KOBELCO

SHOP MANUAL

HYDRAULIC EXCAVATOR

SK30SR-2

SK35SR-2

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SK30SR-2	PW08-20001~
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3. INTERNATIONAL UNIT CONVERSION SYSTEM

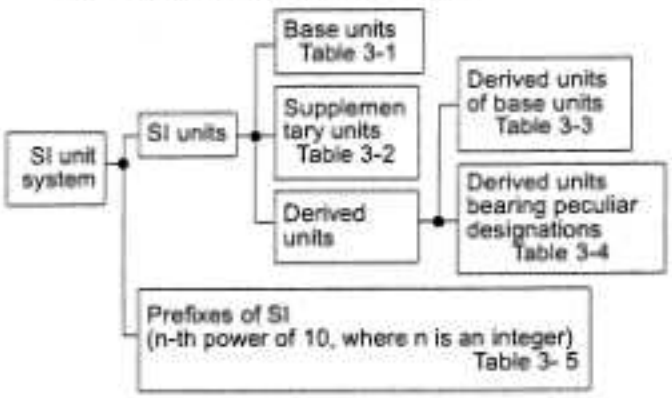
(Based on MARKS' STANDARD HANDBOOK FOR MECHANICAL ENGINEERS)

Introduction

Although this manual uses the gravitational unit system, if you need SI unit, refer to the following international system of units.

are related to this manual :

1. Etymology of SI Units
   French :Le Systme International d' Units
   English :International System of Units
2. Construction of SI Unit System



(1) Base Units [Table 3-1] Given hereinafter is an excerpt of the units that

QUANTITY	UNIT	SYMBOL
Length	metre	m
Mass	kilogram	kg
Time	second	s
Electric current	ampere	A
Thermodynamic temperature	kelvin	K
Amount of substance	mol	mol
Luminous intensity	candela	cd

(2) Supplementary Units [Table 3-2]

QUANTITY	UNIT	SYMBOL
Plane angle	radian	rad
Solid angle	steradian	sr

(3) Derived Units [Table 3-3]

QUANTITY	UNIT	SYMBOL
Area	square metre	m^2
Volume	cubic metre	m^3
Velocity	metre per second	m/s
Acceleration	metre per second squared	m/s^2
Density	kilogram per cubic metre	kg/m^3

(4) Derived Units bearing Peculiar Designations

[Table 3-4]

QUANTITY	UNIT	SYMBOL	FORMULA
Frequency	hertz	Hz	1/s
Force	newton	N	$kg \cdot m/s^2$
Pressure and Stress	pascal	Pa	N/m^2
Energy, Work and Quantity of heat	joule	J	N • m
Power	watt	W	J/s
Quantity of electricity	coulomb	C	A • s
Electric potential difference, Voltage, and Electromotive force	volt	V	W/A
Quantity of static electricity and Electric capacitance	farad	F	C / V
Electric resistance	ohm	‰	V / A
Celcius temperature	celcius degree or degree	°C	(t+273.15)K
Illuminance	lux	lx	l m/m2

(5) Prefixes of SI [Table 3-5]

PREFIX	SYMBOL	MULTIPLICATION FACTORS
giga	G	10^9
mega	M	10^6
kilo	k	10^3
hecto	h	10^2
deca	da	10
deci	d	10^{-1}
centi	c	10^{-2}
milli	m	10^{-3}
micro	μ	10^{-6}
nano	n	10^{-9}
pico	p	10^{-12}

(6) Unit Conversion [Table 3-6]

QUANTITY	Gravitational	SI	CONVERSION FACTOR
Weight	kgf		
Mass		kg	1 kgf=1 kg
Force	kgf	N	1 kgf=9.807 N
Torque	kgf • m	N•m	1 kgf•m=9.807 N•m
Pressure	kgf/cm^2	MPa	1 kgf/cm^2=0.09807 MPa
Motive power	PS	kW	1 PS=0.7355 kW
Revolution	rpm	min^{-1}	r/min ★1

★1 Units that are allowed to use

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