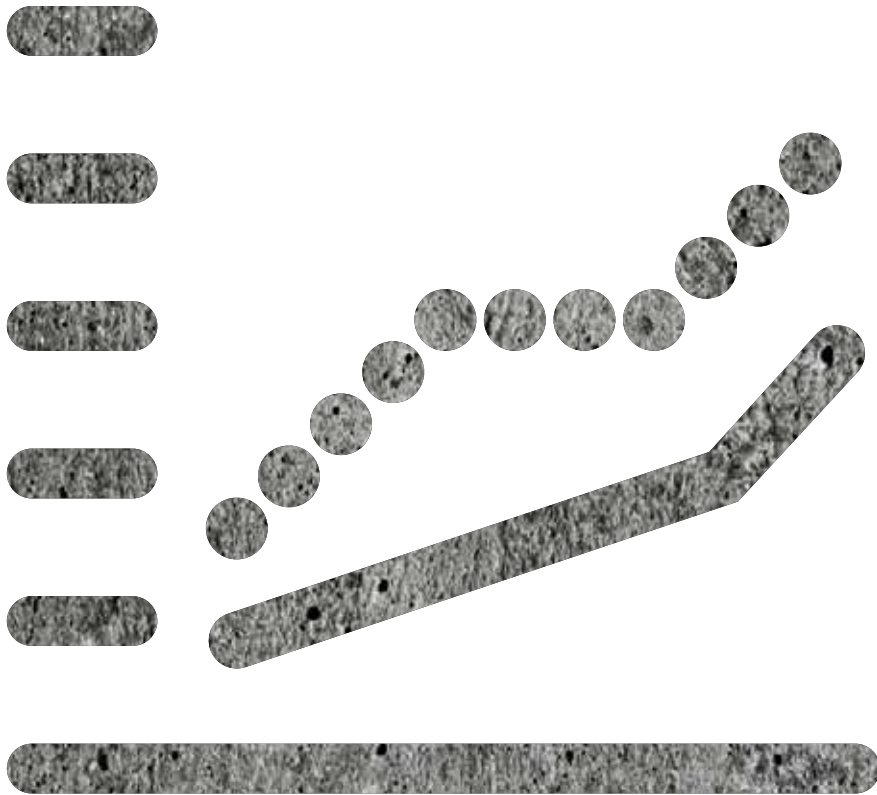


# DornerLaboratory



## SECURE VERIFICATION



CONTROL



DISPATCHING



**LABORATORY**



BRM



INVOICING



FOCUS



DATA PORTAL



## Professional quality management

**Mix Design**

Client: Laboratory Steiner  
Plant: Gravel- and Concrete Plant Jame  
Mix Design: 15343  
Description: C25/30 XC4 XF1 XA1 F4 32  
Grading Curve: 032 B  
Aggregate 0/32 Type B

Calculation | Grading Curve | Details | Concrete producer | Concr. Code | Remark

Wetland values | Dry Values | Prices

Calculation for	1,00	m <sup>3</sup>	Aggregate	1834	kg/m <sup>3</sup>	Fines 0,125	365	kg/m <sup>3</sup>
Content of air	1,10	%	Aggregate (dry)	1812	kg/m <sup>3</sup>	Fines (0,25)	412	kg/m <sup>3</sup>
Moisture cont...	189	kg/m <sup>3</sup>	Surface moisture	22	kg/m <sup>3</sup>	Mortar content	474	l/m <sup>3</sup>
Cement content	300	kg/m <sup>3</sup>	Added water	177	kg/m <sup>3</sup>	Cement paste	290	l/m <sup>3</sup>
Admixture	0,6	l/m <sup>3</sup>				Water/cemen...	0,63	
Fines in recy. wa...	10	kg/m <sup>3</sup>	Density (fresh concr.)	2351	kg/m <sup>3</sup>	w/c(eq)	0,60	
						Internal moist...	11,0	kg/m <sup>3</sup>

k-value	Density kg/dm <sup>3</sup>	Volume dm <sup>3</sup>	Content kg/m <sup>3</sup>	Moisture %	Water kg/m <sup>3</sup>	Solid kg/m <sup>3</sup>
	2,453	88,9	218	0	0	218
	2,680	104,0	242	10,0	22	220
	2,680	129,9	348	0	0	348
	2,680	191,4	513	0	0	513
	2,680	191,4	513	0	0	513
	3,200	93,8	300			300
	1,000	72,5	73		73	0,0
	1,050	99,0	104		95	10
0,40	2,300	17,4	40,0			40,0
	1,070	0,6	0,60	(100,0)	(0)	0,60
	0,000	0,0				

Material	Description	Producer	Quantity	Unit
10	Sand 0/2	Tbw	13,0	%
10110	Sand 0/4	Gravel- and Concrete Plant	12,0	%
10210	Gravel 4/8	Gravel- and Concrete Plant	19,0	%
10310	Gravel 8/16	Gravel- and Concrete Plant	28,0	%
10410	Gravel 16/32	Gravel- and Concrete Plant	28,0	%
20120	CEM II/B-T 32,5 R	Cement Complete Ltd.	300	kg
30130	Fresh Water	General Water Supply	189	kg
30230	Residual Flow	General Water Supply	50,0	%
50140	Flue Ash	Abm Ltd.	40,0	kg
40140	Plasticizer	Construction Chemistry Ltd.	0,20	%
			0	

OK Cancel Save

### Mix-design development

Straightforward operation means decision-makers and laboratory technicians can perform their core tasks such as development of mix designs and quality control with the maximum of efficiency.

### Founded on quality

DornerLaboratory meets all the requirements of a modern laboratory facility. It forms a link between the business-management systems (ERP) and the planning/production level.

- 12.000.000 m<sup>3</sup> concrete per year
- 400 interfaces to mixing plants

## Application Service Providing

DornerLaboratory is used site-independently via the internet. The programs are not installed locally, but run on the hardware of a highly professional data centre where software and data is managed, backed up at frequent intervals and protected from unauthorised access. Updates are imported and are immediately available to every laboratory technician.

The ASP model makes costs easy to manage: no investment, no laborious installation at your workplace and you only pay for the time you use the program. Updates and support are included in the licence.

for long-term customer satisfaction

The screenshot displays the 'Concrete Test' software interface. The main window is titled 'Concrete Test' and features a menu bar, a toolbar, and a sidebar with various test parameters. The main area is divided into several sections:

- Client Information:** Client: Laboratory Steiner (M530), Concrete test No.: D040304.2, Created at: 03.04.2009, Test method: Test of Conformity, Project No.: 09/001547, Initiator: 22, Gravel & Concrete Ltd.
- Concrete producer:** OBA, Plant James, Concr. Code: 5333, C25/30 F3 32 XC4, XF1 XA1, Mix Design: 5333, C25/30 F3 32 XC4, X, Status: not started.
- Fresh concrete - specimen Table:**

Sample No.	Deliv. ticket No	Customer	Sampl. place	Production (date)	No. of specimen	New
1	100	High-Building Ltd	Plant	03.04.2009	1	Copy
2	101	High-Building Ltd	Plant	03.04.2009	1	Remove
3	102	High-Building Ltd	Plant	03.04.2009	1	Specimen
- Specimen/Test-standart:** Sample No. 1
- Test results:** Deliv. ticket No: 100, Sampl. place: Plant, Sampler: Simon Jones
- Characteristics:** Customer: 9523, High-Building Ltd, Cologne
- Grading Curve:** Client: Laboratory Steiner, Plant: Gravel and Concrete Plant James, Grading Curve: 032 B, Description: Aggregate 032 Type B. A table lists materials and their target percentages:

Material	Description	Producer	Target % (%)
10110	Sand 0/4	Thy	13,11
10110	Sand 0/4	Gravel and Concrete	12,0
10210	Gravel 0/8	Gravel and Concrete	19,0
10310	Gravel 8/16	Gravel and Concrete	26,11
10410	Gravel 16/32	Gravel and Concrete	20,0
			0,0
- Grading Curve Graph:** A line graph showing the grading curve and its limit grading curves. The x-axis represents particle size (mm) and the y-axis represents percentage passing. The graph includes curves for A32, #52, F32, F52, S52, and the actual grading curve for S52 GE 0/32 James. The total price is 57,05.

Raw and hardened concrete tests can be developed quickly, easily and in compliance with norms. A wide range of test certificates can be used for the documentation.

Visual representation of the grading curve and its limit grading curves ensures clear particle size distribution.

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### proof of identity-values list

**Conformity:** 120/EBR13, Mix Design R13  
**Plant:** Concrete Plant Jones  
**Period:** 24.01.2009 - 23.05.2009  
**proof of identity:** 1, First Production  
**Age of specimens:** 28 days  
**Mix Design:** R13, C25/30/B3/F45/GK22

No.	Product Date	Mix Design	Concr. Code	Test-Number	Sample	Binder cont.		Crit. OK	equiv. w/c- Ratio		Consistence		Content of air Vol-%	
						kg/m <sup>3</sup> Targ. val.	kg/m <sup>3</sup> Act. val.		Targ. val.	Act. val.				
1	24.01.09	R13	R13	09/00095	187/02	280	298	Yes	0,60	0,51				
2	05.02.09	R13	R13	09/00101	386/01	280	298	Yes	0,60	0,54				
3	07.02.09	R13	R13	09/00123	436/02	280	298	Yes	0,60	0,51				
4	08.02.09	R13	R13	09/00135	453/09	280	298	Yes	0,60	0,52				
5	12.02.09	R13	R13	09/00130	438/02	280	298	Yes	0,60	0,51				
6	15.02.09	R13	R13	09/00137	577/04	280	298	Yes	0,60	0,54				
7	19.02.09	R13	R13	09/00139	629,01	280	298	Yes	0,60	0,51				
8	20.02.09	R13	R13	09/00140	648/08	280	298	Yes	0,60	0,54				
9	27.02.09	R13	R13	09/00141	799/02	280	298	Yes	0,60	0,47				
10	28.02.09	R13	R13	09/00142	820/05	280	298	Yes	0,60	0,51				
11	14.03.09	R13	R13	09/00355	1056/02	280	298	Yes	0,60	0,56				
12	09.04.09	R13	R13	09/00155	993/02	280	298	Yes	0,60	0,54				
13	12.04.09	R13	R13	09/00247	998/01	280	298	Yes	0,60	0,49				
14	14.04.09	R13	R13	09/00389	1056/02	280	298	Yes	0,60	0,56				
15	23.05.09	R13	R13	09/00145	1226/01	280	298	Yes	0,60	0,54				

Number of test results:	15
Total criterion not complied :	0
Number in the tolerance range:	0
Acceptance Number by table 19a. or 19b pursuant EN 206	1
Conformity provided:	sorted ascending sorted asc

Consistency types: F(flow)-[mm];S(Slump)-[mm];v(VeBe)-[s];C(Compaction)  
No\*): Individual test results outside the limit deviation of EN 206 Table 17 or 18

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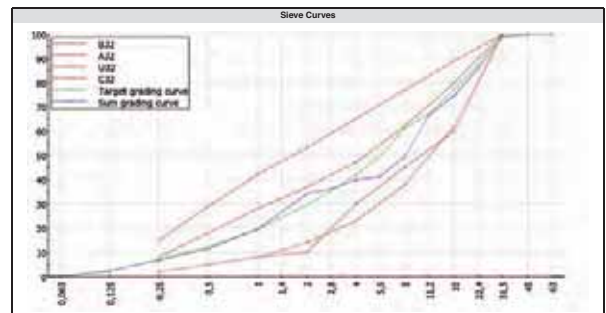
### Aggregate-test report

Test from: week 31/2010

Plant	Gravel- and Concrete Plant James	
Grading Curve	R 0/32	R 0/32 N

Agg.size (d/D)	Composition of grain groups													k-value	
	0,063	0,125	0,25	0,5	1	2	4	5,6	8	11,2	16	22,4	31,5		63
0/4	0,3	6,0	17,0	28,7	49,0	85,7	99,3	100,0	100,0	100,0	100,0	100,0	100,0	100,0	2,2
4/8	0,0	0,0	0,0	0,0	0,0	0,0	1,0	6,0	46,0	96,0	100,0	100,0	100,0	100,0	5,53
8/16	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	1,6	50,2	96,6	100,0	100,0	100,0	6,02
16/32	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,9	43,7	85,1	100,0	7,04	

Agg.size (d/D)	mm	share %	Calculation of the Grading Curve													k-value	
			0,063	0,125	0,25	0,5	1	2	4	5,6	8	11,2	16	22,4	31,5		63
0/4	40	0,1	2,4	6,8	11,5	19,8	34,3	39,7	40,0	40,0	40,0	40,0	40,0	40,0	40,0	2,2	
4/8	20	0,0	0,0	0,0	0,0	0,0	0,0	0,2	1,2	9,2	18,2	20,0	20,0	20,0	5,53		
8/16	15	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,2	7,5	14,5	15,0	15,0	15,0	6,02		
16/32	25	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,2	10,9	23,8	25,0	25,0	7,04		
Total %		100,0	0,1	2,4	6,8	11,5	19,8	34,3	39,9	41,2	49,4	66,7	74,7	85,9	98,8	100,0	4,65
desired grad. curve			0,3	2,3	7,0	12,4	19,7	29,5	41,7	49,6	61,3	67,1	77,4	87,3	99,8	100,0	4,51
Variation +/- % vom Soll			-0,2	0,1	-0,2	-0,9	-0,1	4,8	-1,8	-8,4	-11,9	-0,3	-2,6	-1,3	-1,0	0,0	



Heerbrugg, 03.08.2010

(Simon Jones)

## The benefits are clear

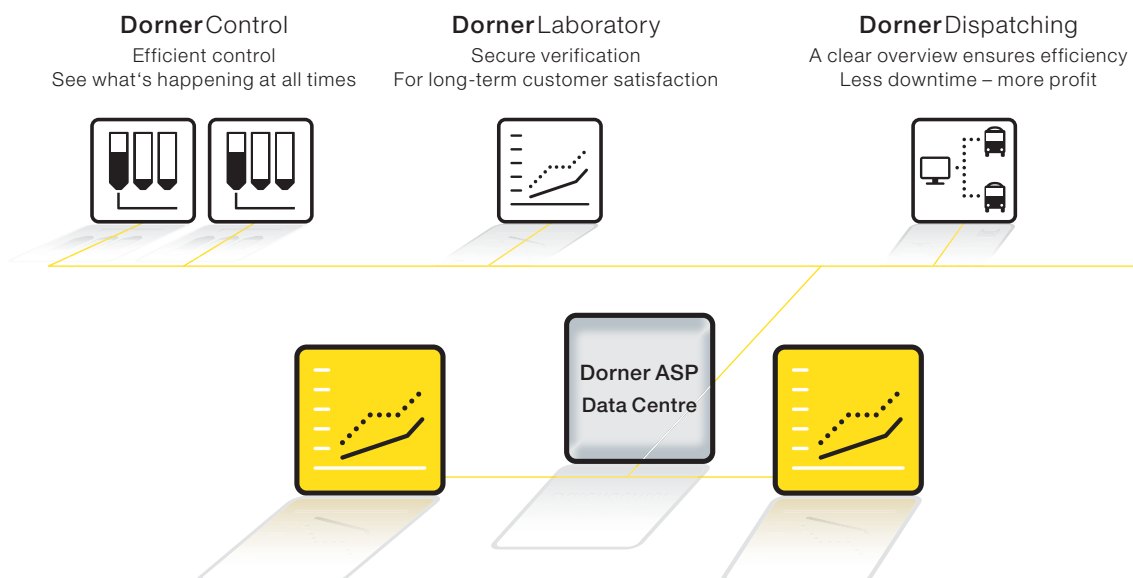
The laboratory program allows plant monitoring for gravel and concrete plants. The documents recognised as proof of conformity by the monitoring / certifying bodies are provided. 50 field-proven reports with a wide range of variants help with routine work.

## DornerLaboratory basic modules

- Address management for plants, suppliers, customers and construction sites
- Materials management for aggregates, water, cement, additives and admixtures
- Material exchange with cross-plant copying functions
- Material testing for aggregates
- Grading curve management, limit and target grading curves
- Mix designs and grades
- Management of relationship between grade and mix design
- Concrete grade indexes for individual construction sites
- Management of concrete families
- Raw and hardened concrete tests
- Allocation of actual production values to concrete tests
- Evaluation of concrete tests
- Testing lists
- Management of produced quantities
- Testing plan according to EN 206
- Conformity with EN 206 for Austria, Germany and Switzerland
- Batch and total batch reports
- Statistical analyses of raw material and concrete test results
- Connection of test equipment
- Interface to production (planning, mixing plant control)
- Automatic import of batch reports
- Archiving of batch reports

Dorner ASP has a partnership-based relationship with its customers. Highly precise knowledge of work processes enables companies to optimise their products in line with customer requirements. The user-friendliness of DornerLaboratory allows every user to focus on their core skills – from mix-design development to quality control.

Markus Durot, Managing Director Dorner ASP





## DornerSupport

DornerLaboratory is installed in a highly professional data centre where we take care of your data, ensure data backup and perform regular updates. We know what we're talking about. Individual advice and support is available from our specialists. Support and advice is provided by trained concrete specialists with many years' professional experience.

## DornerTraining

DornerLaboratory is easy and intuitive to operate. If you want to optimise your workflows or learn to use a new system, suitable practical workshops are available at our training centre. System users from different companies are trained together and exchange experiences in an open and communicative atmosphere. The personal contact between users and trainers guarantees long-term learning success.



## DornerIntegration

To ensure efficient work processes over the long term, data needs to be made available and distributed within the network. With our extensive experience, we can create interfaces that allow you to access specific information and avoid repeat entries.