

Synopsis & Fact Sheet: PoC for DIVE

- **PoC: proof of concept**
- **DIVE: a decompression suite as a free-/shareware for:**
 - **dive / decompression planning with open system / SCUBA**
 - **bounce/jump/sprint dives in the TEC & recreational domain**
 - **saturation diving**
 - **custom models for:**
 - **diving at reduced ambient pressure, low water temperature**
 - **diving with high workload / oxygen consumption**
 - **C&R diving, Caisson- & tunnel work**

- For simple perfusion models like:
- Bühlmann, Hahn, USN, VVAL, MT92, ...
- no GUI (*), only robust CLI (**), MS Windows:
- “click & run” (no installation required)
- flexible Service Engine in stable FORTRAN77:

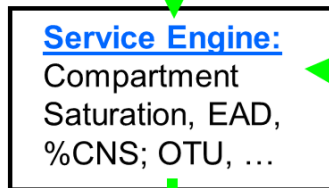
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DIVE Version 3:

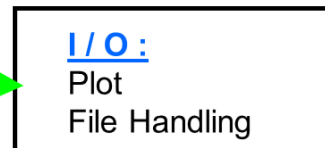
a dive simulation and decompression learning tool

Parameters:

multi-level depth, time, gas mix, respiratory quotient,
ascent procedures: deep stops & ascent rates, last stop depth
surface intervall, initial air pressure, SAC, table corrections,
gradient factors: GF Hi / Lo, water-temperature & -density ...



prognosis / simulations: PMRC, R/L Shunt,
oxygen correction, asymmetric desaturation, security
surcharges, accelerated deco, P(DCS) , temperature
adaption, O₂-consumption / workload,
U.S. Navy Simulators, RGBM simulation, ...



show, protocol,
read/write of ASCII files,
run-times & log file,
time-to-flight,
desaturation time,
NDL tables,
NDL repetitive dives,
Expert Mode:
N₂ & He-Coefficients,
VGM, ...

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Topic	DOI	Ref.
Heliox Jump Dive	10.13140/RG.2.2.24608.20482/1	[2]
MT92 comparison	10.13140/RG.2.2.34271.38567	[3]
DCIEM, USN comparison	10.13140/RG.2.2.28277.40169	[4]
DGUV40 comparison	10.13140/RG.2.2.10079.28324	[5]
Yo-Yo / fish farming	10.13140/RG.2.2.15432.75522	[6]
P(DCS) models compared	10.13140/RG.2.2.17249.74084	[7]
SAA „deep stop“ table	10.13140/RG.2.2.24738.04800	[8]
Comparison with COMEX	10.13140/RG.2.2.10536.39685	[9]

References (1):

- [1] the SubMarineConsulting Group (1991) DIVE: a decompression suite;
- [2] Salm, Albi (2020) ZH-L 12 : Validation of an old (1982) experimental Heliox jump dive (30 m, 120 min)
DOI: 10.13140/RG.2.2.24608.20482/1
- [3] Salm, Albi (2021) The mapping of a french air diving table (MT92) to a standard Haldane- / Workman- /Schreiner-algorithm
DOI: 10.13140/RG.2.2.34271.38567
- [4] Salm, Albi (2020) Comparison of the air-diving tables ZH-86 and DCIEM with DGUV40 & DIVE V 3_09
DOI: 10.13140/RG.2.2.28277.40169
- [5] Salm, Albi (2020) Is the DGUV40 adequate for underwater-"work"?
DOI: 10.13140/RG.2.2.10079.28324

References (2):

[6] Salm, Albi (2020) On the theoretical evaluation of one yo-yo diving profile on air for fish-farming

DOI: 10.13140/RG.2.2.15432.75522

[7] Salm, Albi (2020) On the statistical probability of contracting a decompression sickness after a single scuba dive on air within a no-decompression-limit

DOI: 10.13140/RG.2.2.17249.74084

[8] Salm, Albi (2020) A „deep stop“ table for recreational dives on air: Debunked!

DOI: 10.13140/RG.2.2.24738.04800

[9] Salm, Albi (2020) Adaption of a COMEX procedure for recreational bounce dives on air

DOI: 10.13140/RG.2.2.10536.39685

Bonus Material: Source for DIVE Version 3_09

SUB
MARINE
CONSULTING

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Download free of charge:

→ DIVE V 3_09

(https://www.divetable.info/DIVE_V3/index.htm)

→ and the german manual

https://www.divetable.info/DIVE_V3/DOXV3_0.pdf

The release train for

→ the english version (V3_04) is somewhat slower ...

DIVE V 3_09 is not compatible with all older versions!

https://www.divetable.info/DIVE_V3/V3e/index.htm

Continuous development of DIVE:

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- „Alive & kickin‘ ...“ since 1991
- continuous development after latest news from
- Diving & Hyperbaric Medicine (DHM Journal); and:
- ASM UHMS (annual scientific meeting of the UHMS)
- the latest DIVE Version for beta testing is always staged there:

<https://www.divetable.info/beta/index.htm>

along with information on

- production date
- size in bytes
- new features
- bugs fixed
- checksums for verifying the download.
- (Microsoft 64 Bit Windows 7 or higher required)