To produce ligatures of three or more notes, some of the glyphs in this range have to be combined.

Glyphs should be positioned relative to their starting pitch: for example, the chantLigaturaDesc3rd glyph, which describes a downwards progression by an interval of a third, should be positioned on the staff line or space of the starting note of the downwards pattern; the connecting lines (e.g. chantConnectingLineAsc3rd) should likewise be positioned on the staff line or space corresponding to the bottom of the line; for an ascending liquescent, position chantAuctumAsc on the starting staff position, and chantDeminutemUpper on the ending staff position, with the appropriate length of connecting line between them, starting one staff position above the starting staff position (so describing an interval one staff position smaller than the distance between the lower and upper notes of the liquescent).

Scoring applications should position these glyphs like any other notehead, i.e. moving them vertically according to the desired starting staff position. Fonts intended for use in text-based applications should include glyphs that present these symbols at different staff positions, and a means to easily choose between them; one possible implementation would be to define OpenType ligatures of each of the glyphs in the **Combining staff positions** range with each of the glyphs in this range.

The table below shows how to produce some common ligatures, and describes which glyphs should be used; glyphs whose names appear in parentheses are control characters that move the following glyph vertically to a different staff position, as might be used in a font that employs OpenType ligatures.

|  |  |
| --- | --- |
| Macintosh HD:Users:DSpreadbury:Desktop:podatus-asc-3rd.png | Podatus, ascending 3rd: chantPodatusLower + chantConnectingLineAsc3rd + (staffPosRaise3) + chantPodatusUpper |
| Macintosh HD:Users:DSpreadbury:Desktop:clivis-desc-4th.png | Clivis, descending 4th: chantPunctumVirgaReversed + (staffPosLower4) chantConnectingLineAsc4th + (staffPosLower4) + chantPunctum |
|  | Salicus: chantPunctum + (staffPosRaise1) + chantPodatusLower + (staffPosRaise1) + chantConnectingLineAsc2nd + (staffPosRaise2) + chantPodatusUpper |
|  | Climacus: chantPunctumVirga + (staffPosLower1) + chantPunctumInclinatum + (staffPosLower2) + chantPunctumInclinatum |
|  | Torculus: chantPunctum + (staffPosRaise1) + chantPunctum + chantPunctum |
|  | Porrectus flexus resupinus: chantEntryLineAsc5th + (staffPosRaise5) + chantLigaturaDesc4th + (staffPosRaise1) + chantConnectingLineAsc3rd + (staffPosRaise4) + chantPunctum |
|  | Scandicus flexus: chantPodatusLower + (staffPosRaise1) + chantConnectingLineAsc2nd + (staffPosRaise2) + chantPodatusUpper + chantPunctumVirga + chantConnectingLineAsc3rd + chantPunctum |
|  | Porrectus flexus: chantConnectingLineAsc3rd + (staffPosRaise3) + chantLigaturaDesc3rd + chantPunctumVirga + chantConnectingLineAsc3rd + chantPunctum |
|  | Climacus resupinus: chantPunctumVirga + (staffPosRaise1) + chantPunctumInclinatum + chantPunctumInclinatum + (staffPosRaise1) + chantPunctum |
|  | Torculus resupinus: chantPunctum + (staffPosRaise1) + chantPunctum + chantPunctum + (staffPosRaise1) + chantPunctumVirga |
|  | Pes subbipunctus: chantPodatusLower + (staffPosRaise1) + chantConnectingLineAsc2nd + (staffPosRaise2) + chantPodatusUpper + chantPunctumInclinatum + (staffPosLower1) + chantPunctumInclinatum |
|  | Virga praetripunctis: chantPodatusLower + (staffPosRaise1) + chantConnectingLineAsc3rd + (staffPosRaise3) + chantPodatusUpper chantPodatus3rd + (staffPosRaise4) + chantPodatusLower + (staffPosRaise5) + chantConnectingLineAsc2nd + (staffPosRaise6) + chantPodatusUpper |
|  | Epiphonus (liquescent podatus): chantAuctumAsc + (staffPosRaise1) + chantDeminutemUpper |
|  | Cephalicus (liquescent flexa): chantConnectingLineAsc3rd + (staffPosRaise3) + chantAuctumDesc + (staffPosRaise2) + chantDeminutemLower |
|  | Pinnosa (liquescent torculus): chantPunctum + chantConnectingLineAsc4th + (staffPosRaise4) + chantAuctumDesc + (staffPosRaise3) + chantDeminutemLower |
|  | Porrectus liquescens: chantPunctumVirgaReversed + (staffPosLower1) + chantAuctumAsc + (staffPosRaise1) + chantDeminutemUpper |
|  | Scandicus liquescens: chantPunctum + (staffPosRaise1) + chantAuctumAsc + + (staffPosRaise1) + chantConnectingLineAsc3rd + (staffPosRaise4) + chantDeminutemUpper |