Let $B$ be a finite-dimensional Nichols algebra of diagonal type over an algebraically closed field of characteristic 0. The distinguished pre-Nichols algebra of $B$, introduced and studied in [4], has several nice properties including finite GK-dimension and action of the Weyl groupoid. Its graded dual, called the Lusztig algebra of $B$, was subsequently introduced and studied in [1]. We will outline these constructions. Then we will present the Lusztig algebra as an extension (as braided Hopf algebras) of $B$ by the universal enveloping algebra of a graded nilpotent Lie algebra, that is the positive part of a semisimple Lie algebra, that is determined in all cases.