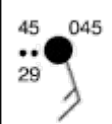
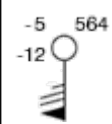


# Weather Map Symbols

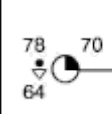
## Surface Station Model

Temp (F) Weather Dewpoint (F)		Pressure (mb) Sky Cover Wind (kts)	<b>Data at Surface Station</b> Temp 45 °F, dewpoint 29 °F, overcast, wind <b>from SE</b> at 15 knots, weather light rain, pressure 1004.5 mb
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






























## Upper Air Station Model

Temp (C) Dewpoint (C)		Height (m) Wind (kts)	<b>Data at Pressure Level - 500 mb</b> Temp -5 °C, dewpoint -12 °C, wind <b>from S</b> at 75 knots, height of level 5640 m
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## Forecast Station Model

Temp (F) Weather Dewpoint (F)		PoP (%) Sky Cover Wind (kts)	<b>Forecast at Valid Time</b> Temp 78 °F, dewpoint 64 °F, scattered clouds, wind <b>from E</b> at 10 knots, probability of precipitation 70% with rain showers
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## Map Symbols

<u>Sky Cover</u>	<u>Wind</u> Shaft is direction wind is coming <b>from</b>	<u>Fronts and Radar</u>	<u>Selected Weather Symbols</u>
 clear	 Calm	cold front 	 Rain
 1/8	 1-2 knots (1-2 mph)	warm front 	 Rain Shower
 scattered	 3-7 knots (3-8 mph)	stationary front 	 Thunderstorm
 3/8	 8-12 knots (9-14 mph)	occluded front 	 Drizzle
 4/8	 13-17 knots (15-20 mph)	Trough 	 Snow
 5/8	 18-22 knots (21-25 mph)	squall line 	 Snow Shower
 broken	 23-27 knots (26-31 mph)	Dryline 	 Freezing Rain
 7/8	 48-52 knots (55-60 mph)		 Freezing Drizzle
 overcast	 73-77 knots (84-89 mph)		 Fog
 obscured	 103-107 knots (119-123 mph)		 Haze
Multiple rain or snow symbols indicate intensity, i.e. light, moderate, heavy			 Smoke
			 Dust or Sand
			 Blowing Snow

# Guide to weather chart symbols



## Cold front

The leading edge of an advancing colder air mass. Its passage is usually marked by cloud and precipitation, followed by a drop in temperature and/or humidity.



## Occluded front (or 'occlusion')

Occlusions form when the cold front of a depression catches up with the warm front, lifting the warm air between the fronts into a narrow wedge above the surface. Occluded fronts bring cloud and precipitation.



## Weakening cold/warm front (frontolysis)

Represents a front that is losing its identity, usually due to rising pressure. Cloud and precipitation becomes increasingly fragmented.



## Quasi-stationary front

A stationary or slow-moving boundary between two air masses. Cloud and precipitation are usually associated.



## Thickness lines

Pressure decreases with altitude, and Thickness measures the difference in height between two standard pressure levels in the atmosphere. It is proportional to the mean temperature of this layer of air, so is a useful way of describing the temperature of an airmass.

Weather charts commonly show contour lines of 1000-500 hPa thickness, which represent the depth (in decametres, where 1 dam = 10 m) of the layer between the 1000 hPa and 500 hPa pressure levels. Cold, polar air has low thickness, and values of 528 dam or less frequently bring snow to the UK. Conversely, warm, tropical air has high thickness, and values in excess of 564 dam across the UK often indicate a heatwave.



## Warm front

The leading edge of an advancing warmer air mass, the passage of which commonly brings cloud and precipitation followed by increasing temperature and/or humidity.



## Developing cold/warm front (frontogenesis)

Represents a front that is forming due to increase in temperature gradient at the surface.



## Upper cold/warm front

Upper fronts represent the boundaries between air masses at levels above the surface. For instance, the passage of an upper warm front may bring warmer air at an altitude of 10,000 ft, without bringing a change of air mass at the surface.



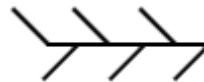
## Isobars

Contours of equal mean sea-level pressure (MSLP), measured in hectopascals (hPa). MSLP maxima (anticyclones) and minima (depressions) are marked by the letters H (High) and L (Low) on weather charts.



## Trough

An elongated area of relatively low surface pressure. The troughs marked on weather charts may also represent an area of low thickness (thickness trough), or a perturbation in the upper troposphere (upper trough). All are associated with increasing cloud and risk of precipitation.



## Convergence Line

A slow-moving trough, which is parallel to the isobars and tends to be persistent over many hours or days. They are quite common in cold northerly outbreaks down the Irish Sea, affecting west Wales, Devon and Cornwall in particular, but can be found in other areas also. This convergence line can give hours of persistent precipitation over very localised areas, whilst a few miles down the road it is relatively dry, leading to some heavy snowfall/rainfall. In summer the convergence lines are not as easy to forecast, but then can still occur due to sea-breeze convergence, and are over the land, whilst in winter they are over the sea.