

BİRİM ÇEVİRİMLERİ
ISI BİRİMLERİNİN METRİK BİRİMLERE DÖNÜŞÜMÜ

1 feet	ft	X 0.3048	= m
2 pound/in ²	psi	X 6.894757	= kPa
3 psi/ft	psi/ft	X 22.62	= kPa/m
4 inch	in	X 2.54	= cm
5 galon	gal	X 3.785 10 ⁻³	= m ³
6 varil	bbl	X 0.159	= m ³
7 pound/ft ³	lb/ft ³	X 16.02	= kg/m ³
8 galon/dakika	gal/dak	X 0.00379	= m ³ /dk
8 galon/dakika	gal/dak	X 6.31 10 ⁻⁵	= m ³ /sn
9 libre feet	lb/ft	X 1.489	= kg/m
10 centipoise	cp	X 1.0 10 ⁻³	= Pa's
11 libreforce/100 ft ²	lbf/100 ft ²	X 0.4788	= Pa
12 libre/varil	lb/bbl	X 2.853	= kg/m ³
13 1/32 inch	32's in	X 0.794	= mm
14 feet-libreforce	ft-lbf	X 1.3558	= Torb(M.n)
15 varil/feet	bbl/ft	X 0.5216	= m ³ /m
16 libreforce	lbf	X 4.448222	= N
16 libreforce	lbf	X 0.445	= daN
17 beygir gücü	hp	X 0.746	= kW
18 derece	deg	X 1.74533 10 ⁻²	= rad
19 Fahrenayt	(o F-32)	/ 1.8	= oC
20 feet ²	ft ²	X 9.29 10 ⁻²	= m ²
21 feet ³	ft ³	X 2.8317 10 ⁻²	= m ³
22 inch ²	in ²	X 6.4516	= cm ²
22 inch ²	in ²	X 6.4516 10 ⁻⁴	= m ²
23 libremass	lbm	X 4.536 10 ⁻¹	= kg
24 mil	miles	X 1.609	= km
25 Atmosfer	Atm	X 1.01325 10 ²	= kPa
26 kilopaskal	kip	X 4.44822 10 ³	= N
27 ton	ton	X 9.07185 10 ⁻¹	= mg
27 ton	ton	X 9.07185 10 ²	= kg
28 feet/dakika	ft/dak	X 5.08 10 ⁻³	= m/s
29 feet/saat	ft/s	X 8.4667 10 ⁻⁵	= m/s
30 feet ³	cuft	X 2.8317 10 ⁻²	= m ³
31 bar	bar	X 1.0 10 ⁵	= Pa
32 torba	torba	X 3.1148 10 ⁻²	= m ³
33 feet ³ /torba	cuft/torba	X 3.1148 10 ⁻²	= m ³ /torba(verim)
34 Fahrenayt/100 feet	oF/100 ft	X 1.8 10 ¹	=mK/m

HAM PETROL

API
1 acre-foot
1 acre-foot

141.5/Özgül Ağırlık-131.5
7778 varil
43560 ft³

DOĞALGAZ

SCFD
1m³
6000 SCF
1 kw saat elektrik üretimi

Standart ft³/gün
35.32 ft³
1 varil hampetrol enerji eşdeğeri
0.31 m³/saat doğalgaz kullanımı

AKIŞ DÖNÜŞÜMLERİ

ÖRNEK: 100 US gal/min x 0.0631 liters/sec

	US gal/ dak	Imp gal/ min	US million gal/day	Cu ft per-sec (sec-ft)	Cu meters per hour	liters per sec	Barrels (42 gal) per min	Barrels (42 gal) per day
US gal/min	1	0.8327	0.00144	0.00223	0.2271	0.0631	0.0238	34.286
Imp gal/min	1.201	1	0.00173	0.002676	0.2727	0.0758	0.02859	41.176
US million gal/day	694.4	578.25	1	1.547	157.7	43.8	16.53	23810
Cu ft/sec	448.83	373.7	0.646	1	101.9	28.32	10.686	15388
Cu m/sec	15852	13200	22.83	35.35	3600	1000	377.4
Cu m/min	264.2	220	0.3804	0.5886	60.0	16.667	6.290	9058
Cu m/hr	4.403	3.67	0.00634	0.00982	1	0.2778	0.1048	151
Liters/sec	15.85	13.20	0.0228	0.0353	3.60	1	0.3773	543.3
Liters/min	0.2642	0.220	0.000380	0.000589	0.060	0.0176	0.00629	9.058
Bar.(42 gal)/min	42	34.97	0.0605	0.0937	9.538	265	1	1440
Bar.(42 gal)/day	0.0292	0.0243	0.000042	0.000065	0.00662	0.00184	0.00069	1

HACİM DÖNÜŞÜMLERİ

ÖRNEK:20 us gallons x 3.7854=75.508 liters

	US gallons	Imperial gallons	Cubic inches	Cubic feet	Liters	Cubic meters	Pounds	US tons	Kilo grams
Us gallons	1	0.8327	231	0.13368	3.7854	0.0037854	8338	0.00417	3.782
Imperial gallons	1.20094	1	277.39	0.16054	4.546	0.004546	10.0134	0.005	4.542
Cubic inches	0.004329	0.003605	1	0.0005787	0.016387	0.000016387	0.036095	55409	0.016372
Cubic feet	7.48052	6.229	1728	1	28.317	0.02832	62.3714	0.03119	28.291
Liters	0.2642	0.2200	61.024	0.035315	1	0.001	22029	0.0011	0.1000
Cubic meters	264.2	220.0	61024	35.315	1000	1	2202.65	1.10133	1000.0
Pounds*	0.1199	0.09987	27.71	0.016033	0.4539	0.00454	1	0.0005	0.45359
US tons*	239.87	199.7	55409	32.066	907.9	0.908	2000	1	907.2
Kilograms	0.2644	0.2202	61.08	0.03534	1.000	0.001	2.205	0.0011	1

Değişik endüstrilerde varil kapasiteleri değişmektedir. Mesala

1 Varil (bbl) Bira = 31 US galon (gallon) 1 Varil(bbl) Şarap = 31 US galon

1 Varil petrol =42 US galon 1 varil(bbl) Viski= 45 US galon

DRUM= Spesifikasyonlara göre hazırlanıp 2 1/2 galondan 55 galona kadar değişen kapasitelerde mevcuttur.

En çok kullanılan 5 galon ve 55 galon kapasiteli durum'lardır.

İNGİLİZ BİRİMLERİNİN METRİK BİRMLERE DÖNÜŞÜMÜ

Debi	1 gal (CAN) / dk	X 0.0046 m ³ /dk / gal/dk	= 0.0046 m ³ /dk
	1 gal (US) / dk	X 0.00379 m ³ /dk / gal/dk	= 0.00379 m ³ /dk
	1 bbl /dk	X 0.1590 m ³ /dk / bbl/dk	= 0.1590 m ³ /dk
Yoğunluk (Çamur ağırlığı)	1 lb (CAN) / gal	X 99.79 kg/m ³ / lb/gal	= 99.79 kg/m ³
	1 lb (US) / gal	X 119.83 kg/m ³ / lb/gal	= 119.83 kg/m ³
	1 lb (US) / bbl	X 119.83 kg/m ³ / lb/bbl	= 2.853 kg/m ³
Lineer yoğunluk	1 lb /ft	X 1.489 kg/m / lb/ft	= 1.489 kg/m

Viskozite	1 sn / qt (US)	X 1.057 sn/lt / sn/qt	= 1.057 sn/lt
PV	1 centipoise	X 1 mP/sn / centipoise	= 1 mPa's
YP	1 lb / 100 _{ft} 2	X 0.4788 Pa / lb/100 _{ft} 2	= 0.4788 Pa
Jel Mukavemeti	1 lb / 100 _{ft} 2	X 0.4788 Pa / lb/100 _{ft} 2	= 0.4788 Pa
Anülüs hızı	1 ft/dk	X 0.3048 m/dk / ft/dk	= 0.3048 m/dk
Halat	1 ton-mil	X 14.317 mjul / t-mil	= 14.317 MJ
Kuvvet	1 lb	X 0.445 deca-newtons/lb	= 0.445 daN
Su ilavesi	1 bbl(42 US gal)	X 0.1589 _{m3} /bbl	= 0.1589 _{m3}
GOR	1 _{ft} 3 gaz / bbl petrol	X 0.177	= 0.177 _{m3} / _{m3}

İNGİLİZ VE AMERİKAN BİRİMLERİNİN DÖNÜŞÜMÜ DEĞER

BİRİMLER	SEMBOL	GÖRELİ	METRİK
UZUNLUK			metre
inch	in	-	0.02540
foot	ft	12 in	0.30479
yard	yd	3 ft	0.91438
fathom	-	2 yd	1.82876
Mile(kara)		1760 yd	1609.3149
Mile(deniz)		2029 yd	1853.1232
ALAN			metrekare
inchkare	in ²	-	0.00064513
feetkare	ft ²	144 in ²	0.0928997
Acre	-	4840 yd ²	4046.81
Milekare(kara)	mi ²	640 acr	259.0 ha
HACİM			metreküp
inchküp	in ³		0.000016386
feetküp	ft ³	1728 in ³	0.02831531
KAPASİTE			Litre
Galon(US)	gal(US)		3.785
Varil petrol	bbl	42 gal	158.98
KÜTLE			kilogram
once	oz		0.02835
libre	lb	16 oz	0.45359
Ton(kısaton)	shtn	2000 lbs	907.1853

ÖNEMLİ SABİTLER

Hava Yoğunluğu (60 oF-14.6 psia)	0.0764	lb/ _{ft} 3
Normal atmosfer basıncı (76 mm Hg)	14.691	psi
Yer çekimi (980.665 cm/ _{sn} 2)	32.174	ft/ _{sn} 2
Bir beygir gücü (hP)	550.00	lb ft/ _{sn}
İngiliz termal birimi (Btu)	778.20	lb
Suyun yoğunluğu (4 oC)	62.43	lb/ _{ft} 3
Suyun yoğunluğu (4 oC)	8.345	lbf/gal

API DERECESİNE GÖRE TON-VARİL ÇEVİRİM TABLOSU

API FAKTÖRÜ	ÖZGÜL AĞIRLIK (GR/CCC)	TON/VARİL	API FAKTÖRÜ	ÖZGÜL AĞIRLIK (GR/CCC)	TON/VARİL
10	1.000	0.1590	26	0.898	0.1428
11	0.993	0.1579	27	0.893	0.1419
12	0.986	0.1568	28	0.887	0.1410
13	0.979	0.1557	29	0.882	0.1402
14	0.973	0.1546	30	0.876	0.1393
15	0.966	0.1536	31	0.871	0.1384
16	0.959	0.1525	32	0.865	0.1376
17	0.953	0.1515	33	0.860	0.1368
18	0.946	0.1505	34	0.855	0.1359
19	0.940	0.1495	35	0.850	0.1351
20	0.934	0.1485	36	0.845	0.1343
21	0.928	0.1475	37	0.840	0.1335
22	0.922	0.1466	38	0.835	0.1327
23	0.916	0.1456	39	0.830	0.1319
24	0.910	0.1447	40	0.825	0.1312
25	0.904	0.1437			

KATI MADDE KONTROLÜ İLE İLGİLİ ÇEVİRİMLER

Ağırlık (lb/gal)	8.6 lb/gal	X 120 kg/m ³ / lb/gal	= 1032.04 kg/m ³
Debi (GPM)	2 gal/dk	X 0.00378 m ³ /dk / gal/dk	=0.00756 m ³ /dk
Pompa basıncı	2200 lbs/in ²	X 6.895 kPa/1 lb/in ²	= 15200 kPa
Anülüs hızı	145 ft/dk	X 0.3048 m/dk/1 ft/dk	= 44.19 m/dk

POMPA İLE İLGİLİ ÇEVİRİMLER

Gömlek çapı	5 1/2 in	X 2.54 mm/in	= 139.7 mm
Gömlek boyu	12 in	X 2.54 mm/in	=304.8 mm
Ağırlık	40000 lbs	X 0.445 daN/1 lb	= 17800 daN
Hidrostatik basınç (İngiliz birim)	çamur ağı.(ppg) 9.0	X derinlik(ft)x0.052 X 10000x0.052	= 4680 psi g
Hidrostatik basınç (metrik birim)	çamur ağı.(kg/m ³) 1078.44	X derinlik(m)/100 X 3048/100	= 32870 kPa

POMPA VE HİDROLİK PARAMETRELERİ

Gömlek çapı, rot çapı	in	X 25.4	= (milimetre) mm
Debi	gal/dk	X 0.00379	= (metreküp/dak) m ³ /dk
Pompa basıncı	lb/in ²	X 6.894	= (kilopaskal) kPa
Çamur hacmi	bbl(US)	X 0.159	= (metreküp) m ³
Çamur ağırlığı	lb/pal(US)	X 119.8	= (kilogram/metreküp) kg/m ³
Ann, dp, kapasitesi	bbl/ft	X 0.5216	= (metreküp/m) m ³ /m
Yoğunluk	Ibs/ft ³	X 16.02	=(kilogram/metreküp) kg/m ³
Basınç kaybı	psi/ft	X 22.62	= (kilopascal/metre) kPa/m

SICAKLIK DÖNÜŞÜMÜ

Santigrat	○	C+273.15	= (Kelvin)	○	K
Fahrenayt	○	F+459.69	= (Rankine)	○	R
Fahrenayt	○	F-32)/1.8	= (Santigrat)	○	C
Santigrat	○	1.8 °C+32	= (Fahrenayt)	○	F
Kelvin	○	R/1.8	= (Kelvin)	○	K