

M+F Terminal Projects

Small Terminals

Company	Oiltanking Deutschland (former VTG / Tanquid)	TanQuid	BP	LUKOIL-BALTIJA	LUKOIL-BALTIJA	MOL	MOL
Terminal	Misburg	Duisburg	Nürnberg	Marijampole	Kedainiai	Komarom	Százhalombatta
Loading type	Rail Car	Barge	Truck			Barge	Truck (special gasoline)
Country	Germany	Germany	Germany	Lithuania	Lithuania	Hungary	Hungary
No. of TL Meter runs	1	1	1	4	4	4	1
No. of BL Meter runs							12
Flow Computer	x	x	x	x	x	x	x
Additive Injection	x	x		x	x	x	x
PLC				x	x		
Terminal automation system	COTAS	OPC	COTAS	COTAS base	COTAS base	COTAS	OPC
Operating System	Win XP	Win XP	Win 2003	Win XP Pro	Win 98	Win 2003 Server	
Card Reader		x	x			x	
Turn key		x					
Reconstruction or new	reconstruction	reconstruction	new	reconstruction	reconstruction	reconstruction	new
Year	2000	1999	2005	1998 / 2004	1998	1997	2003

M+F Terminal Projects

Small Terminals

Company	MOL	CZECH REFINERY	SLOVNAFT	PETROGAL	Fernleitungs-Betriebs- gesellschaft mbH (FBG)	FBG	FBG
Terminal	Algyö	Litvinov	Hrickov	Porto Brandao	Bitburg	Neuburg-Muna	Hohn
Loading type		Truck		Truck	Truck	Truck	Truck
Country	Hungary	Czech Republik	Slovakia	Portugal	Germany	Germany	Germany
No. of TL Meter runs	4	1	1	9	3	4	1
No. of BL Meter runs	4	4	4				
Flow Computer	x	x	x		x	x	x
Additive Injection	x	x	x	x			
PLC	x	x		x		0	0
Terminal automation system	COTAS	COTAS (TCL)	COTAS	COTAS (Unix)	COTAS base	COTAS base	COTAS base
Operating System	Win 2003 Server	WIN XP		UNIX	Win 98	Win XP	Win XP
Card Reader		x				0	0
Turn key						0	0
Reconstruction or new	reconstruction	reconstruction	reconstruction	reconstruction	new	reconstruction	reconstruction
Year	2006	1998	1998	1991	2000	2005	2005

Small Terminals

Company	OILTANKING Deutschland GmbH	ESSO AG	JUGOPETROL	LUKA PLOCE	Europoint	Tanklux	Tanklux
Terminal	Kassel	Flughafen Bremen	Smederevo	Ploce	Amsterdam	Lüttich	Malverde
Loading type	Truck	Truck	Barge	Truck		Truck	Truck
Country	Germany	Germany	Yugoslavia	Croatia	The Netherlands	Belgium	Luxembourg
No. of TL Meter runs		4	3	2	1		
No. of BL Meter runs	4			4	4		
Flow Computer	x	x	x	x	x	x	x
Additive Injection	x			x			
PLC			x	x			
Terminal automation system	COTAS base	COTAS base	COTAS	COTAS	COTAS base	COTAS base	COTAS base
Operating System	WIN NT	Win XP	NT	NT	Win 2000	Win XP	Win XP
Card Reader	x			x			
Turn key							
Reconstruction or new	reconstruction	new	reconstruction	reconstruction	new	new	new
Year	2001	2003	2000	2001	2002	2003	2003



Small Terminals

Company	SABIC (former DSM Polypropylene)	AVIA	Petrotank	Petrotank	Erik Walther	Lomo	NEW
Terminal	Gelsenkirchen	Weghorst	Marktredwitz	Köln	Aschaffenburg	Bad Hersfeld	Marl
Loading type	Silo Trucks	Truck	Truck	Truck	Truck	Truck	Truck
Country	Germany	Netherlands	Germany	Germany	Germany	Germany	Germany
No. of TL Meter runs	4				1	2	5
No. of BL Meter runs			4	4	4		
Flow Computer			x	x	x	x	x
Additive Injection	x		x	x	x		
PLC			x	x			
Terminal automation system	TIS	COTASbase	OPC	OPC	COTAS base	COTAS base	COTAS base
Operating System	Win NT	WINXP			Win NT	Win XP	Win 2000
Card Reader	x		x	x			
Turn key	x						
Reconstruction or new	reconstruction	new	reconstruction	reconstruction	reconstruction	reconstruction	new
Year	2000	2002	2000	2001	2002	2003	2001



Small Terminals

Company Bioölwerk Magdeburg Bioölwerk Magdeburg GEERETSBERG V.W. Günther ÖTAG Unser Lagerhaus Unser Lagerhaus

Terminal	Magdeburg	Magdeburg		Bebra	Osnabrück	Innsbruck	Klagenfurt
Loading type	Truck	Truck / Ship	Truck	Truck	Truck	Truck	Truck
Country	Germany	Germany	Belgium	Germany	Germany	Austria	Austria
No. of TL Meter runs	1	5		5	1	2	
No. of BL Meter runs	4				4		4
Flow Computer	x	x MFX_4		x	x	x	x
Additive Injection	x				x	x	x
PLC							x
Terminal automation system	COTAS	COTAS	COTAS	COTAS base	COTAS base	COTAS	COTAS
Operating System	Win 2003	Win 2003		Win 95	Win 95	Win XP	Win XP
Card Reader					x		
Turn key							
Reconstruction or new	new	new		new	new	new	new
Year	2002	2007		1998	1998	2003	2004



M+F Terminal Projects

Small Terminals

Company	Unser Lagerhaus	Petrotank	Petrotank	Petrotank	Petrotank	Petrotank	Petrotank
Terminal	Villach	Braunschweig	Hamm	Würzburg	Hildesheim	Hannover I+II	Osnabrück
Loading type	Truck	Truck	Truck	Truck	Truck	Truck	Truck
Country	Austria	Germany	Germany	Germany	Germany	Germany	Germany
No. of TL Meter runs	2	3	1	2	2	3	2
No. of BL Meter runs			4	4	4	4	4
Flow Computer	x	x	x	x	x	x	x
Additive Injection	x	x	x	x	x	x	x
PLC	x						
Terminal automation system	COTAS	OPC	OPC	OPC	OPC	OPC	OPC
Operating System	Win XP						
Card Reader		x	x	x	x	x	x
Turn key							
Reconstruction or new	new	reconstruction	reconstruction	reconstruction	new	update	reconstruction
Year	2007	2003	2003	2003	1997	2003	2003

M+F Terminal Projects

Small Terminals

Company	Petrotank	TANQUID (former PETROPLUS)	TANQUID (former PETROPLUS)	Petrotank (former TANQUID)	A. Präg GmbH	A. Präg GmbH	A. Präg GmbH
Terminal	Hannover III	Plochingen	Neuss II	Dortmund	Heidenau	Augsburg	Kempton
Loading type	Truck	Truck	Truck	Truck	Truck	Truck	Truck
Country	Germany	Germany	Germany	Germany	Germany	Germany	Germany
No. of TL Meter runs	4	3		1		1	3
No. of BL Meter runs	8	4	8	4	4	4	4
Flow Computer	x	x	x	x	x	x	x
Additive Injection	x	x	x	x	x	x	x
PLC	x	x (S7 + Win CC)					
Terminal automation system	COTAS	COTAS	COTAS	COTAS	COTAS	COTAS	COTAS base
Operating System	Win 2003 Server	Win 2003	Win 2003	Win 2003	Win XP Pro	Win XP	Win XP Pro
Card Reader	x	x	x	x			
Turn key							
Reconstruction or new	reconstruction	reconstruction	reconstruction	reconstruction	reconstruction	reconstruction	reconstruction
Year	2007	2000	2000	2000	2003 / 2006	2007	2003 / 2005

Small Terminals

Company	ADM Oelmühle	TLB (former GETA)	Pflipsen	Valentin Gas u. Öl GmbH	Rapsveredelung Mecklenburg GmbH	ADM Oelmühle	ADM Soya
Terminal	Hamburg	Berlin	Mönchengladbach	Mainz	Sternberg	Hamburg	Mainz
Loading type	Truck	Truck	Truck	Truck		Truck	Truck
Country	Germany	Germany	Germany	Germany	Germany	Germany	Germany
No. of TL Meter runs		1		5	1	2	
No. of BL Meter runs	1	4	4	4	4	6	8
Flow Computer	x	x	x	x	x	x	x
Additive Injection		x		x		MFX_4	MFX_4
PLC							x
Terminal automation system	COTAS base	COTAS base	COTAS base	COTAS base	x	TASC	TASC
Operating System	Win 2000	Win ME	Win 98	Win 95		Win XP	Win XP
Card Reader	x						
Turn key							
Reconstruction or new	new	new	new	new	new	new	new
Year	2001	2001	2000	1997	2006	2006	2006



M+F Terminal Projects

Small Terminals

Company	Shell Direct	Total Raffinerie Mitteldeutschland	Total Raffinerie Mitteldeutschland	Total Raffinerie Mitteldeutschland	Total Raffinerie Mitteldeutschland	Total Raffinerie Mitteldeutschland	Fertigent
Terminal	Erlangen	Spergau	Spergau, Track 2	Spergau, Track 3	Spergau, Track 4	Spergau, Track 80	Gent
Loading type	Truck	TKW	Rail car	Rail car	Rail car	Rail car	TKW
Country	Germany	Germany	Germany	Germany	Germany	Germany	Belgium
No. of TL Meter runs		1					3
No. of BL Meter runs	4						
Flow Computer	x MFX_4	x					x
Additive Injection	x	x	x	x	x		
PLC		WinCC	HIMA, InTouch	HIMA, InTouch	WIN CC	WIN CC	
Terminal automation system	COTAS	COTAS	COTAS	COTAS	COTAS	COTAS	COTAS
Operating System	Win XP	Win 2003 Server	WIN 2000	WIN 2000	WIN 2003	WIN 2003	Win 2003 Server
Card Reader		x					
Turn key		0					
Reconstruction or new	reconstruction	reconstruction	reconstruction	reconstruction	new	new	
Year	2007	2006	2001 / 2005	2001 / 2005	2008	2008	2006

Small Terminals

Company	Bundeswehr (german military)	Bundeswehr (german military)	Bundeswehr (german military)	Adolf Roth	Adolf Roth	Adolf Roth	Adolf Roth (former TANQUID)
Terminal	Niederstetten	Wittmundhafen West	Wittmundhafen Ost	Gießen, Europastrasse	Gießen, Gottl.-Daimler-Str.	Haiger, Kinzenbach	Frankfurt
Loading type	FTKW	FTKW	FTKW	Truck	Truck	Truck	Truck
Country	Germany	Germany	Germany	Germany	Germany	Germany	Germany
No. of TL Meter runs	2	2	2	3	2	3	4
No. of BL Meter runs				4			4
Flow Computer	x	x	x	x MFX_4	x MFX_4	x MFX_4	x MFX_4
Additive Injection				x			
PLC				S7 + WinCC	S7 + WinCC	S7 + WinCC	S7 + WinCC
Terminal automation system	COTAS base	COTAS base	COTAS base	COTAS	COTAS	COTAS	COTAS
Operating System	Win 2000	Win XP	Win XP	Win 2003	Win 2003	Win 2003	Win 2003
Card Reader	x	x	x	x	x	x	x
Turn key							
Reconstruction or new	reconstruction	reconstruction	reconstruction	reconstruction	reconstruction	reconstruction	reconstruction
Year	2003	2006	2006	2007	2006	2006	2008



M+F Terminal Projects

Small Terminals

Company	Choren Sunfuel	Prokon Nord Bio-Ethanol	Biopetrol Schwarzheide	Petrotank Blexen	
Terminal	Leuna	Stade	Schwarzheide	Blexen	
Loading type	Truck	Truck, Rail car	Truck, Rail car	Truck	
Country	Germany	Germany	Germany	Germany	
No. of TL Meter runs		3	2	2	
No. of BL Meter runs	3	2			
Flow Computer	x MFX_4	x MFX_4	x MFX_4		
Additive Injection					
PLC	S7	S7 + WinCC			
Terminal automation system	COTAS	COTAS	COTAS		
Operating System	Win 2003	Win 2003	Win XP		
Card Reader	x	x			
Turn key					
Reconstruction or new	new, pilot plant	new			
Year	2006 delivered	2008	2008	2008	
	2009 in operation				

Medium sized Terminals

Company	WALTHER	MOL	MOL	MOL	MOL	MOL	MOL
Terminal	Schweinfurt	Csepel	Komarom	Szajol	Tiszaújváros	Pécs	Székesfehérvár
Loading type	Truck	Truck	Truck	Truck	Truck	Truck	Truck
Country	Germany	Hungary	Hungary	Hungary	Hungary	Hungary	Hungary
No. of TL Meter runs	4	4	4	4	8	8	4
No. of BL Meter runs	5	8	8	8	8	8	8
Flow Computer	x	x	x	x	x	x	x
Additive Injection	x	x	x	x	x	x	x
PLC	x	x	x	x	x	x	x
Terminal automation system	COTAS	CCOTAS / LCOTAS	CCOTAS / LCOTAS	CCOTAS / LCOTAS	CCOTAS / LCOTAS	CCOTAS / LCOTAS	CCOTAS / LCOTAS
Operating System	Win 2003 Server	Win 2003 Server	Win 2003 Server	Win 2003 Server	Win 2003 Server	Win 2003 Server	Win 2003 Server
Card Reader		x	x	x	x	x	
Turn key		x	x	x	x		
Reconstruction or new	reconstruction	reconstruction	reconstruction	reconstruction	reconstruction	reconstruction	reconstruction
Year	1995 + 2008	1995 + 2006	1995 + 2006	1996 + 2006	1996 + 2006	1998 + 2006	2006



Medium sized Terminal:

Company	Salawatnefteorgsintez	OMV Deutschland	OMNI TANK	Shell Deutschland Oil GmbH	CEPRO	TanQuid (former IVG)	TanQuid (former IVG)
Terminal	Salawat	Burghausen	Speyer	Hamburg	Strelice	Silesia	Bremen
Loading type	Truck / Railcar	Truck / Rail Car	Truck	Barge		Truck	Truck / Bargeloading
Country	Russia	Germany	Germany	Germany	Czech Republic	Poland	Germany
No. of TL Meter runs	3	3	2	23	13	15	4
No. of BL Meter runs	8	12	16				8
Flow Computer	x	x	x	x	x	x	x
Additive Injection	x	x	x		x	x	x
PLC	x		x				
Terminal automation system	COTAS	OPC		COTAS		OPC	COTAS base
Operating System	Win 2003 Server			Win NT		Win NT	Win XP Pro
Card Reader			x		x	x	x
Turn key	x						
Reconstruction or new	new	reconstruction	reconstruction	reconstruction	reconstruction	new	reconstruction
Year	2006	2002	1994	1999	1996	2001	2000 / 2006



M+F Terminal Projects

Medium sized Terminal:

Company	GARANT	DUO	INA	TanQuid	TanQuid	PKN	Petrotank
Terminal	Wesel	Stettin	Sisak	Neuss I	Koblenz	Blachownia Slaska	Trier
Loading type	Truck	Truck	Truck	Truck	Truck	Truck	Truck
Country	Germany	Poland	Croatia	Germany	Germany	Poland	Germany
No. of TL Meter runs	3	4	8	3	2	2	2
No. of BL Meter runs	8	12	16	8	8	12	8
Flow Computer	x	x	x	x	x	x	x
Additive Injection	x	x	x	x	x	x	x
PLC			x			x	
Terminal automation system	x	x	COTAS (TCL)	COTAS	COTAS	COTAS	COTAS
Operating System	Win XP Pro	NT	Win 2000	Win 2003	Win 2003	Win NT	
Card Reader	x		x	x	x	x	x
Turn key			x			x	
Reconstruction or new	reconstruction	reconstruction	reconstruction	reconstruction	reconstruction	reconstruction	reconstruction
Year	2000	2000	2003	2000	2000	2001	2002



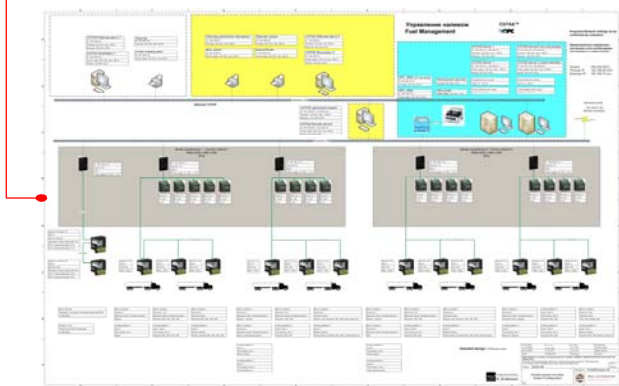
M+F Terminal Projects

Medium sized Terminal:

Company	FBG	BP	Lotos	OILTANKING Deutschland GmbH	SLOVNAFT	SLOVNAFT	SLOVNAFT
Terminal	Kehl / Kork	Kassel	Czechowice	Hamm	Bratislava	Kapusany	Klacany
Loading type	Railcar	Truck	Truck	Truck			
Country	Germany	Germany	Poland	Germany	Slovakian republic	Slovakian republic	Slovakian republic
No. of TL Meter runs	10	4	2		5	5	5
No. of BL Meter runs		10	9	8	12	12	12
Flow Computer	x	x	x MFX_4	x	x	x	x
Additive Injection	x	x	x	x	x	x	x
PLC		x			x	x	x
Terminal automation system	COTAS base	OPC	COTAS / OPC	OPC / TASC	CCotas / LCotas / OPC	CCotas / LCotas / OPC	CCotas / LCotas / OPC
Operating System	Win 2000		Win 2003 Server		Win 2003 Server	Win 2003 Server	Win 2003 Server
Card Reader		x	x	x	x	x	x
Turn key					x	x	x
Reconstruction or new	reconstruction	reconstruction	new	reconstruction	reconstruction	reconstruction	reconstruction
Year	2002	2004	2005	2005	1996 + 2006	2006	2006

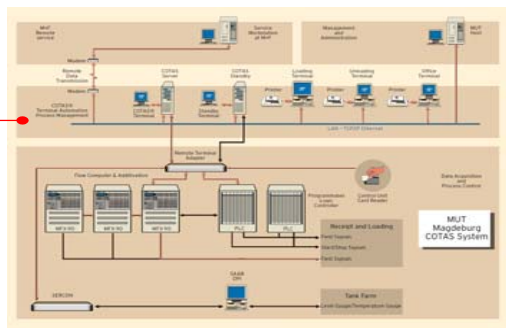
Medium sized Terminal:

Company	Petroplus	Banias Refinery	TANECO	MOL	MOL		
Terminal	Antwerpen	Banias	Nishnekamsk	Telegd	Korneuburg		
Loading type	Stock handling	Truck, Rail car	Truck	Truck	Truck / Inventory		
Country	Belgium	Syria	Russia	Romania	Austria		
No. of TL Meter runs		10	17				
No. of BL Meter runs			17				
Flow Computer		x MFX_4	x MFX_4	x MFX_4	x MFX_4		
Additive Injection	x				x		
PLC					x		
Terminal automation system	COTAS	COTAS	COTAS	COTAS	COTAS		
Operating System	Win 2003 Server	Win 2003 Server	Win 2003 Server	Win 2003 Server	Win 2003 Server		
Card Reader			x		x		
Turn key					x		
Reconstruction or new		new	new	reconstruction	reconstruction		
Year	2006	2007 2009 in operation	2008 2009 in operation	2008	2008		



Large Terminals

Company	CZECH REFINERY	MUT	MOL
Terminal	Kralupy	Magdeburg	Százhalombatta
Loading type	Truck	Truck, Rail Car, Barge	Truck
Country	Czech Republic	Germany	Hungary
No. of TL Meter runs	6	6	12 + 10 special gasoline
No. of BL Meter runs	16	16	16
Flow Computer	x	x	x x
Additive Injection	x	x	x
PLC	x		x
Terminal automation system	COTAS (TCL)	COTAS	COTAS
Operating System	Win NT	W2K	Win 2003 Server
Card Reader	x	x	x
Turn key	x		x
Reconstruction or new	reconstruction	new	new / reconstruction
Year	1994	1994	1994 / 2006



Large Terminals

Company	HELLENIC Petroleum	HELLENIC Petroleum
Terminal	Kalohori	Aspropyrgos
Loading type	Truck	Truck
Country	Greece	Greece
No. of TL Meter runs	14	17
No. of BL Meter runs	40	40
Flow Computer	x	x
Additive Injection	x	x
PLC	x	x
Terminal automation system	COTAS	COTAS
Operating System	Win NT	Win NT
Card Reader	x	x
Turn key	x	x
Reconstruction or new	reconstruction	reconstruction
Year	1999	1999



The Terminals in Kalohari and Aspropyrgos are the largest in the country and one of the very largest in whole Europe. Each of them are powered by a dual redundant LAN with more than 30 operator workstations. The traffic load is in total 1000 trucks per day.

M+F Terminal Projects

Large Terminals

Company	OMV Deutschland GmbH	PKN	Oiltanking	EKO	Bayernoil
Terminal	Feldkirchen	Ostrov	Karlsruhe	Thessaloniki	Vohburg
Loading type	Truck / Railcar	Truck	Truck	Truck	TKW / Railcar
Country	Germany	Poland	Germany	Greece	Germany
No. of TL Meter runs	7	5	11	12	8
No. of BL Meter runs	20	20	7	40	30
Flow Computer	x	x	x	x	x
Additive Injection	x	x	x	x	x
PLC			S7 + Win CC	x	
Terminal automation system	OPC	COTAS	OPC / TASC	COTAS	OPC / TASC
Operating System		Win NT		Win 2000	Win 2003 Server
Card Reader		x	x	x	
Turn key				x	
Reconstruction or new	reconstruction	new	reconstruction	reconstruction	reconstruction
Year	2001	2001	2003	2003	2005

Large Terminals

Company	PRIOFUELS	LBC	PETROGAL	PETROGAL	PETROGAL
Terminal	Aveiro	Tanquipor	Sines	Porto	Tanquisado / Setubal
Loading type	Truck	Truck		Truck	Truck
Country	Portugal	Portugal	Portugal	Portugal	Portugal
No. of TL Meter runs			7	30	2
No. of BL Meter runs	24	16	16	20	8
Flow Computer	x	x	x	x	x
Additive Injection	x	x	x	x	
PLC	x	x		x	x
Terminal automation system	COTAS	COTAS	COTAS	COTAS (Unix)	COTAS
Operating System	Win 2003 Server	Win 2003 Server	Win 2003 Server	UNIX	Win 2003 Server
Card Reader	x	x	x	x	x
Turn key	x			x	
Reconstruction or new	new	new	reconstruction	reconstruction	reconstruction
Year	2007	2008	1996 + 2009	1997	2009



The Porto Terminal of PETROGAL is the largest in the country and one of the very largest in the whole of Europe. It supplies the whole of Northern Portugal and also areas of Northern Spain. The traffic load is about 800 trucks per day.