



Adding value every day

VikingHolstein Cows sired by VikingGenetics bulls prepare you for an ever more competitive future, combining longevity and production like no other cows. We were the first to focus on important traits like fertility and udder health – a dedication to the farmers' best interest that has resulted in superior long-term profitability.

VikingGenetics is one of the leading AI companies in the world, covering three countries and export to well above 40 markets annually. VikingGenetics uses genomic selection to select the very highest bull calves and puts 175 Holstein bulls through progeny testing every year. The high participation in milk recording and the unique registration on health and fertility enable an effective selection for cows that are high-yielding and in the same time breed back and stay healthy. In short, our Viking cows give you more output, less trouble and more freedom.



Breed statistics

No. of cows	603,731
Milk, kg	9,477
Fat, kg	387
Fat, %	4.09
Protein, kg	319
Protein, %	3.37
Fat + Protein, kg	706

EBV 2005 +1530 kg Milk +84 kg Fat +67 kg Prot.









VH Grafit





HOL 253217 S B Goldwyn MGS Oman Justi MGGS BW Marshal KappaCasein AB



PRODUCTION TRAI	TS	NO.	OF DTRS	2483
Prod. index 126 Milk, kg 116 Protein, kg 124 Protein, % 109 Fat, kg 126 Fat, % 108 Growth 90	90	100	110	120
HEALTH TRAITS				
D 1. C .::: 44E				

HEALTH TRAITS				
Daughter fertility 115				
Calvings, Sire 106				
Calvings, maternal 104				
Udder health 101				
Other diseases 105				
Longevity 117				
Hoof health 106				
CONFORMATION TO AL	TC	NO OF D	TDC	1052
CONFORMATION TRAI	15	NO. OF D	IKS	1052

CONFORMATION TRAITS	NO. OF DTRS	1052
Body 122 Feet and legs 110 Udder 114		
Milking speed 100 Temperament 86		





EBV 2005 +2480 kg Milk +59 kg Fat +79 kg Prot.







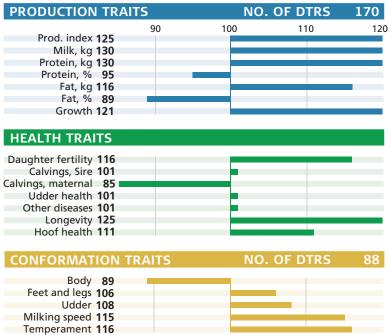
VH Op





HOL 253721
S D Onside
MGS S Jordan 3
MGGS VAR Calano
KappaCasein





VH Op
is sired by D Onside.
His daughters are smaller than average but they have very good milk production, nice udders and good feet and legs. Good fertility, milking speed and temperament makes very functional cows with good longevity.

EBV 2005 +1195 kg Milk +30 kg Fat +39 kg Prot.







VH Black





HOL 253186
S Bobas
MGS Oman Justi
MGGS RGK Bob CV
KappaCasein



PRODUCTION TRA	ITS	NO	. OF DTRS	1928
	90	100	110	120
Prod. index 108				
Milk, kg 110				
Protein, kg 110				
Protein, % 97				
Fat, kg 105				
Fat, % 95				
Growth 101				
HEALTH TRAITS				
Daughter fertility 129				
Calvings, Sire 104				
Calvings, maternal 113				
Udder health 116				
Other diseases 109				
Longevity 116				
Hoof health 101				
CONFORMATION 1	TRAITS	NO	. OF DTRS	765
Body 100				
Feet and legs 102				
Udder 100				
Milking speed 103				
Temperament 92				

VH Black
is an excellent example
of health and fertility: the
fertility index is 125 and all the
calving traits are positive. Udder
health index 114 shows that the
daughters have low somaticcell
count and much less
mastitisthan average.

EBV 2005

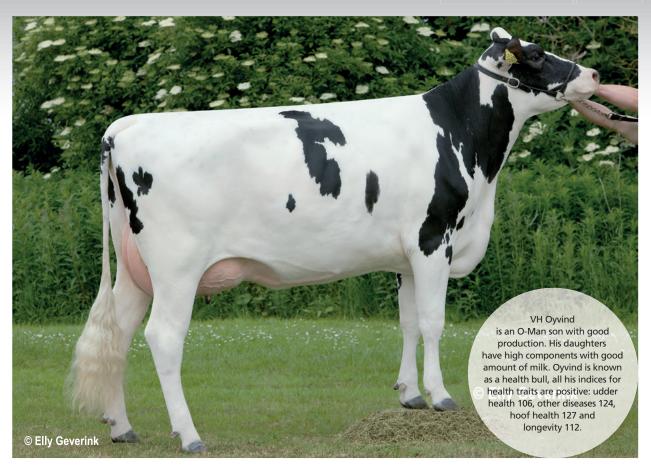
+446 kg Milk +65 kg Fat +44 kg Prot.







VH Oyvind





HOL 252791 S Oman Justi MGS V Exces MGGS RGK Bob CV KappaCasein BB



PRODUCTION TRAI	TS	NO. (OF DTRS	1626
Prod. index 117 Milk, kg 99 Protein, kg 112 Protein, % 121 Fat, kg 118 Fat, % 117 Growth 119	90	100	110	120
HEALTH TRAITS				
Daughter fertility 105 Calvings, Sire 100 Calvings, maternal 99 Udder health 107		-		

Udder nealth 107			
Other diseases 121			
Longevity 111			
Hoof health 125			
CONFORMATION T	RAITS	NO. OF DTRS	657
Body 104			
Body 104			
Body 104 Feet and legs 111 Udder 104			
Body 104 Feet and legs 111 Udder 104 Milking speed 107			
Body 104 Feet and legs 111 Udder 104			





EBV 2005 +1347 kg Milk +42 kg Fat +45 kg Prot.







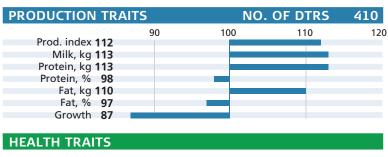
D Grove





HOL 251010
S V GroovyBL
MGS D Novalis
MGGS HJ Vogd
KappaCasein







Growth 87	
HEALTH TRAITS	
Daughter fertility 126 Calvings, Sire 106 Calvings, maternal 116 Udder health 105 Other diseases 114 Longevity 109 Hoof health 104	
CONFORMATION TRAITS	NO. OF DTRS 218
Body 92 Feet and legs 110 Udder 100 Milking speed 77 Temperament 107	

D Grove one of the highest ranking bulls in the breed based on daughters.
D Grove is already used as GenVikPLUS bull and now confirms his superiority also with daughters. Dam is an EX 90
D Novalis – the foundation of a family that brings in several top bulls.

EBV 2005

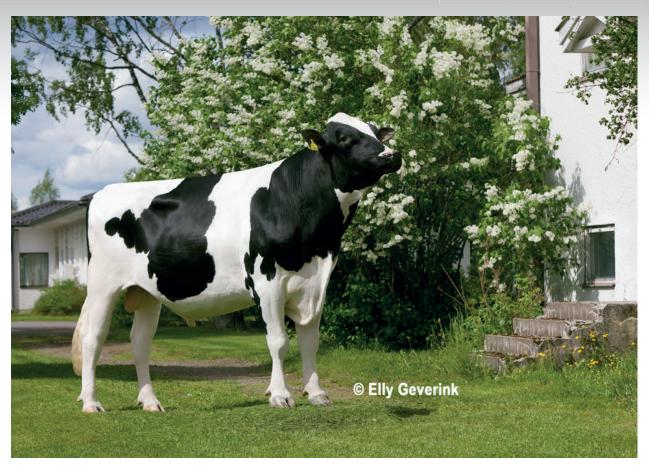
+993 kg Milk +47 kg Fat +43 kg Prot.







VH Rudolf





HOL 95209
S M.Rakuuna Tv
MGS Ramos
MGGS Trent Tv Mf

KannaCasein

KappaCasein				
PRODUCTION TRAITS	5	NO.	OF DTRS	323
Prod. index 113 Milk, kg 107 Protein, kg 112 Protein, % 105 Fat, kg 112 Fat, % 103 Growth 94	90	100	110	120
HEALTH TRAITS Daughter fertility 116 Calvings, Sire 104 Calvings, maternal 108 Udder health 100				
Other diseases 111 Longevity 114 Hoof health 113 CONFORMATION TR	AITS	NO.	OF DTRS	91
Body 92 Feet and legs 108 Udder 111 Milking speed 87 Temperament 93			-	

VH Rudolf
is the best of famous
Rakuuna sons. He is like his
sire, combination of good milk
production and high components,
excellent fertility and calving
traits and good conformation.
Together these mean of course
good longevity!

EBV 2005

+78 kg Milk +57 kg Fat +32 kg Prot.

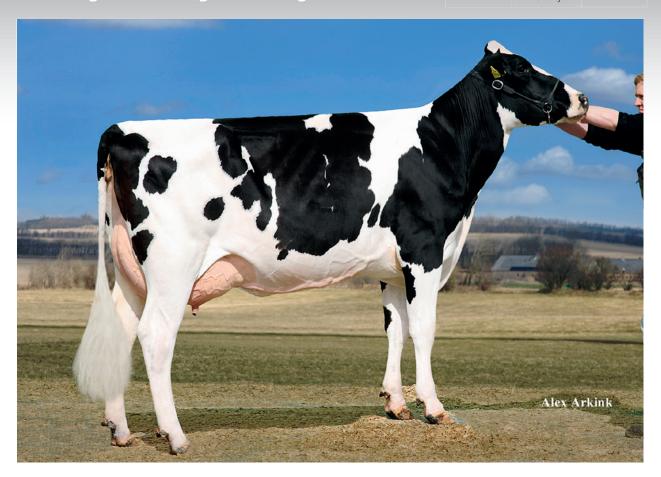








VH Salomon





HOL 253100 S D Sammy MGS Oman Justi MGGS Merdrignac KappaCasein BB



PRODUCTION TRA	ITS	NO.	OF DTRS	2657
Prod. index 113 Milk, kg 93 Protein, kg 106 Protein, % 122 Fat, kg 116 Fat, % 121 Growth 98	90	100	110	120
HEALTH TRAITS				
Daughter fertility 109 Calvings, Sire 105 Calvings, maternal 91 Udder health 107 Other diseases 114 Longevity 112 Hoof health 125				
CONFORMATION	TRAITS	NO.	OF DTRS	991
Body 107 Feet and legs 107 Udder 115 Milking speed 93 Temperament 101				•



VH Salomon is a D Sammy son. He has a strong cow family behind. The dam produced in 4.4 lactations 11.300 kg milk with 4.86 % of fat and 3.73 % of protein. The daughters of Salomon also have also very high components, they are fertile with good longevity.

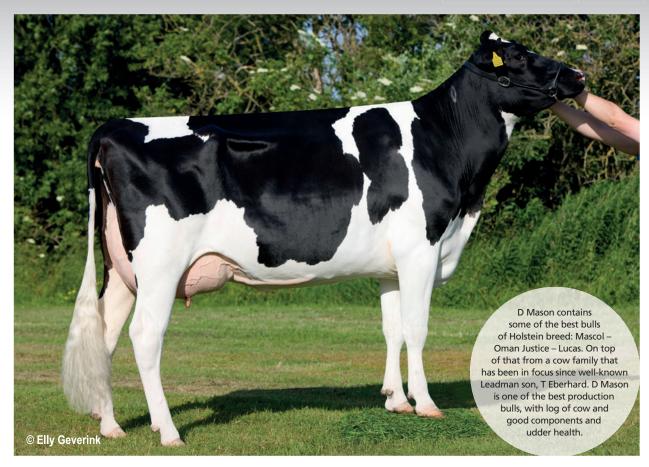
EBV 2005 +1498 kg Milk +68 kg Fat +55 kg Prot.







D Mason





HOL 251114
S Mascol
MGS Oman Justi
MGGS Lukas
KappaCasein AB



PRODUCTION TRAIN	ΓS	NO.	OF DTRS	988
	90	100	110	120
Prod. index 119				
Milk, kg 115				
Protein, kg 118				
Protein, % 101				
Fat, kg 120				
Fat, % 103				
Growth 103				
HEALTH TRAITS				
Daughter fertility 98				
Calvings, Sire 91		_		
Calvings, maternal 107				
Udder health 110				
Other diseases 119				
Longevity 114				
Hoof health 108				
CONFORMATION TO	RAITS	NO.	OF DTRS	334
Body 93				
Feet and legs 117				
Udder 99				
Milking speed 101				
Temperament 96				





EBV 2005 +441 kg Milk +25 kg Fat +41 kg Prot.

VH Basten





HOL 253139
S D Banker
MGS T Lambada
MGGS T Funkis
KappaCasein



PRODUCTION TRA	ITS	NO.	OF DTRS	216
Prod. index 110 Milk, kg 99 Protein, kg 111 Protein, % 120 Fat, kg 103	90	100	110	120
Fat, % 104 Growth 93		_		



Fat, % 104	
Growth 93	
Glowall 33	
HEALTH TRAITS	
Daughter fertility 112	
Calvings, Sire 100	
Calvings, maternal 108	
Udder health 104	
Other diseases 108	
Longevity 112	
Hoof health 107	
nooi nealth 107	
CONFORMATION TRAITS	NO. OF DTRS 139
COM ORMATION TRAITS	HOI OI DING 137
Body 111	
Feet and legs 100	
Udder 124	
Milking speed 93	
Temperament 104	

VH Basten
is the best D Banker son.
The dam – a T Lambada cow
with 7.4 years production with
an average of almost 12,000 kg
milk and classified VG87. Essential
traits like components, female
fertility, udder health and calving
ease are all positive and at the
same time conformation is
excellent!

NTM +21 (%)×VIK

EBV 2005 +1084 kg Milk



+43 kg Fat +53 kg Prot.







VH Max





Udder **101** Milking speed 92 Temperament 92

HOL 253419 S Mascol MGS Oman Justi MGGS Luxemburg

KappaCasein **PRODUCTION TRAITS** NO. OF DTRS 110 Prod. index 116 Milk, kg 109 Protein, kg 117 Protein, % 111 Fat, kg 110 Fat, % 101 Growth 105 **HEALTH TRAITS** Daughter fertility 107 Calvings, Sire 97 Calvings, maternal 96 Udder health 110 Other diseases 116 Longevity 107 Hoof health 115 NO. OF DTRS Body 108 Feet and legs 110

VH Max is a Mascol son out of an O-Man dam. The daughters of the bull are very productive, both milk production and components are high. The daughters have good health and longevity. Good all-round bull without faults.

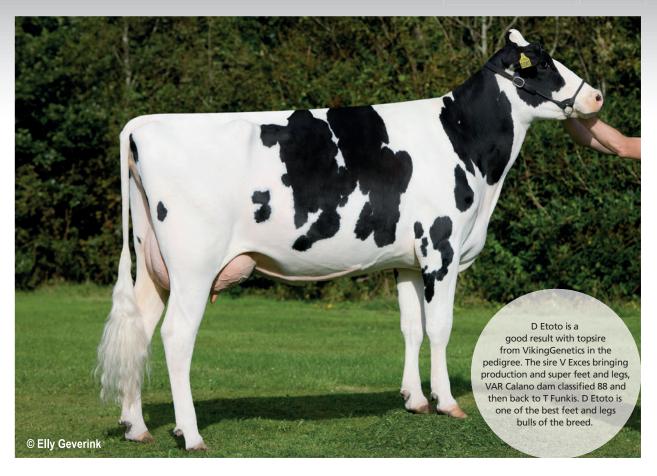
EBV 2005 +1423 kg Milk +23 kg Fat +59 kg Prot.







D Etoto





HOL 250027 S V Exces MGS VAR Calano MGGS T Funkis KappaCasein



PRODUCTION TRA	ITS	NO	OF DTRS	8939
B 1: 1 444	90	100	110	120
Prod. index 114				
Milk, kg 114				
Protein, kg 120				
Protein, % 106				
Fat, kg 102				
Fat, % 90				
Growth 88				



HEALTH TRAITS			
Daughter fertility 110 Calvings, Sire 111 Calvings, maternal 110 Udder health 96 Other diseases 112 Longevity 109 Hoof health 100	-	Ŧ	

HEALTH TRAITS
Daughter fertility 110 Calvings, Sire 111 Calvings, maternal 110 Udder health 96 Other diseases 112 Longevity 109 Hoof health 100
CONFORMATION TRAITS NO. OF DTRS 3107
Body 88 Feet and legs 127 Udder 101 Milking speed 104

© Elly Geverink

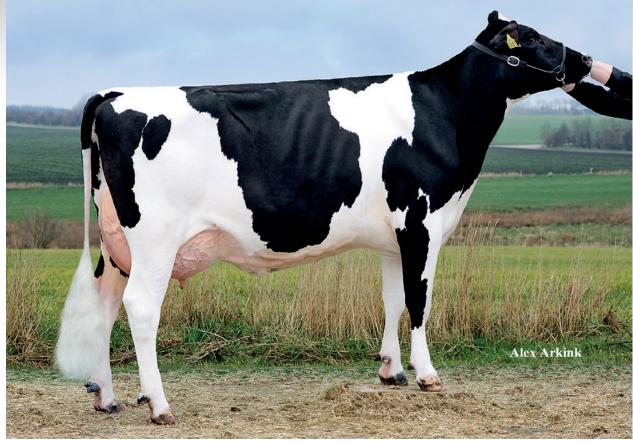
EBV 2005 +2825 kg Milk +46 kg Fat +75 kg Prot.







VH Cadiz





Feet and legs 91 Udder 107 Milking speed 102 Temperament 101

HOL 253356
S D Cole
MGS S Jordan 3
MGGS S Morty
KappaCasein



PRODUCTION TRAI	TS	NO.	OF DTRS	699
Prod. index 120 Milk, kg 136 Protein, kg 128 Protein, % 85 Fat, kg 112 Fat, % 82 Growth 105	90	100	110	120
HEALTH TRAITS				
Daughter fertility 106				



HEALIH IKAIIS		
Daughter fertility 106 Calvings, Sire 103 Calvings, maternal 110 Udder health 92 Other diseases 93 Longevity 113 Hoof health 120		
CONFORMATION TRAITS	NO. OF DTRS	265
Body 110		

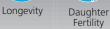
VH Cadiz
has an outcross pedigree:
you cannot find a pedigree
with D Cole as a sire and S Jordan
as a MGS! Lot of milk, lot of protein
and fat. Good for heifers, too.
Notice these: hoof health 120,
milking speed 105 and
longevity 113!

NTM +19 (0)X-VIK



EBV 2005 +629 kg Milk +43 kg Fat +29 kg Prot.











HOL 250354 S P Shottle MGS T Funkis MGGS VE Otto KappaCasein AA



PRODUCTION TRAI	TS	NO.	OF DTRS	5630
Prod. index 108 Milk, kg 102 Protein, kg 105 Protein, % 104 Fat, kg 110 Fat, % 107 Growth 113	90	100	110	120



diowai 113	
HEALTH TRAITS	
Daughter fertility 111 Calvings, Sire 106 Calvings, maternal 108 Udder health 104 Other diseases 113 Longevity 120 Hoof health 120	
CONFORMATION TRAITS	NO. OF DTRS 2071

CONFORMATION TRA	AITS	NO. OF DTRS	2071
Body 100			
Feet and legs 107			
Udder 99 Milking speed 90	_		
Temperament 101			
·			



S Ross

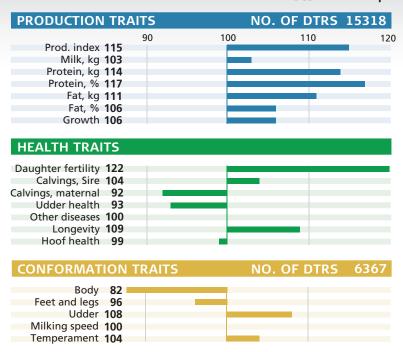








HOL 48202 S Chassee MGS T Funkis MGGS Häradsköp





time adding a lot of production. The dam of S Ross, a

after 5 calvings, producing 58 tons in total.

long-living T Funkis cow, calving interval of 11.5 month

EBV 2005 +214 kg Milk +8 kg Fat / +23 kg Prot.

NTM/+17

VH Strong

Temperament 104



HOL 253208 S Stol Joc MGS Oman Justi MGGS D L Aaron

PRODUCTION TRAITS	NO. OF DTRS 210
90 Prod. index 118 Milk, kg 104 Protein, kg 118 Protein, % 121 Fat, kg 112 Fat, % 106 Growth 117	100 110 120
Daughter fertility 94 Calvings, Sire 105 Calvings, maternal 93 Udder health 109 Other diseases 102 Longevity 95 Hoof health 101	
Body 116 Feet and legs 98 Udder 107 Milking speed 106	NO. OF DTRS 146



VH Strong originates from the German family Genua - the dam of VH Strong is Tir-An Oman Geneve (VG86). A production level at 120. He breeds powerful and robust animals that will create profit for the farmer!

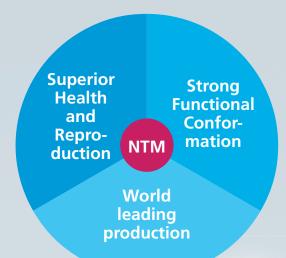
Look beyond the horizon

VikingGenetics is in the frontline breeding healthy cows



The best cows are almost has be

Choose NTM – Nordic Total Merit – for maximum production and minimum of problems. Then profit comes naturally!







Viking Top 10 – make your choice!

NTM	
VH Boogie	38
VH Reynold	37
VH Miracle	36
VH Ponder	36
VH Clement	36
VH Mandel	35
VH Jaywalk	35
VH Grafit	33
VH Miguel	33
VH John	32

PRODUCTION	
VH Ponder	128
VH Jaywalk	127
VH Grafit	126
VH Gavin	126
VH Op	125
VH Goblin	122
VH Reynold	121
VH Oneal P	120
VH Cadiz	120
D Mason	119

DAUGHTER FERTILITY	
VH Black	129
D Grove	126
VH Redwood	123
S Ross	122
VH Albion	121
VH Ponder	119
VH Miracle	117
VH Op	116
VH Blume	116
VH Rudolf	116

CALVINGS SIRE	
VH Barkley	114
VH Clement	114
VH Redwood	112
VH Albion	112
VH Ponder	111
D Etoto	111
VH Blume	107
VH Boogie	107
VH Oneal P	107
D Grove	106

UDDER HEALTH	
VH Boogie	123
VH Clement	119
VH Redwood	119
VH Miguel	117
VH John	116
VH Black	116
VH Barkley	113
VH Albion	113
VH Miracle	113
VH Reynold	112

HOOF HEALTH	
VH Salomon	125
VH Oyvind	125
VH Gregor	124
VH Reynold	123
D Sol	120
VH Cadiz	120
VH Miguel	118
VH Albion	118
VH Oneal P	116
VH Max	115

LONGEVITY	
VH Miracle	131
VH Gregor	126
VH Miguel	126
VH Op	125
VH Clement	125
VH Blume	124
VH Reynold	121
VH Albion	121
VH John	121
VH Jaywalk	121

UDDER	
VH Mandel	137
VH Redwood	132
VH Clement	131
VH Boogie	129
VH Miracle	125
VH Basten	124
VH Blume	120
VH Barkley	120
VH Jaywalk	115
VH Salomon	115

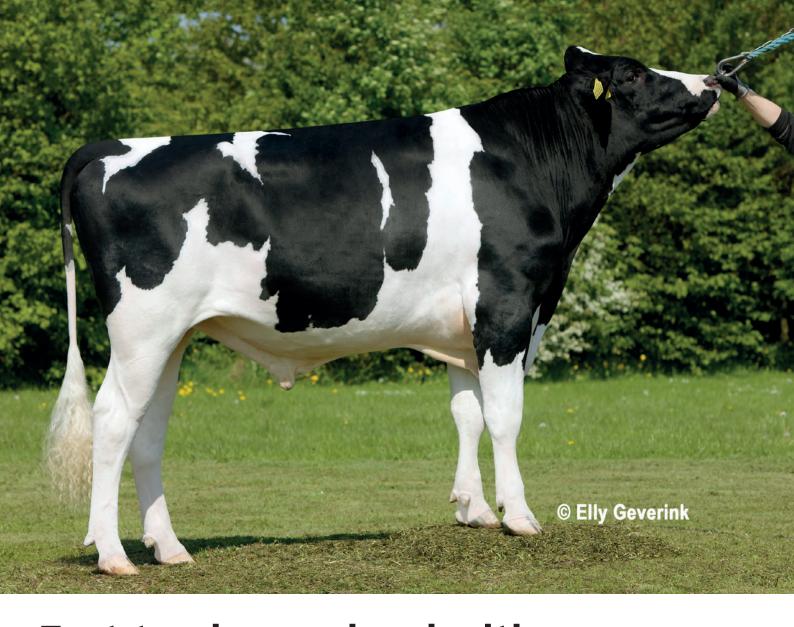
FEET & LEGS	
D Etoto	127
VH Barkley	121
VH Miguel	120
D Mason	117
VH Redwood	116
VH Gavin	113
VH Boogie	111
VH Oyvind	111
VH Grafit	110
VH Albion	110

Use sexed semen by VikingGenetics!

By using VikingGenetics X-Vik you obtain the following benefits:

- Estimated 90 % females Excellent fertility results
- Many heifers to sell or replace cows and increase your herd
- Easy calvings Higher profit





Fast track your herd with Genomic Bulls!

VikingGenetics **Holstein Genomic Programme** is the first hand choice when it comes to profitable herd improvement.

The Genomic Sires from Viking are the next generation, and offers you top quality genetics. All bulls entering the program are preselected on their genomic values, to ensure that only the best of the best go through progeny testing. Unique registration and cattle data

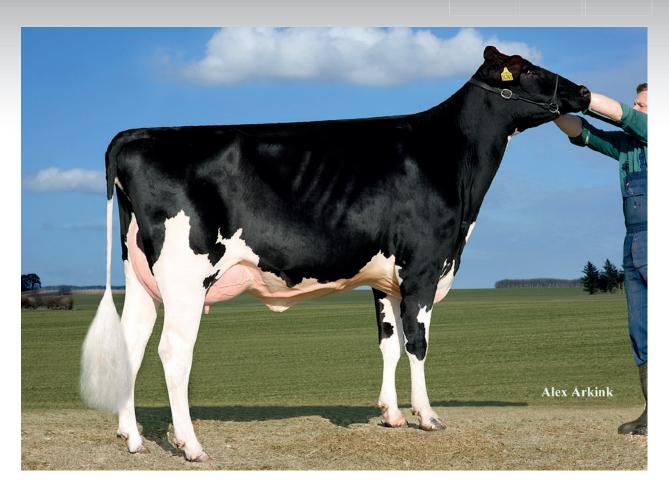
base give us a tremendous tool for accurate genomic selection. Young bulls with the very best genomic values are used beyond the services for progeny testing, and are marketed as GenVikPLUS. Here we can offer you the very best bulls, with the most interesting pedigrees.



NTM +38 Ø GENVIK PLUS



VH Boogie





HOL 255962 S Bookem MGS Man-O-Man MGGS RGK Didrik

KappaCasein

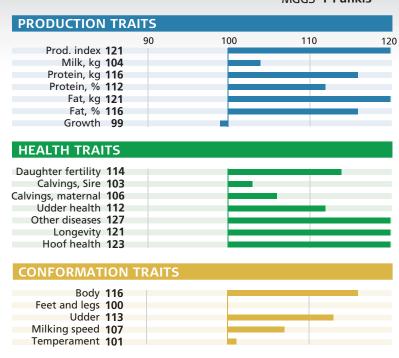
PRODUCTION TRA	ITS			
	90	100	110	120
Prod. index 113				
Milk, kg 107				
Protein, kg 114				
Protein, % 107				
Fat, kg 107				
Fat, % 100				
Growth 104				
HEALTH TRAITS				
Daughter fertility 114				
Calvings, Sire 107				
Calvings, maternal 119				
Udder health 123				
Other diseases 109				
Longevity 119				
Hoof health 103				
CONFORMATION T	RAITS			
Body 132				
Feet and legs 111				
Udder 129				
Milking speed 87				
Temperament 101				

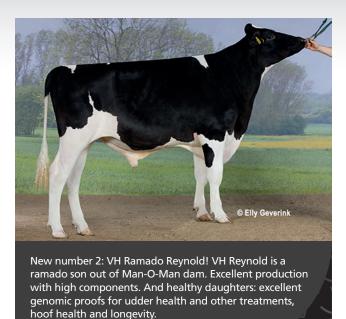
VH Anderstrup Bookem Boogie is the Bookem son. The dam has a nice pedigree, Man-O-Man as a sire and Didrik as MGS. Easy calvings and good fertility. Look at that conformation: all udder traits are positive. If you are looking for body capacity, remember this bull!

NTM +37 GENVIK PLUS VH Reynold



S Ramado
MGS Man-O-Man
MGGS T Funkis





NTM +36 GENVIK PLUS VH Clement



HOL 256209 S CM MGS Juwel

MGGS Oman Justi

PRODUCTION TRAITS 100 110 Prod. index 114 Milk, kg 110 Protein, kg 113 Protein, % 103 Fat, kg 116 Fat, % 105 Growth 108 **HEALTH TRAITS** Daughter fertility 108 Calvings, Sire 114 Calvings, maternal 109 Udder health 119 Other diseases 95 Longevity 125 Hoof health 110 **CONFORMATION TRAITS** Body 103 Feet and legs 102 Udder **131** Milking speed 104



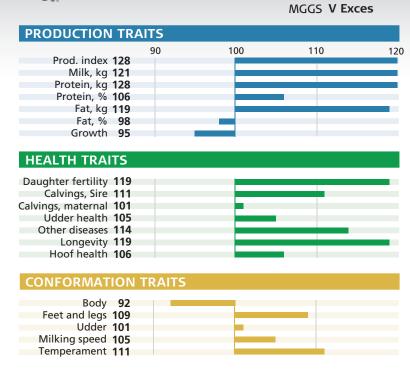
maternal grandsire.

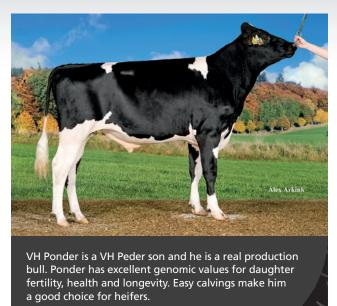
Temperament 115

NTM +36 🚽 🧳 GENVIK*PLUS **VH Ponder**



HOL 256205 S VH Peder MGS D Onside

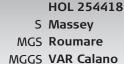




NTM +36 **VH** Miracle



GENVIK*PLUS









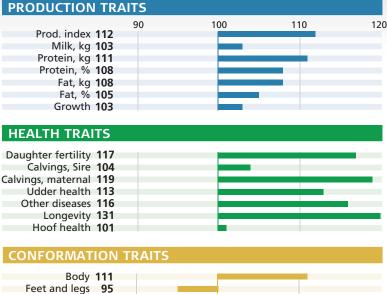




Udder **125**

Milking speed 124 Temperament 108

VIKING HOLSTEIN[®]





VH Miracle has excellent pedigree: Massey x Roumare (VG89) x VAR Calano EX92 x Lukas EX90). He has been at the very top among genomic sires a long time. His profile is very appealing to everybody: production, fertility, calving ease, health, conformation and longevity!

VH Mandel





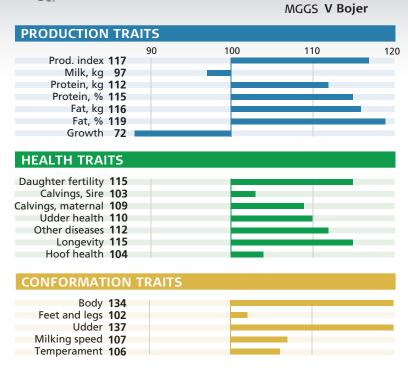


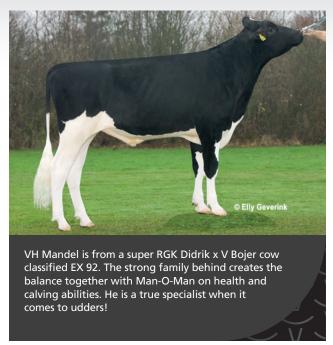




HOL 254168 S Man-O-Man MGS RGK Didrik

GENVIK*PLUS





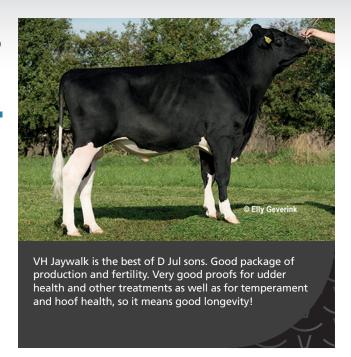
NTM +35 GENVIK PLUS VH Jaywalk



HOL 255788 S D Jul MGS Oman Justi

MGGS Lancelot

			MGGS Lanc	eior
PRODUCTION TRA	ITS			
Prod. index 127 Milk, kg 107 Protein, kg 121 Protein, % 113 Fat, kg 129 Fat, % 121 Growth 100	90	100	110	120
HEALTH TRAITS				
Daughter fertility 105 Calvings, Sire 105 Calvings, maternal 102 Udder health 110 Other diseases 117 Longevity 121 Hoof health 106				
CONFORMATION	TRAITS			
Body 99 Feet and legs 98 Udder 115 Milking speed 94 Temperament 116	_	+		

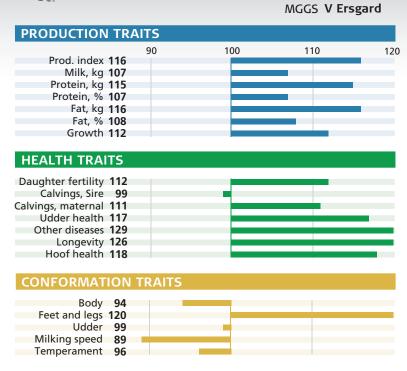


NTM +33 **VH** Miguel

GENVIK*PLUS



HOL 255750 S D Mason MGS D Sol





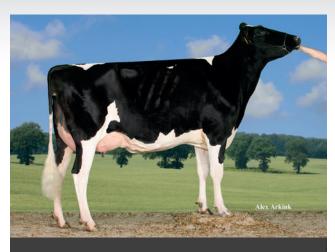
NTM/+32 GENVIK*PLUS VH Barkley



HOL 255755

S Bookem MGS Gibor

			MGGS Shark	У
PRODUCTION TRAI	TS			
Prod. index 114 Milk, kg 121 Protein, kg 118 Protein, % 97 Fat, kg 108 Fat, % 89 Growth 100	90	100	110	120
HEALTH TRAITS				
Daughter fertility 109 Calvings, Sire 114 Calvings, maternal 112 Udder health 113 Other diseases 108 Longevity 117 Hoof health 96				
CONFORMATION T	RAITS			
Body 110 Feet and legs 121 Udder 120 Milking speed 96 Temperament 105				



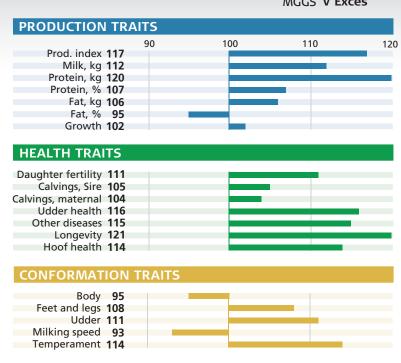
VH Barkley is a great combination of production and type! Look: the production index 114, body 109, feet and legs 121 and udder conformation 120! And still you get good fertility, udder heath and longevity. Calving ease as a sire 123!

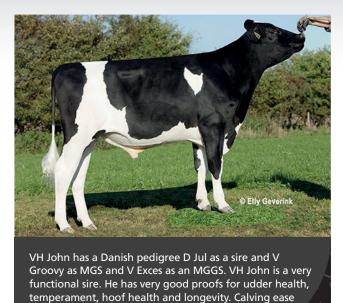
NTM +32 VH John





HOL 255754
S D Jul
MGS V GroovyBL
MGGS V Exces



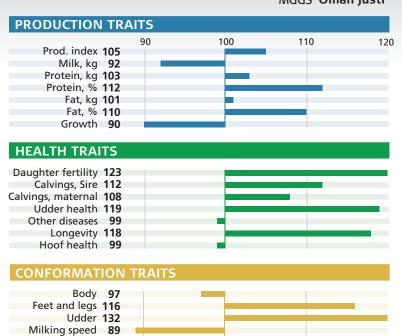


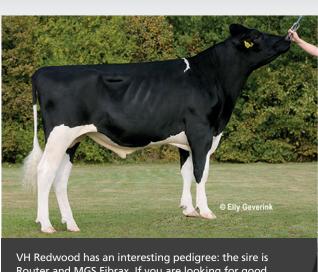
bull for heifers.

NTM/+31 GENVIK'PLUS VH Redwood



HOL 255624
S Router
MGS Fibrax
MGGS Oman Justi





VH Redwood has an interesting pedigree: the sire is Router and MGS Fibrax. If you are looking for good type, VH Redwood is a good choice. Beside of conformation you will get fertile heifers with good udder health. Calving ease bull, good for heifers!

Temperament 111

VH Gregor



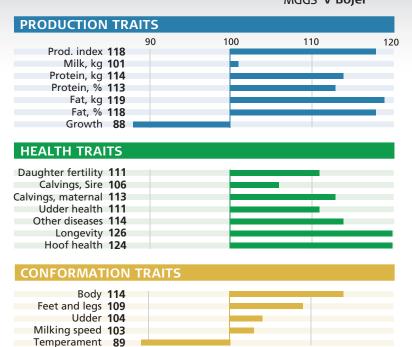








HOL 255190 S VH Grafit MGS V Exces MGGS V Bojer





VH Gregor is one of very good VH Grafit sons. The dam is out of V Exces so this combination promises good production. VH Gregor is a very functional bull: notice that fertility, calving traits, udder health and hoof health: it means longevity!

NTM +31 VH Gavin



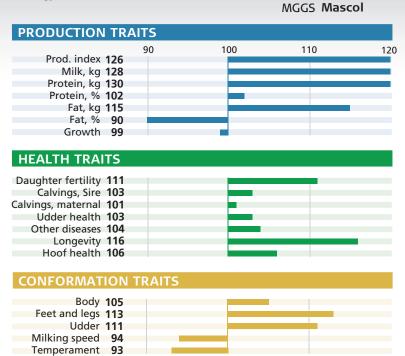








S VH Grafit
MGS D Onside





VH Gavin is the second best of VH Grafit genomic sons in the list now. The dam of the bull is an Onside daughter. Gavin has excellent breeding values for production as well as for conformation. No faults and easy to use in every herd!

NTM +31 **VH Blume**



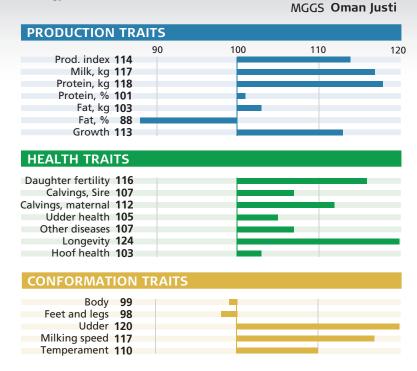


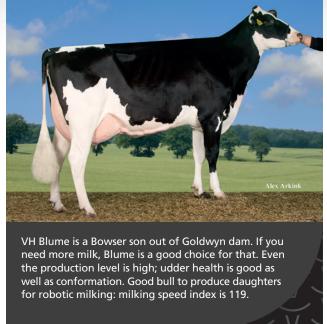






HOL 254934 S Bowser MGS B Goldwyn





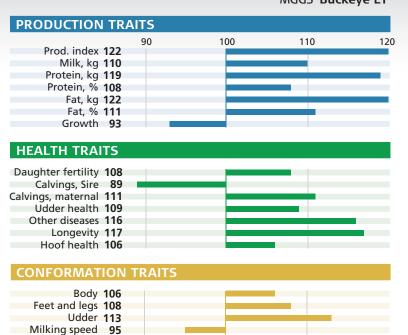
NTM +29 **VH** Goblin

VIKING HOLSTEIN[®]





HOL 96307 S VH Grafit MGS Fibrax MGGS Buckeye ET





VH Goblin is a son of the B Goldwyn x Oman Justi son VH Grafit. VH Goblin is a Finnish born bull born from a strong Fibrax cow classified VG86. VH Goblin is a bull with a lot of positive traits and is able to add production, health and fertility at the same time.







Temperament 84

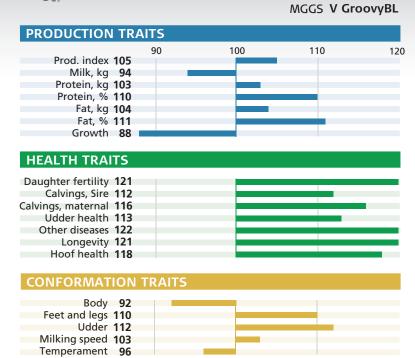
VH Albion





HOL 255412 S Ammus MGS D Banker

GENVIK*PLUS





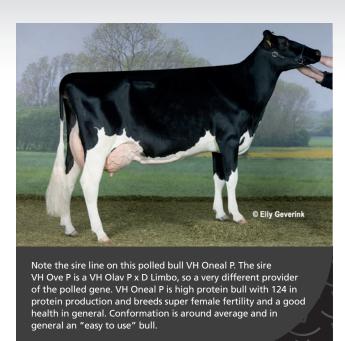
VH Albion is the oldest son of V Ammus. He has a nice pedigree, the dam is out of D Banker. VH Ammus is very good in functional traits: fertility, udder health, hoof health and milking speed. Easy calving bull, good for your heifers!

NTM +23 GENVIK PLUS VH Oneal P



HOL 255423 S VH Ove P MGS Stäme-ET MGGS V Exces

PRODUCTION TR	AITS			
Prod. index 120 Milk, kg 115 Protein, kg 120 Protein, % 104 Fat, kg 115 Fat, % 100 Growth 101		100	110	120
HEALTH TRAITS				
Daughter fertility 113 Calvings, Sire 107 Calvings, maternal 96 Udder health 97 Other diseases 117 Longevity 109 Hoof health 116		=		
CONFORMATION	I TRAITS			
Feet and legs 104 Udder 103 Milking speed 93 Temperament 103		=		



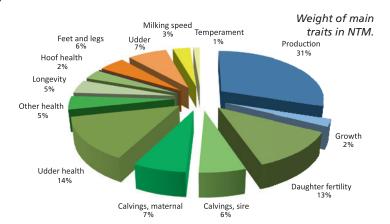
Understand the benefit from high NTM – increased profit!

1. What is NTM?

NTM (Nordic Total Merit) is the most complete total merit index in the world. NTM consists of more than 40 subtraits combined into 12 main traits as shown in the right figure.

When you use NTM as selection criteria, you obtain positive progress for all traits of economic importance in the dairy cattle industry. You obtain the highest progress from the "most expensive traits" such as fat and protein yield and health traits as shown in the figure to he right.

Longevity index and production index have the highest correlation of all traits to the NTM, showing that the NTM is optimized to produce long-living and high-producing cows.



2. How are the indexes in NTM expressed?

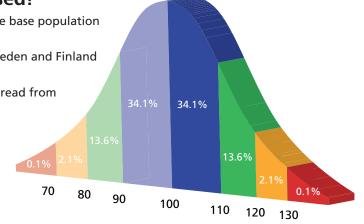
EBVs of all animals are adjusted in such a way that animals in the base population have an average index of 100.

For all traits a rolling base consisting of cows from Denmark, Sweden and Finland that are 3-5 years of age at the date of publication is applied.

The Standard Deviation is a statistic that tells you how widely spread from the average the scores of all bulls are for any particular trait.

The bell curve shows what each standard deviation represents.

One standard deviation away from the mean in either direction (the purple area) accounts for about 68 % of the bulls.



3. The value of NTM units

The value of +10 NTM units for the sire is the same as 100 Euro added value for the heifer under Scandinavian conditions.

The value of +10 units for production traits

Milk index	+ 160 kg milk
Fat index	+ 8.6 kg fat
Fat percentage	+ 0.13 %
Protein index	+ 6.1 kg protein
Protein percentage	+ 0.08 %
Growth	+ 8 g/day. Higher weight gain of bull calves

Calculation of production index	- 0.25 x Milk + 0.25 x Fat + 1 x Protein
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The value of +10 units for functional traits

Daughter fertility	Days open reduced by 8 days and 0.03 less services per pregnancy
Calvings, Sire (Maiden heifers)	Reduction in difficult calvings with 2 % and 1 % less stillborn calves
Calvings, Maternal (Maiden heifers)	Reduction in difficult calvings with 8 % and 2 % less stillborn calves
Udder health	1.8 % units less mastitis treatments in first lactation. 2.6 % units less mastitis treatments in second and third lactation
Other diseases	2.7 % units less treatments for reproduction diseases, metabolic disorders and diseases in hooves, feet and legs in first and second lactation. 3.6 % units less treatments for the same diseases in third lactation
Milking speed	9.5 g fat + protein more per minute (robots and farmer observation)
Longevity	36 days longer productive life

How to read VikingGenetics breeding values

1 NTM

See left page.

2 Production

Production Index: Based on amount of protein, fat and milk. There is a slight negative weighting applied to the milk quantity, in order to maintain concentration.

Growth: Based on data from slaughtered male progeny. Includes growth and carcass classification.

3 Health

Daughter fertility: Fertility data from heifers, first, second and third calvers. Includes number of inseminations, interval from calving to 1st insemination, interval between first and last insemination, Non Return Rate.

Calving index, sire: Based on calving difficulties and number of stillborn calves from first calvers as well as later lactations.

Calving index, maternal: Expresses the ability of the bulls' daughters to give birth to a living calf at their first calving.

Udder health: Based on mastitis diagnoses, compulsory reported by vets and from the milk recording scheme, cell-count data and reported cullings due to mastitis. In addition conformation traits like udder depth is used to further increase the accuracy of the index.

Other diseases: Based on diseases other than mastitis, compulsory reported by vets and culling reports from the milk recording scheme. The diseases are divided into four different subindexes – early and late fertility disorder, feet and leg problems and metabolic diseases – these four sub-indexes are then weighted together to the complete index for other diseases.

Longevity: Productive life, days from 1st calving, max 365 d/lactation. Information from the first five lactations.

Hoof health: Based on lesion scoring reported by hoof trimmers. Includes both infectious and laminitis related lesions with highest weight put on sole ulcer.

4 Conformation

A comprehensive classification of body, legs and udder. Based on a linear description of conformation traits.

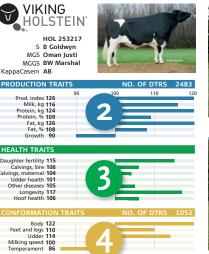
Legs: A comprehensive evaluation of the legs.

Udder: A comprehensive evaluation of the udder.

Temperament: Based on farmer's observations.

Milking Speed: Based on farmer's observations.









5 Main characteristics

Symbols showing the main characteristics of the bull.



Longevity



Daughter Fertility



Total Merit Index



Components



Easy Calvings



Milk Production



Udder Health



Conformation

