

The Sound-Unit



The unique **Sound-Unit** can easily be removed for maintenance and, if necessary, all components can be exchanged individually. The mouthpiece is slim and, together with the block, slightly curved to provide for comfortable lip positioning and to offer an optimal angle for working with lip pressure. The knurled head of the block adjustment thumbscrew (7), located below the block, allows the windway to be flexibly adjusted in small increments.

Care must be taken not to overtighten the screw.

- A narrow windway adds a certain rawness to the sound (i.e. the pitch drops slightly).
- A wide windway makes the sound more flute-like (i.e. the pitch rises somewhat).
- The windway and block are cone-shaped to provide more flexibility in sound and intonation. The air stream becomes faster, giving a quicker response and a more immediate attack, aspects which improve both playing in the third octave and working with the Lip-Control mechanism (5).
- The two exchangeable windway-roof platelets (included) are held in position by



a removable rubber ring (6). The characteristics of these differ, depending on the material they are made of: The **Grenadilla platelet** (16) ensures a sonorous strong sound due to its smooth and very hard wood. The **Synpor platelet** (15) improves the response throughout the entire range, but particularly in the third octave, due to its moisture absorbing inorganic microporous structure.

General information about block settings
The stepless adjustment of the windway via the block adjustment screw gives the player the option to direct the tonal focus to the low register, or to the third register and above. In addition, narrower block positions give more focused, brilliant sounds, wider block positions emphasize the soft and airy sound elements. Because Synpor is absorbent, but does not swell, it is the ideal material for the platelet, and especially for the block. In the composite block (2) the Synpor core is embedded in a protective shell of high-quality plastic to prevent damage from teeth, or other mechanical wear. The stable



dimensions of both platelets and block maintain an air-tight fitting which is particularly beneficial when practising or rehearsing for many hours or playing in concerts. The edges of the platelets have been designed perfectly for easy handling while removing or mounting, and ensure an air-tight fit. The movable block allows the player to directly influence the sound. The soft rubber mount (3) beneath the block allows it to be tilted so as to completely close the windway as required. This gives the player the option to not only stop notes abruptly, but also to impart various shades, or even to let notes fade into nothing. A spring (8) connected to the lip control mechanism (5) enables the Lip-Control to be employed in any block position, allowing greater flexibility for timbres and dynamics. The tension of the stainless steel spring (8) can be adjusted by means of a small screwdriver to suit playing conditions of the day and the musical material.

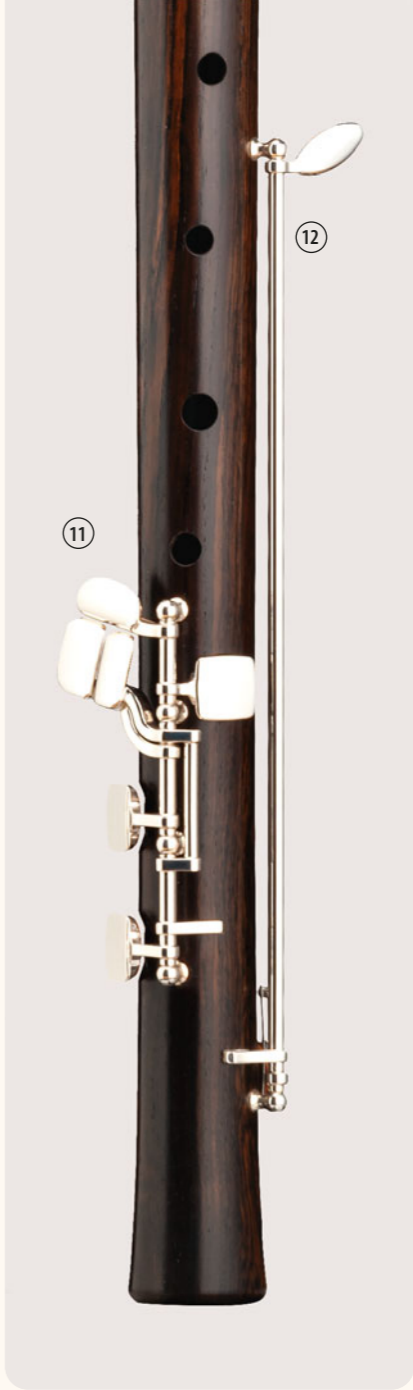
Important: We recommend that the windway roof platelet (1), combo block (2) and the thumbscrew (7) are carefully removed after every long period use so that the Sound-Unit can thoroughly dry out.

The Features

- The stainless steel tuning slide (9) allows the player to alter the instrument's pitch over a relatively wide range without detriment to the intonation, when playing, for example together with a piano (up to A= 444 Hz), with electronic studio instruments (at A=440 Hz), or even with older instruments (at around A=435 Hz).



- The wedge-shaped piano key/register key (10) can be opened or closed steplessly to allow playing with subtle, infinitely variable dynamics.
- The layout of the keys for F/F sharp/G sharp (11) has been ergonomically designed to allow smooth fingering changes even when slurring.



The key for the low E (12) makes it possible to play this extra note simply with the little finger of the left hand and also adds more options for alternative fingerings.

The Evolution of the Dynamic Recorder

Based on the principle of modern harmonic recorders developed in the 1990s, and first developed by the Dutch recorder maker Maarten Helder, Mollenhauer has been making the so-called 'Helder Tenor' since 1996. Shortly after this, also an alto version was produced. Since that time, this comprehensively-equipped instruments have been continuously improved. Incorporating suggestions from Johannes Fischer and, more recently, in collaboration with recorder player Susanne Fröhlich, various tenor versions were developed which also influenced the alto size. The underlying principles of the new harmonic instruments ensure that, through the use of a modern key mechanism, all the recorders' lowest notes can be overblown to clean and natural sounding harmonics. This characteristic gives the instruments more stability and volume, offering more favourable conditions for dynamic playing, improving the intonation and giving more natural access to the highest registers as well as an extended range.

Helder Evo
Alto recorder

Fingering Chart