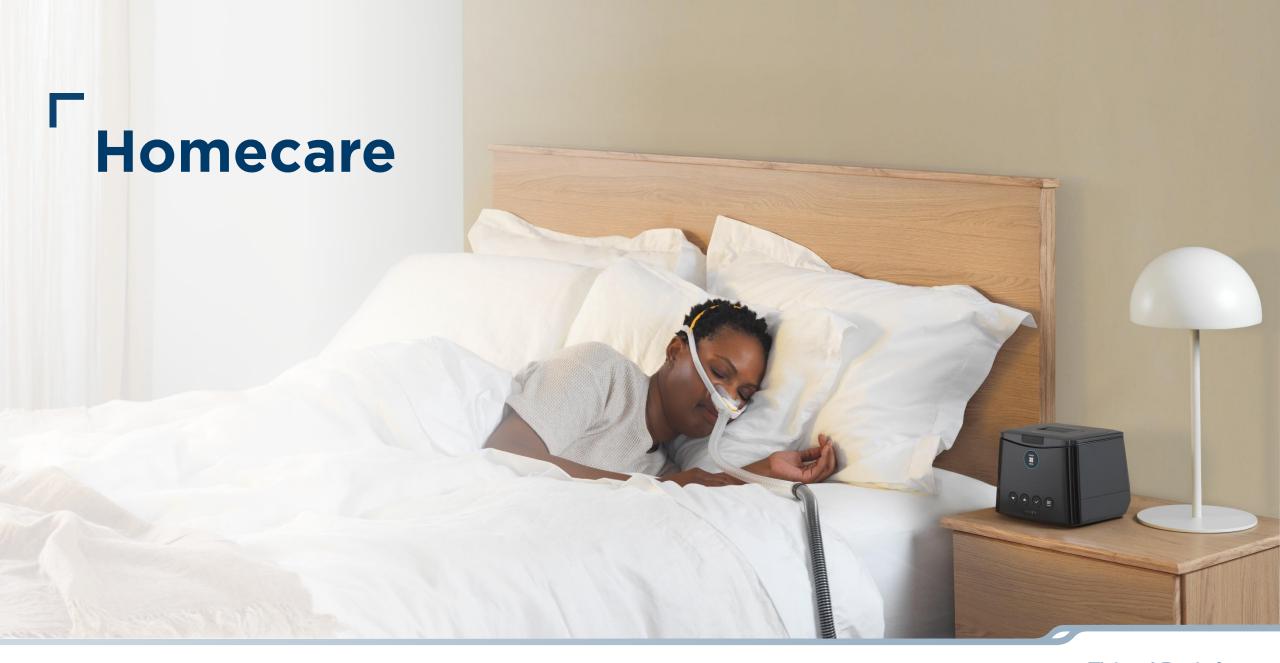


Surgical humidification is the delivery of warm, humidified CO_2 in laparoscopic and open surgery.

- Current standard of care is dry CO₂ gas to the surgical site
- Causes evaporation and cooling
- Surgical humidification reduces the incidence of peri-operative hypothermia^{8,9} and improves core body temperature at the end of surgery in both laparoscopic¹⁰ and open surgery⁹.









Obstructive sleep apnea



Obstructive sleep apnea (OSA) is characterized by episodes of a complete (apnea) or partial collapse (hypopnea) of the upper airway with an associated decrease in oxygen saturation or arousal from sleep.

- OSA is an underdiagnosed medical condition, with multiple negative outcomes to patients' health
- It can greatly impair quality of sleep, leading to fatigue; also associated with hypertension, stroke and heart attack
- Estimate >100 million people affected in developed countries
- Most common treatment is CPAP (Continuous Positive Airway Pressure)
 - Key issue with CPAP is compliance
 - The mask is the one component of the CPAP therapy system that the patient interacts most intimately, so choosing the right mask is critical.

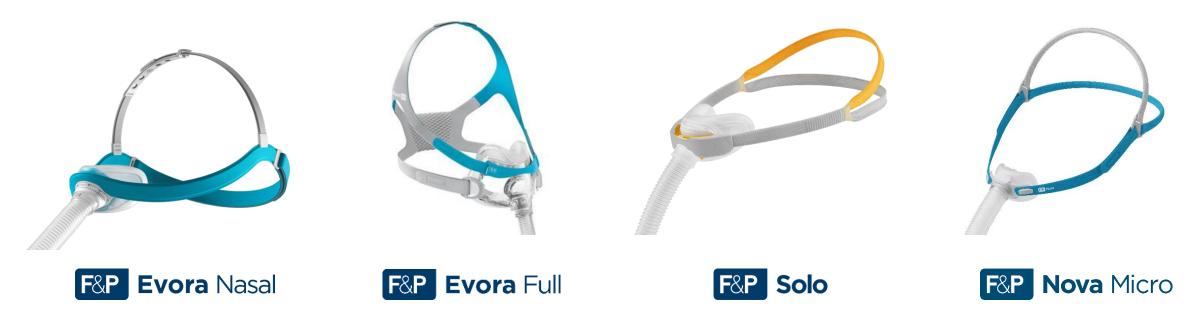




Mask matters most



- Masks are key to compliance
- Unique, patented designs
- Released our new F&P Solo™ mask into New Zealand and Australia during the financial year. Nova Micro™ launched in New Zealand in early FY25.





Home respiratory support



The F&P myAirvo™ system delivers humidified high flow therapy to chronic respiratory patients at home and in long-term care facilities.

- Chronic obstructive pulmonary disease (COPD) is a lung disease which is commonly associated with smoking
- Chronic respiratory disease, primarily COPD, is the third leading cause of death in the world¹¹
- 4-10% COPD prevalence worldwide¹² (~400 million people)
- Humidified high flow therapy delivers a mix of warm, moist air and supplementary oxygen (when required) to help COPD patients¹³:
 - Ease respiratory disease symptoms
 - Reduce escalation of care
 - Improve quality of life









Environmental, Social & Governance

Our People

The Board approved a discretionary profit-sharing payment of \$9 million for those who have worked for the company for a qualifying period.

Community and Volunteer Sustainable Procurement Groups

We are proud of the community groups supported through the Fisher & Paykel Healthcare Foundation. During the 2024 financial year, the Foundation provided \$1.125M in grants • and donations to 15 community organisations. Refer to our 2024 Annual Report for more details.

FY24 Highlights:

- Hosted our inaugural Supplier Sustainability Conference in New Zealand
- Rolled out our Sustainable Procurement Framework in Mexico
- Commenced risk mapping of Tier 2 suppliers

Key Environmental Metrics	FY22	FY23	FY24
Scope 1 emissions (tonnes CO ₂ e)	1,777	2,287	2,123
Scope 2 emissions (tonnes CO ₂ e) – location-based	13,894	14,529	14,293
Scope 2 emissions (tonnes CO ₂ e) – market-based	10,344	11,105	12,253
Scope 1 & 2 emissions subtotal (tonnes CO ₂ e) – using location-based Scope 2	15,671	16,816	16,416
Scope 1 & 2 emissions subtotal (tonnes CO ₂ e) – using market-based Scope 2	12,121	13,392	14,376
Scope 3 emissions (tonnes CO ₂ e)	457,112	328,313	302,479
Total emissions (tonnes CO ₂ e) - using location-based Scope 2	472,783	345,129	318,895
Total emissions (tonnes CO ₂ e) - using market-based Scope 2	469,233	341,705	316,855
Water usage (cubic metres)	184,171	133,517	136,923
Landfill waste diverted (cubic metres)	2,035	1,727	1,348
NZ recycling efficiency (percentage of waste diverted from landfill)	68%	62%	59%
Global recycling efficiency (percentage of waste diverted from landfill)	52%	54%	53%

Sustainability disclosures and indices

We participate annually in a suite of wellrespected sustainability disclosure programmes and are included in the Dow Jones Sustainability Index and the FTSE4Good index.

Member of

Dow Jones **Sustainability Indices**

Powered by the S&P Global CSA

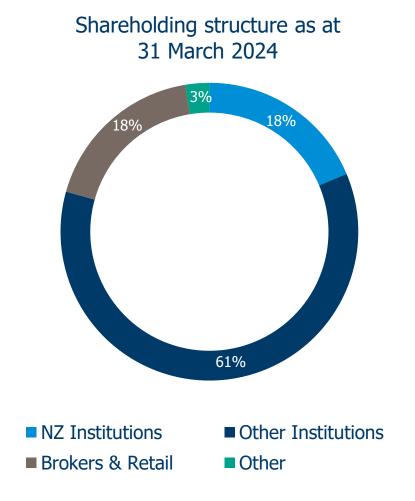


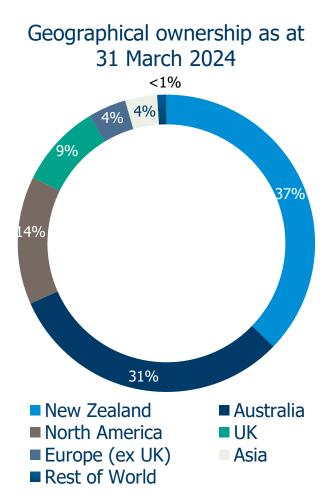




Ownership structure and listings

Listed on NZX and ASX (NZX.FPH, ASX.FPH)







References

- 1. Rochwerg, Bram et al. "The role for high flow nasal cannula as a respiratory support strategy in adults: a clinical practice guideline." Intensive care medicine vol. 46,12 (2020): 2226-2237. doi:10.1007/s00134-020-06312-y
- 2. Oczkowski, Simon, et al. "ERS Clinical Practice Guidelines: High-flow Nasal Cannula in Acute Respiratory Failure." European Respiratory Journal, vol. 59, no. 4, European Respiratory Society (ERS), Oct. 2021, p. 2101574. Crossref, https://doi.org/10.1183/13993003.01574-2021.
- 3. Evans, Laura, et al. "Surviving Sepsis Campaign: International Guidelines for Management of Sepsis and Septic Shock 2021." Critical Care Medicine, vol. 49, no. 11, Ovid Technologies (Wolters Kluwer Health), Oct. 2021, pp. e1063–143. Crossref, https://doi.org/10.1097/ccm.0000000000005337.
- 4. Piraino, Thomas, et al. "AARC Clinical Practice Guideline: Management of Adult Patients With Oxygen in the Acute Care Setting." Respiratory Care, vol. 67, no. 1, Daedalus Enterprises, Nov. 2021, pp. 115–28. Crossref, https://doi.org/10.4187/respcare.09294.
- 5. Qaseem, Amir, et al. "Appropriate Use of High-Flow Nasal Oxygen in Hospitalized Patients for Initial or Postextubation Management of Acute Respiratory Failure: A Clinical Guideline From the American College of Physicians." Annals of Internal Medicine, vol. 174, no. 7, American College of Physicians, July 2021, pp. 977–84. Crossref, https://doi.org/10.7326/m20-7533.
- 6. Barnett, Adrian, et al. "Thoracic Society of Australia and New Zealand Position Statement on Acute Oxygen Use in Adults: 'Swimming Between the Flags.'" Respirology, vol. 27, no. 4, Wiley, Feb. 2022, pp. 262–76. Crossref, https://doi.org/10.1111/resp.14218.
- 7. Clinical management of COVID-19: Living quideline, 23 June 2022. Geneva: World Health Organization; 2022 (WHO/2019-nCoV/Clinical/2022.1). Licence: CC BY-NC-SA 3.0 IGO.
- 8. Mason, S. E., Kinross, J. M., Reynecke, D., Hendricks, J. & Arulampalam, T. H. (2015). Cost-effectiveness of warm humidified CO2 to reduce surgical site infections inlaparoscopic colorectal surgery: a cohort study. Gut, 64, A556. http://dx.doi.org/10.1136/gutinl-2015-309861.1220.
- 9. Frey, J. M., Janson, M., Svanfeldt, M., Svenarud, P. & van der Linden, J. A. (2012). Local insufflation of warm, humidified CO2 increases open wound and core temperature during open colon surgery: a randomized clinical trial. Anesthesia Analgesia, 115(5), 1204–1211. https://doi:10.1213/ANE.0b013e31826ac49f.
- 10. Matsuzaki, S., Vernis, L., Bonnin, M., Houlle, C., Fournet-Fayard, A., Rosano. G., Lafaye. A. L., Chartier, C., Barriere, A., Storme, B., Bazin. J-E., Canis, M., Botchorishvilli, R. (2017). Effects of low intraperitoneal pressure and a warmed, humidified carbon dioxide gas in laparoscopic surgery: a randomized clinical trial. Scientific Reports, 7(1), 11287. https://doi.org/10.1038/s41598-017-10769-1.
- 11. World Health Organization (2018) The top 10 causes of death, Available at: https://www.who.int/news-room/fact-sheets/detail/the-top-10-causes-of-death (Accessed: 24 May 2018)
- 12. Nicole M Kosacz, Antonello Punturieri et al. Chronic Obstructive Pulmonary Disease Among Adults United States 2011. US Centers for Disease Control and Prevention, 2012.
- 13. Storgaard LH, et al. Long-term effects of oxygen-enriched high-flow nasal cannula treatment in COPD patients with chronic hypoxemic respiratory failure. Int J Chron Obstruct Pulmon Dis 2018;13:1195-1205.

