HiTech Fluid Systems
THE BALANCE IS ALWAYS IN THE SERVICE

Engineering Data - Conversion Table

Quantity or Property	Previous Units (API)	"SI" or Metric Units	Symbol	To Convert to "SI" Units, Multiply By:
Annular Velocity	ft/min	metres/min	m/min	0.3048
Apparent & Plastic Viscosity	centipoise	millipascal second	mPa·s	1
Area	acre	hectares	ha	0.4047
Bentonite Yield	bbl's/ton	cubic metres/tonne	m^3/tonne	0.175
Bit Size	inches	millimeters	mm	25.4
Casing Capacity / Displacement	bbl/ft	cubic metres/metre	m^3/m	0.5216
Casing Weight	lbs/ft	kilograms/metres	kg/m	0.188
Corrosion Rate	lbs/ft^2/day mils per year	grams/square metre/day milligrams/day	g/m^2/day mm/a	13.377 0.254
Depth Hole & Pipe Diameter	feet	metres	m	0.3048
Distance	miles miles inches yards feet	metres kilometres metres metres metres	m km m m m	1609.35 1.6093 39.37 1.0936 3.2808
Drill Rate	feet/hour	metres/hour	m/h	0.3048
Filter Cake Thickness	32'nds inch	millimeters	mm	0.794
Flow Rate	US gallons/min bbl/min	cubic metres/min cubic metres/min	m^3/min m^3/min	0.003785 0.159
Fluid Loss	millilitres or cc's	millilitres or cc's	ml or cm^3	1
Funnel Viscosity	sec/quart	seconds/litre	s/L	1.057
Hook Load	thousands of pounds	decanewtons	daN	0.444
Horsepower	Horsepower	watts	W	745.7
Horsepower per sq.inch	Hp/in^2	meagawatts /square metre	mw/m^2	1.15
Ionic Concentration in Water	parts per million (ppm)	milligram/litre	mg/L	1
Liner Length & Diameter	inches	millimeters	mm	25.4
Material Concentration	lb/bbl equivalents	kilogram/cubic metre moles/cubic metre	kg/m^3 mol/m^3	2.85 1
MBT (Bentonite Equivalent)	lb/bbl	kilograms/cubic metre	kg/m^3	2.85

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Quantity or Property	Previous Units (API)	"SI" or Metric Units	Symbol	To Convert to "SI" Units, Multiply By:
Mud Density	lbs/gal	kilograms/cubic metres	kg/m^3	119.83
Mud Gradient	psi/foot	kilopascals/metre	kPa/m	22.621
Nozzle Size	32'nds inch	millimeters	mm	0.794
Particle Size	microns	micrometres	mm	1
Pounds Force	pounds	newton	N	4.448
Pressure	psi	kilopascals megapascals	kPa mPa	6.895 0.006895
Pump Data	bbl/stroke	cubic metres/stroke	m^3/stroke	An oilfield barrel is exactly 0.1589873 m^3
Pump Output per Stroke	bbl/stroke	litres/stroke	l/stroke	159
Rotary Speed	revolutions/min (rpm)	revolutions/min (rpm)	rpm	1
Shear Rate	reciprocal second	reciprocal second	sec^{-1}	1
Temperature	° Fahrenheit ° Celsius	° Celsius ° Fahrenheit	°C ° F	(°F-32) / 1.8 (°CX1.8) + 32
Torque	ft/lbs	newton·metre	N·m	1.3558
Volume	barrels US gallons/stroke US gallons/stroke	cubic metres cubic metres/stroke litres/stroke	m^3 m^3/stroke litres/stroke	0.159 0.003785 3.785
Volumes	US gallon Imperial Gallon US gallon Imperial Gallon Oilfield barrel (42 US gallons) Cubic yards	litre litre cubic metre cubic metre cubic metre cubic metres	L L m^3 m^3 m^3 m^3	3.785 4.546 0.003785 0.004546 0.1589 0.7646
Weight on Bit	pounds	decanewtons	daN	0.445
Yield Point, Gel Strength, Shear Stress	$lb/100\ ft^3$	pascal	Pa	0.4788 (round off to 0.5 for field use)