# dyson airblade

Fast to dry hands hygienically with HEPA filtered air.





# Why do we put up with products that don't work properly?

In 1907, paper towels were introduced to washrooms. The electric hand dryer made its first appearance in 1948. But both have changed little since – they can still be expensive, unhygienic and harmful to the environment.

At Dyson, our engineers didn't think that was good enough. So in 2006, they put a century of poor performing hand drying methods to rest – with the invention of Airblade™ technology.

# The problems with paper towels

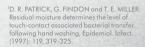
Some paper towels may have a high impact on the environment and cause extra maintenance through mess and blockages. This can make them very expensive.

And because dispensers may be found empty leaving no way to dry hands, paper towels can create hygiene issues beyond the washroom.

#### Did you know?

Ensuring hands are dry is crucial for maintaining hygiene levels, as damp hands can spread up to 1,000 times more bacteria to the surfaces they touch.<sup>1</sup>







# The problems with other hand dryers

#### Warm air dryers

Warm air dryers are slow. Which means they're energy hungry, expensive to run and unhygienic.

Dry times can take up to 30 seconds, so many users give up before their hands are dry – risking increased spread of bacteria.

#### Jet dryers

Other jet dryers might look like a Dyson Airblade hand dryer.
But without patented Airblade technology and HEPA filters as standard, their performance is not the same. Thanks to weak motors, most other jet dryers can't generate the fast airflow needed to dry hands quickly. They can also lack the power required to draw the air through a HEPA filter.

So most other jet dryers aren't just slower than Airblade™ technology, they're less hygienic too.





#### Have you ever looked inside a drain tank?

Some hand dryers collect waste water using drain tanks. But these are unhygienic – providing the perfect breeding ground for bacteria.

Drain tanks must be emptied and cleaned regularly – adding time and effort to the washroom maintenance process, and risking spillage of waste water during disposal.



#### Did you know?

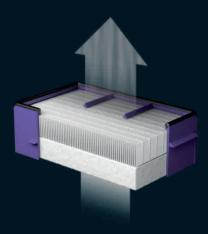
In recent testing, Dyson microbiologists detected greater levels of bacteria in a drain tank than levels that can be found in the average household toilet."

# Dyson Airblade<sup>™</sup> hand dryers work differently

Dyson digital motor V4







#### Dyson digital motor V4

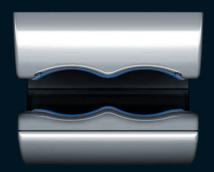
Sometimes conventional motors are bulky, slow and can be inefficient. They can also rely on carbon brushes, which wear out over time. The Dyson digital motor V4 is different. It's both compact and powerful, and instead of old-fashioned carbon brushes, it uses digital pulse technology to spin up to three times faster than a conventional motor.

#### **HEPA** filter

Bacteria and viruses in washrooms can cause colds, flu, sickness, diarrhoea or worse. Dyson Airblade hand dryers have HEPA filters installed as standard, which capture 99.95% of particles the size of bacteria from the washroom air. So hands are dried with cleaner air, not dirty air.

+ Airblade<sup>™</sup> technology

 Fast to dry hands hygienically with HEPA filtered air



#### Airblade<sup>™</sup> technology

Every second, the Dyson digital motor V4 draws in up to 30 litres of air through a HEPA filter, and forces it through apertures up to 0.8 mm wide. The result – up to 430 mph sheets of filtered air that scrape water from hands, drying them quickly and hygienically.

No other hand dryer has this technology

#### Some hand dryers are too slow

Testing based on NSF Protocol P335 shows that most other hand dryers are much slower than their manufacturers claim – with dry times based on drying hands without a HEPA filter. Many people give up when using a slow hand dryer. But damp hands can spread up to 1,000 times more bacteria than dry hands.



30 sec

Up to 30 sec

No HEPA filter as standard



#### Dyson hand dryers are fast

Testing based on NSF Protocol P335 shows that Dyson Airblade™ hand dryers are fast. Every second, up to 30 litres of air is forced through apertures up to 0.8 mm wide. The result – up to 430 mph sheets of air that scrape water from hands, drying them quickly and hygienically.







10 sec

12 sec

14 sec

HEPA filter as standard

HEPA filter as standard

HEPA filter as standard

# Airblade<sup>™</sup> technology is fast and hygienic

These are the reasons why:

Dyson digital motor V4

**HEPA** filter

10-14 second dry time

No drain tank

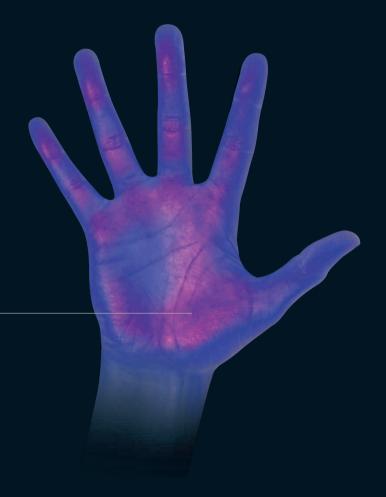
Antibacterial additive

No heating element

Touch-free operation



Damp hands can spread up to 1,000 times more bacteria than dry hands.







## Hygienically drying hands is as important as washing them

Bacteria and viruses deposited by hands onto surfaces can survive for several hours. When others touch these contaminated surfaces, they can be transferred. Damp hands can spread up to 1,000 times more bacteria than dry hands. It's why it's important that hands are dried properly.

#### Hygienic hand dryers

Dyson Airblade hand dryers use HEPA filters. 99.95% of particles the size of bacteria are captured from the washroom air. So hands are dried in 14 seconds or less using cleaner air, not dirty air. Both the Dyson Airblade V hand dryer and the Dyson Airblade dB hand dryer contain an antibacterial additive which can help prevent the growth of bacteria.

#### Dyson hand dryers are globally certified as hygienic by HACCP International

Certified by HACCP International. The Dyson Airblade dB hand dryer and the Dyson Airblade Wash+Dry hand dryer have been certified for use in food preparation environments.



# Other hand drying methods can be more expensive to run

Paper towels need constant restocking and disposal. Most other hand dryers are slow. They can be energy-hungry too.





£1,460

per year<sup>2</sup>

£157

per year<sup>2</sup>



#### Low running costs

Dyson Airblade™ hand dryers cost up to 80% less to run than other hand dryers, and up to 98% less than paper towels.<sup>2</sup>







£40

per year<sup>2</sup>

£31

per year<sup>2</sup>

£34

per year<sup>2</sup>

<sup>&</sup>lt;sup>2</sup> Electricity prices as of April 2017.

For calculations visit www.dyson.co.uk/calcs.

#### Higher impact on the environment

Dyson Airblade<sup>™</sup> hand dryers produce up to 80% less CO<sub>2</sub> than some other hand dryers and up to 81% less than paper towels.<sup>3</sup>





17.1g

16.8g



#### Low impact on the environment

Dyson Airblade<sup>™</sup> hand dryers have a lower environmental impact across measures including carbon emissions and energy consumption.<sup>3</sup> They are the only hand dryer certified by the Carbon Trust.







3.7g
CO<sub>2</sub> per dry<sup>3</sup>

3.3g
CO2 per dry3

3.6g



<sup>&</sup>lt;sup>3</sup>The environmental impact of electrical appliances and paper towels was measured by Carbon Trust.

The calculations were produced using the software Footprint Expert Pro, based on product use over 5 years and using weighted averages of individual countries of use. Dry times for product were evaluated using DTM 769.

#### PAPER TOWELS HAVE A HIGH IMPACT ON THE ENVIRONMENT

FROM CUTTING DOWN TREES, THROUGH TO CHEMICAL PROCESSES AND DISPOSAL – USING PAPER TOWELS HAS A SIGNIFICANT IMPACT ON THE ENVIRONMENT.

1

#### **DEFORESTATION**

Trees are a major source of pulp for virgin paper towel production. Cutting down trees can result in loss of habitat.



2

#### TIMBER TRANSPORTATION

Timber has to be transported from forests to the paper mill.



5

#### **DELIVERY AND RESTOCKING**

Paper towels have to be delivered from the mill to distributors and from distributors to facility managers. This is a continuous process resulting in carbon emissions.



6

#### WASTE

Most used paper towels cannot be recycled. They are put into plastic bin liners which have to be stored.





3

#### WATER INTENSIVE PROCESS

A high volume of water is used throughout the paper towel production.

4

#### CHEMICAL PROCESSES

Chemicals, such as chlorine and sulfur dioxide, are used in the manufacturing process of paper towels.









Only Dyson Airblade<sup>™</sup> hand dryers have all these benefits.

10-14 second dry time.

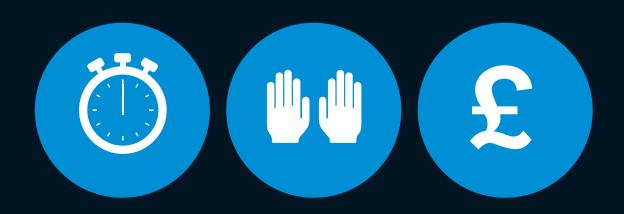
Hygienic.

HEPA filter as standard.

Costs less to run.

Better for the environment.

5 year guarantee.





#### 5 year guarantee. Unrivalled service.

#### Test. Test. Test.

Dyson Airblade hand dryers are engineered to last. They have been repeatedly tested for durability and resilience to physical abuse. They have also been exposed to real-life environments to ensure that they can withstand the pressures of high usage.

#### Guarantee

Thanks to this rigorous testing regime, all factory parts on Dyson Airblade™ hand dryers are guaranteed against original defects in materials and workmanship for 5 years.

#### Aftersales support

But if anything does go wrong with your machine, we provide repair and maintenance support through Dyson service engineers and self-service spare parts.

Reducing downtime and disruption to your facilities.

#### Dyson Airblade dB hand dryer

5 year parts, 1 year labour guarantee.

#### Dyson Airblade V hand dryer

5 year parts guarantee, easy self-service.

#### Dyson Airblade Wash+Dry hand dryer

5 year parts and labour guarantee.









#### dyson airblade V

The most hygienic hand dryer is 35% quieter.<sup>4</sup>

#### 35% quieter

With reprogrammed digital motor technology and precision air apertures, loudness testing shows that the Dyson Airblade V hand dryer is 35% quieter than its predecessor.

#### More room, Less hassle.

With a slim, compact profile that protrudes just 10 cm from the wall, the Dyson Airblade V hand dryer takes up less space in the washroom. While its easy-mount backplate allows for easy, self-service installation, maintenance and replacement.

For full product details visit www.dyson.co.uk



#### Certified by Quiet Mark

The Noise Abatement Society tested and approved the decibel levels and sound quality of the Dyson Airblade V hand dryer – awarding it the Quiet Mark. The Quiet Mark has been developed in response to public health concerns over the psycho-physiological effects of excessive or invasive sound produced by appliances.



#### The View from The Shard

"The Dyson Airblade V hand dryers have a modern and sleek design that fits the general design of 'The View from The Shard' very well. Guests have told us they like the power and speed of the machines. We are very proud to be amongst the first to have these hand dryers."

Sandy Clark, Operations Director.



### dyson airblade dB

The fastest, most hygienic hand dryer.

#### Fast drying

The original Dyson Airblade dB hand dryer produces sheets of air travelling at up to 430 mph. They scrape water from the front and back of hands simultaneously, drying hands in just 10 seconds.

#### Safe for the food sector

The Dyson Airblade dB hand dryer has been approved for use in food preparation environments by HACCP International.

For full product details visit www.dyson.co.uk



#### **Gloucester Services**

"Although we had a wide range of hand dryers to choose from, our sister station has had its Dyson Airblade" hand dryers for over 5 years and they still only have positive things to say."

**Joshua Jackson,** Facilities Manager.



#### dyson airblade wash+dry

Airblade<sup>™</sup> hand drying technology in a tap.

#### Wash and dry hands at the sink. No waste water on the floor.

With Airblade<sup>™</sup> technology in a tap, hands can be dried at the sink in just 14 seconds. There's no need for users to move to a separate drying area, so less water is dripped on the floor.

#### Free up your washroom.

Other hand drying methods take up valuable wall and floor space. With the Dyson Airblade Wash+Dry hand dryer, there's room for extra toilet cubicles and other facilities.

For full product details visit www.dyson.co.uk





#### Certified by Quiet Mark

The Noise Abatement Society approved the decibel levels and sound quality of the Dyson Airblade Wash+Dry hand dryer—awarding it the Quiet Mark. The Quiet Mark has been developed in response to public health concerns over the psychophysiological effects of excessive or invasive sound produced by appliances.

#### Coca-Cola London Eye

"As an iconic global landmark, The London Eye needs to meet high expectations of quality – and that extends to our washrooms.

Installing the Dyson Airblade Tap hand dryer has allowed us to achieve this."

#### Davey Barrett,

Show Services Manager.



#### The range













Sprayed nickel

White

# The fastest, most hygienic hand dryer.

10 second dry time.

HEPA filter captures 99.95% of particles the size of bacteria.

Tested and certified by NSF International.

Certified for use in food environments by HACCP International.

Costs just £40 to run per year.<sup>2</sup>

Small carbon footprint.

Tough and durable.

Touch-free operation.

Contains antibacterial additive

# The most hygienic hand dryer is 35% quieter.<sup>1</sup>

Certified by Quiet Mark.

HEPA filters capture 99.95% of particles the size of bacteria.

Tested and certified by NSF International.

12 second dry time.

Costs just £31 to run per year.<sup>2</sup>

Small carbon footprint.

Slim profile – just 10 centimetres deep, no recessing required.

Touch-free operation.

Easy to service. Safe electrical disconnect.

Contains antibacterial additive









# Airblade<sup>™</sup> hand drying technology in a tap.

Wash and dry hands at the sink. No waste water dripped on the floor.

Certified by Quiet Mark.

Saves space.

Saves water.5

Costs as low as £34 to run per year.<sup>2</sup>

HEPA filter captures 99.95% of particles the size of bacteria.

Certified for use in food environments by HACCP International.

Automatic water flush, activates after 24 hours – helps reduce water stagnation.

Small carbon footprint.3

14 second dry time.

<sup>\*</sup>Loudness reduction compared to the original Dyson Airblade V hand dryer.

\*Electricity prices as of April 2017. For calculations visit www.dyson.co.uk/calcs.

\*The environmental impact of electrical appliances and paper towels was measured by Carbon Trust. The calculations were produced using the software Footprint Expert Pro, based on product use over 5 years and using weighted averages of individual countries of use. Dry times for product were evaluated using DTM 769.

<sup>&</sup>lt;sup>5</sup>Reduction in water compares 4 l/min aerator fitted as standard to the Dyson Airblade Tap hand dryer to 1.9 l/min aerator fitted to Dyson Airblade Wash+Dry.

# dyson airblade









See what Dyson technology can do for your business. www.dyson.co.uk



#### **Electrical**

Input voltage/Frequency: 220-253V 50 Hz

Rated power: 1600 W

Motor type: Dyson digital motor – brushless DC Motor

Motor switching rate: 6,000 per second

Motor speed: 90,000 rpm

Operating temperature range: 0° – 40°C

Heater type: None

Standby power consumption: Less than 0.5 W

#### Construction

Tap construction: Stainless steel (brushed)

Under counter motor assembly construction: Moulded ABS (main unit)

Exterior screw type: Torx T15
Water ingress protection to IP35

#### Filter

HEPA filter (glass fibre and fleece prelayer)

Bacteria removal 99.9%

#### Operation

Touch-free infra-red activation

Hand dry time measurement: 12 seconds (Measurement based on National Sanitation Foundation Protocol P.335)

on National Sanitation Foundation Protocol P.335)

Operation lock-out period: 30 seconds
Airspeed at apertures: 430 mph

Operating airflow: Up to 30 l/s
Maximum altitude: 2,000 metres

#### Water operation

Water flow rate: 4 I/min

Tap Aerator: Aerated water outlet

Tap power supply: Mains supply

Water temperature control: Thermostatic mixer recommended (not supplied)

Water pressure required: 1-8 Bar

#### Logistics

Serial number prefix: AB09 EC1; AB10 EC2; AB11 EC3

Single unit order code: AB09 25818-01; AB10 25819-01; AB11 25820-01

Net weight: AB09 4.3kg; AB10 4.6kg; AB11 9.0kg

Packaged weight: AB09 5.7kg; AB10 6.1kg; AB11 11.4kg

Packaged dimensions: AB09 H303 × W284 × D286 mm

AB10 H276  $\times$  W437  $\times$  D280 mm; AB11 H302  $\times$  W610  $\times$  D375 mm

Unit barcode: AB09 5025 1550 1577 3;

AB10 5025 1550 1578 0; AB11 5025 1550 1579 7

#### Sink specification

The Dyson Airblade Tap hand dryer is compatible with most sink types. Ensure plugs are not installed in the sinks.

Sink dimensions: All sink measurements are internal unless stated otherwise. Width of sink – Minimum: 350mm, Front to back – Minimum: 300mm

Depth of sink - Minimum: 100mm

Maximum depth of sink for AB10 only: 200mm (External measurement

of vessel sink)

Sink materials: Sinks with highly polished surfaces should be avoided e.g. reflective chrome. Porcelain or brushed metal are ideal. When multiple taps are installed side-by-side, tap centres should be a minimum of 580mm apart.

#### Standard guarantee

5 year guarantee



#### **Product range**

**AB09 Short** 

AB10 Long

AB11 Wall















The NSF logo is a registered trade mark of NSF International.
The Carbon Reduction Label is the registered trade mark of the Carbon Trust.
HACCP International non-food certification mark is the registered trademark of
HACCP International. HACCP International have certified Dyson products based on their recommended installation and operating conditions. Licensed by Dyson.

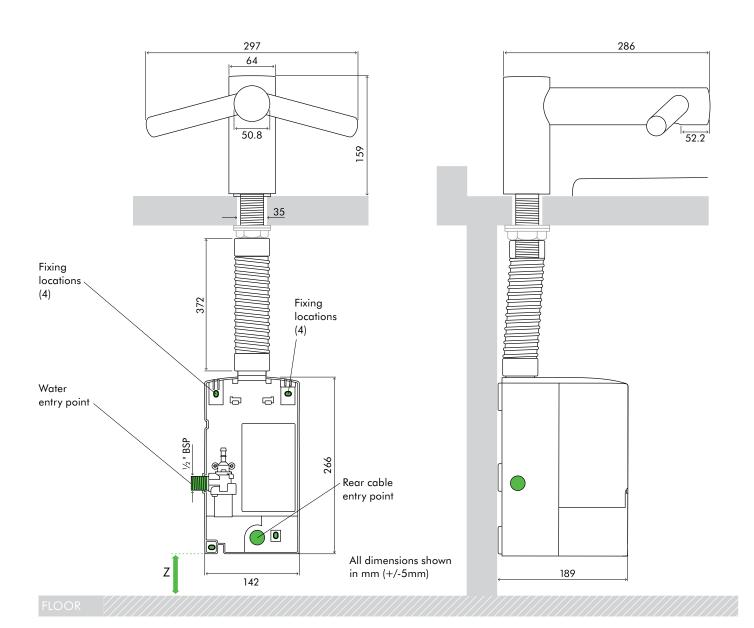
#### **TECHNICAL SPECIFICATION**





FRONT ELEVATION

SIDE ELEVATION



#### Tap dimensions

AB09 Height 159mm Width 297mm Depth 286mm

#### Motor bucket dimensions

AB09 Height 266mm Width 142mm Depth 189mm

#### Minimum clearance

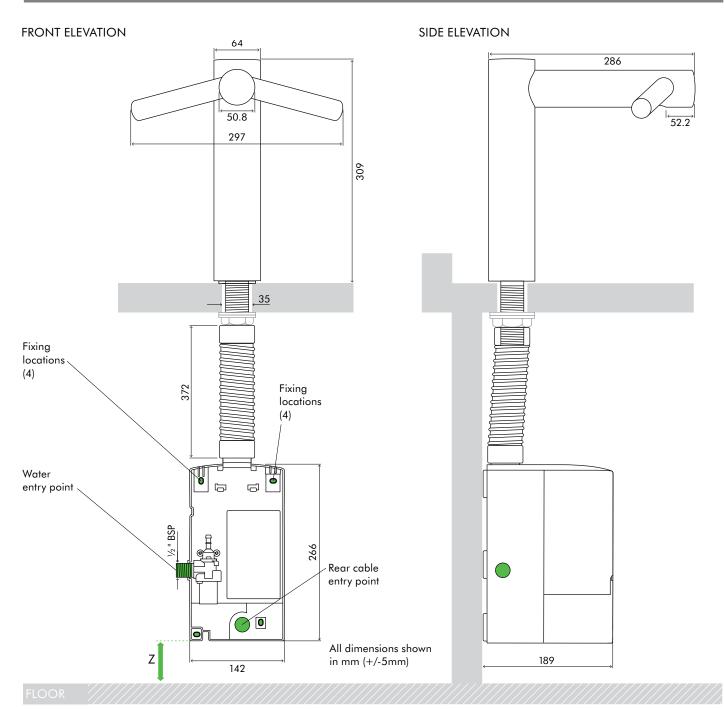
Z 100mm clearance from floor.

For further information please contact Dyson. 0800 345 7788 (UK) 01-401-8300 (IE) www.dysonairblade.com

#### **TECHNICAL SPECIFICATION**







#### Tap dimensions

AB10 Height 309mm Width 297mm Depth 286mm

#### Motor bucket dimensions

AB10 Height 266mm Width 142mm Depth 189mm

#### Minimum clearance

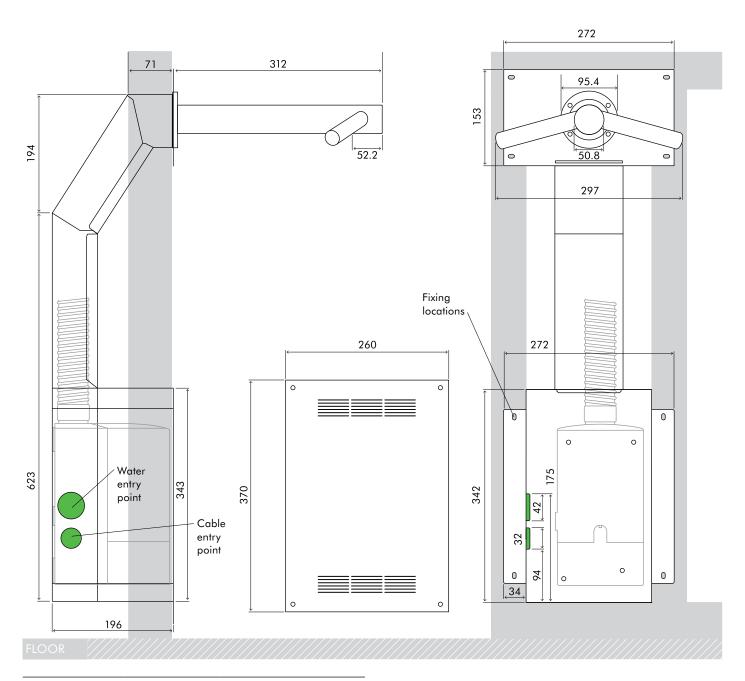
Z 100mm clearance from floor.

#### **TECHNICAL SPECIFICATION**





#### SIDE ELEVATION FRONT ELEVATION



Tap dimensions

AB11 Length 312mm Width 297mm

Motor bucket dimensions

AB11 Height 266mm Width 142mm Depth 189mm

#### PRE-INSTALLATION INFORMATION





#### Sink specification guidelines

Using a specially designed test method, Dyson engineers tested a wide range of sinks to assess their compatibility with the Dyson Airblade Tap hand dryer. For recommended sinks, please use our guide at www.dyson.co.uk/airblade/useful-documents Porcelain or brushed metal sinks are ideal.

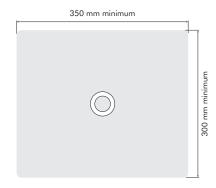
Sinks with highly polished surfaces should be avoided e.g. reflective chrome.

#### Tap mounting

The tap stem (measured from the outside diameter) should be mounted 15-40 mm from the outside edge of the sink.

There should be a minimum of 290 mm between a tap centre and a side wall. When multiple taps are installed side-by-side, tap centres should be a minimum of 580 mm apart. This allows sufficient space for mounting the motor bucket, as well as sufficient shoulder room for users.

Fig.1





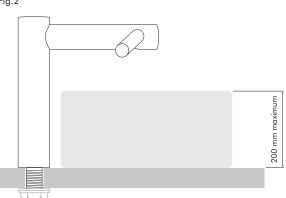
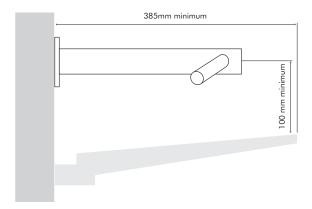


Fig.3



Sink dimensions (All internal measurements unless otherwise stated)

Fig.1 Width of sink minimum: 350 mm, Front to back of sink minimum: 300 mm

Fig.2 Maximum depth of sink for Long Neck Tap (AB10) only: 200 mm (External measurement of vessel/pedestal sink.)

Fig.3 Minimum distance from tap centre to top of sink (AB11 only) 100 mm Front edge of sink (all types – pedestal, recessed, slab) to wall minimum 385 mm.

Internal depth of sink minimum (for all taps): 100 mm



#### Tap mounting

Do not place the downward facing water sensor of the tap over a reflective surface, such as the drainage hole. (Fig. 4) For complete instructions, please refer to the printed installation guide supplied with the machine.

It's also available online at www.dyson.co.uk/airblade/useful-documents

AB09 AB10 240 mm

#### Fig.4

# 

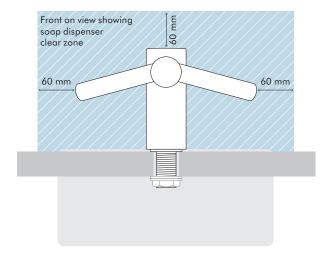
#### Soap and locating the soap dispenser

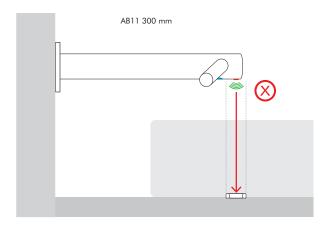
For best user experience, Dyson recommends the use of gel soaps. The infrared sensing zone for air activation extends along each tap branch. In order to prevent accidental activation, it's important to consider the user's hand route to the soap dispenser.

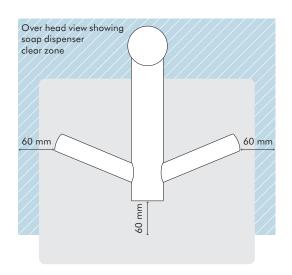
The dispenser should be located at least 60 mm outside the width of the tap, so the user reaches around the side of the branch.

It should also be located at least 60 mm above the branches, so that the sensors are not activated.

Please note that the user may reach diagonally across for the soap, so this path must not go through the sensing zone.









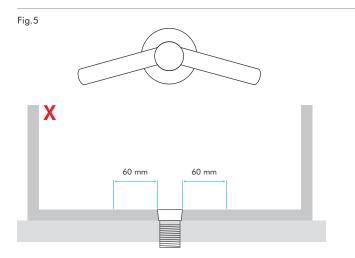
#### Water drainage

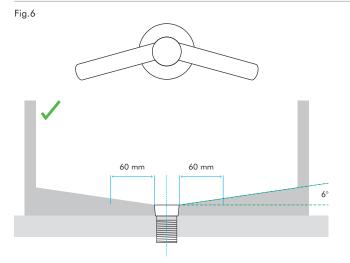
Due to high velocity air and water being in close proximity, there is a chance of some water and soap dispersion outside the sink dimensions. To alleviate this effect, we recommend following the below guidelines.

#### Base profile

Flat base profile will result in poor drainage leading to high levels of splashback.

To improve drainage, avoid sinks with a flat base with particular focus on the immediate area surrounding the drain hole, minimum 60 mm radius (Fig. 5).

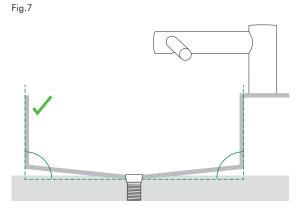




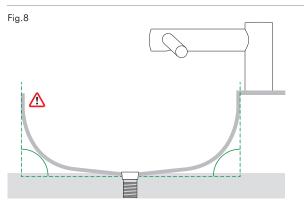
Minimum of  $6^{\circ}$  ramp angle from the edge of the drain hole of the sink will result in good drainage leading to reduced levels of splashback (minimum 60 mm radius).

#### Base to back and front wall transition

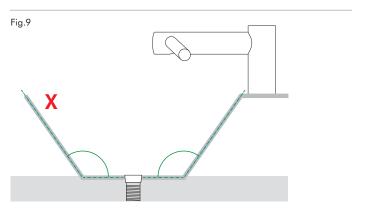
The base to back and front wall transition should also be considered. The back wall should be as close to 90°, and at as sharp a radius as possible (Fig.7). Curved geometry is more likely to increase splashback, whereas sloping back and front wall transitions should be avoided (Fig.8 & 9).



Vertical and sharp transition



Vertical and smooth transition



Sloped transition



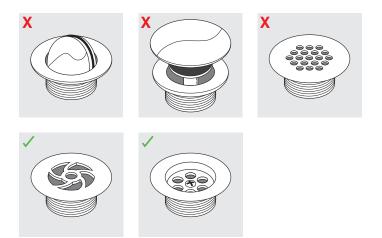
#### Sink access guidelines

It is recommended that the following guidelines are followed to ensure there is sufficient access under the sink to allow for servicing and installation to take place (Fig.10).

# 85mm (min) 100 mm (min) CLEAR ZONE

#### Plug hole

Plug holes with the most open aperture are recommended, whereas grill or perforated type plug holes should be avoided as they restrict the drainage of soapy water (lather). Do not use plugs within the plug holes in sinks.

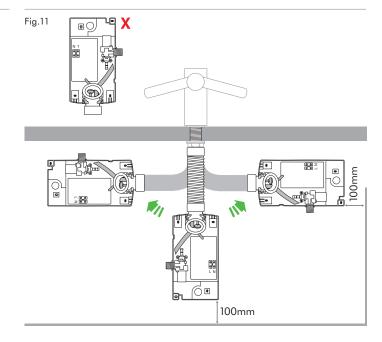


#### Mounting the motor bucket (AB09/AB10)

Ensure 100 mm minimum clearance from bottom of motor bucket to floor/wall.

The motor bucket cannot be mounted upside down or installed above the sink.

Only the following is advised (Fig.11).





#### **Installing AB11**

The AB11 Dyson Airblade Tap hand dryer is designed so that the motor unit is located behind a stud wall within a metal enclosure which is supplied with the Dyson Airblade Tap hand dryer (Fig.12). The vertical wall studs must be constructed so as to allow the metal enclosure to be fitted between them (Fig.13). One of the horizontal wall studs must be fitted a) so it holds the main weight of the metal duct and the unit, and b) so it is in the correct position for the tap stem.

For complete instructions, please refer to the printed installation guide supplied with the machine. It's also available online at www.dyson.co.uk/airblade/useful-documents

Fig.13

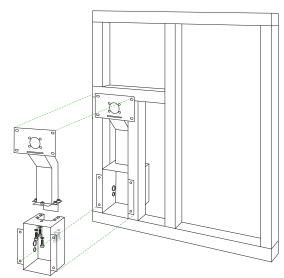


Fig.14

Install plasterboard.

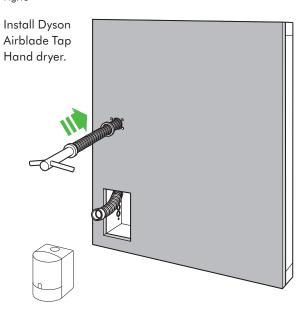


#### AB11 metal enclosure assembly

Fig.12



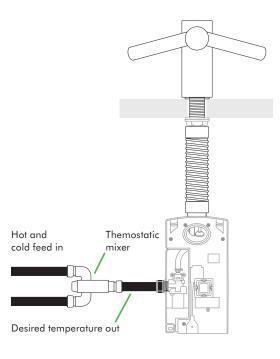
Fig.15



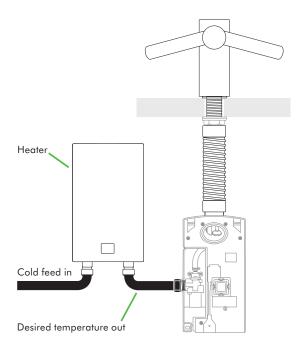


#### Water temperature control

If you are connecting a hot and cold water feed you will need to install a thermostatic mixer.



If connecting to cold only water feed you will need to install a heater.



#### Abusive testing

The tap has undergone rigorous abusive testing to ensure that it can withstand substantial forces and impacts typical of a commercial and public bathroom environment.

#### **Tools required**

To install this unit you will need (4) screws, and appropriate fittings

Torx T15 screw driver – long handle

Electrical drill with 35 mm drill bit

4 wall plugs (check suitability for wall type)

7 mm flat head screwdriver

Flat terminal block screwdriver

37 mm Box spanner

Sharp knife/blade

Pan head screws, 5 mm in diameter, toggle or masonry type

Conduit as per local electrical regulations

#### **Electrical**

Input voltage/Frequency: 200-253V 50 & 60Hz

Isolated by switch fuse spur or RCD as appropriate

Current 6.6 A

Cable specification: 3 core PVC 1.5 mm cross sectional area

Local electrical regulations must be adhered to when installing or repairing the product

Rated power: 1600 W

Operating temperature range: 0° – 40°C

Standby power consumption: Less than 0.5 W

#### Water operation

Water flow rate: 4 l/min normal fitted aerator.

1.9 l/m with low flow aerator supplied with product

Water temperature control: There is no in-built function to change the temperature of the water. The use of a Thermostatic mixer or heater (not included) is recommended.

Water pressure required: 1-8 bar

1  $\frac{1}{2}$ " BSP isolated valve required for service

Maximum altitude: 2,000 metres

#### Water supply cleanliness and biological growth

In some countries there are regulations or guidelines that require temperature controlled water supply systems (such as that supplied to the Dyson Airblade Tap hand dryer) to be subjected to regular cleaning to minimise any biological growth.

To enable you to meet these regulations, the Dyson Airblade Tap hand dryer has been designed and tested to withstand internal cleaning both with hot water up to 95°C and with sodium hypochlorite at a concentration of 0.45%.

Please refer to specific (market) regulations and water supply system recommendations for information on cleaning regimes for water supply cleanliness and biological growth for your country.

When carrying out internal cleaning of the Dyson Airblade Tap hand dryer, please be aware of any safety considerations when using hot water or chemicals. Dyson will not be responsible for any injury caused by this process.