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IEEE P1003.2 Draft 11.2 – September 1991

B.2 C Numerical Limits

The following subclauses list the names of macros that C language applications can use to obtain minimum and current values for limits defined in 2.13.1.

B.2.0.1 C Numerical Limits Rationale. *(This subclause is not a part of P1003.2)*

This subclause was added in Draft 9 to give C applications access to limits at compile time. Applications can use the values from the macros without resorting to *sysconf*(). The descriptions very closely follow the descriptions of macros and limits in POSIX.1 {8}.

This definition of the limits is specific to the C language. Other language bindings might use different interfaces or names to provide equivalent information to the application.

Note that there are no C bindings or interfaces that change based on the macros in Table B-5. These macro only advertise the availability of the associated utilities.

B.2.1 C Macros for Symbolic Limits

The macros in Table B-3 shall be defined in the header <limits.h>. They specify values for the symbolic limits defined in 2.13.1.

Table B-3 – C Macros for Symbolic Limits

Symbolic Limit	Minimum Allowed by POSIX.2	Minimum for this Implementation
{BC_BASE_MAX}	_POSIX2_BC_BASE_MAX	BC_BASE_MAX
{BC_DIM_MAX}	_POSIX2_BC_DIM_MAX	BC_DIM_MAX
{BC_SCALE_MAX}	_POSIX2_BC_SCALE_MAX	BC_SCALE_MAX
{BC_STRING_MAX}	_POSIX2_BC_STRING_MAX	BC_STRING_MAX
{COLL_WEIGHTS_MAX}	_POSIX2_COLL_WEIGHTS_MAX	COLL_WEIGHTS_MAX
{EXPR_NEST_MAX}	_POSIX2_EXPR_NEST_MAX	EXPR_NEST_MAX
{LINE_MAX}	_POSIX2_LINE_MAX	LINE_MAX
{RE_DUP_MAX}	_POSIX2_RE_DUP_MAX	RE_DUP_MAX

The names in the first column of Table B-3 are symbolic limits as defined in 2.13.1. The names in the second column are C macros that define the smallest values permitted for the symbolic limits on any POSIX.2 implementation; they shall be defined as constant expressions with the most restrictive values specified in 2.13.1. The names in the third column are C macros that define less restrictive values provided by the implementation; each shall be defined as a constant that

— is not smaller than the associated macro in column 2, and

— is not larger than the smallest value that will be returned by *sysconf*() when the application is executed.